
YubiEnterprise Services

Yubico

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USER GUIDE AND RELEASE NOTES

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YUBIENTERPRISE SUBSCRIPTION & DELIVERY

1.1 Introduction

1.1.1 Overview

YubiEnterprise Services

YubiEnterprise Services enable organizations to procure YubiKeys efficiently, distribute them rapidly, and remotely manage YubiKey strong authentication solutions at scale. These services are the gateway to value-added service offerings.

YubiEnterprise Subscription

YubiEnterprise Subscription provides cost-effective and flexible YubiKey procurement and rollout. It simplifies the acquisition and rollout of phishing-resistant authentication, with future-proofed flexibility.

Benefits

- **Lower cost to entry:** Gain phishing-resistant multi-factor authentication for very low prices per user per month (OPEX) with additional entitlements and discounts.
- **Flexibility:** Enable user choice to select preferred YubiKeys with the option to upgrade as needs evolve.
- **Future-proofed:** Ensure security is always prioritized as your business evolves and you experience employee turnover and/or replace lost or stolen keys.
- **Faster rollouts:** Quickly deploy and protect your workforce and your brand. Stay connected to security experts via Professional Services, a dedicated Customer Success Manager, and Priority Support.

Subscription Use Cases

Connecting to an IDP or Authenticating only to FIDO-enabled sites

Choose Base Tier (FIDO-only) Security Key Series

Securing both legacy and modern apps and/or services

Choose Advanced Tier (Multi-protocol) YubiKey 5 Series

Achieving compliance (for example FIPS, CSPN)

Choose Compliance Tier (Certified) YubiKey 5 FIPS Series, YubiKey 5 CSPN Series

The tiers and their contents are described in detail in *Modes of Purchase*.

YubiEnterprise Delivery

Providing distribution and logistics for YubiKeys, YubiEnterprise Delivery is a cloud-based service for streamlined distribution of YubiKeys to end users' offices or residential addresses, both domestic and foreign.

- Ship Yubico products to end users, tracking them through the system with seamless support from the experts at Yubico
- Access the service through the YubiEnterprise Delivery Console or integrate the service into your own IT flows using YubiEnterprise Delivery public APIs
- Place individual shipment requests or upload shipment requests in bulk using CSV files
- Check current inventory levels at a glance
- Get immediate information on product and shipping costs, as well as all other details relating to purchasing and shipment.
- Generate reports on all shipment requests over time for interdepartmental cross-charging.

To quickly get up and running with YubiEnterprise Delivery, see the following:

- This [Getting Started](#) video
- The [Getting started section](#) of this documentation

1.1.2 Workflow

In the typical use case, an enterprise or organization purchases a subscription to cover their security key needs over time. [Modes of Purchase](#) describes the options in detail.

The enterprise or organization then uses YubiEnterprise Console to ship the security keys to their end users as required. Some of the keys might be shipped to head office and/or branch offices for distribution in person, and many will be shipped to the home addresses of employees working remotely. To help perform these tasks, the YubiEnterprise account owner usually assigns privileges (roles) to others in their organization so that they too (or instead) can use YubiEnterprise Delivery to ship security keys to the end users.

1.1.3 Prerequisites

Through your Yubico sales person or a distributor, Yubico's channel partner, your organization issues a purchase order for:

- YubiEnterprise Subscription Services (or non-subscription products)
- YubiEnterprise Delivery Services
- Delivery Services (Shipping) Credits. For details on what this covers, see [Delivery Services Credits](#).

The YubiEnterprise Delivery Console (GUI) requires only a browser such as Chrome, Firefox, or Edge, with the popup-blocking function disabled. For the API requirements, see [API Onboarding Playbook](#).

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.2 Getting Started

Welcome to YubiEnterprise Subscription & Delivery Services! This section provides an introduction to supporting documentation for common tasks performed by different user categories when working with the YubiEnterprise Console and the YubiEnterprise Delivery API.

Note: What you can do in the Console depends on your role and permissions. The descriptions below are specific to each user category. For more information, see *Roles and Permissions*.

1.2.1 Customers

Organization owner with CONSOLE OWNER role

You are an account owner purchasing keys for your organization. You want to get your first set of keys, add Console users from your organization, and manage their account permissions.

Understanding purchasing and delivery

- *Subscriptions and key models*
- *Shipping costs and taxes*
- *Destinations, delivery types, and quantities*

Onboarding and accessing the Console

- *Onboarding procedure*
- *Viewing initial purchase*
- *Requesting initial shipping of (up to 10) keys*

Managing your Console users

- *Adding users and permissions*
- *Recovering accounts*

Organization IT administrator with CONSOLE ADMIN role

You manage deployment of keys for your organization. You want to see the inventory, understand how many keys are available, and ship keys to various parts of your organization.

Monitoring your inventory

- *Checking available inventory*
- *Viewing purchase orders*

Managing shipment of keys

- *Getting an overview of shipments*
- *Requesting shipment to a single address*
- *Requesting shipment to multiple addresses*
- *Correcting shipment addresses*
- *Editing and deleting shipments*
- *Managing refunds for failed shipments*

Organization auditor with **CONSOLE AUDITOR** role

You are an auditor for an organization and want to review data like purchase orders, shipments and permission settings. You also want to download information for reporting purposes.

Viewing data for an organization

- *Purchase orders*
- *Shipment requests*
- *Processed refunds*
- *Users and their permissions*

Downloading information

- *Shipment requests*
- *Processed refunds*

1.2.2 Distributors

User with **DISTRIBUTOR VIEW** access

Distributors are organizations that sell Yubico products to associated resellers that in turn sell the products to end customers. As a distributor you want to see what was sold by your resellers, monitor customer inventories, and provide your resellers with access to view purchase orders.

Getting an overview

- *Reseller and customer overview*
- *Viewing inventory for a reseller's customer*

Viewing purchase orders

- *Checking what was sold per reseller and customer*
- *Viewing purchase order details*
- *Checking if a customer can use automated delivery (YE Delivery)*

Managing view permissions

- *Allowing resellers to view purchase orders*

1.2.3 Resellers

User with **RESELLER VIEW** access

Resellers are organizations that sell Yubico products to end customers. As a reseller you want to see what was sold to your customers, monitor their inventories, and provide access for customers to view purchase orders.

Getting an overview

- *Customer overview*
- *Viewing inventory for a customer*

Viewing purchase orders

- *Checking what was sold for a customer*
- *Viewing purchase order details*
- *Checking if a customer can use automated delivery (YE Delivery)*

Managing view permissions

- *Allowing customers to view purchase orders*

1.2.4 Integrators

Developer with CONSOLE ADMIN role

You are a developer integrating the YubiEnterprise Delivery API into a system on behalf of a customer organization. You want to understand how to get started with the YubiEnterprise Delivery API, and how to use it for example to create shipment requests.

Getting started with the YubiEnterprise Delivery API

- *API Onboarding Playbook*
- *Setting up an API caller with access token*

Working with the YubiEnterprise Delivery API

- *API best practices*
- *Requesting shipments*
- *Listing, tracking, and searching shipment requests*
- *Shipment status*
- *Managing API tokens*

Integration examples

- *Integrating with ServiceNow*

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.3 Modes of Purchase

The mode of purchase affects the selections you make when using YubiEnterprise Delivery for shipment requests. You can purchase directly from Yubico or you can purchase from Yubico's channel partners, i.e., distributors and resellers (see *Purchasing Through Resellers/Distributors* below).

There are two modes of purchase, *Subscription* or *Non-subscription (Perpetual)*.

1.3.1 Subscription

Since the exact numbers and models of YubiKeys you will need may be difficult to predict - especially for an organization in a rapidly changing environment - Yubico offers the option of purchasing licenses that allow you to select the model and form factor you require according to need as and when it arises.

Subscriptions are charged at a fixed price per user per month for a user license, granting you access to a range of products within a tier, for a specified number of users and maximum flexibility. You and/or your end-users choose any YubiKey with the assurance that when your needs change (e.g., upgrade from computer with USB-A to USB-C) or new keys within the same tier become available, you can upgrade immediately.

The tables in *Tier Options* show which models of YubiKey and Security Key by Yubico are available in which tier(s).

1.3.2 Tier Options

Tier options apply to subscription modes of purchasing. The enterprise tiers are:

- *Base* - Standard, with Replacements for Primary and Backup
- *Base* - Plus, with Replacements for Primary and Backup
- *Advanced* - Standard, with Replacements for Primary and Backup
- *Advanced* - Plus, with Replacements for Primary and Backup
- *Compliance* - Standard, with Replacements for Primary and Backup
- *Compliance* - Plus, with Replacements for Primary and Backup
- **Plus:** Most services and a base level of entitlements are included.
- **Standard:** Most entitlements are available only à la carte and priced accordingly.

Key Models Per Tier

Table 1: **Subscription (2.0) key models per tier**

MODEL	TIER Base	Advanced	Compliance
Security Key NFC by Yubico	X	X	X
Security Key C NFC by Yubico	X	X	X
Security Key NFC - Enterprise Edition	X	X	X
Security Key C NFC - Enterprise Edition	X	X	X
YubiKey 5 NFC		X	X
YubiKey 5C NFC		X	X
YubiKey 5C		X	X
YubiKey 5 Nano		X	X
YubiKey 5C Nano		X	X
YubiKey 5Ci		X	X
YubiKey 5 Nano FIPS/CSPN			X
YubiKey 5C FIPS/CSPN			X
YubiKey 5C Nano FIPS/CSPN			X
YubiKey 5 NFC FIPS/CSPN			X
YubiKey 5C NFC FIPS/CSPN			X
YubiKey 5Ci FIPS/CSPN			X

The YubiKey Bio Series - FIDO Edition (YubiKey Bio - FIDO Edition and YubiKey C Bio - FIDO Edition) is an optional add-on to any Subscription tier.

Table 2: **Subscription (1.0) key models per tier**

MODEL	TIER			
	Base	Advanced	Premium	FIPS
Security Key NFC by Yubico (Black)	X	X	X	X
Security Key C NFC by Yubico (Black)	X	X	X	X
YubiKey 5 NFC		X	X	X
YubiKey 5C		X	X	X
YubiKey 5 Nano		X	X	X
YubiKey 5C Nano		X	X	X
YubiKey 5Ci			X	X
YubiKey 5 Nano FIPS/CSPN				X
YubiKey 5C FIPS/CSPN				X
YubiKey 5C Nano FIPS/CSPN				X
YubiKey 5 NFC FIPS/CSPN				X
YubiKey 5C NFC FIPS/CSPN				X
YubiKey 5Ci FIPS/CSPN				X

Subscription Support Services

As you experience employee turnover and/or need to replace lost or stolen keys you are covered. Priority Support with a Customer Success Manager to help you in your journey are included. The Plus plan even includes credits that you can use towards Professional Services to help you deploy YubiKeys quickly to protect your workforce and your brand.

The *Features and Benefits* of YubiEnterprise Services subscriptions provides more detail.

Non-subscription (Perpetual)

Outright purchase of physical keys): Purchasing set numbers of specified models of key on a perpetual basis assumes that you know exactly how many end-users you will have, as well as how many and what kinds of keys those end-users will need. It also assumes that you have accurately estimated your employee turnover rate, and the number of end-users who will lose their keys. None of the advantages of the subscription purchasing model are available to those who only purchase physical keys.

1.3.3 Features and Benefits

As of 24 January 2023, YubiEnterprise Services presents Subscription (2.0). If you purchased YubiEnterprise Subscription before this date, the options that came with *Subscription (1.0)* are shown in your Console, but that subscription version is no longer available for sale.

Subscription (2.0)

All Plans

- Procurement that is fast, predictable, and cost-effective
- Organizations can upgrade to higher tiers as needs evolve
- Subscriptions available for 500 users or more
- Form factor flexibility
- Purchase backup YubiKey subscriptions at a discount to ensure your backup authentication mechanism is as strong as your primary one and to enable easy self-service account recovery.
- 24x7x365 Priority Technical Support included: easy access to Yubico security experts. Yubico Support Services Overview can be found here <https://www.yubico.com/support-services/>
- Extended warranty: warranties cover the initial term of the subscription plus the first renewal.

Plus Plan

- Replacement licenses allow you to cover up to 25% of subscribed users per year, with an option to add on additional users as needed a la carte, due to turnover, lost or stolen keys, and upgrades
- Maximum discount on licenses for backup subscriptions
- 5% of base purchase as funds available to apply toward Professional services
- Option for one bulk customization event per year included.

Standard Plan

- Choose the number of replacement licenses for turnover, lost or stolen keys, and upgrades.

Subscription (1.0)

- Procurement that is fast, predictable, and cost-effective
- Organizations can upgrade to higher tiers as needs evolve
- Subscriptions available for 500 or more users
- Replacement licenses allow you to cover up to 25% of subscribed users per year to cover turnover, lost or stolen keys, and upgrades.
- Maintain buffer stock to accommodate urgent needs: keep an extra stock of 5% of your order at no additional cost. If you subscribed to multiple tiers, the buffer stock is proportionately distributed across those tiers.
- Purchase backup YubiKey subscriptions at a discount to ensure your backup authentication mechanism is as strong as your primary one and to enable easy self-service account recovery.
- Technical support included: easy access to Yubico security experts. Yubico Support Services Overview can be found [here](#).
- Extended warranty: warranties cover the duration of the subscription.

1.3.4 Terms & Conditions

For detailed information, see the [terms relevant to your subscription](#).

Example Subscriptions

Subscription (2.0) Example

Plus Plan

Purchase a subscription for 400 users, two per user, from the Base tier (800 licenses), and for 600 users, two per user, from the Advanced tier (1200 licenses). You are entitled to upgrade annually 25% of the license units in each tier as Replacement stock, so 200 license units are automatically provided to you in the Base tier and 300 in the Advanced tier. Although you only paid for 2000 license units (800 + 1200) in your *Initial* order, you actually get a total of 2500 licence units in the first year of your subscription. You also get a discount on additional replacement or backup licenses.

Subscription (1.0) Example

Purchase a subscription for 400 users, two per user, from the Base tier (800 licenses), and for 600 users, two per user, from the Advanced tier (1200 licenses). You automatically get 5% more license units free as **Buffer stock** for each of the tiers to which you subscribed, so in this example, 40 licenses from the Base tier and 60 from the Advanced tier. You are entitled to upgrade 25% of the license units annually in each tier as **Replacement stock**, so 200 license units are automatically provided to you in the Base tier and 300 in the Advanced tier. Although you only paid for the 2000 license units in your **Initial** order, you actually get a total of 2600 license units in the first year of your subscription. In addition, you get a discount on backup licenses.

1.3.5 Purchasing Workflow

The subscription contract is a signed order form that covers Yubico terms and supersedes all other documents, followed by a purchase order (PO), which is required for invoicing and payment. The start date of the subscription determines when the annual replenishment of the Replacement stock takes place.

As soon as a PO is accepted, it is entered into the YubiEnterprise Delivery system, where it can be accessed to get information for requesting shipments, such as quantities of each product purchased and reseller and/or distributor information.

All POs must have an email address for each of the following individuals:

- The distributor
- The reseller
- The customer.

If a distributor is purchasing products for a reseller, and that reseller is selling YubiEnterprise Delivery to an end-customer, Yubico needs all three email addresses. Only if YubiEnterprise Delivery is not involved are these email addresses not required. For example, if the distributor does not want the reseller to access the Console, then no email address for the reseller is required on the PO. However, if the reseller cannot access the Console, then that reseller's end-customer cannot access the Console either.

1.3.6 Subscription Renewal

Subscription (2.0)

The subscription automatically renews for original subscription term length unless one party provides the other party with written notice of non-renewal at least 30 days prior to the end of the current term.

Subscription (1.0)

The subscription automatically renews for a one-year term unless one party provides the other party with written notice of non-renewal at least 30 days prior to the end of the current term.

Co-Terming

Yubico supports co-terming for YubiEnterprise Delivery Subscription, allowing organizations to add users and services at any time during the term of the subscription. The added users and/or services will have the same term end date as the original subscription. Customers pay based on the pro-rated term of the remaining subscription period.

1.3.7 Purchasing Through Resellers/Distributors

The entity through which you submit a PO is always referred to as a channel partner. “Channel partner” is a term that covers distributors, resellers, and even Yubico itself. Yubico’s Channel partner ID (or `ChannelPartnerId` or `channelpartner_id`) is “1”.

Note: The deprecated `/shipments` API did not support indirect sales, i.e. the selection of channel partners (distributors, resellers). That API only supported direct sales in that the `ChannelPartnerID` was always set to 1, which means Yubico. To order inventory purchased through a distributor or reseller, use the `/shipments_exact` API.

Because inventory is sorted according to the source from which it was purchased, when requesting shipment, distinguish between inventory purchased directly from Yubico and inventory purchased through distributors and resellers doing business with Yubico. The **Dashboard** shows your *total* inventory of any given product, combining quantities purchased from all sources: both directly from Yubico and indirectly through channel partners. To find out what is in which inventory, check your purchase orders.

To find out what the channel partner (reseller or distributor) ID is:

BEFORE shipment

The name of the channel partner (reseller or distributor) is shown on the **Purchase orders** tab, and the channel partner ID is shown on the PO detail popup accessed by clicking on the Purchase order number:

Purchase order #: PO01234

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YUBIENTERPRISE DELIVERY INCLUDED ?

Order date: 07 Jul 2023

Reseller: Yubico (direct sale)

Reseller ID: 1

123 State Street

Austin

Texas

73301

US

Firstname Lastname

firstname.lastname@acme.cor

+1 999 999 9999

Products

Inventory	Cost per item
500 / 500 - Advanced/Bio - Plus - Primary	\$47.53
125 / 125 - Advanced/Bio - Plus - Primary - Replacement	\$0.00
500 / 500 - Advanced/Bio - Plus - Backup	\$35.65
249 / 250 - Compliance - Plus - Primary	\$49.08
75 / 75 - Compliance - Plus - Primary - Replacement	\$0.00
250 / 250 - Compliance - Plus - Backup	\$36.81

AFTER shipment

The **Channel partner ID (Reseller or Distributor)** is shown on the shipment request detail page, accessible by clicking the ID of the shipment request on the **Shipments tab**.

SHIPMENT ID
PZtDmpRHylcn73YgHbGQPm

AUTOMATED

[Go back](#)Request date: 2023-03-27T18:15:16.206Z Reseller name: Yubico (direct sale)
Requestor: Firstname Lastname Reseller ID: 1

Status: Shipped: In transit

- ✓ Shipment requested
- ✓ Shipped: In transit
- Delivered

Status messages

- No status messages

Address

Firstname Lastname
Firstname
530 Lytton Ave
#301
Palo Alto
California
94301
US
frank@acme.com
Tel: 5559251212

Shipping & tax

Shipping Fee: \$10.00
Shipping Tax: \$0.92
Shipping VAT: --
Product cost: \$75.00
Product tax: \$6.85
Product VAT: --
Total: \$92.77
Delivery type: Normal
Provider: FedEx
Tracking: Vr2W3FDIFPC8tsZj6PRErm

Item details

Inventory product type	PO reference	Quantity	Product name	Cost per item	Cost
Standard products	Perpetual PO	1	YubiKey 5Ci	\$75.00	\$75.00

When an end-customer purchases through a reseller or distributor, the customer's view of the console shows neither the cost of the products nor the shipping costs. Only the shipment status is shown to the end-customer.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.4 Costs of Shipping and Taxes

For up-to-date shipment pricing to supported destinations, see the [YubiEnterprise Delivery pricing table](#). The table lists destination countries and key shipment limits for each country. For bulk shipments to single-key countries, contact [YubiEnterprise Delivery Support](#).

1.4.1 Delivery Services Credits

YubiEnterprise Delivery service customers will be invoiced for Delivery Services Credits to cover shipping and taxes after the fact.

Note: Customers with credits remaining after having paid in advance for them will continue to be able to draw them down until those credits are exhausted.

YubiEnterprise Delivery Shipping/Services Credits are shipping fees, a Shipping Credits SKU that is invoiced after shipment. For each shipment request, YubiEnterprise Delivery will automatically deduct the appropriate shipping fees and calculate the product taxes based on destination address and shipping taxes based on location from which the products are shipped.

At the end of every month in which shipment requests are made, Yubico invoices you.

The apportioning of the taxes / VAT across shipping and product is shown:

- On the invoice sent at the end of the month in which shipping was requested.
- On the Console - each shipment request that is made is assigned an ID. To display the tax or VAT charged for any given shipment, on the **Shipments** tab or the **Dashboard** tab, click on its **Id** in the lists of shipments and recent shipments.

1.4.2 Shipping

Shipping costs are determined at the time of shipping. They are based on:

- The weight/size of the package - this is affected by the way the keys are packaged, in trays or in blister packs. It is cheaper to ship large volumes of keys in trays than in blister packs, because the blister packs result in heavier, more voluminous packages.
- Destination
- Type of shipment, expedited or normal.

Sales Tax/VAT on Shipping

The VAT or sales tax charged for shipping is distinct from the VAT or sales tax charged for the product itself. Sales tax or VAT is charged on shipping costs at the rate imposed by the location where the shipment originates (see [Delivery Policies](#)).

1.4.3 Sales Tax/VAT on Product

Yubico calculates product taxes based on shipment destination. When the Delivery Services Credits are purchased and invoiced in advance, the rate charged is 10% for US and Canadian destinations. Products are taxed at the actual tax rates of shipping destination, and the customer is charged by aggregating individual shipments at the end of each month in a consolidated invoice. At the end of each month in which shipments are dispatched, Yubico's invoice shows the reconciliation of the Delivery Services Credits purchased with the amounts actually charged.

Note: Sales tax/VAT on product is not calculated until the shipment has been shipped.

Method of Calculating VAT

- If you are based in the Netherlands, Yubico charges VAT on the initial invoice.
- If you are based in the EU but not in the Netherlands and you provide a valid non-Netherlands EU VAT number, no VAT is charged on the initial invoice.
- If you are based in the EU but not in the Netherlands and you do not provide a valid non-Netherlands EU VAT number, VAT is charged based on shipment source, which is the Netherlands.

1.4.4 Exemptions

Sales Tax

To claim exemption from sales tax, you must present to Yubico the sales tax exemption certificate for the location to which the product is being shipped.

VAT

To claim exemption from VAT, you must present the VAT number; treatment varies depending on the country. Yubico does VAT reconciliation at the end of the month. It will then credit the customer with the amount of the tax charged on both product and shipping.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.5 Delivery Policies

1.5.1 Shipment Sources

Shipments to EU countries

Fulfilled out of the warehouse in the Netherlands until 3 April 2023, after which date these shipments will be fulfilled out of Yubico's facility in Stockholm.

Shipments to UK

Fulfilled out of the warehouse in Great Britain.

Shipments to US, Canada and the rest of the world

Shipped out of Yubico's facility in Santa Clara, California.

Each organization has business rules applying to delivery policies, some unique to the particular organization. These rules specify which combinations of parameters are allowed for the organization and are therefore fundamental to determining whether a shipment request can succeed. Business rules are applied before undeliverability and similar such issues are determined.

1.5.2 Post Office Box as Destination

Delivery to Post Office boxes (PO boxes) are acceptable for shipment requests for US destinations. Delivery to the equivalent elsewhere in the world is unlikely to succeed.

1.5.3 Key Quantities and Delivery Types

Using the YubiEnterprise Delivery service you can ship keys to many countries around the world. Each destination country has a maximum number of keys per shipment request. For some countries you can include up to 500 keys per shipment request. For other countries you can only include one key per shipment request due to custom duty regulations.

Available quantity options for different countries are listed below. Products cannot be shipped via YubiEnterprise Delivery to countries that are not listed below. Shipments are delivered using either *Normal* or *Expedited* delivery. Available options for different countries are listed below.

For more information about shipping and pricing, see the [YubiEnterprise Delivery pricing table](#).

Multiple Keys - Normal and Expedited Delivery

Using the YubiEnterprise Delivery service, up to 500 keys per shipment request can be delivered to the countries listed below. Both the **Normal** and **Expedited** delivery options are supported when creating shipment requests to these countries.

Multiple key shipments - Normal or Expedited delivery

- Austria
- Belgium
- Bulgaria
- Canada
- Croatia
- Cyprus
- Czechia

- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Iceland
- Ireland
- Italy
- Latvia
- Liechtenstein
- Lithuania
- Luxembourg
- Malta
- Netherlands (the)
- Norway
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- United Kingdom of Great Britain and Northern Ireland (the)
- United States of America (the)

Single Keys - Normal Delivery

Using the YubiEnterprise Delivery service, no more than one (1) key per shipment request can be delivered to the countries listed below. Only **Normal** delivery is supported, therefore the **Expedited** option is not available when creating shipment requests to these countries. For bulk shipments to single-key countries, contact [YubiEnterprise Delivery Support](#).

Single key shipments - Normal delivery only

- Albania
- Argentina
- Australia

- Bosnia and Herzegovina
- Brazil
- Chile
- Colombia
- Costa Rica
- Dominican Republic (the)
- Egypt
- Guatemala
- Guernsey
- Hong Kong
- India
- Indonesia
- Isle of Man
- Israel
- Jamaica
- Japan
- Jersey
- Korea (the Republic of)
- Malaysia
- Mexico
- Montenegro
- New Zealand
- Pakistan
- Panama
- Peru
- Philippines (the)
- Puerto Rico
- Saudi Arabia
- Serbia
- Singapore
- South Africa
- Taiwan (Province of China)
- Thailand
- Turkey
- United Arab Emirates (the)

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.6 Onboarding

The current guide (<https://console.yubico.com/help/>) is available without logging in.

1.6.1 Prior to Onboarding

After the *Prerequisites* have been met, Yubico does the following:

1. Creates a YubiEnterprise Delivery account for your organization.
2. Enters the purchased products and delivery shipping credits into your organization's account.
3. Assigns Console login privileges to your organization's enterprise account owner (Console Owner), nominated when the first purchase order (PO) is submitted.
4. Emails the login credentials to the Console Owner.

1.6.2 Onboarding Workflow

The onboarding involves these steps:

1. Initial login to the Console as Console Owner using provided credentials.
2. Verifying your first purchase order.
3. Creating an initial shipment request of maximum 10 YubiKeys.
4. Registering at least one security key for your account.
5. Adding more organization members to your organization account.

Logging in to the Console always requires a YubiKey except in the first phase of onboarding.

In this first phase, Yubico creates a new account in YubiEnterprise Delivery and the system creates a *demo user* with restricted permissions for the first Console Owner. Until the Console owner enrolls a security key, the permissions of that user/role remain restricted:

- Able to ship no more than ten keys
- Unable to invite new members
- Unable to generate API tokens
- Unable to edit the email template for *shipment delivery information to recipients*

These limitations are displayed on a banner during the initial onboarding phase instructing the user to register a *We-Authn credential* (security key) to finish account enablement.

Note: If the Console Owner has not already got a YubiKey, that person should use this initial phase as demo user in the onboarding to ship keys (maximum 10) to other organization members.

Once the demo user registers a security key in the Console, that person acquires the full permissions of an Console Owner, and all capabilities of the account are fully enabled.

Procedure

1. The Console Owner (demo user) logs in, and clicks the privacy policy link to accept Yubico's terms and conditions. At this point, the Console Owner can already verify that the YubiEnterprise Console dashboard displays the information corresponding to the initial purchase order(s), including the expected quantities of products in the applicable categories:
 - Available subscription 2.0 licenses
 - Available subscription 1.0 licenses
 - Available standard products inventory

Yubico

YubiEnterprise Console

US TAXES: \$20,901.05 | VAT: \$0.00 | SHIPPING: \$99,868.13 | [Help](#) | [A](#) user@alphacompany

Alpha Company

VIEWING AS CUSTOMER

Dashboard

Shipments

Purchase orders

Settings

Only show shippable inventory

Available subscription 2.0 licenses

PRIMARY SUBSCRIPTION

COM

Compliance Standard tier

INITIAL LICENSE

100 / 101

CREATE SHIPMENT REQUEST

Available subscription 1.0 licenses

PRIMARY SUBSCRIPTION

ADV

Advanced tier

INITIAL LICENSE

185 / 1000

CREATE SHIPMENT REQUEST

PRIMARY SUBSCRIPTION

PREM

Premium tier

INITIAL LICENSE

399 / 1010

100 SHIPPABLE

CREATE SHIPMENT REQUEST

BACKUP SUBSCRIPTION

PREM

Premium tier

INITIAL LICENSE

0 / 10

Available standard products inventory

YubiKey 5 NFC

1307 / 1915

YubiKey 5 Nano

1571 / 1900

YubiKey 5C

1613 / 1950

YubiKey 5C Nano

2 / 1237

Create shipment request

Verifying quantities purchased

To see the explanation for what products are available in each of these categories, see [Key Models Per Tier](#). (The term “tier” applies to subscriptions.)

Note: It might be necessary to toggle the **Only show shippable inventory** switch on the top right of the screen.

It might be necessary to adjust the view to correspond to your situation and your permissions. If you do not see what you expect to see, check *Distributor and Reseller Onboarding*. For a full understanding of roles in the Console, see *Roles and Permissions*.

2. The Console Owner uses the system to request shipment of at least one YubiKey to themselves. It is recommended that you register at least one additional key to avoid losing access to the Console if the original key is lost. See *Shipping to a Single Address*.
3. The Console Owner receives at least one YubiKey and uses the information on the *Packaging* page to validate the packaging has not been tampered with (as do subsequent recipients of products shipped via YubiEnterprise Delivery). The authenticity of the YubiKey itself is validated by following the guidelines on <https://www.yubico.com/genuine/>. The Console Owner then registers with the system, thereby ending the first phase of onboarding and gaining access to the full capabilities accorded to a Console Owner.
4. The Console Owner configures new YubiEnterprise Delivery accounts for the other key recipients on the **Settings** tab by:
 - Entering the email addresses of the organization members who will be managing the YubiKeys
 - Assigning roles to those organization members. See *Roles and Permissions*.

Note: Ensure your organization has at least two Console Owners. This is the only role that can perform password and account resets for users who have been locked out. If your organization has only a single Console Owner and that person locks themselves out or leaves your organization, you must contact Yubico to set up a new Console Owner.

5. The system automatically emails login credentials to the organization members. However, they will not be able to activate their accounts until they register their keys.
6. The organization members log in to the Console, register their keys, review the privacy policy, and accept Yubico's terms and conditions before starting to manage and/or audit the organization's inventory of Yubico products and shipping thereof.

yubico

① Announcement about Single Sign-On
Single Sign-On (SSO) authentication is now available for YubiEnterprise Console. To enable SSO, contact Yubico.

Welcome to the YubiEnterprise Console

YubiEnterprise enables organizations to procure YubiKeys, manage their inventory, and distribute YubiKey authentication solutions for employees at scale.

Login

[Learn more](#)

To subscribe to this service [Contact sales](#).

[Privacy policy](#) [Terms of service](#) [Contact support](#) [Help](#)



1.6.3 Distributor and Reseller Onboarding

Distributors and resellers (formerly referred to as “Channel Partners”) can use YubiEnterprise Delivery to manage their own inventories, and view their customers’ inventories for related purchases.

A reseller can have Yubico enable the end-customer for which it purchased inventory to see that inventory. For example, by clicking on the **Reseller** role label, a reseller can change the view to verify that an associated end-customer can see the inventory purchased from that reseller.

Similarly, a Distributor can enable (and verify) inventory viewing through the Console by a Reseller for which it purchased inventory.

Yubico sets up these roles/views when it receives a PO containing an email address for each role where applicable. For example, the Reseller user must have both Reseller and Customer roles if the end customer is to use the Console, while the user in the customer organization must have a Console Owner role. That alone is sufficient to give that user the Customer view.

1.6.4 Logging In

The following instructions are for users of the YubiEnterprise Console. (Your own organization could decide to implement a very similar process for its own end users of YubiKeys and/or Security Keys by Yubico.)

Step 1

Click the link supplied in the email from YubiEnterprise Delivery, which opens in a browser. (The browser requirements are given in [Prerequisites](#).)

Step 2

Enter the username and password supplied in the same email.

Note: Usernames must be email addresses. Any username entered without the “@” will return an error when the user tries to log in.

Note: If you allow your browser to fill in your username and password automatically, the **Submit** button might be grayed out. To activate the button, click in the password field.

Step 3

Click the **Submit** button. The browser displays a message instructing you to insert the YubiKey and touch it when it flashes its LED(s).

Step 4

When the LED(s) flash, touch the YubiKey until it stops flashing. (If you have dry skin, you may need to dampen your finger so the key recognizes your touch.)

Step 5

If your organization has more than one **account**—for example, the EMEA organization and the US/CAN organization—the list of accounts is displayed. Click the name of the appropriate organization.

Step 6

If the user logging in to the Console has multiple **roles**, the highest priority role is selected, with the top role being Console Owner, followed by Console Admin, Console Auditor, Distributor, Reseller in that order. The user then arrives at the appropriate landing page. If necessary, a different role can be selected on the Profile page (click on name of logged-in user in top right-hand corner of any Console screen).

Session Limits

Console users do not stay logged in indefinitely. After an hour of inactivity, you are automatically logged out. If the screen does not react after a period of inactivity, log out by going back to the home page and clicking the profile button at the top of the page. Then you can log in again.

After 24 hours you will need to log in again in any case.

Password Requirements

The requirements for the Console login password are:

- Must be 8-64 alphanumeric characters.
- Must not contain any part of the username.
- Must be different from the current password.

Managing Passwords with SSO

This ability is associated with the User role. Owners and Admins can manage their passwords and so on, but Auditors cannot. If your organization is using the single sign-on (SSO) method, you cannot change your password and/or your authentication method when you log in via SSO. You must use your credentials (username, password and YubiKey) to log in. Only then can you manage your credentials.

To change any of your credentials,

Step 1

Log in to <https://console.yubico.com/> with username, password, and YubiKey. If you belong to more than one organization, select the one you want to access.

Step 2

Select the **Settings** page. To edit your profile, on the **Users** tab, select your own username (you might have to scroll to find it) and click the pencil icon.

Step 3

On the subsequent page, **Edit member Somebody@company.com**,

- To change your username or email address, click the **Reset user** button.
- To change your password, click the **Reset password** button.
- To change your role (a capability only available to Console Owners), select the role from the dropdown list under the **Change role** heading and click **Save**.

Step 4

With your YubiKey at the ready, on the login page, enter:

- The email address associated with your YubiEnterprise account
- The password (which must be between 8 and 64 characters, and must not contain any parts of your username)

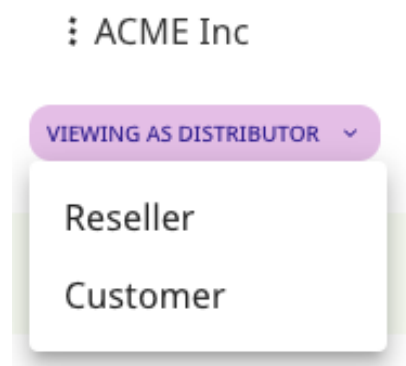
Insert and touch the YubiKey when prompted.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.7 Dashboard

The Dashboard in the YubiEnterprise Console provides an overview of available inventory, and recent shipments and purchase orders. The menu to the left provides access to different functions. What you see depends on your *user role* when logged in to the Console.

There are three categories of Console users: Customers, Distributors, and Resellers. Each of these have their own view providing access to functions that are specific for the type of user role. Depending on your user roles, you can have multiple view options and you can switch between them using the view selector in the upper part of the left menu of the Console.



Dashboard views available to a user with all roles

The following sections describes the functionality available through the different views.

1.7.1 Customer View

All users with either the Console Owner, Console Admin, or Console Auditor role can access the Customer view of the Dashboard. For more information, see [Roles and Permissions](#).

The Dashboard provides an overview of your aggregated inventory, recent shipments and purchase orders (POs). If you are a distributor or a reseller, the information you see on the Dashboard using the Customer view applies to purchases for your own organization.

From the Dashboard you can do the following:

- Get an overview of your product inventory, aggregated from different resellers if applicable.
- View recent shipments and POs.
- Request shipments (only Console Owners and Console Admins) from the inventory cards.



For more information about different functions, see [Shipments: Overview](#), [Requesting Shipment: Introduction](#), [Purchase Orders](#), and [User Management](#) (Settings).


The screenshots below show examples of a Console Owner's view of the **Dashboard**.


The screenshot displays the YubiEnterprise Services Dashboard for 'Alpha Company'. The left sidebar contains navigation links: 'Dashboard' (selected), 'Shipments', 'Purchase orders', and 'Settings'. The main content area is divided into three sections:

- Available subscription 2.0 licenses:** A single card for 'PRIMARY SUBSCRIPTION Compliance Standard tier' showing 'INITIAL LICENSE 100 / 101' with a green progress circle and a 'CREATE SHIPMENT REQUEST' button.
- Available subscription 1.0 licenses:** Three cards. Two are 'PRIMARY SUBSCRIPTION' (Advanced tier: 185 / 1000, Premium tier: 399 / 1010) and one is 'BACKUP SUBSCRIPTION' (Premium tier: 0 / 10). Each card includes a progress circle and a 'CREATE SHIPMENT REQUEST' button. A '100 SHIPPABLE' indicator is visible on the Premium tier card.
- Available standard products inventory:** A row of six product images with labels: YubiKey 5 NFC, YubiKey 5 Nano, YubiKey 5C, YubiKey 5C Nano, YubiKey 5CI, and YubiKey C FIPS. A 'Create shipment request' button is located to the right.


The **Dashboard** displays cards for each of the different subscription plans/tiers within the primary, backup and replacement categories. Each card shows the licenses available and the total licenses in the form of numbers and a circular graphic showing the amount of product consumed and remaining. In addition, the supported form factors for each plan/tier/category can be viewed.


 PRIMARY SUBSCRIPTION
Advanced/Bio Plus tier 


INITIAL LICENSE
500 / 500



REPLACEMENT
125 / 125



Form factors available


YubiKey 5 NFC




YubiKey 5 Nano



YubiKey 5C


YubiKey 5


[CREATE SHIPMENT REQUEST](#)



 BACKUP SUBSCRIPTION
Advanced/Bio Plus tier 

INITIAL LICENSE
500 / 500


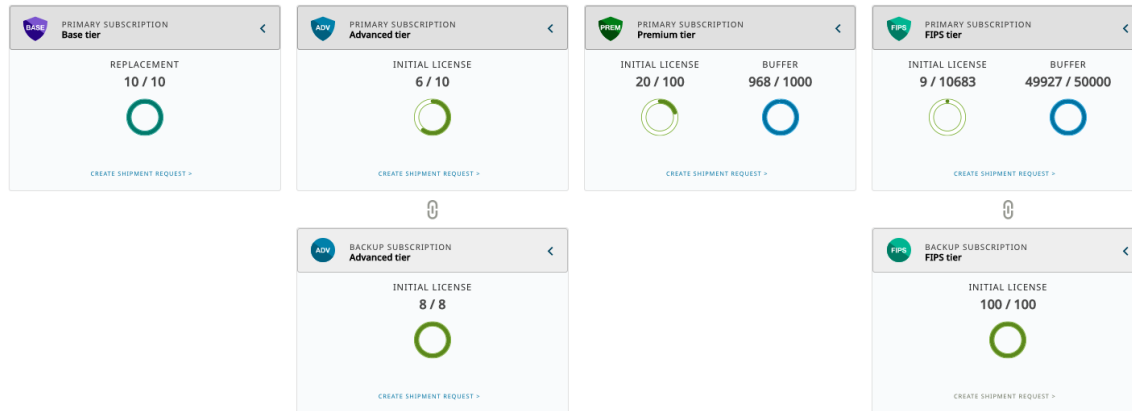
[CREATE SHIPMENT REQUEST >](#)

To view the form factors available for each type of subscription, click the left-pointing caret on the right of the title bar on the card. The **Form factors available** popup opens on the card. This is shown on the top card in the screenshot above; the caret of the card at the bottom is unclicke

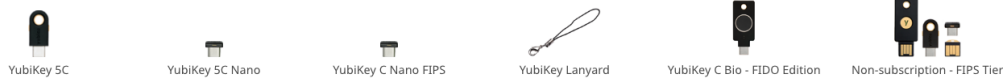
You can put in a shipment request directly from each subscription card as well as from within the Form factors available window. For more information on creating shipment requests, see [Requesting Shipment: Introduction](#).

Subscription (2.0) is differentiated from Subscription (1.0), and the standard products inventory is shown simply as form factors available.

Available subscription 1.0 licenses



Available standard products inventory

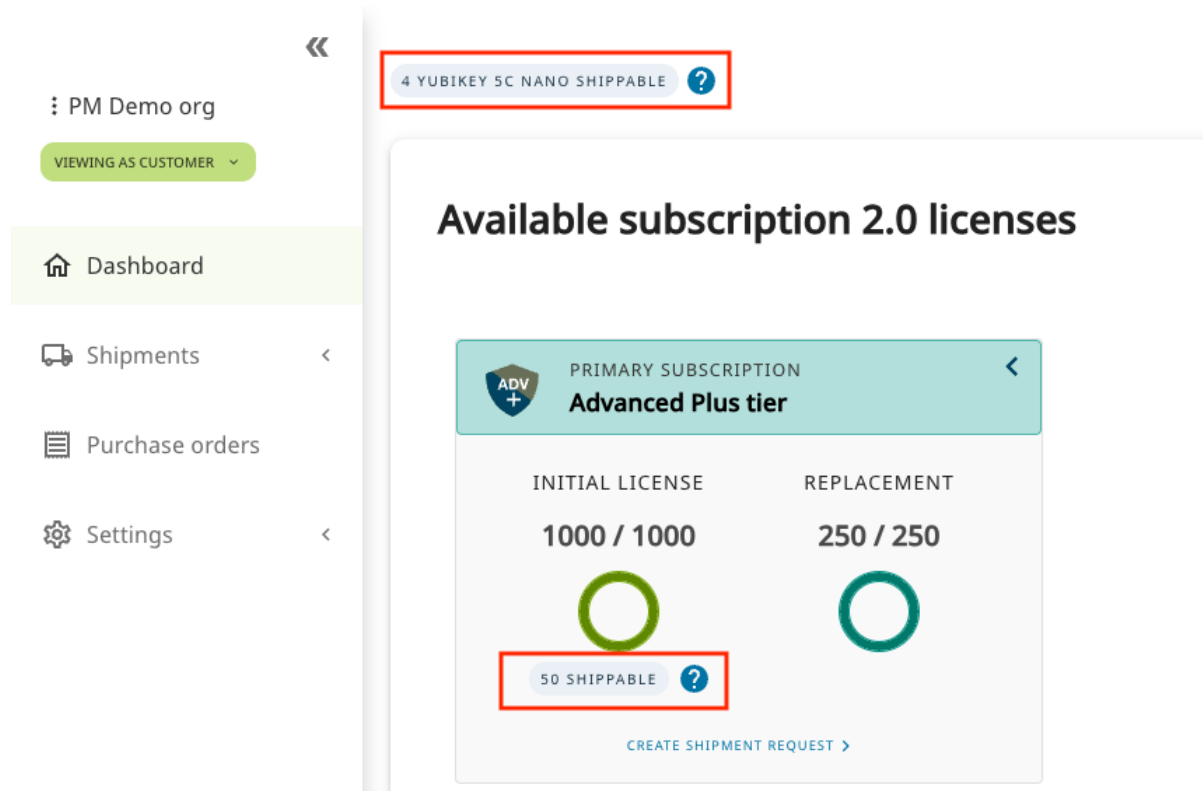
[Create shipment request](#)


In the examples shown above, we see the subscription tiers purchased plus inventory available in addition to standard product inventory. [Recent Shipments](#) is shown on the Dashboard below that, along with [Recent Purchase Orders \(POs\)](#). Entitlement to products for each subscription tier is given in [Key Models Per Tier](#).

Shippable Inventory

On certain occasions, shippable quantities for a product might be allocated, for example due to limited availability. Inventory allocation is also used for shipment of customized keys to indicate the number of pre-programmed keys available for shipment.

If there is an inventory allocation set for a specific product you will see the availability on your **Dashboard** and in the **Create shipment request** form when requesting shipments.



If there are no shippable products available, you will not be able to request shipments. The allocation is removed or updated as soon as the affected products become available.

You can enable the **Only show shippable inventory** toggle switch on the top right of the Dashboard to see products that can be shipped through automated shipments.

If the toggle is turned *on*, the inventory allocation is displayed only if it has been set for a product that can be shipped using the YubiEnterprise Console (automated shipments). In that case, the remaining product volume supported by automatic shipment is *smaller* than the actual total remaining available allocated inventory number that can be shipped using manual and automated shipments.

Recent Shipments

Only recent shipments are displayed on the Dashboard. To view all shipments, click the **Shipments** tab. The information displayed in the table in the **Recent Shipments** section is explained in [Searching Shipments](#), which is in [Shipments: Overview](#).

Recent Purchase Orders (POs)

Only recent POs are shown on the Dashboard. To view all POs, click **View all purchase orders**, which takes you to the [Purchase Orders](#) tab. The information displayed in the table in the **Recent purchase orders** section is explained in [Viewing Purchase Orders](#).

Managing Settings

From the **Settings** page Console Owners can add and delete users for the organization, and recover and reset user accounts if needed. For more information, see [User Management](#).

1.7.2 Distributor View

Distributors are organizations that sell Yubico products to resellers that in turn sell the products to end customers. The *Distributor role* provides access to the **Distributor** view in the Console.

Reseller ↓	Customer	Purchase orders
Stage_Reseller04	Stage_Cust02	1
Stage_Reseller02	Stage_Cust03	1
Stage_Reseller01	Stage_Cust01	1
Stage_Reseller01	Stage_Cust02	1

Total Rows: 4

The Distributor view lets you see what was sold to end customers, monitor their inventories, and provide access to purchase order information for your resellers.

Viewing Inventories

The **Resellers** page provides an overview of your associated resellers. To view the inventory for a specific reseller customer, select **Resellers** in the left menu and click on a **Customer** link in the list.

The screenshot displays the YubiEnterprise end customer dashboard. On the left is a sidebar with navigation links: 'Stage_Dist01', 'VIEWING AS DISTRIBUTOR' (highlighted in purple), 'Resellers', 'Purchase orders', and 'Settings'. The main content area shows the breadcrumb 'Resellers / Stage_Reseller04 - Stage_Cust02'. Below this, a card titled 'Available subscription 1.0 licenses' contains a 'PRIMARY SUBSCRIPTION' section for the 'Base tier'. This section features three progress indicators: 'INITIAL LICENSE' at 100 / 100 (green circle), 'BUFFER' at 5 / 5 (blue circle), and 'REPLACEMENT' at 25 / 25 (green circle).

This displays the end customer Dashboard showing the inventory that was sold by the distributor and the associated reseller to that end customer. The dashboard view is an aggregation of how much of each product was purchased, and how much inventory is available for shipping. Inventory sold to this end customer by other distributors or resellers is not shown.

The end customer dashboard view displays the following information:

- Subscription/non-subscription inventory
- Perpetual/Standard inventory
- The number of each product purchased
- The number of each product remaining to be redeemed/shipped
- For virtual tiers (Advanced/Compliance), the models that the end customer can order
- The most recent purchase orders

Viewing Purchase Orders

The **Purchase orders** page provides a list of purchase orders and associated resellers and their end customers. To see purchase order details for a specific customer, click the desired **Purchase order** link in the list of resellers.

«

Stage_Dist01

VIEWING AS DISTRIBUTOR

Resellers

Purchase orders

Settings

Search

Columns Filters Density Refresh data

Rows per page: 15 1-4 of 4 < >

Purchase order ↓	Order date	Reseller	Customer	Contact	YE Delivery ?
Dist01-Reseller04-Cust03-noYED	Sep 22, 2023	Stage_Reseller04	Stage_Cust02	Austin Brown abrown@example.org	✗ NO
Dist01-Reseller02-Cust03-withYED	Sep 22, 2023	Stage_Reseller02	Stage_Cust03	Lani Kealakekoa lani@business.com	✓ YES
Dist01-Reseller01-Cust02-withYED	Sep 22, 2023	Stage_Reseller01	Stage_Cust02	IT Buyer someone@company.com	✓ YES
Dist01-Reseller01-Cust01-withYED	Sep 22, 2023	Stage_Reseller01	Stage_Cust01	Pat Smith person@company.com	✓ YES

Total Rows: 4

For more information on purchase order details, see [PO Detail View](#).

Managing Settings

From the **Settings** page you can manage settings for your resellers, for example allowing them to view purchase orders. For more information, see [Distributor Role](#).

1.7.3 Reseller View

Resellers are organizations that sell Yubico products to end customers. The [Reseller role](#) provides access to the **Reseller** view in the Console.

«

Stage_Reseller01

VIEWING AS RESELLER

Customers

Purchase orders

Settings

Search

Columns Filters Density Refresh data

Rows per page: 15 1-2 of 2 < >

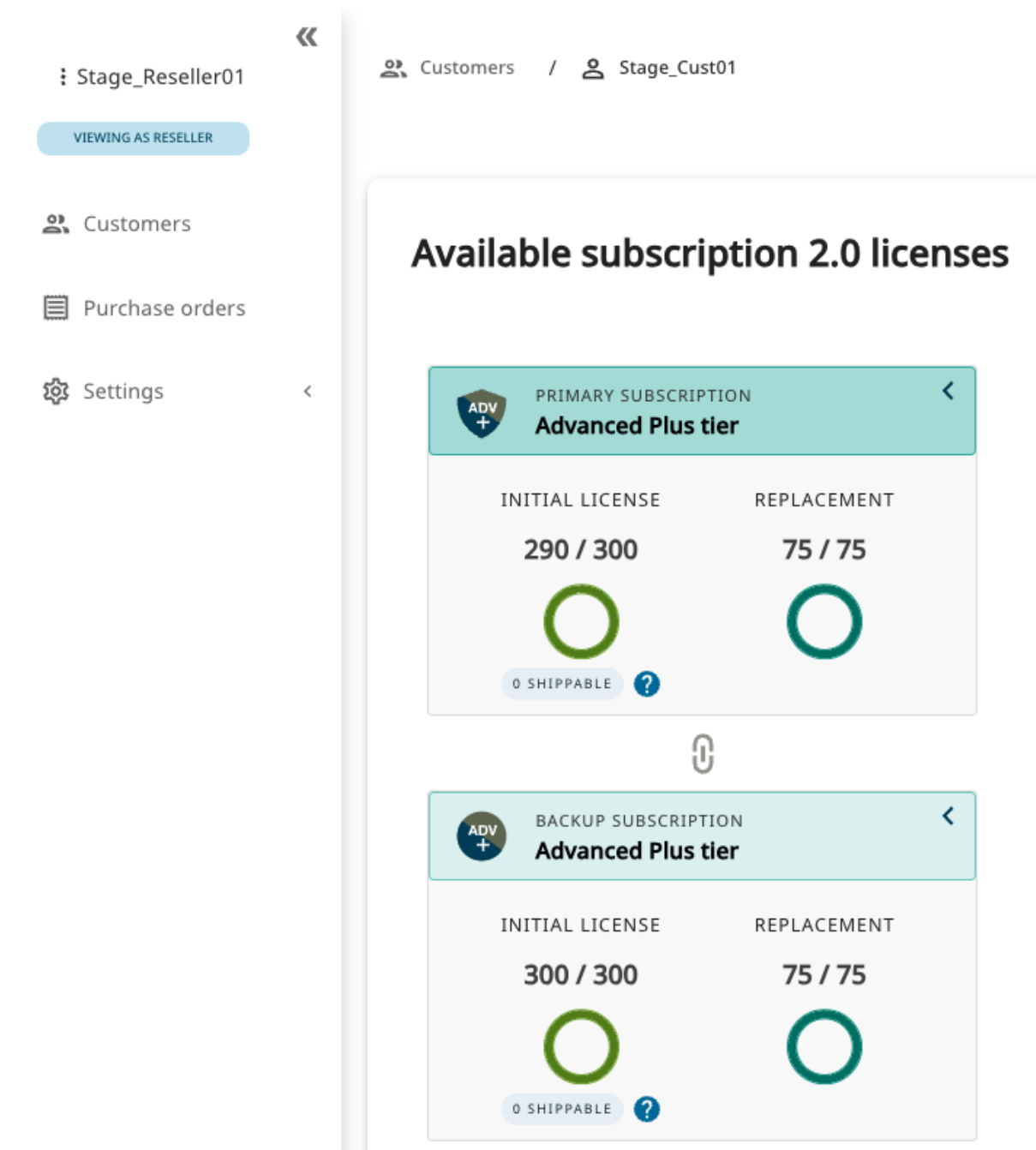
Customer	Purchase orders
Stage_Cust01	1
Stage_Cust02	1

Total Rows: 2

The Reseller view lets you see what was sold to your customers, monitor their inventories, and provide access to purchase order information for your end customers.

Viewing Inventories

The **Customers** page provides an overview of your customers. To view the inventory for a specific customer, select **Customers** in the left menu and click on a **Customer** link in the list.



This displays the end customer Dashboard showing the inventory that was sold by you to that end customer. The dashboard view is an aggregation of how much of each product was purchased, and how much inventory is available for shipping. Inventory sold to this end customer by other distributors or resellers is not shown.

The end customer dashboard view displays the following information:

- Subscription/non-subscription inventory
- Perpetual/Standard inventory
- The number of each product purchased
- The number of each product remaining to be redeemed/shipped

- For virtual tiers (Advanced/Compliance), the models that the end customer can order
- The most recent purchase orders

Viewing Purchase Orders

The **Purchase orders** page shows a list of purchase orders and associated customers, and distributors if any. To see purchase order details for a specific customer, click the desired **Purchase order** link in the list.

Purchase order ↓	Order date	Customer	Distributor	Contact	YE Delivery ?
Dist01-Reseller01-Cust02-withYED	Sep 22, 2023	Stage_Cust02	Stage_Dist01	IT Buyer someone@company.com	✓ YES
Dist01-Reseller01-Cust01-withYED	Sep 22, 2023	Stage_Cust01	Stage_Dist01	Pat Smith person@company.com	✓ YES

For more information on purchase order details, see [PO Detail View](#).

Managing Settings

From the **Settings** page you can manage settings for your customers, for example allowing them to view purchase orders. For more information, see [Reseller Role](#).

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.8 Purchase Orders

The **Purchase orders** page displays the purchase orders (POs) that have been submitted for both products and delivery shipping credits.

Note: POs are generated by contacting your Yubico sales representative or your channel partner, not from the YubiEnterprise Delivery Console.

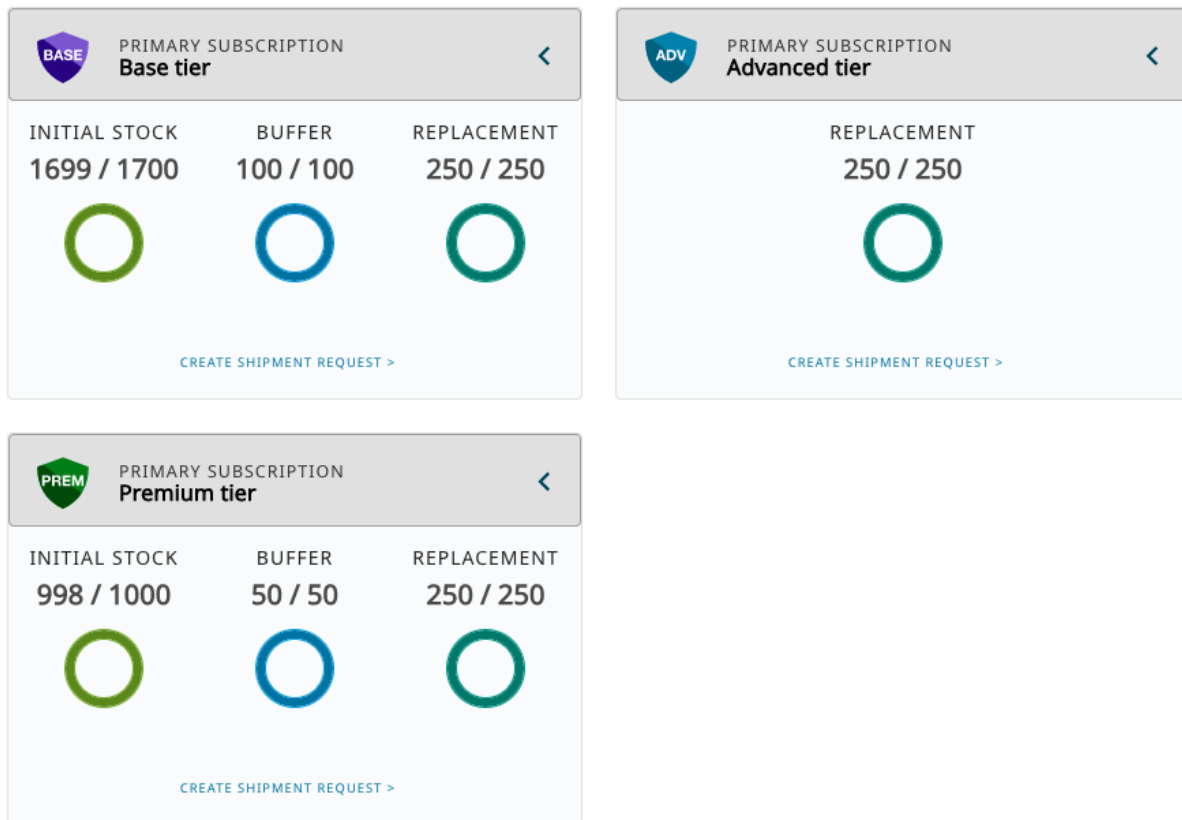
The **Purchase orders** page lists your order information as shown in the example below.

Order date ↓	Purchase order number	Reseller	Contact	Status	YE Delivery ?
Jul 7, 2023	PO01234	--	Firstname Lastname	Available for Shipment	✓ YES
Feb 4, 2022	Subscription PO	--	Firstname Lastname	Available for Shipment	✓ YES
Sep 1, 2021	Perpetual PO	--	Firstname Lastname	Available for Shipment	✓ YES

Total Rows: 3

View the subscription tiers and number of licenses for products you currently have in inventory by clicking on the PO number to display the PO detail view (see [PO Detail View](#)). This information is also shown on the Dashboard:

Available subscription 1.0 licenses



The subscription tiers are listed and explained in [Modes of Purchase](#).

Note: If you want to identify the PO that applies to a particular inventory, be aware that unless the PO is **ONLY** for that item, you will not be able to find it by filtering on the Status column. In other words, it is not possible to filter on the status of inventory that has been exhausted if its PO contains more than one product. For example, even if you do not have any keys left in a Backup subscription Premium tier, if that purchase is included in a PO with a Primary subscription Advanced tier that has not yet been exhausted, the PO status will be displayed as **Available for shipment**.

1.8.1 Viewing Purchase Orders

Depending on your role and the selected view - Customer, Distributor or Reseller - you will see different information when looking at the **Purchase orders** page.

The **Customer** view shows purchase orders (POs) submitted on behalf of an organization. The **Distributor** and **Reseller** views are intended for distributor and reseller types of organizations, and show purchase orders associated with a distributor or reseller respectively. Console Owners for an organization always have access to the Customer view to be able to manage organization users.

You can have multiple roles within an organization. For example, as a Console Owner for a *distributor* type of organization you will have access to both the Customer and the Distributor views. You will then see the following information on the **Purchase orders** page:

- The **Customer** view shows information about purchase orders submitted for your own organization, for example keys you purchased for your employees.
- The **Distributor** view shows information about purchase orders submitted on behalf of your associated resellers and their end customers.

Note: Distributors must first allow their resellers to view PO information associated with them. Resellers must then allow their associated end customers to view their PO information. For more information, see [Roles and Permissions](#).

Click the view selector in the upper part of the left menu to switch between views. Use the [Filters](#) function to search for a subset of purchase orders.

1.8.2 Purchase Order Column Headings

Customer View

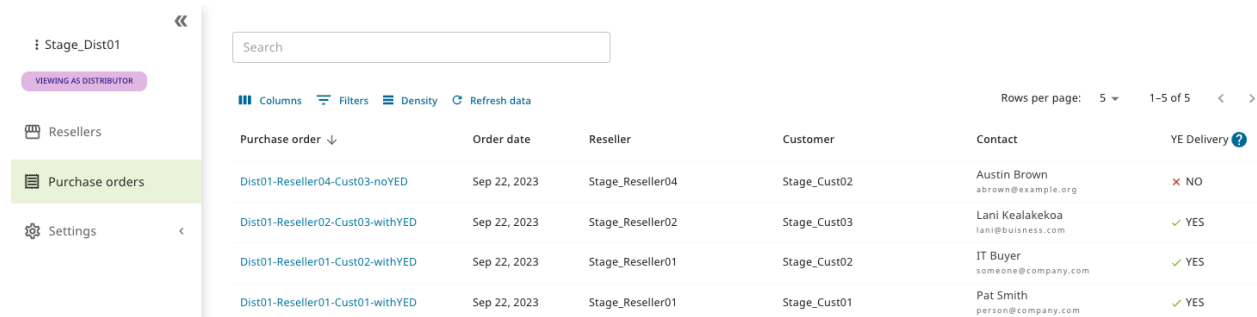
Note: Selecting the **Customer** view as an end customer you can only see POs from *indirect* sales if the reseller has granted you access to view purchase order information. You will always be able to see POs from *direct* sales (through Yubico).

The **Customer** view provides the following purchase order information:

- **Order date** - When the order was received by Yubico.
- **Purchase order number** (PO number) - Links to a [PO Detail View](#) showing what was purchased and existing inventory related to that specific purchase order. If you purchased from a reseller, unit prices are not shown.
- **Reseller** - Name of reseller. This field is empty if you purchased directly from Yubico.
- **Contact** - Name on the PO provided to Yubico.
- **Status** - Whether available for shipping or not. As shipping requests are processed, inventory and shipping credits will be depleted.
 - **Available for Shipment** - Indicates whether there are products available for shipment.
 - **Order Consumed** - All products purchased have been shipped.
 - **Order Expired, contact sales** - The PO expired before the keys were shipped, so you should contact your Yubico sales person.
- **YE Delivery** - Indicates whether the inventory can be shipped using YubiEnterprise Delivery.

Distributor View

Distributors are organizations that sell Yubico products to resellers that in turn sell the products to end customers. For more information about Distributor view options, see [Distributor View](#).



The screenshot shows the 'Distributor' view in the YubiEnterprise interface. The left sidebar has a 'VIEWING AS DISTRIBUTOR' button and a 'Purchase orders' menu item. The main table displays purchase order information with columns: Purchase order, Order date, Reseller, Customer, Contact, and YE Delivery. The table contains four rows of data.

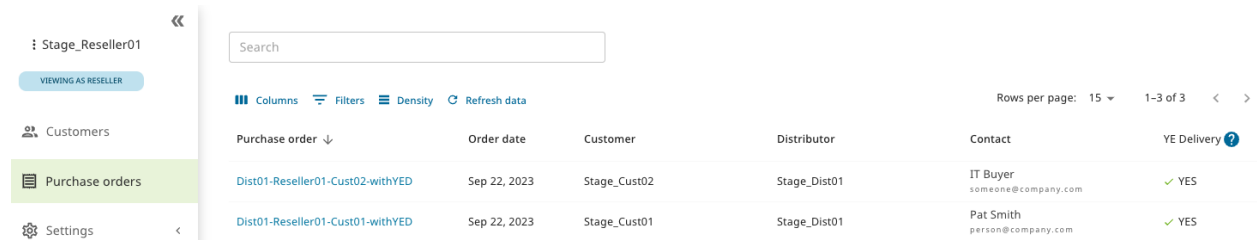
Purchase order ↓	Order date	Reseller	Customer	Contact	YE Delivery ?
Dist01-Reseller04-Cust03-noYED	Sep 22, 2023	Stage_Reseller04	Stage_Cust02	Austin Brown abrown@example.org	✗ NO
Dist01-Reseller02-Cust03-withYED	Sep 22, 2023	Stage_Reseller02	Stage_Cust03	Lani Kealakekoa lani@business.com	✓ YES
Dist01-Reseller01-Cust02-withYED	Sep 22, 2023	Stage_Reseller01	Stage_Cust02	IT Buyer someone@company.com	✓ YES
Dist01-Reseller01-Cust01-withYED	Sep 22, 2023	Stage_Reseller01	Stage_Cust01	Pat Smith person@company.com	✓ YES

Purchase order information in the **Distributor** view includes the following:

- **Purchase order number** (PO number) - links to a [PO Detail View](#) showing what was purchased and existing inventory related to that specific purchase order.
- **Order date** - When the order was received by Yubico.
- **Reseller** - Name of the reseller for the PO.
- **Customer** - Name of the end customer for which the purchased products are intended.
- **Contact** - Name on the PO provided to Yubico.
- **YE Delivery** - Indicates whether the inventory can be shipped using YubiEnterprise Delivery.

Reseller View

Resellers are organizations that sell Yubico products to end customers. For more information about Reseller view options, see [Reseller View](#).



The screenshot shows the 'Reseller' view in the YubiEnterprise interface. The left sidebar has a 'VIEWING AS RESELLER' button and a 'Purchase orders' menu item. The main table displays purchase order information with columns: Purchase order, Order date, Customer, Distributor, Contact, and YE Delivery. The table contains two rows of data.

Purchase order ↓	Order date	Customer	Distributor	Contact	YE Delivery ?
Dist01-Reseller01-Cust02-withYED	Sep 22, 2023	Stage_Cust02	Stage_Dist01	IT Buyer someone@company.com	✓ YES
Dist01-Reseller01-Cust01-withYED	Sep 22, 2023	Stage_Cust01	Stage_Dist01	Pat Smith person@company.com	✓ YES

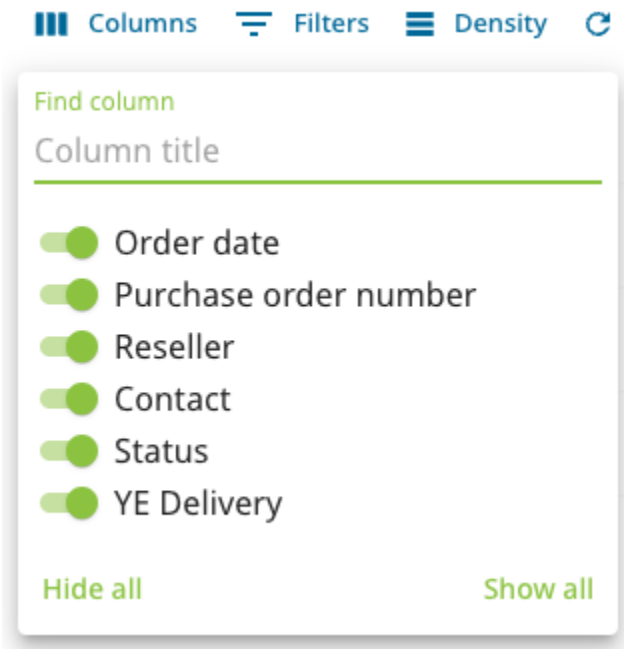
Purchase order information in the **Reseller** view includes the following:

- **Purchase order number** (PO number) - links to a [PO Detail View](#) showing what was purchased and existing inventory related to that specific purchase order.
- **Order date** - When the order was received by Yubico.
- **Customer** - Name of the end customer for which the purchased products are intended.
- **Distributor** - Name of the distributor through whom the reseller purchased the products. If no distributor is involved in the purchase, this field is empty.
- **Contact** - Name on the PO provided to Yubico.
- **YE Delivery** - Indicates whether the inventory can be shipped using YubiEnterprise Delivery.

1.8.3 Purchase Order Table Controls





Columns

To determine which columns will be shown and/or to hide or show them, click on **Columns** in blue, below the **Search** field.



Filters

To determine which filters will be used, click on **Filters** in blue, below the **Search** field. The operators are contains or equals.


 Columns  Filters  Density  Refresh data




Purchase order number	Operator contains ▼	Value _____
Reseller name	Operator contains ▼	Value _____
Status	Operator contains ▼	Value _____
Order date	From _____	To _____

Clear all Apply

Density

To determine how the information on the **Purchase orders** page will be shown, click on **Density** in blue, below the **Search** field to select from the Compact, Standard, or Comfortable options.

 Density  Refresh

 Compact
 Standard
 Comfortable

Searching Purchase Orders

The **Search** field on the upper left of the **Purchase orders** page enables you to locate any element in a purchase order, even partial words or numbers. Entering search parameters instantly filters the list of purchase orders based on those parameters.

To return to viewing the list of search results after clicking into one of the list items, click **Go back**. The list remains available even after refreshing the browser window while on a page of search results.

Change or remove the search parameters in the **Search** field to reset the search.

Advanced Search

You can perform advanced searches by using Filters. You can also use Search in combination with Filters to drill down further into the list of purchase orders. For more information, see [Filters](#).

1.8.4 PO Detail View

For more information about a PO, click the **Purchase order** number to open the **Purchase order detail** view.

The screenshot shows the 'Purchase order details' view for order # PO01234. The left sidebar contains navigation links: ACME Inc, VIEWING AS CUSTOMER, Dashboard, Shipments, Purchase orders (selected), and Settings. The main content area displays the order details and a table of products.

Purchase order #: PO01234 [Back](#)

YUBIENTERPRISE DELIVERY INCLUDED ?

Order date: 07 Jul 2023	Reseller: Yubico (direct sale) Reseller ID: 1	123 Street Name Austin Texas 73301 US	Firstname Lastname name@acme.com +1 999 999 9999
-------------------------	--	---	--

Products

Inventory	Cost per item
500 / 500 - Advanced/Bio - Plus - Primary	\$47.53
125 / 125 - Advanced/Bio - Plus - Primary - Replacement	\$0.00
500 / 500 - Advanced/Bio - Plus - Backup	\$35.65
248 / 250 - Compliance - Plus - Primary	\$49.08
75 / 75 - Compliance - Plus - Primary - Replacement	\$0.00
250 / 250 - Compliance - Plus - Backup	\$36.81

Customer view of PO details

The following information is displayed:

- The **Purchase order #**
- The **Order date**
- The **Reseller** name (also for direct purchase from Yubico)
- The **Reseller ID**
- The product inventory. For subscriptions, this is expressed as the name of a *tier*.
 - Number shown in bold indicates the number of subscriptions available out of the number of subscriptions purchased (number not bolded).
 - If the purchase was direct (not through a channel partner), the unit price per item is shown.

Note: If a customer has purchased inventory directly from Yubico, *and* from a distributor, *and* from a reseller, that customer can see all three 'buckets' of inventory. Similarly, a distributor can see which resellers have purchased from

it as well as the respective inventories, but the distributor would not be able to see if other distributors supply those resellers through YubiEnterprise Delivery. Each “chain” (or set of relationships) “Distributor > Reseller > Customer” is unique.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.9 Shipments: Overview

You can manage shipments from your inventory of purchased products on the **Shipments** page. Even if not all your products are being shipped through YubiEnterprise Delivery, you can track shipment requests regardless of how those shipments are processed by Yubico.

Shipments processed through YubiEnterprise Delivery (Console, API, or CSV) are considered “Automatic”, whereas the shipments created by Yubico or a channel partner at your request (for example by telephone) are considered “Manual”. Any given shipment request displayed on the Console’s **Shipments** page will show which kind of shipment it is in the **Type** column.

Console Owners and Admins can request (create) shipments and edit the requests if the shipment is of the Automated type and has not yet been processed. The **Status** column shows the *Shipment Request Status*.

ID	Date	Shipment address	Recipient email	Delivery	Type	Status
RusbUsLn	Aug 27, 2021	Firstname Lastname, 123	name@acme.com	Normal	AUTOMATED	Shipment Lost/Missing
2fG2MLu2	Aug 5, 2021	Firstname Lastname, 123	name@acme.com	Normal	AUTOMATED	Incomplete
8ZGBQmC	Aug 5, 2021	Firstname Lastname, 172	--	Normal	AUTOMATED	Incomplete
86QWZWI	Aug 4, 2021	Firstname Lastname, 2 Lane	--	Normal	AUTOMATED	Shipment Lost/Missing
NLzXZDgr	Aug 4, 2021	Firstname Lastname, Rail	--	Normal	AUTOMATED	Address is undeliverable or could not be understr

Shipments page

1.9.1 Shipment Tasks

- *Shipping to a Single Address*
- *Bulk Shipment: Shipping to Multiple Addresses*
- *API Shipment Requests*
- *Downloading the CSV File of Shipment Requests*
- *Notifying End-Users of Shipment and Delivery*

1.9.2 Actions

From the **Actions** menu on the **Shipments** page (next to **Create shipment request**), you can select from these options:

- **Review incompletes** - Review requests that have not gone through because the request was not complete, see [Reviewing Incompletes](#).
- **Bulk operations** - Delete multiple shipment requests at once, see [Bulk Deletion of Shipment Requests](#).
- **Processed refunds** - See which shipment request costs have been refunded, see [Refunds](#).

1.9.3 Viewing Shipments

On the **Shipments** page, you can sort on all the column headings using different criteria. To view all the details for a given request, including the email address of the person who made the request, click on the ID of the request.

Shipments Column Headings

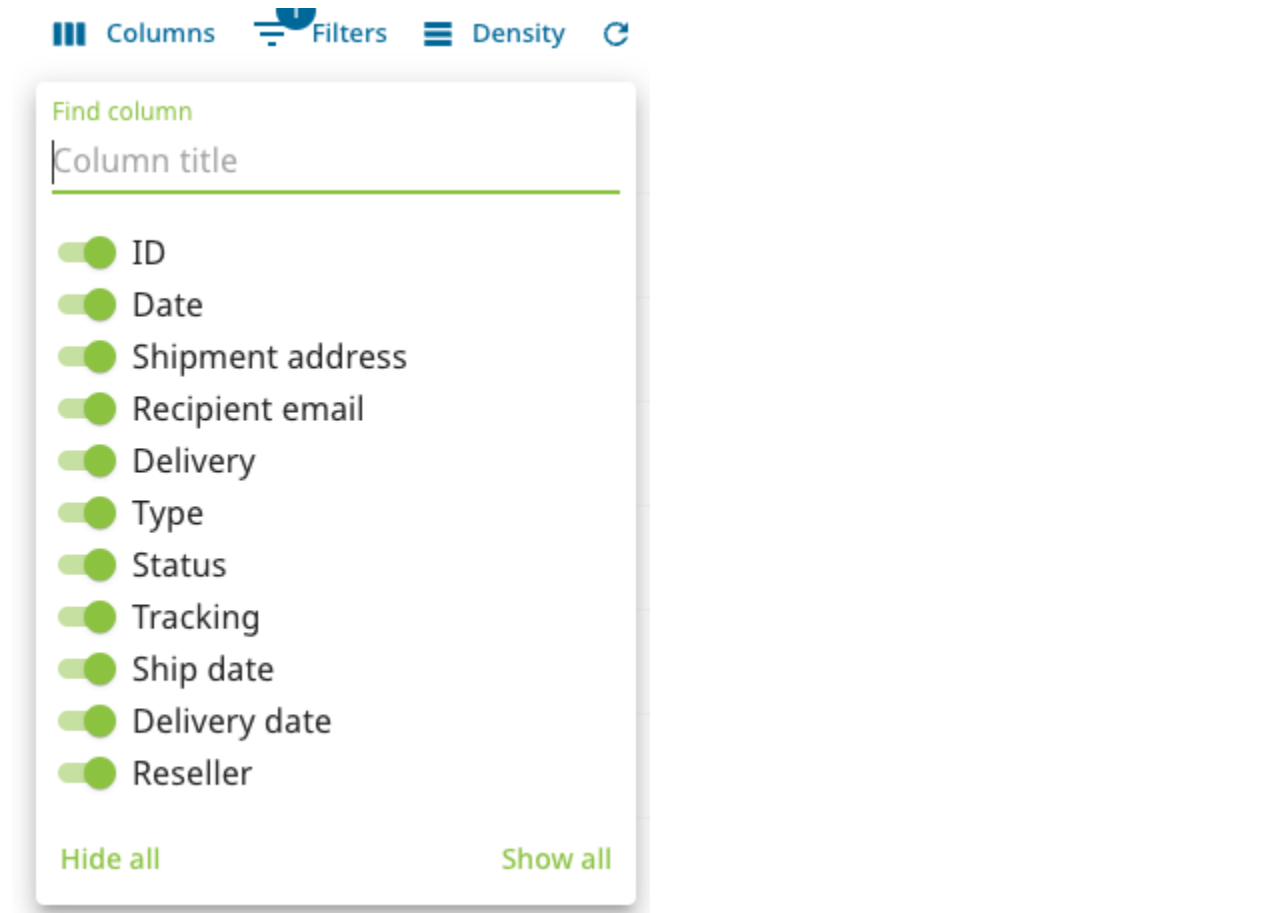
The **Shipments** page provides the following information:

- **ID** - The ID of the shipment request. Click the ID number to view the shipment request details, see [Shipment Details View](#).
- **Date** - Date on which the shipment request was made.
- **Shipment address** - The address to which the shipment was or will be sent.
- **Recipient email** - Email address to which information about the shipment is automatically sent.
- **Delivery** - Type of delivery - Normal or Expedited (rush).
- **Type** - How the shipping request was created, **Manual** or **Automated**, see [Shipments: Overview](#).
- **Status** - The status of the shipment request, see [Shipping Status Codes](#).
- **Tracking** - The tracking number with the carrier. Clicking the tracking number takes you to the site of the carrier.
- **Ship date** - Date on which the shipment was dispatched.
- **Delivery date** - Date on which the shipment arrived at its destination.
- **Reseller** - Name of the reseller, if reseller was involved in the purchase.

Shipments Table Controls

Columns

To determine which columns will be shown and/or to hide or show them, click on **Columns** in blue, below the **Search** field.



Filters

To determine which filters will be used, click on **Filters** in blue, below the **Search** field. The number on the Filters icon indicates the quantity of filters that have been set; in the case illustrated, just one: “Shipment address” contains the Palo Alto value.

Columns

1

Filters

Density

Refresh data

Shipment address	Operator contains	Value Palo Alto
Recipient name	Operator contains	Value
Country code	Operator contains	Value
Type	Operator is	Value any
Recipient	Operator equals	Value
Recipient email	Operator equals	Value

Clear allApply

Density

To determine how the information on the **Shipments** page will be shown, click on **Density** in blue, below the **Search** field to select from the Compact, Standard, or Comfortable options.

Density

Refresh

Compact

Standard

Comfortable

Searching Shipments

The **Search** field on the upper left of the **Shipments** page lets you locate any element in a shipping request, even partial words or numbers. Entering search parameters instantly filters the list of shipments based on those parameters.

To return to viewing the list of search results after clicking into one of the list items, click **Go back**. The list remains available even after refreshing the browser window while on a page of search results.

Change or remove the search parameters in the **Search** field to reset the search.

Advanced Search

You can perform advanced searches by using **Filters**. You can also use **Search** in combination with Filters to drill down further into the list of shipments. For more information, see [Filters](#).

Shipment Request Status

The shipment request **Status** shows the progress of the shipment request, for example “Awaiting Validation”, “Delivered”, or “Incomplete”. For more information, see [Shipping Status Codes](#).

In case of shipment request errors, click the shipment ID to open the [Shipment details](#) view to investigate the shipment information. To edit a shipment request and correct errors, see [Editing or Deleting a Shipment](#).

Shipment Details View

To open the **Shipment details** view, click the shipment ID either from the **ID** column on the **Shipments** page, or in the **Recent Shipments** section of the **Dashboard**.

The **Shipment details** page displays the following information:

- **SHIPMENT ID** section - The shipment ID and type of shipment request (manual/automated).
- **REQUEST DATE** and **REQUESTOR** - The date when the shipment request was created, and the email of the user who created the shipment request.
- **RESELLER NAME** and **ID** - Name and ID of the reseller.
- **SHIPMENT STATUS** section - Status and related status messages for the shipment request.
- **Address** section - Contact information for the shipping recipient.
- **Shipping** section - Details about type of delivery, shipping provider and tracking number, if available.
- **Costs** section:
 - **Product cost** - The total cost of purchased products included in the shipping.
 - **Product tax/VAT** - The product tax/VAT based on the total product cost.
 - **Shipping Fee** - The shipping cost based on included products and shipping destinations.
 - **Shipping tax/VAT** - The shipping tax/VAT based on the shipping cost.
 - **Total** - Total cost including shipping and taxes. For more information, see [shipping costs](#).

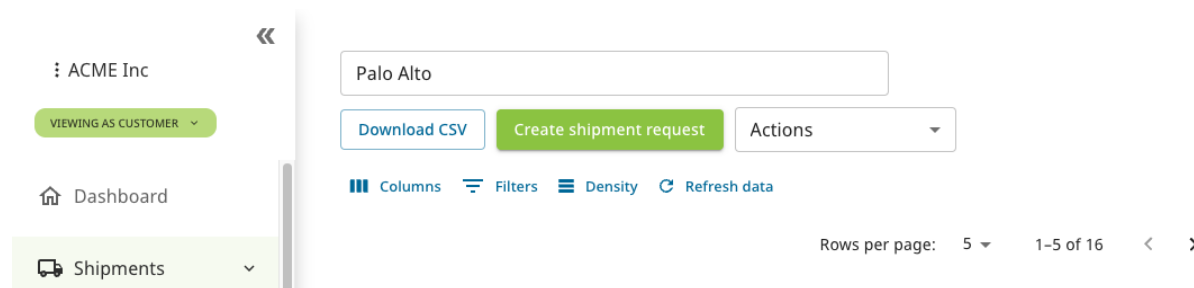
If the shipment request has not yet been locked for processing and fulfillment, you can edit the recipient information and product selection. To edit the shipment, scroll to the bottom of the **Shipment details** page. For more information, see [Editing or Deleting a Shipment](#).

1.9.4 Downloading the CSV File of Shipment Requests

Organization owners, admins, and auditors can download a record of the shipment requests that have been made. To download a CSV file with general shipment data, go to the **Shipments > All shipments** page and click **Download CSV** in the top row.

When downloading the CSV file, only enabled columns and filtered rows are included. Use the **Search** field or click **Filters** to filter out desired shipments. Click **Columns** to include desired columns in the output.

Note: If no filtering is applied, data for **ALL** shipments in the list will be included in the CSV file. Ensure to filter out desired shipments before downloading to only get the data you are interested in.



Column Headings in the Shipment Requests Table (Download CSV)

The Shipment table downloaded as a CSV file combines the information in the shipment ID popup with what is shown on the **Shipments** page plus additional information. The column headings are listed below.

Note: Although all currency amounts displayed by the system are in US dollars, contracts, purchase orders, and invoices, etc. use the currency applicable to the parties involved.

- A - `shipment_id` - The unique identifier assigned by YubiEnterprise Delivery to every shipment request
- B - `shipment_request_date` - month/day/year
- C - `shipment_update_date` - month/day/year
- D - `organization_name` - Name of the customer organization on behalf of which the shipment request was made (typically the same throughout the file)
- E - `reseller_id` - Identifier of the reseller (Yubico's channel partner) - this is 1 if it was a direct sale by Yubico
- F - `user_email` - The email address of the YubiEnterprise Delivery user who made the shipment request
- G - `country_code_2` - Two-letter country code provided in `available_countries.csv`
- H - `inventory_type` - Depends on items entered in customer PO; e.g.,
 - Standard Inventory Keys,
 - Subscription Initial Stock,
 - Subscription Buffer Stock,
 - Subscription Replacement Stock,
 - Tier Perpetual Key,
 - YubiKey Shipment,

- YubiKey Tier SKU Shipment
- I - `is_delivered` - TRUE or FALSE
- J - `is_shipped` - TRUE or FALSE
- K - `shipped_date` - month/day/year - Date of shipping
- L - `delivered_date` - month/day/year - Date of delivery
- M - `tracking_number` - Tracking number assigned by fulfillment agency
- N - `recipient_company` - Name of recipient's company
- O - `recipient_email` - Recipient's email address
- P - `recipient_firstname` - First name of recipient
- Q - `recipient_lastname` - Last name of recipient
- R - `recipient_telephone` - Recipient's telephone number
- S - `street_line1` - First line of street address
- T - `street_line2` - Second line of street address
- U - `street_line3` - Third line of street address
- V - `city` - Name of village, town, or city
- W - `region` - Name or region, state, or province
- X - `postal_code` Postal code, post code, zip code
- Y - `shipment_type` - Automated (entered into the YubiEnterprise system by you) or Manual (entered into the system by Yubico)
- Z - `delivery_type` Normal or Expedited
- AA - `shipment_state_code` - see *Shipping Status Codes*
- AB - `shipment_state_id` - see *Shipping Status Codes*
- AC - `shipment_state_message` - see *Shipping Status Codes*
- AD - `shipment_summary_description` - Total number of keys plus number of each type, e.g., *Total Keys: 2 yk5c:1, sky2:1* means two keys were shipped, one a YubiKey 5C and one a Security Key 2
- AE - `shipment_product_cost` - Cost of product alone, without tax, VAT, or shipping
- AF - `shipment_product_taxes` - Cell is populated if products are shipped to location where sales tax is applicable. Amount of sales tax levied on product
- AG - `shipment_product_vat` - Cell is populated if products are shipped to location where VAT is applicable. Amount of VAT levied on product
- AH - `shipping_service_cost` - Cost of shipping
- AI - `shipping_service_taxes` - Cell is populated if products are shipped to location where sales tax is applicable. Amount of sales tax levied on shipping
- AJ - `shipping_service_vat` - Cell is populated if products are shipped to location where VAT is applicable. Amount of VAT levied on shipping
- AK - `total_shipment_product_cost` - Cost of product(s) with tax or VAT; does not include shipping costs or tax or VAT on them
- AL - `total_shipment_tax_cost` - Cell is populated if products are shipped to location where sales tax is applicable. Total sales taxes levied on product(s) plus shipping costs

- AM - total_shipping_service_cost - Total shipping costs including taxes or VAT levied on them
- AN - total_keys_shipped - Total number of products shipped
- AO - purchaseorder_numbers - If multiple POs were drawn on for a single request, they are separated by a pipe, e.g., PQR_123|PO-0721a
- AP - reseller_name - Name of the reseller from whom you purchased, Yubico's channel partner, whose ID is given in column E.

1.9.5 Notifying End-Users of Shipment and Delivery

The YubiEnterprise Delivery system automatically notifies recipients by email when products are sent to them (see the *SHIPPED* template below) and when they are delivered (see the *DELIVERED* template below) .

If there is a problem with delivery, the system automatically sends an email notification to the person who made the shipping request (see the *DELIVERY EXCEPTIONS* template below).

The variables in angle brackets in the templates below are automatically replaced.

SHIPPED

```
Subject: YubiKeys shipped!
To: <Email address of recipient provided in shipping request>

Hello, <Name of recipient, or if absent, company name>
Your YubiKeys have been shipped. If you have any questions,
please reach out to your company administrator.

<Custom text, if any>

YubiKeys Shipped:
<Type of YubiKey> <Quantity>
Delivered To: <Name and address of recipient>
<Name of Carrier> Tracking Number: <TrackingNumber>

Sincerely,
Your YubiEnterprise Delivery Service Team
This is an automatically generated message from Yubico.
Replies are not monitored or answered.
```

DELIVERED

```
Subject: YubiKeys Delivered!
To: <Email address of recipient provided in shipping request>

Hello, <Name of recipient, or if absent, company name>
Your YubiKeys have been delivered. If you have any questions,
please reach out to your company administrator.

<Custom text, if any>

YubiKeys Delivered:
<Type of YubiKey> <Quantity>
Delivered To: <Name and address of recipient>
<Name of Carrier> Tracking Number: <TrackingNumber>
```

(continues on next page)

(continued from previous page)

Sincerely,
Your YubiEnterprise Delivery Service Team
This is an automatically generated message from Yubico.
Replies are not monitored or answered.

DELIVERY EXCEPTIONS

Subject: YubiKeys Delivery Exceptions!
To: <Email address of end-user, intended recipient>

Hello <Name of end-user>

Your Shipment request for YubiKeys has delivery exceptions.
Please reach out to your company administrator. You can also
reach out to us at YubiEnterprise Support
<<https://www.yubico.com/products/yubienterprise/contact-support/>>

<Custom text, if any>

Delivery Details:
<Type of YubiKey> <Quantity>

Deliver To:
<Address of intended recipient>
<Name of Carrier> Tracking Number: <TrackingNumber>

<Error text>

Sincerely,
Your YubiEnterprise Delivery Service Team

This is an automatically generated message from Yubico.
Replies are not monitored or answered.

Customizing the Automated Emails

One of the primary reasons for customizing the automated emails is when you do not need your end-users to reach out directly to Yubico if they have questions. Usually it is desirable for end-users to contact your own organization's IT department if they have issues understanding how YubiKeys fit into your organization's services access model.

These standard emails can be customized by **adding** text to the existing standard email templates. Note that the *SHIPPED* and *DELIVERED* emails are sent to **every** recipient, so customization is not suitable for sending an individual greeting.

Note: If you make a mistake in the HTML code when customizing the template, you can click the **Restore** button to return to the default. However, if your HTML is correct and you click **Update**, you can no longer click **Restore**. For this reason, consider making a copy of the default template before you customize it.

Step 1

In the Console, click **Settings > Email** and select the **Template** to be customized: Shipped, Deliv-

ered, or Delivery Exceptions.

Modify custom email text

Template
 Shipped

Custom email subject
 YubiKeys Shipped!

Custom email body


```

1
2 <!DOCTYPE html>
3 <html lang="en">
4 <head>
5   <meta http-equiv="Content-Type" content="text/html; charset=utf-8">
6   <script>alert(x)</script>
7 </head>
8 <body style="margin: 0;background: #D8D8D8;">
9
10 <table style="background: #D8D8D8;margin: 10px auto;max-width: 640px;font-family: 'Helvetica Neue', 'Open Sans',
11 <tr>
12   <th style="border-bottom: 1px solid #9aca3c;padding: 50px 0 15px 0;text-align: center;">
13     
14   </th>
15 </tr>
16 <tr>
17   <td style="padding: 25px;">
18     <h1 style="color: #325f74;font-weight: bold; font-size: 28px; text-align: center; margin:10px 0; mso-line-height: 1;">
19       YubiKeys shipped today!
20     </h1>
21     <p style="margin: 20px 0; line-height: 22px;">Hello, {{.Name}}</p>
22     <p style="margin: 20px 0; line-height: 22px;">
23       Your YubiKeys have been shipped. To get started, please visit: <a href="https://www.yubico.com/start">www.
24     </p>
25
26
27     <p style="margin: 20px 0; line-height: 22px;">
28       Delivery Details:<br>

```

✓ Your HTML code has no errors!

Update Send sample Restore

Step 2

Insert the text into the template. It can accept any valid HTML, including scripts. Web and email links can be inserted as HTML link elements. Put the link target in the href attribute, and put the display text for the link between the angle brackets. For example:

Please visit [Yubico's webpage](https://yubico.com) for more information, or email someone@yourcompany.com.

Step 3

Your HTML code is validated as you type. If your code is correct, a green banner announcing its correctness appears, and you can continue editing or click **Update**. However, once you click **Update**, the **Restore** button is deactivated.

If the HTML is wrong, a red banner describing the errors appears, and you can correct it and click **Update** once the red banner disappears, or click **Restore**.

Step 4

To view the customized email just created, click **Send Sample**.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.10 Requesting Shipment: Introduction

This section provides specific information about shipment requests. For a general introduction to shipment requests, see *Shipments: Overview*.

The different methods of requesting shipment each have their own subsection; the information in this current section applies to all methods.

The **Dashboard** displays cards for each of the different subscription plans/tiers within the primary, backup and replacement categories. Each card shows the licenses available and the total licenses in the form of numbers and a circular graphic showing the amount of product consumed and remaining. In addition, the supported form factors for each plan/tier/category can be viewed.

PRIMARY SUBSCRIPTION
Advanced/Bio Plus tier

INITIAL LICENSE: 500 / 500
REPLACEMENT: 125 / 125

Form factors available

- YubiKey 5 NFC
- YubiKey 5 Nano
- YubiKey SC
- YubiKey F

[CREATE SHIPMENT REQUEST](#)

BACKUP SUBSCRIPTION
Advanced/Bio Plus tier

INITIAL LICENSE: 500 / 500

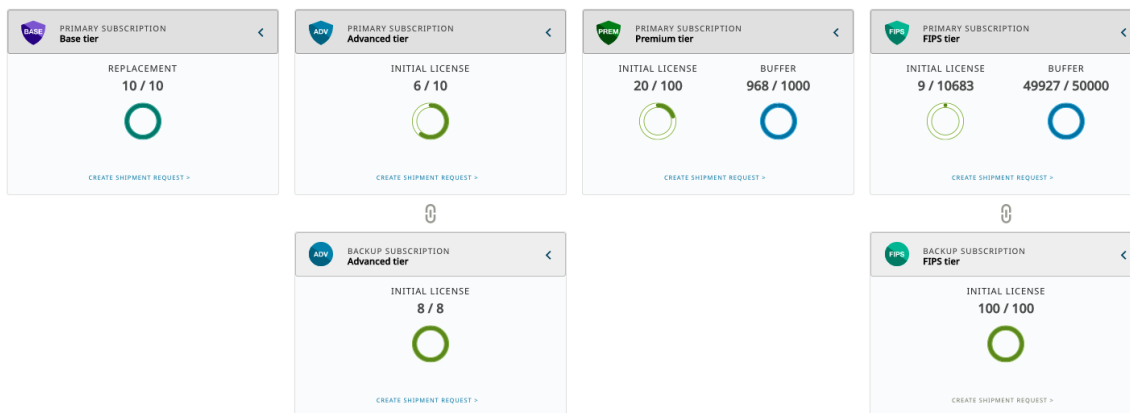
[CREATE SHIPMENT REQUEST >](#)

To view the form factors available for each type of subscription, click the left-pointing caret on the right of the title bar on the card for each type of subscription. The **Form factors available** popup opens on the card. This is shown on the top card in the screenshot above; the caret of the card at the bottom is unclicke and thus does not display the available form factors.

You can put in a shipment request directly from each subscription card as well as from within the Form factors available window. For more information on creating shipment requests, see [Requesting Shipment: Introduction](#).

Subscription (2.0) is differentiated from Subscription (1.0), and the standard products inventory is shown simply as form factors available.

Available subscription 1.0 licenses



Available standard products inventory

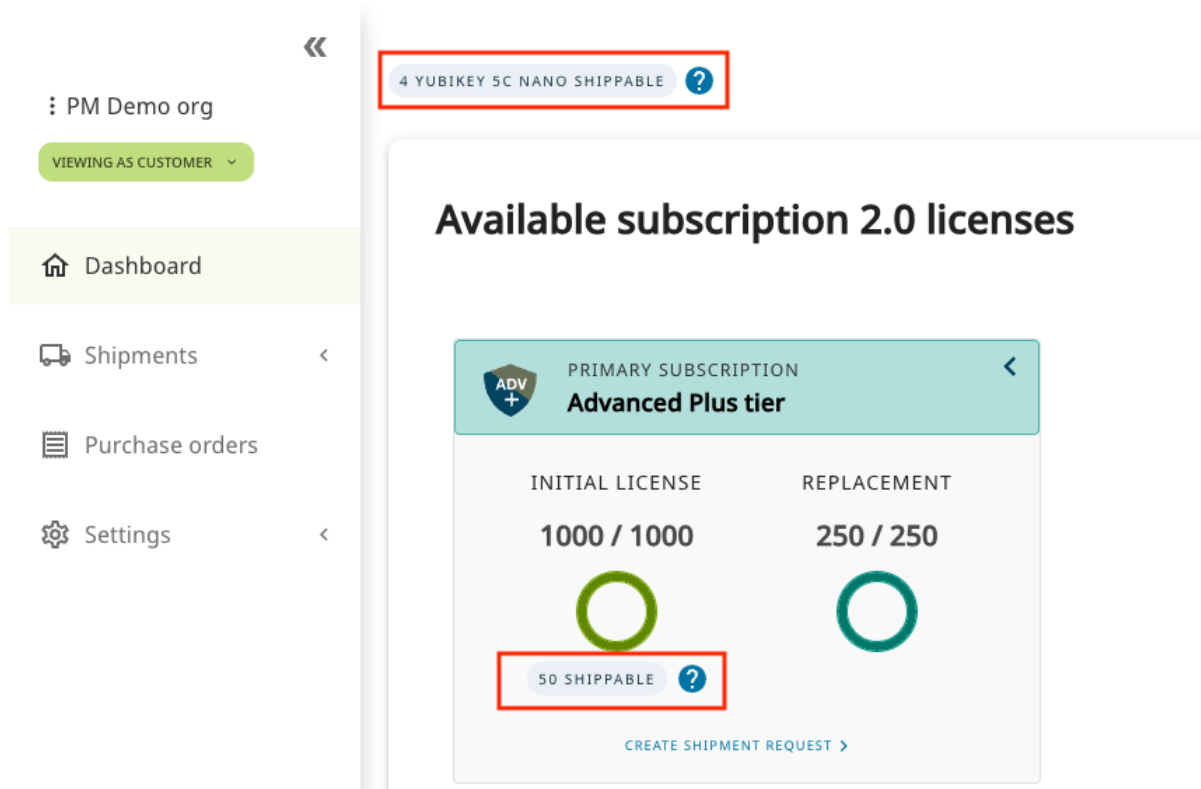


In the examples shown above, we see the subscription tiers purchased plus inventory available in addition to standard product inventory. [Recent Shipments](#) is shown on the Dashboard below that, along with [Recent Purchase Orders \(POs\)](#). Entitlement to products for each subscription tier is given in [Key Models Per Tier](#).

1.10.1 Shippable Inventory

On certain occasions, shippable quantities for a product might be allocated, for example due to limited availability. Inventory allocation is also used for shipment of customized keys to indicate the number of pre-programmed keys available for shipment.

If there is an inventory allocation set for a specific product you will see the availability on your **Dashboard** and in the **Create shipment request** form when requesting shipments.



If there are no shippable products available, you will not be able to request shipments. The allocation is removed or updated as soon as the affected products become available.

You can enable the **Only show shippable inventory** toggle switch on the top right of the Dashboard to see products that can be shipped through automated shipments.

If the toggle is turned *on*, the inventory allocation is displayed only if it has been set for a product that can be shipped using the YubiEnterprise Console (automated shipments). In that case, the remaining product volume supported by automatic shipment is *smaller* than the actual total remaining available allocated inventory number that can be shipped using manual and automated shipments.

1.10.2 Methods of Requesting Shipment

- *Shipping to a Single Address*
- *Bulk Shipment: Shipping to Multiple Addresses*
- *API Shipment Requests*

1.10.3 Address Validation

When Yubico's address validation service catches a discrepancy between an address in a shipment request and post office standards, the system flags the affected shipment request. Requests with such discrepancies are shown as "Incomplete" in the **Status** column of the Console. Incompletes must be reviewed and the proposed change accepted or rejected before the request can be processed. For instructions, see [Reviewing Incompletes](#).

1.10.4 Restrictions

Post Office Boxes

Although the system can deliver to Post Office (PO) Boxes within the United States, delivery to the equivalent elsewhere in the world is unlikely to succeed.

Inventory: Channel Partners

The entity through which you submit a PO is always referred to as a channel partner. “Channel partner” is a term that covers distributors, resellers, and even Yubico itself. Yubico’s Channel partner ID (or `ChannelPartnerId` or `channelpartner_id`) is “1”.

Note: The deprecated `/shipments` API did not support indirect sales, i.e. the selection of channel partners (distributors, resellers). That API only supported direct sales in that the `ChannelPartnerID` was always set to 1, which means Yubico. To order inventory purchased through a distributor or reseller, use the `/shipments_exact` API.

Because inventory is sorted according to the source from which it was purchased, when requesting shipment, distinguish between inventory purchased directly from Yubico and inventory purchased through distributors and resellers doing business with Yubico. The **Dashboard** shows your *total* inventory of any given product, combining quantities purchased from all sources: both directly from Yubico and indirectly through channel partners. To find out what is in which inventory, check your purchase orders.

To find out what the channel partner (reseller or distributor) ID is:

BEFORE shipment

The name of the channel partner (reseller or distributor) is shown on the **Purchase orders** tab, and the channel partner ID is shown on the PO detail popup accessed by clicking on the Purchase order number:

Purchase order #: PO01234

[Back](#)

YUBIENTERPRISE DELIVERY INCLUDED ?

Order date: 07 Jul 2023

Reseller: Yubico (direct sale)

Reseller ID: 1

123 State Street

Austin

Texas

73301

US

Firstname Lastname

firstname.lastname@acme.cor

+1 999 999 9999

Products

Inventory	Cost per item
500 / 500 - Advanced/Bio - Plus - Primary	\$47.53
125 / 125 - Advanced/Bio - Plus - Primary - Replacement	\$0.00
500 / 500 - Advanced/Bio - Plus - Backup	\$35.65
249 / 250 - Compliance - Plus - Primary	\$49.08
75 / 75 - Compliance - Plus - Primary - Replacement	\$0.00
250 / 250 - Compliance - Plus - Backup	\$36.81

AFTER shipment

The **Channel partner ID (Reseller or Distributor)** is shown on the shipment request detail page, accessible by clicking the ID of the shipment request on the **Shipments tab**.

SHIPMENT ID
PZtDmpRHylcn73YgHbGQPm

AUTOMATED

[Go back](#)Request date: 2023-03-27T18:15:16.206Z Reseller name: Yubico (direct sale)
Requestor: Firstname Lastname Reseller ID: 1

Status: Shipped: In transit

- ✓ Shipment requested
- ✓ Shipped: In transit
- Delivered

Status messages

- No status messages

Address

Firstname Lastname
Firstname
530 Lytton Ave
#301
Palo Alto
California
94301
US
frank@acme.com
Tel: 5559251212

Shipping & tax

Shipping Fee: \$10.00
Shipping Tax: \$0.92
Shipping VAT: --
Product cost: \$75.00
Product tax: \$6.85
Product VAT: --
Total: \$92.77
Delivery type: Normal
Provider: FedEx
Tracking: Vr2W3FDIFPC8tsZj6PRErm

Item details

Inventory product type	PO reference	Quantity	Product name	Cost per item	Cost
Standard products	Perpetual PO	1	YubiKey 5Ci	\$75.00	\$75.00

Limits and Constraints

Names and Addresses: First Line

First name and **Last name** in the Console and in the CSV file for bulk shipments, map to the first line on the shipping label.

Long recipient names can be problematic for all methods of requesting shipment, because the shipment request will fail if the contents of the **First name** and **Last name** fields and/or **Company** or **recipient** fields exceed the maximum number of characters permitted in these fields (shown in the table below).

Workaround: When a recipient's full name or company name exceeds the fields' maximum lengths, split the names across the three fields, as in this example:

Location	Field (limit=15)	Field (limit=20)	Field (limit=20)
API	recipient_firstname	recipient_lastname	recipient
CSV	First name	Last name	Company
Console	First name	Last name	Company
Example of an overly long name before adjustment to fit the fields			
	Johannes-Maximilian	von Derschowitz-Dampfloch	zu Querdenker
Example after adjustment			
	Joh.-Maximilian	v.DerschowitzDampfloch	zu Querdenker

Company Name: Second Line

The second line on the shipping label maps to the name of the recipient's company if the address is not residential. For example, the system's address verification function recognizes that Yubico's Santa Clara facility is in a commercial building, therefore the company name is expected in:

- The **Company** field/table cell in the **Console** and in the CSV file.
- The **recipient** field in the API

Note: **API:** Do not use the `/shipments recipient` field to specify the **name of the individual** to whom products are to be shipped. For this, use the `recipient_firstname` and `recipient_last` name fields instead.

If the address is residential, leave empty:

- The **Company** field/table cell in the **Console** and in the CSV file.
- The **recipient** field in the API.

Address Information

Incomplete or incorrect address information might cause *validation errors*. For example, entering the following information for a shipment request would result in failure because USPS recognizes that there are multiple companies in the building whose address is 530 Lytton Avenue:

```
Jan Lindberg
530 Lytton Avenue
Palo Alto, CA 94301
USA
```

Similarly, entering the following information for a shipment request would result in failure because a residential address would not be associated with a company.

Jan Lindberg
Yubico Inc.
6 Lea Rd
Dronfield S18 1SB
UK

When adding address information, you can for example use the address formats provided by Google Maps, see note in [Troubleshooting](#). The limits on the various fields and the options for the dropdown are given in [Shipment Request Form Fields](#).

Address Validation

Every 15 minutes, the system validates addresses; therefore you might have to wait up to 15 minutes to find out if your shipment request has been queued for fulfillment. (For details, see [Shipping Status Codes](#).)

Availability of Stock/Inventory

Shipment allocations may be set. (For details, see [Shippable Inventory](#).)

Non-subscription Purchases

Shipment requests can be made for up to one year after a PO is submitted.

Subscription Purchases

Availability of products depends on the stock/inventory from which the products are drawn. (For details, see [Tier Sub-categories](#).)

1.10.5 Inventory Matters

Subscription (2.0)

Table 3: Subscription (2.0) - full list of inventory (stock) types

Name of Tier	Initial or Replacement	Primary or Backup	Console: “Product selection”, “Products” dropdown
Base Standard tier (FIDO-only key license(s)) Security Keys only	Initial	Primary	Base Standard Primary
		Backup	Base Standard Backup
	Replacement	Primary	Base Standard Primary Replacement
		Backup	Base Standard Backup Replacement
Base Plus tier	Initial	Primary	Base Plus Primary
		Backup	Base Plus Backup
	Replacement	Primary	Base Plus Primary Replacement
		Backup	Base Plus Primary Replacement
Advanced Standard tier (Multiprotocol key license(s)) YubiKey 5 Series including YubiKey 5 Ci	Initial	Primary	Advanced Standard Primary
		Backup	Advanced Standard Backup
	Replacement	Primary	Advanced Standard Primary Replacement
		Backup	Advanced Standard Backup Replacement
Advanced Plus tier	Initial	Primary	Advanced Plus Primary
	Replacement	Primary	Advanced Plus Primary Replacement

Subscription (1.0)

The full list of options that were potentially available in Subscription (1.0) is given below. The actual list depends on what you have purchased. Explanations for the terms in the list are given in the table below the list. For more details on subscription and non-subscription purchasing, see *Modes of Purchase*.

Subscription (1.0): Full List of Inventory Types

- Primary Subscr - Base Tier: Initial
- Primary Subscr - Base Tier: Buffer
- Primary Subscr - Base Tier: Replacement
- Primary Subscr - Adv. Tier: Initial
- Primary Subscr - Adv. Tier: Buffer
- Primary Subscr - Adv. Tier: Replacement
- Primary Subscr - Prem. Tier: Initial
- Primary Subscr - Prem. Tier: Buffer
- Primary Subscr - Prem. Tier: Replacement
- Primary Subscr - FIPS Tier: Initial
- Primary Subscr - FIPS Tier: Buffer
- Primary Subscr - FIPS Tier: Replacement
- Backup Subscr - Base Tier: Initial
- Backup Subscr - Base Tier: Buffer
- Backup Subscr - Base Tier: Replacement
- Backup Subscr - Adv. Tier: Initial
- Backup Subscr - Adv. Tier: Buffer
- Backup Subscr - Adv. Tier: Replacement
- Backup Subscr - Prem. Tier: Initial
- Backup Subscr - Prem. Tier: Buffer
- Backup Subscr - Prem. Tier: Replacement
- Backup Subscr - FIPS Tier: Initial
- Backup Subscr - FIPS Tier: Buffer
- Backup Subscr - FIPS Tier: Replacement
- Non-subscription - Base Tier
- Non-subscription - Advanced Tier
- Non-subscription - Premium Tier
- Non-subscription - FIPS Tier
- Standard Products

Standard Products	Subscription	Non-subscription
Standard products are physical keys purchased outright (on your PO you will not find “Standard Products”, but instead the actual products/models that you purchased).	There is a primary subscription and a backup subscription for each tier (product grouping): Base, Advanced, Premium, and FIPS. Each of those tiers has Initial, Buffer, and Replacement sub-categories, explained in the table below, <i>Tier Sub-categories</i>	The non-subscription tiers are for virtual keys. Unlike subscription tiers, non-subscription tiers have no sub-categories.

Tier Sub-categories

Table 4: **Stock: Initial, Buffer, Replacement**

Initial	The stock in this category reflects the total number of users on the subscription. This lot can be drawn upon for 12 months from the start of your subscription term.
Buffer	This category is made available to you free of charge when your subscription begins. You can draw on it throughout the term of your subscription.
Replacement	This category is intended for those who have lost their YubiKeys or want to upgrade. The stock in this category is reset each year of the subscription to the Replacement limit.

1.10.6 Timing

Shipment Requests

Shipment requests can be edited or deleted until **2am PST (10am GMT)**, the day **after** they were entered. For instructions on these procedures, see [Editing or Deleting a Shipment.](#))

Delivery

Normal (standard) shipping: Typically, shipments will take 5-7 days for delivery in North America and Europe. Delivery to other parts of the world will take longer.

Expedited (rush) shipping: Typically, shipments within North America can be delivered in 1 business day. It may take longer to deliver shipments to other parts of the world, but Yubico will leverage the fastest delivery service reasonably available.

Shipment Status Messages

These error messages accessible via the API tell you why a given shipment request was unsuccessful. It is worth reviewing them before making any shipping requests in order to see what sort of issues might arise and thereby avoid them in the first place.

In the Explanation column, the source of the message is given: YubiEnterprise Delivery system for internal messages, US Validation for the US Postal Service, and finally, International Validation. Messages originating from the last two are simply passed on to you by YubiEnterprise Delivery.

Table 5: **YubiEnterprise Delivery API status messages**

Message	Explanation
InventoryProductId not specified for ProductId %d - ShipmentStateError	See Bulk Shipment: Shipping to Multiple Addresses YubiEnterprise Delivery system
Too many keys in shipment - TotalKeysShipped %d > %d - ShipmentStateError	See Limits and Constraints YubiEnterprise Delivery system
Not enough Inventory for Shipment - ShipmentStateError	See Purchase Orders YubiEnterprise Delivery system
Re-enter the address differently; some parts of it are invalid.	See Troubleshooting US Validation
The address is invalid.	See Troubleshooting US Validation
The address is valid.	No further explanation required. US Validation

continues on next page

Table 5 – continued from previous page

Message	Explanation
Remove the ‘secondary unit designator’ (apt, suite, department, etc.) because it is superfluous.	Remove the apartment number, unit, etc.: it is considered wrong or unnecessary. US Validation
Enter second line information (apartment, unit, etc.). The information in the primary line is not specific enough.	Add the apartment number, unit, etc. US Validation
The address is a valid military address.	No further explanation required. US Validation
The address is a valid General Delivery address where individuals without permanent addresses can receive mail.	No further explanation required. US Validation
The address is valid. An organization such as a government agency can have its own zipcode because it receives a large volume of mail.	No further explanation required. US Validation
Enter a street number; for example, for Yubico “Lytton Ave” alone is not sufficient, it needs to be “530 Lytton Ave”.	The number on the primary line, for example the “185” in “185 Berry Street” is missing. US Validation
Enter a valid street number.	The number on the primary line, for example the “185” in “185 Berry Street” not valid. US Validation
Enter a PO Box, Rural Route, or Highway Contract number.	US Validation
Enter a valid PO Box, Rural Route, or Highway Contract box number.	US Validation
Enter the Private Mailbox (PMB) identifier or the # sign, followed by the PMB number.	PMB number is Private Mailbox Number US Validation

continues on next page

Table 5 – continued from previous page

Message	Explanation
This address is not eligible to receive mail.	US Validation
The address is that of a Commercial Mail Receiving Agency (CMRA) a private business that accepts mail for recipients, and the required private mailbox information is present.	US Validation
The address is missing some important secondary line information (apartment, unit, etc).	No further explanation required. International Validation
Mail is unlikely to arrive at this destination - please verify input.	No further explanation required International Validation
This street could not be found within the city or postal code.	No further explanation required International Validation
Invalid OrganizationId for Shipment	YubiEnterprise Delivery system
Country Code not set for Shipment	YubiEnterprise Delivery system
Country could not be found from CountryCode2: %s	Country code entered is not in YubiEnterprise Delivery system list
Shipment has no shipment items	YubiEnterprise Delivery system
DeliveryType not set for Shipment, defaulting to 1 - <i>normal</i>	YubiEnterprise Delivery system
Invalid DeliveryType %s for Shipment	YubiEnterprise Delivery system

continues on next page

Table 5 – continued from previous page

Message	Explanation
InventoryType not set for Shipment, defaulting to 1	YubiEnterprise Delivery system
InventoryType %s not valid set for Shipment	You cannot use this InventoryType for this shipment - YubiEnterprise Delivery system
Negative quantity entered for ShipmentItem with ProductId=%d defaulting to 0	You set the quantity of the specified ProductID to be shipped to less than zero. YubiEnterprise Delivery system
Invalid ShipmentProductQuantity for ShipmentItem %d	You probably do not have sufficient inventory. YubiEnterprise Delivery system
Invalid ShipmentProductLineCost for ShipmentItem %d	YubiEnterprise Delivery system
Invalid Shipment - Total keys in shipment greater than 500	You cannot ship more than 500 items at once. YubiEnterprise Delivery system
Shipment has zero total item quantity	The number of items to be shipped must be > 0. YubiEnterprise Delivery system
US Address is missing the state name/abbreviation in region field	No further explanation required. YubiEnterprise Delivery system
Bad ProductId in ShipmentProduct for NewShipmentProduct	ProductID is wrongly specified or invalid. YubiEnterprise Delivery system
Input for %s exceeded limit of %d characters	Specified field cannot accept the number of characters that were entered. YubiEnterprise Delivery system
Shipment of these products to this country using this delivery type is not supported For more information, see Delivery Policies .	Shipment request contravenes one or more business rules. YubiEnterprise Delivery system

- See the [USPS FAQ](#).

1.10.7 Reviewing Incompletes

The address validation service flags addresses that are problematic or defective in some way, and displays this information on the Console in the **Status** column on the **Dashboard** tab. For a complete list of the different statuses and what they indicate, see *Shipping Status Codes*. To ensure your shipping request is accepted and processed, always verify that it has not been flagged Incomplete.

Step 1

On the **Shipments** tab, in the **Actions** menu next to the **Create shipping request** button, select **Review incompletes**. The list of shipping requests with incomplete addresses is displayed:

Review incomplete addresses

Back to shipments

Refresh data

Rows per page: 5 6-10 of 13

ID	Date ↓	Incomplete address	Status	Actions
WPmPscB	Aug 8, 2023	1234 Main Street, San Francics...	Address is undeliverable or could not be understood	
QShUQ9n	Jul 27, 2023	530 Lytton ave, Palo Alto, Calif...	Incomplete	
RBVFpCu	Jul 27, 2023	530 Lytton Ave, Palo Alto, Calif...	Incomplete	
HmpXcBd	Jul 11, 2023	530 Lytton Ave, Palo Alto, Calif...	Incomplete	
Gm73dN	Jul 11, 2023	222 Maple Stree, Sunnyvale, C...	Address is undeliverable or could not be understood	

Total Rows: 5 of 13

Step 2

To find out what is wrong with an address and/or correct it, click the **Edit** icon at the end of the row containing the item. See *Editing or Deleting a Shipment*. The **Edit Shipment** dialog indicates the problem. In the example below, the recipient name is incorrect.

Edit Shipment - WkeKBRZG1pAiQpFvtYUDLQ

Country

United States

Address Line 1

240 Maple St.

Address Line 2

City

Los Angeles

Region / state

CA

Postal code

90010

Normal

Attention to

Undeliverable Name

Contact phone

1234567890

Contact email (optional)

Step 3

The address validation process stops at the first error it finds in a given request (or in the case of a CSV file, in a given row). In the example above, it stopped at the name of the recipient, but the address in the example above would not be validated either. For this reason, continue to run the **Review Incompletes** activity until no more errors are found in your shipment request.

1.10.8 Editing or Deleting a Shipment

You can update an address or delete a shipment request until it is locked for processing and fulfillment, see [Timing](#). This applies for both Automated and Manual type of requests. However, to edit or delete a *Manual* shipment request, you must contact Yubico to update the shipment request.

Step 1

To edit a shipment, click the **Edit [pencil]** icon in the appropriate row of the table. The **Shipment details** page appears. To make name and/or address changes, scroll down to the **Edit Shipment** section.

Edit Shipment

Reseller *

Yubico (direct sale)

Reseller ID

1

Recipient Information

Either the company name or recipient name is required. You may provide both if shipping to a commercial/business address.

First Name *

Sanity

Last Name *

Test

and/or

Company

Do not provide a company name if shipping to a residential address.

Shipping Information

Country *

United States

Address line 1 *

1234 E Street

Step 2

To make changes in either products or inventory, scroll down further to the **Product Selection** section. Be aware that *Shippable Inventory* limits might apply.

Product Selection

Products

COMPLIANCE - STANDARD - PRIMARY

PRIMARY SUBSCR - PREM. TIER: INITIAL


BACKUP SUBSCR - PREM. TIER: INITIAL

PREM

Primary Subscr - Prem. Tier: Initial

9981 SHIPPABLE

Select form factor



YubiKey 5Ci

-

6

+

PREM

Backup Subscr - Prem. Tier: Initial

9933 SHIPPABLE

COM

Compliance - Standard - Primary

1000 SHIPPABLE

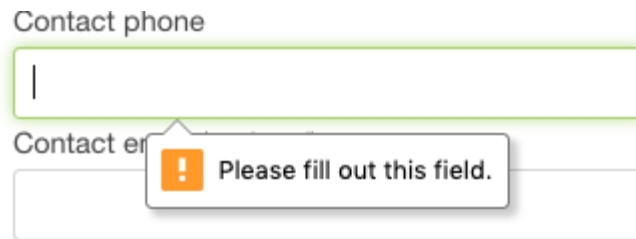
Update

Cancel

Delete shipment

Step 3

Either make the required changes and click **Update** or click **Delete shipment**. The update function validates the fields, with a mouseover warning on any fields requiring input.



The screenshot shows a form with two input fields. The first field is labeled "Contact phone" and is empty. The second field is labeled "Contact email" and is also empty. A red tooltip with a white exclamation mark icon is positioned over the "Contact email" field, displaying the text "Please fill out this field." The tooltip has a white background and a red border.

Step 4

Verify that the system is able to validate all the input in your shipment request by running the **Review Incompletes** activity (see *Reviewing Incompletes*).

Bulk Deletion of Shipment Requests

To delete multiple shipment requests at the same time, do the following:

Step 1

On the **Shipments** tab, go to the **Actions** dropdown list, and select **Bulk operations**. The **Bulk Operations** screen appears showing shipment requests that can be deleted (those that have not yet been processed).

Step 2

Select the checkbox in the row you want to delete. To delete all, select the checkbox in the header row and click **Delete shipments** on the upper right. The selected shipment requests are deleted.

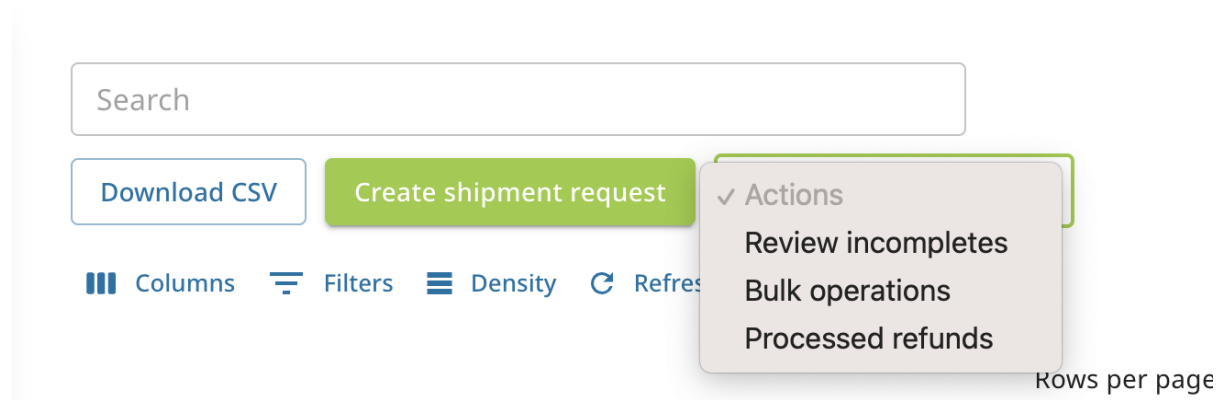
To revert the **Select all** action, deselect all the shipment requests by clicking the checkbox in the header row again.

1.10.9 Refunds

When shipments fail to arrive at their destination, the price of product(s) plus shipping is refunded. The status of such a shipment is recorded as “Lost/Missing”.

Viewing Refunds

Console Owners, Admins, and Auditors can access refund details from the **Shipments** tab. On the upper right, click the **Action** dropdown menu and select **Processed refunds**.



The list of processed refunds appears. The **Processed refunds** table shows the following information:

- Shipment ID
- Inventory product type (shipping, subscription type, etc.)
- PO reference if applicable (link to PO from which the refunded inventory was drawn)
- Refund quantity (this value will be “0” for shipping)
- Product name
- Refund date
- Refunded amount

To see more details, click the **Shipment ID** of the desired shipment, or click the **Download refund CSV** file (see [Downloading List of Refunds](#)).

SHIPMENT ID

BSnJKfW4dNqmQtbDeBVsqy

AUTOMATED

Go back

REQUEST DATE:

2022-04-08T13:30:34.942Z

REQUESTOR:

firstname.lastname@acme.com

RESELLER NAME:

Yubico (direct sale)

RESELLER ID:

1

SHIPMENT STATUS

Status: Delivery Exception

TRACKING: TESTFEDEXGROUND

✓

Shipment requested

08 APRIL 2022 AT 03:30 PM GMT+2

—

✓

Shipped: in transit

04 FEBRUARY 2020 AT 01:00 AM GMT+1

—

✗

Delivery Exception

—

⚠

Shipment refunded

MESSAGES

Insufficient Tax Credit

Address	Shipping	Costs
Firstname Lastname	Delivery type: Normal	Product cost: \$50,000.00
17 harding st	Provider: FedEx	Product tax: \$3,125.00

Downloading List of Refunds

To download a CSV file listing all the data shown on the list of processed refunds, click the **Download refund CSV** button.

Shipment / Processed refunds

Processed refunds

Search

Download refund CSV

Columns Density Refresh data

Rows per page: 15 1-1 of 1 < >

Shipment...	Inventory product type	PO reference	Refund quant...	Product name	Refund date	Refunded amount
BSnJKfW4dNc	Standard products	ABC_123	1	YubiKey 5 NFC	Mar 4, 2024	\$53,125.00

The downloaded spreadsheet contains the following information for each refunded shipment request:

- shipment_id
- refund_date
- organization_name

- reseller_name
- reseller_id
- inventory_product_type
- product_name
- refund_quantity
- product_cost
- refunded_product_tax
- refunded_product_vat
- refunded_shipping_fee
- refunded_shipping_tax
- refunded_shipping_vat
- purchaseorder_number
- country_code_2
- shipment_request_date
- shipped_date
- recipient_company
- recipient_email
- recipient_firstname
- recipient_lastname
- recipient_telephone
- street_line1
- street_line2
- street_line3
- city
- region
- postal_code

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.11 Shipping to a Single Address

The information in this section describes how to create shipment requests to a *single* recipient address from the YubiEnterprise Console. To create shipments to *multiple* addresses, see [Bulk Shipment: Shipping to Multiple Addresses](#). For information about shipment request concepts, see [Shipments: Overview](#) and [Requesting Shipment: Introduction](#).

1.11.1 Creating a Shipment Request

To use the Console to request shipping of keys from your inventory to an individual address, click one of the following:

- **CREATE SHIPMENT REQUEST** in the card for the appropriate subscription on the **Dashboard**.
- The **Create shipment request** button on the **Shipments** tab.

The **New shipment request** form appears with the **SINGLE SHIPMENT** tab displayed by default.

New shipping request

SINGLE SHIPMENT BULK SHIPMENT

Reseller * Yubico (direct sale) ▼	Reseller ID 1
--------------------------------------	------------------

Recipient Information

Either the company name or recipient name is required. You may provide both if shipping to a commercial/business address.

First name Firstname	Last name Lastname
-------------------------	-----------------------

and/or

Company ACME

Do not provide a company name if shipping to a residential address.

Shipping Information

Country * United States of America (the) ▼	Address line 1 * 123 Street Name
Address line 2	City * Pasadena
Region / State * California ▼	Postal code * 81818
Phone * 81811223344	
Submitting an invalid phone number may result in the order being returned to sender and may incur additional shipping charges.	
Email address firstname.lastname@acme.com	

Delivery Type

 Normal	 Expedited
---	---

Product selection

Enter information in the form fields as described in the following. For detailed descriptions of form fields and their values, see [Shipment Request Form Fields](#).

1. If applicable, select a **Reseller** from the dropdown list. Your selection determines the inventories from which

you can draw products from. The **Reseller ID** field is automatically populated depending on the selected reseller.


2. Enter the required **Recipient information**, either provide a company name or a recipient name, or both.
3. Enter the **Shipping information**. Ensure you enter a valid recipient address and phone number for a successful delivery, see [Entering Shipping Information](#).
4. Select the **Delivery Type**, Normal or Expedited. Your selection determines the shipping fee, which is calculated after you complete the shipping request.
5. Under **Product selection**, click in the **Products** field to display available inventories.
6. Select one or more inventories to draw products from.

Product Selection


Products

COMPLIANCE - PLUS - PRIMARY

COMPLIANCE - PLUS - PRIMARY - REPLACEMENT

 Compliance - Plus - Primary

249 SHIPPABLE

 Compliance - Plus - Primary - Replacement

75 SHIPPABLE

Create shipment request

Cancel

7. Select the desired products from each inventory. Note that inventory restrictions might apply, see [Shippable Inventory](#). For explanation of subscriptions, see [Inventory Matters](#).

Product Selection


Products

COMPLIANCE - PLUS - PRIMARY


COMPLIANCE - PLUS - PRIMARY - REPLACEMENT

COM + **Compliance - Plus - Primary** 249 SHIPPABLE ^


Select form factor

 YubiKey 5 NFC

- 59 +

 YubiKey 5 Nano

- 1 +

 YubiKey 5C

- 0 +

8. Click **Create shipment request**. The **Shipment Confirmation** popup appears.

×

Shipment Confirmation

Primary Subscr - Prem. Tier: Initial

YubiKey 5 NFC - 1

YubiKey 5Ci - 27

YubiKey 5C Nano - 59

Confirm

Cancel

9. Click **Confirm**. If all went well, you are notified that your request was accepted. The new shipment request will appear in the **Shipments** page.

×

Your shipment request has been accepted

Please review the Shipments list to check the status of your request.

Return to shipments

Create new shipment

Shipment Request Form Fields

The table below provides descriptions of fields in the **New shipping request** form. Fields not marked as *Required* are optional. The **Limit** column displays the maximum number of alphanumeric characters permitted per field. You will be notified in the Console if the number of characters you enter in a field exceeds the limit.

Field Name	Description	Limit
Reseller Reseller ID	Required. Even if the selling entity was Yubico (direct sale), the Reseller name must be selected. The Reseller ID is automatically populated.	—
First name	Name of recipient. Required if company name is not provided. Maps to the first line on the shipping label.	15
Last name	Recipient's family name. Required if first name is provided. Maps to the first line on the shipping label.	20
Company	Required if name of recipient is not provided. Maps to the second line of the shipping label if the address is not residential. Do not provide a company name if shipping to a residential address.	20
Country	Required. Select a country from the list of destination countries that your organization is allowed to ship to.	—
Address 1	Required. First line of address.	60
Address 2	Required if address is undeliverable without, for example suite #.	60
City	Required. City, town, or township.	60
Region/State	USPS codes are required for the US and Canada, see	—

Managing Long Recipient Names

Long recipient or company names can be problematic because the shipment request will fail if the maximum number of permitted characters is exceeded for these fields.

Workaround: When a recipient's full name or company name exceeds the fields' maximum lengths, split the names across the three fields, as in this example:

Field (limit=15)	Field (limit=20)	Field (limit=20)
First name	Last name	Company
Example of an overly long name before adjustment to fit the fields		
Johannes-Maximilian	von Derschowitz-Dampfloch	zu Querdenker
Example after adjustment		
Joh.-Maximilian	v.DerschowitzDampfloch	zu Querdenker

Entering Shipping Information

Note: When creating shipment requests and selecting destination countries, you will only see countries that are enabled for your organization in the **Country** dropdown list. However, you can ship to all countries that are listed in the [YubiEnterprise Delivery pricing table](#). To ship to other countries, contact [YubiEnterprise Delivery Support](#).

For a successful delivery of your order, always ensure that the recipient information you provide is valid. The **Phone** field in the shipment request form is the telephone number of the shipment recipient, and is used by the carrier to complete the last stage of delivery. Ensure you submit a valid phone number to avoid the order being returned to the sender.

Incomplete or incorrect address information might cause *validation errors*. For example, entering the following information for a shipment request would result in failure because USPS recognizes that there are multiple companies in the building whose address is 530 Lytton Avenue:

```
Jan Lindberg
530 Lytton Avenue
Palo Alto, CA 94301
USA
```

Similarly, entering the following information for a shipment request would result in failure because a residential address would not be associated with a company.

```
Jan Lindberg
Yubico Inc.
6 Lea Rd
Dronfield S18 1SB
UK
```

When adding address information, you can for example use the address formats provided by Google Maps, see note in [Troubleshooting](#). The limits on the various fields and the options for the dropdown are given in [Shipment Request Form Fields](#).

Verifying Shipment Status

You can view the status of shipment requests on the **Shipments** page in the **Status** column. To ensure your shipping request is accepted for processing, always verify that it has not been flagged as *Incomplete* by the validation service. For more information on how to correct incomplete shipment requests, see [Reviewing Incompletes](#).

1.11.2 Editing and Deleting Shipment Requests

You can update an address or delete a shipment request until it is locked for processing and fulfillment. Editable shipment requests are shown with a pencil icon in the list of **Shipments**. For more information, see [Editing or Deleting a Shipment](#).

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.12 Bulk Shipment: Shipping to Multiple Addresses

You can create a request to ship a set of products to multiple addresses using the **BULK SHIPMENT** method. With this method you download an address template CSV file from the Console and fill it with recipient names and addresses.

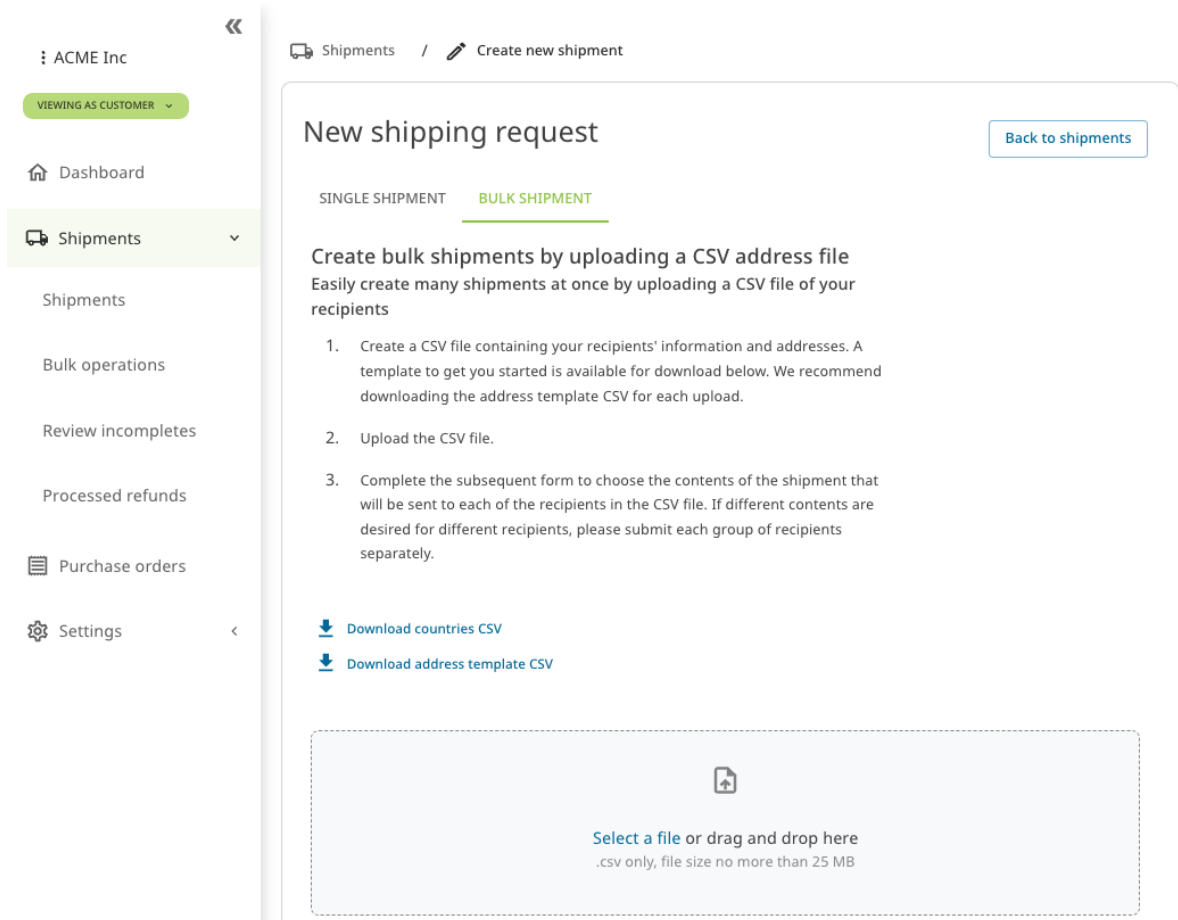
Important: Download a fresh `countries` CSV and `address template` CSV file every time you make a bulk shipment request. The templates change frequently, and any request that does not use the latest templates will fail.

You then upload the file, select from the Console the products that all recipients will get, and submit the bulk shipment request for the products to be shipped to multiple addresses. If different recipients require different product sets, create a separate CSV file for each product set.

1.12.1 Creating the Address File

Use the templates provided by Yubico to create your list of recipient names and addresses.

1. In the **Console**, go to **Shipments**, click **Create shipment request**, and select **BULK SHIPMENT**.



2. Click **Download countries CSV** to download the country list. This file contains the list of countries that your organization is allowed to ship to and the country code for each country.

Important: Download a fresh **countries CSV** and **address template CSV** file every time you make a bulk shipment request. The templates change frequently, and any request that does not use the latest templates will fail.

3. Click **Download address template CSV** to download the template for recipient information.
4. Fill out the address template. For details about the fields in the CSV file, see *Recipient Information Fields*.
5. Save the address file, it will be used when *creating the actual shipment request*.

Recipient Information Fields

When filling in the template, ensure you follow these guidelines for a successful validation later on in the process:

- The table header row from the template is included in your CSV file.
- The columns in your CSV file correspond exactly to those in the template.
- Either company name *or* first name and last name are required.
- If the destination country is either United States or Canada, state or region is required, see [Region/State Codes for US and Canada](#).
- Some table cells have limits on the number of alpha-numeric characters (including spaces). Ensure that content in a cell does not exceed the limits listed in the table below. For more information, see [Managing Long Recipient Names](#).

Note: The size of the uploaded CSV file must not exceed 25 MB. If it does, split the file and create multiple shipment requests.

In the table below, fields not marked as *Required* are optional. The **Limit** column displays the maximum number of alphanumeric characters permitted per field/table cell.

Column Heading	Description	Limit
Company	Required if name of recipient is not provided. Maps to the second line of the shipping label if the address is not residential. Do not provide a company name if shipping to a residential address.	20
First name	Name of recipient. Required if company name is not provided. Maps to the first line on the shipping label.	15
Last name	Recipient's family name. Required if first name is provided. Maps to the first line on the shipping label.	20
Address 1	Required. First line of address.	60
Address 2	Required if address is undeliverable without, for example suite #.	60
City	Required. City, town, or township.	60
Region/State	USPS codes are required for the US and Canada, see Region/State Codes for US and Canada . Region/state is required for other countries if the address is undeliverable without it.	50
Postcode	Required. Zip code or postal code.	50
Country Code 2	Required. Country code from <code>available_countries.csv</code> file, see Country Codes .	2
1.12. Bulk Shipment: Shipping to Multiple Addresses		81
Recipient Email	Recipient's email address.	80

Managing Long Recipient Names

Long recipient or company names can be problematic because the shipment request will fail if the maximum number of permitted characters is exceeded for these fields.

Workaround: When a recipient's full name or company name exceeds the fields' maximum lengths, split the names across the three fields, as in this example:

Field (limit=15)	Field (limit=20)	Field (limit=20)
First name	Last name	Company
Example of an overly long name before adjustment to fit the fields		
Johannes-Maximilian	von Derschowitz-Dampfloch	zu Querdenker
Example after adjustment		
Joh.-Maximilian	v.DerschowitzDampfloch	zu Querdenker

Country Codes

The downloadable `available_countries.csv` file contains a list of destination countries and their country codes that your organization is allowed to ship to. Use the two-letter country codes to populate the Country Code 2 field in the address template.

Note: Although the system can deliver to Post Office (PO) Boxes within the United States, delivery to the equivalent elsewhere in the world is unlikely to succeed. If possible, use a different address.

Region/State Codes for US and Canada

If the destination country is either United States or Canada, state or region is required and must confirm to the two-letter codes for states (US) or territories (CA). Use the codes provided in the following table to populate the Region/State field in the address template.

State (US) / Province or Territory (Canada)	Code
Alabama	AL
Alaska	AK
Alberta	AB
Arizona	AZ
Arkansas	AR
British Columbia/Colombie-Britannique	BC
California	CA
Colorado	CO
Connecticut	CT
Delaware	DE
District of Columbia	DC
Florida	FL
Georgia	GA
Hawaii	HI
Idaho	ID
Illinois	IL

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Table 6 – continued from previous page

State (US) / Province or Territory (Canada)	Code
Indiana	IN
Iowa	IA
Kansas	KS
Kentucky	KY
Louisiana	LA
Maine	ME
Manitoba	MB
Maryland	MD
Massachusetts	MA
Michigan	MI
Minnesota	MN
Mississippi	MS
Missouri	MO
Montana	MT
Nebraska	NE
Nevada	NV
New Brunswick/Nouveau-Brunswick	NB
New Hampshire	NH
New Jersey	NJ
New Mexico	NM
New York	NY
Newfoundland/Terre-Neuve	NF
North Carolina	NC
North Dakota	ND
Northwest Territories/Territoires du Nord-Ouest	NT
Nova Scotia/Nouvelle-Écosse	NS
Nunavut	NU
Ohio	OH
Oklahoma	OK
Ontario	ON
Oregon	OR
Pennsylvania	PA
Prince Edward Island/Île-du-Prince-Édouard	PE
Puerto Rico	PR
Quebec/Québec	QC
Rhode Island	RI
Saskatchewan	SK
South Carolina	SC
South Dakota	SD
Tennessee	TN
Texas	TX
Utah	UT
Vermont	VT
Virginia	VA
Washington	WA
West Virginia	WV
Wisconsin	WI
Wyoming	WY
Yukon	YK




1.12.2 Creating the Bulk Shipment Request

The steps described in the following require that you have *created a CSV file with recipient information* to be used when submitting the shipment request.

1. In the **Console** on the **Shipments** tab, click **Create shipment request** and select **BULK SHIPMENT**.
2. Drag and drop your address CSV file into the upload area, or click **Select a file** to add a file from a location of your choice. The file size must not exceed 25 MB. If it does, split the shipment request.
3. If applicable, select a **Reseller** from the dropdown list. Your selection determines the inventories from which you can draw products from.
4. Select the **Delivery Type**, Normal or Expedited. Your selection determines the shipping fee, which is calculated after you complete the shipping request.
5. Under **Product selection**, select one or more of available inventories to draw from and select the desired products. When done, click **Continue**.

Note: Inventory restrictions might apply, see *Shippable Inventory*. For some countries you can request only one (1) key per address due to customs duty regulations. To see which countries this limitation applies to, see *Delivery Policies*.

6. Verify the product selection and the address file to be used.
7. Click **Create shipment request(s)**.
8. The recipient information is validated line by line to ensure there are no errors. If errors were found, you will see a notification indicating the type of errors and the lines in the file where they were found.

Edition		Yubico (Black)	
 Security Key C NFC by Yubico (Black)	<input type="text" value="1"/>	 Security Key NFC by Yubico - Enterprise Edition	<input type="text" value="0"/>
 Security Key C NFC by Yubico - Enterprise Edition	<input type="text" value="0"/>		

Continue

- ❗ **Line 2** • Invalid region for country US (2-letter state abbreviation required): California
- ❗ **Line 3** • invalid country code 2

Create shipment request(s)

9. Correct the errors in the file according to the instructions and save it.
10. Click **Use a different file** in the upload area, upload the corrected version for a new validation, and click **Create shipment requests(s)**.
11. When the file is accepted without errors you will see a success notification. The new shipment requests will appear in the **Shipments** page as one request for each recipient line in the CSV file.

Note: If you have purchased directly from Yubico as well as from resellers, you will have multiple inventories to draw products from. To request shipments from multiple inventories you need to make a shipment request for each inventory separately by selecting the desired reseller in the **Reseller** dropdown when creating the shipment request.

1.12.3 Editing and Deleting Shipment Requests

You can update an address or delete a shipment request until it is locked for processing and fulfillment. Editable shipment requests are shown with a pencil icon in the list of **Shipments**. For more information, see [Editing or Deleting a Shipment](#).

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.13 API Onboarding Playbook

While YubiEnterprise Delivery can be driven entirely through the prebuilt console, it also comes with an API that provides the ability to extend the functionality to custom applications. The YubiEnterprise Delivery API enables your organization's developers to integrate the API into custom solutions that meet the specific requirements of your business.

The following points are important to master before working with the API:

Shipment flow

Make sure you understand the shipment request happy path flow and how to handle the error cases.

Testing

Use an isolated sandbox environment to reduce testing time.

Data model complexity

The API exposes the YubiEnterprise Services data model. It is crucial to understand the difference between product identifiers and form factor identifiers.

Low inventory

Prepare for initial stock running out by setting up pulling from the buffer or replacement stocks. Set up notification to admins of low inventory and automatically roll shipment requests to buffer and replacement stocks.

App maintenance

The YubiEnterprise Services API occasionally makes breaking changes. Therefore, monitor all release notes and spin up a project to prepare for migration before the change goes live.

1.13.1 YubiEnterprise Delivery Self-Service Web Portal

This [example in YubicoLabs GitHub repository](#) will demonstrate an end-to-end solution with the ability to integrate the YubiEnterprise Delivery API into a web application that users in your enterprise (or beyond) could use to create YubiKey shipment requests drawing on your organization's inventory.

In this project you will:

1. Stand up an environment in Amazon Web Services (AWS) to handle the server-side operations for the YubiEnterprise Delivery API and for handling user authentication/authorization
2. Use the YubiEnterprise Delivery API to create, delete, edit, and retrieve shipment requests as well as verify a shipment address
3. Create a front-end application for your end users to request shipment of a YubiKey that has been defaulted by your organization.

Guide

GitHub Repository: This repository contains the code and steps required to stand up an application in AWS capable of sending requests to your organization's instance of YubiEnterprise Delivery.

Considerations

The aim of this guide is to demonstrate a barebones application that utilizes the YubiEnterprise Delivery API. The application should not be considered “production ready”. Below are a few of the considerations to keep in mind to ensure the success of your integration.

Policies to prevent abuse

This demo will allow a user to request shipment of as many keys as they desire. Additional logic will need to be built in to limit the number of shipment requests based on your requirements.

Selectable security Key

This demo is configured to order the YubiKey 5 NFC, and can be extended a variety of ways to allow different keys.

Error handling

There is one section in this guide that describes handling methods if an error is sent during the initial order. For a production deployment, there are a variety of different error cases that should be considered such as low inventory, shipment failure, undeliverable address, etc.

Auto-filling address

Currently this guide assumes that the user will be shipping their key to the address listed in ServiceNow. The catalog item may need to be extended to allow the user to input their personal address (for example, if they are not located at one of your main offices). You may want to consider leveraging the YubiEnterprise Delivery Verify Address API to allow your users to correct any address errors prior to submitting a shipment request.

Configuration based on your security requirements

This includes swapping the system out to use your identity provider, secrets management in AWS Lambda, and other controls used by your organization.

People and process impacts to customer service

If your application is intended for external end users then your internal CX team needs to be prepared to handle inquiries relating to YubiEnterprise Delivery/YubiKey. Either an internal team should be established and trained to handle these items OR you can engage Yubico Professional Services.

Multi-region PO support

The current demo is configured for a purchase order covering a single region. You will need to use the proper API token for the user's region, e.g. North America / Canada is one region, EMEA is a different region and each have their own associated API token.

More information can be found [here](#).

1.13.2 ServiceNow Integration

For an organization that has fully integrated YubiEnterprise Delivery into its own internal systems via the APIs, the fulfillment experience is streamlined: the end-user receives an email notifying them that they are eligible for a YubiKey and/or that they are required to use the key for specific system access. The email directs the end-user to the corporate fulfillment system (e.g., ServiceNow). For more information, see [API: ServiceNow Integrations](#).

1.13.3 Setting up API Caller and Token

Consider the following regarding API tokens:

- Protect access to the API token, because whoever is in possession of the token is authorized to perform API operations for your organization.
- Accounts that use machine tokens should have the Admin role, not the Owner role. This reduces the risk if the token is compromised, since the token has only the permissions associated with its role.
- The fact that API tokens can easily be issued and revoked helps to assure the security of accounts that use machine tokens.
- To handle machine token expiry, we recommend using the API (`/auth/machine-token`) to renew the API token. Ideally, logic should be put in to renew by calling the API to get a new token before the existing one expires.
- If a user is removed from an organization and has a token in that organization, the token is revoked. If a user is suspended, all tokens are revoked. The tokens are left untouched if the user is reset or the password is reset.
- Before an API token expires, the system generates and sends a notification to the associated email address. The email notifies that the token will expire in 7 days/1day and will not be accepted by our system after that.

Follow the steps below to set up an API caller user account with an associated API token.

Step 1

Set up a subaccount for the application that will be calling the YubiEnterprise Delivery API. For instructions regarding b and c below, see [Adding or Deleting Users](#).

- a. Set up an email account for the application that will be calling the API. Ensure that you have access to it. An email with login instructions will automatically be sent to this email address by the system.
- b. In the Console, create an account only to be used by the API caller, for example, `my-app@example.com`.
- c. Assign the **Console Admin** role to the API caller's account.

Step 2

Activate the new API caller account by clicking the login link in the email sent by the system, and follow the instructions.

Step 3

Associate a YubiKey for the API caller account with the YubiEnterprise login credentials:

- a. On the upper right of any **Console** page, click the user icon of the API caller and select **Manage credentials** to open the **Account** page.
- b. Register a YubiKey as a roaming credential, see [Adding WebAuthn Credentials](#). Consider registering a second YubiKey in case the first one is lost.

Step 4

Generate the API token:

- a. In the **Console**, click the organization name in the top left corner and select **Manage API token**.
- b. Make a copy of the token and store it in a secure location. For more information on API tokens, see *Managing API Tokens*.

Authenticating with HTTP

The YubiEnterprise Delivery API supports the HTTP Bearer Authentication scheme. In order to authenticate with HTTP, you must provide your API token in the header of the request.

Copy your API token from its secure location and paste it into a curl command in a bash script as shown below (the full token is not shown here).

```
curl "https://api.console.yubico.com/v1/inventory" \
--header "Authorization: Bearer eyJhb..."
```

Once you are logged into YubiEnterprise Delivery, you can view the YubiEnterprise Delivery public API at <https://console.yubico.com/apidocs>.

1.13.4 Dates and Times

All dates and times in requests from the API are UTC in the [RFC-3339](#) format.

1.13.5 Users, Roles, and Organizations

Since API tokens are scoped to organizations, if an organization is shipping YubiKeys to both United States/Canada and to Europe, two API tokens are required: one for the US/CAN organization and one for the European organization.

An individual user can have one role in one organization and the same or a different role in another organization; for example, user Jan could be an owner in a company's US/CAN organization and an Admin in the same company's EU organization. However, because these are separate organizations, if Jan is logged in to the US/CAN YubiEnterprise, Jan cannot use that login to perform operations in the company's EU YubiEnterprise.

Because it is possible to change the role of a user already in an organization, it is worth noting that deleting a user both:

- Deletes that user's association with the organization, and
- Removes from that user the permissions associated with their role.

It is therefore possible in theory (though undesirable) for a user to be a member of an organization without having a role.

1.13.6 Deprecated APIs: Overview

The following tables list deprecated APIs and recommended replacements if available. Deprecated APIs will eventually be removed, and it is therefore recommended that existing implementations be updated. New implementations should use the recommended replacement methods.

Shipment Request Creation: Address Information

Deprecated	Replacement
street_line3	Starting with release 2.8.0 this field in the recipient address information will be deprecated and will only be available until September 2024. There is no replacement API for this functionality.

Shipping Requests: Bulk Shipment to Multiple Addresses

Deprecated	Replacement
GET /v1/shipments/bulk POST /v1/shipments/bulk POST /v1/shipments/bulkvalidate	From July 2024, the only method to create bulk shipment requests is to use the YubiEnterprise Console There is no replacement API for this functionality.

Shipping Requests: Listing, Tracking, Searching, Status etc.

Deprecated	Replacement
GET /shipments	GET /shipments_exact
POST /shipments	POST /shipments_exact
GET /shipments/{shipmentId}	GET /shipments_exact/{shipmentId}
PUT /shipments/{shipmentId}	PUT /shipments_exact/{shipmentId}
DELETE /shipments/{shipmentId}	DELETE /shipments_exact/{shipmentId}
/UpdateShipmentById	shipments_exact/{shipment_id}
/organization/update-setting	None

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.14 API Shipment Requests

Important: Starting with release 2.7.0, the API for bulk shipment requests will be deprecated. Instead the recommended method for submitting bulk shipment requests to multiple addresses is to use the [YubiEnterprise Console](#). For more information, see the [Release Notes](#).

Before starting, it is recommended that you review the information in [Requesting Shipment: Introduction](#) which also applies to executing shipment requests with the API (as well as to the other methods for making shipment requests). See also the [YubiEnterprise Delivery API documentation](#).

Using the API you can make individual shipment requests or you can make shipment requests in bulk. This latter method requires the CSV file. Many of the necessary parameters are shared by the two methods. Instructions for filling

out the shared fields as the system expects are set out below in the lettered sections (corresponding to the columns in the CSV file), whereas the general instructions for individual and bulk requests are set out in separate sections.

1.14.1 Verifying Inventory Before Requesting Shipment

Verify that all the products you intend to ship are currently available in inventory.

- `/shippablekeys` returns **all** products associated with your organization's account, including any products that have a current available inventory of 0.
- When `inventory_type` is 1, products that have zero inventory are not listed. The quantities of the products available are shown next to the names of the products. Therefore, even if a product is shown on a PO, if its inventory is exhausted by the time you want to request it be shipped, this API will not return it.

Example: Inventory Output

```
{
  "count": 3,
  "total_count": 3,
  "organization_product_inventory": [
    {
      "organization_product_inventory_id": "Cym9ypJsmVEshX9qzSQc7S",
      "is_subscription_product": true,
      "is_virtual_product": true,
      "organization_id": "UEayb8v4LTHdAshpnk1gMd",
      "organization_product_quantity": 978,
      "product_id": 15,
      "inventory_type": 3,
      "product_name": "Primary Subscr - Adv. Tier: Initial",
      "product_tier": 2,
      "product_mapping": [
        1,
        2,
        3,
        4,
        6,
        7]
    },
    {
      "organization_product_inventory_id": "Ky8VzJWpftEk2hiMsJDjVW",
      "is_subscription_product": true,
      "is_virtual_product": true,
      "organization_id": "UEayb8v4LTHdAshpnk1gMd",
      "organization_product_quantity": 10,
      "product_id": 44,
      "inventory_type": 3,
      "product_name": "Backup Subscr - Prem. Tier: Initial",
      "product_tier": 3,
      "product_mapping": [
        1,
        2,
        3,
```

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```

        4,
        5,
        6,
        7]
    },
    {
      "organization_product_inventory_id": "UPjT3FU8oqCoHPCr9mNUzD",
      "is_subscription_product": true,
      "is_virtual_product": true,
      "organization_id": "UEayb8v4LTHdAshpnk1gMd",
      "organization_product_quantity": 964,
      "product_id": 18,
      "inventory_type": 3,
      "product_name": "Primary Subscr - Prem. Tier: Initial",
      "product_tier": 3,
      "product_mapping": [
        1,
        2,
        3,
        4,
        5,
        6,
        7]
    }
  ]
}

```

1.14.2 Verifying Custom Configured Inventory

Custom configuration includes for example pre-programmed YubiKeys. If your organization is using customized YubiKeys you can ensure desired form factors are available for shipment by verifying the number of remaining custom configured keys through the API before requesting a shipment.

After Yubico configures your customized key inventory allocation, you can use `GET /inventory-allocations` to find out how many customized keys of different form factors remain in your current inventory. For information about product IDs, see *Product ID and Inventory Product ID*.

Example: Custom Configured Inventory

The `inventory-allocations` response in the example below provides a simple view of remaining inventory to ship. There is an entry for each product and the `remaining_allocated_inventory` value represents the amount of customized keys left which can be shipped.

```

{
  "allocations": [
    {
      "product_id": 1,
      "product_name": "YubiKey 5 NFC",
      "remaining_allocated_inventory": 25
    },
    {

```

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```

    "product_id": 4,
    "product_name": "YubiKey 5C Nano",
    "remaining_allocated_inventory": 25
  },
  {
    "product_id": 5,
    "product_name": "YubiKey 5Ci",
    "remaining_allocated_inventory": 2
  }
]
}

```

1.14.3 Individual Shipment Requests via API

To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs **must** be used. The APIs modified to handle channel partners are:

- GET `/shipments_exact`
- POST `/shipments_exact`
- GET `/shipments_exact/{shipmentId}`
- PUT `/shipments_exact`

The corresponding deprecated `/shipments` have not been modified and can only handle inventory purchased directly from Yubico.

Important: Starting with release 2.8.0, the `street_line3` field in the recipient address information will be deprecated and will only be available until September 2024. There is no replacement API for this functionality.

Example: Without Subscription

For example, if you do not have a subscription and simply bought outright a number of YubiKey 5C Nanos (no virtual keys, no tiers), your request for a single shipment would look like this:

```

{
  "delivery_type": 1,
  "country_code_2": "US",
  "recipient": "string",
  "recipient_email": "string",
  "recipient_firstname": "string",
  "recipient_lastname": "string",
  "recipient_telephone": "string",
  "street_line1": "string",
  "street_line2": "string",
  "street_line3": "string",
  "city": "string",
  "region": "string",
  "postal_code": "string",
  "shipment_items": [

```

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```
{
  {
    "product_id": 4,
    "inventory_product_id": 4,
    "shipment_product_quantity": 1
  }
}
```

Example: With Subscription

With a subscription, your `product_id` value and your `inventory_product_id` value would not coincide, and your individual shipment request would look like this:

```
{
  "delivery_type": 1,
  "country_code_2": "US",
  "recipient": "string",
  "recipient_email": "string",
  "recipient_firstname": "string",
  "recipient_lastname": "string",
  "recipient_telephone": "string",
  "street_line1": "string",
  "street_line2": "string",
  "street_line3": "string",
  "city": "string",
  "region": "string",
  "postal_code": "string",
  "shipment_items": [
    {
      "product_id": 4,
      "inventory_product_id": 15,
      "shipment_product_quantity": 1
    }
  ]
}
```

1.14.4 Shipping Products to a Single Address

Use the `/shipments_exact` APIs for any new development and to update clients in existence prior to YubiEnterprise Delivery 1.6.0.

Specifying the stock/inventory to be used for an individual shipment request provides a much larger range of options than those available for bulk shipments.

Example: Single Shipment Input

The following Curl example sends an HTTP POST to the `shipments_exact` resource URI to ship a YubiKey 5 NFC to a fictional employee, Jan Lindberg:

```
curl "https://api.console.yubico.com/v1/shipments_exact" \
--header "Content-Type: application/json" \
--header "Authorization: Bearer eyJhb..." \
--data '{
{
  "delivery_type": 1,
  "country_code_2": "US",
  "recipient": "Example Inc.",
  "recipient_email": "jan.lindberg@example.com",
  "recipient_firstname": "Jan",
  "recipient_lastname": "Lindberg",
  "recipient_telephone": "555-5555",
  "street_line1": "7788 Foxrun Street",
  "street_line2": "",
  "street_line3": "",
  "city": "Dedham",
  "region": "MA",
  "postal_code": "02026",
  "shipment_items": [
    {
      "product_id": 3,
      "inventory_product_id": 15,
      "shipment_product_quantity": 16
    }
  ]
}
```

In the example above, you will notice the `delivery_type` is set to 1 which means it is a normal shipment. A value of 2 would request an expedited shipment. The `recipient_email` gives the address at which the recipient will receive an email with the tracking number of the shipment.

Example: Single Shipment Output

```
{
  "shipment_id": "U89bvfkKctQfhnqaFBrAZW",
  "shipment_items": [
    {
      "inventory_product_id": 15,
      "shipment_product_id": "MZ9bmEYFpKKviHe8nSiq4W",
      "shipment_id": "U89bvfkKctQfhnqaFBrAZW",
      "product_id": 3,
```

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```

        "product_name": "YubiKey 5C",
        "product_sku": "5060408461488",
        "product_tier": 2,
        "shipment_product_quantity": 16
    },
    ],
    "organization_id": "UEayb8v4LTHdAshpnk1gMd",
    "user_id": "WMktp3sgPSFt4zsgpLDF46",
    "country_code_2": "US",
    "is_delivered": false,
    "is_sent_to_fulfillment": false,
    "is_shipped": false,
    "recipient": "Example Inc.",
    "recipient_email": "jan.lindberg@example.com",
    "recipient_firstname": "Jan",
    "recipient_lastname": "Lindberg",
    "recipient_telephone": "555-5555",
    "street_line1": "7788 Foxrun Street",
    "city": "Dedham",
    "region": "MA",
    "postal_code": "02026",
    "delivery_type": 1,
    "shipment_state_code": "ShipmentStateAwaitingValidation",
    "shipment_state_id": 3,
    "shipment_state_message": "Awaiting Validation",
    "shipment_summary_description": "Total Keys: 16 yk5c:16",
    "shipment_request_date": "2020-12-10T19:56:57Z",
    "shipment_updated_date": "2020-12-10T19:56:57Z",
    "total_keys_shipped": 16
}

```

1.14.5 Shipping Products to Multiple Addresses

Important: Starting with release 2.7.0, the API for bulk shipment requests will be deprecated. Instead the recommended method for submitting bulk shipment requests to multiple addresses is to use the [YubiEnterprise Console](#). For more information, see the [Release Notes](#).

The system chooses the stock (inventory) from which products are drawn.

Example

The following example of a Bash script calls Curl to upload a CSV file with multiple shipment requests. To scroll horizontally, click in the code box below.

```

#!/bin/bash

token="apitokengoeshere"

curl -F "file=@/path/to/file/bulk_shipment.csv" https://api.console.yubico.com/v1/

```

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```
→ shipments/bulkvalidate \
--header "x-authorization: Bearer ${token}"
```

For instructions on creating and populating the CSV file, see *Bulk Shipment: Shipping to Multiple Addresses*.

Validating CSV Uploads

lines-in-file	Lines in the file, including header.
lines_read	Lines that were able to be read in as CSV, excluding the header. lines_read should thus be one less than lines_in_file
lines_parsable	Lines that passed basic validation. lines_parsable + lines_not_parsable = lines_read.

Example: If a file that is not in the CSV format is uploaded, even if it had 100 lines, 0 lines would be read, because the CSV reader function cannot read the lines in as CSV.

Example: If a file has too many columns - i.e., more columns than the header row has - 0 lines would be read.

Examples of Error Messages

- Error with GetCountryByTwoLetterCode for CountryCode2: TT
- InventoryType not set for Shipment, defaulting to 1
- DeliveryType not set for Shipment, defaulting to 1 - *normal*
- Wrong number of fields

1.14.6 Bulk Shipment Requests via API

Important: Starting with release 2.7.0, the API for bulk shipment requests will be deprecated. Instead the recommended method for submitting bulk shipment requests to multiple addresses is to use the *YubiEnterprise Console*. For more information, see the [Release Notes](#).

Bulk orders using the API are still handled through the following APIs:

- GET /shipments/bulk
- POST /shipments/bulk
- POST /shipments/bulkvalidate

- POST /shipments/bulkdelete

The API parameters and request body themselves did not change to work with channel partners. Instead, it is the content of the .csv file used in the upload that has been changed to include the new **channel_partner_ID** field. The channel partner ID is a non-zero integer shown as a field on the purchase order table and on the purchase order details page.

Note: To ensure you are using the latest .csv file format, download the template file each time you prepare to upload a new batch of shipment requests.

Shipment Request Fields in CSV File

Use the CSV file for bulk shipments via API.

Note: Although Console users can specify the inventory they want to draw from for individual shipment requests, this option is not available for bulk shipments. Bulk shipment requests for Subscription (1.0) allow only the selection of initial, replacement, or buffer stock. When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest purchase order first.

In the table below, all fields not marked as required are optional. The **Limit** column displays the maximum number of alphanumeric characters permitted per field/table cell.

Table 7: **Shipment request fields**

	Console: Field Label CSV: Column Heading	Description	Limit
1	Country code country_code_2	Required. Country code from available_countries.csv	2
	Company recipient	Required if name of recipient is not provided.	20
	First name recipient_firstname	Name of recipient. Required if company name is not provided.	15
	Last name recipient_lastname	Recipient's family name. Required, if company name is not provided.	20
	Address 1 street_line1	Required. First line of address	60

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Table 7 – continued from previous page

	Console: Field Label CSV: Column Heading	Description	Limit
	Address 2 street_line2	Required if address is undeliverable without (for example suite #)	60
	Address 3 street_line3	Not supported for expedited/rush orders	60
	City	Required. City, town, or township.	60
2	Region/State region	For the US and Canada, USPS codes are required. See <i>USPS Codes for US and Canada</i> . (Console users: Select code from dropdown). For other countries, region or state is required if the address is not deliverable without it. To check address availability, see table footnote.	50
	Postcode postal_code	Zip or postal code	50
	RecipientEmail recipient_email	Recipient's email address	80

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Table 7 – continued from previous page

	Console: Field Label CSV: Column Heading	Description	Limit
3	Contact Phone RecipientTelephone recipient_telephone	Required. Telephone number of the shipment recipient. The limit is 40 of the alphanumeric characters “0-9+-()” unless the country code is IN, in which case the limit is 255. Any format is acceptable, with or without spaces.	40
4	DeliveryType delivery_type	Type of shipping, “Normal” (1) or “Expedited” (2). Integers (required for API) OR words	–
5	InventoryType	Required. Console users select from dropdown. For bulk orders and API users, see <i>Product ID and Inventory Product ID</i> .	–
6	ChannelPartnerId channel_partner_ID	Required. If inventory was purchased directly from Yubico, enter “1”; if not, enter the ChannelPartnerId.	3
	YubiKey 5 NFC	Number of keys to be shipped	3
	YubiKey 5 Nano	Number of keys to be shipped	3

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Table 7 – continued from previous page

Console: Field Label CSV: Column Heading	Description	Limit
YubiKey 5C	Number of keys to be shipped	3
YubiKey 5C Nano	Number of keys to be shipped	3
YubiKey 5Ci	Number of keys to be shipped	3
YubiKey 5Ci FIPS	Number of keys to be shipped	3
YubiKey 5C NFC FIPS	Number of keys to be shipped	3
YubikKy 5C Nano FIPS	Number of keys to be shipped	3
YubiKey 5C FIPS	Number of keys to be shipped	3
YubiKey 5 NFC FIPS	Number of keys to be shipped	3
YubiKey 5 Nano FIPS	Number of keys to be shipped	3
YubiKey C Bio - FIDO Edition	Number of keys to be shipped	3
YubiKey Bio - FIDO Edition	Number of keys to be shipped	3

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Table 7 – continued from previous page

Console: Field Label CSV: Column Heading	Description	Limit
Security Key NFC by Yubico (Black)	Number of keys to be shipped	3
Security Key C NFC by Yubico (Black)	Number of keys to be shipped	3
Security Key NFC by Yubico - Enterprise Edition	Number of keys to be shipped	3
Security Key C NFC by Yubico - Enterprise Edition	Number of keys to be shipped	3

Note: To find out if an address is deliverable, make a shipment request and see what status code or message it gets. Deliverability is determined by our shipping partners, and it is their codes and messages we display when it comes to questions of deliverability. For a fuller explanation, see [Troubleshooting](#).

C. and D. Names

Names and Addresses: First Line

First name and **Last name** in the Console and in the CSV file for bulk shipments, map to the first line on the shipping label.

Long recipient names can be problematic for all methods of requesting shipment, because the shipment request will fail if the contents of the **First name** and **Last name** fields and/or **Company** or **recipient** fields exceed the maximum number of characters permitted in these fields (shown in the table below).

Workaround: When a recipient's full name or company name exceeds the fields' maximum lengths, split the names across the three fields, as in this example:

Location	Field (limit=15)	Field (limit=20)	Field (limit=20)
API	recipient_firstname	recipient_lastname	recipient
CSV	First name	Last name	Company
Console	First name	Last name	Company
Example of an overly long name before adjustment to fit the fields			
	Johannes-Maximilian	von Derschowitz-Dampfloch zu Querdenker	
Example after adjustment			
	Joh.-Maximilian	v.DerschowitzDampfloch	zu Querdenker

Company Name: Second Line

The second line on the shipping label maps to the name of the recipient's company if the address is not residential. For example, the system's address verification function recognizes that Yubico's Santa Clara facility is in a commercial building, therefore the company name is expected in:

- The **Company** field/table cell in the **Console** and in the CSV file.
- The recipient field in the API

Note: API: Do not use the /shipments recipient field to specify the **name of the individual** to whom products are to be shipped. For this, use the recipient_firstname and recipient_last name fields instead.

If the address is residential, leave empty:

- The **Company** field/table cell in the **Console** and in the CSV file.
- The recipient field in the API.

Address Information

Incomplete or incorrect address information might cause *validation errors*. For example, entering the following information for a shipment request would result in failure because USPS recognizes that there are multiple companies in the building whose address is 530 Lytton Avenue:

```
Jan Lindberg
530 Lytton Avenue
Palo Alto, CA 94301
USA
```

Similarly, entering the following information for a shipment request would result in failure because a residential address would not be associated with a company.

```
Jan Lindberg
Yubico Inc.
6 Lea Rd
Dronfield S18 1SB
UK
```

When adding address information, you can for example use the address formats provided by Google Maps, see note in *Troubleshooting*. The limits on the various fields and the options for the dropdown are given in *Shipment Request Form Fields*.

E. Post Office Boxes

Although the system can deliver to Post Office (PO) Boxes within the United States, delivery to the equivalent elsewhere in the world is unlikely to succeed.

I. Region/State

USPS Codes for US and Canada

For shipments going to the US and Canada, the region field requires the standardized two-letter USPS code. These codes are listed below.

Table 8: **USPS Codes for US and Canada**

State (US) / Province or Territory (Canada)	Code
Alabama	AL
Alaska	AK
Alberta	AB
Arizona	AZ
Arkansas	AR
British Columbia/Colombie-Britannique	BC
California	CA
Colorado	CO
Connecticut	CT
Delaware	DE
District of Columbia	DC
Florida	FL
Georgia	GA
Hawaii	HI
Idaho	ID
Illinois	IL
Indiana	IN
Iowa	IA
Kansas	KS
Kentucky	KY
Louisiana	LA
Maine	ME
Manitoba	MB
Maryland	MD
Massachusetts	MA
Michigan	MI
Minnesota	MN
Mississippi	MS
Missouri	MO
Montana	MT
Nebraska	NE
Nevada	NV
New Brunswick/Nouveau-Brunswick	NB
New Hampshire	NH
New Jersey	NJ
New Mexico	NM
New York	NY

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Table 8 – continued from previous page

State (US) / Province or Territory (Canada)	Code
Newfoundland/Terre-Neuve	NF
North Carolina	NC
North Dakota	ND
Northwest Territories/Territoires du Nord-Ouest	NT
Nova Scotia/Nouvelle-Écosse	NS
Nunavut	NU
Ohio	OH
Oklahoma	OK
Ontario	ON
Oregon	OR
Pennsylvania	PA
Prince Edward Island/Île-du-Prince-Édouard	PE
Puerto Rico	PR
Quebec/Québec	QC
Rhode Island	RI
Saskatchewan	SK
South Carolina	SC
South Dakota	SD
Tennessee	TN
Texas	TX
Utah	UT
Vermont	VT
Virginia	VA
Washington	WA
West Virginia	WV
Wisconsin	WI
Wyoming	WY
Yukon	YK

L. Telephone Number

It is required that the `recipient_telephone` field be populated. This is the number at which the recipient of the shipment can be reached, designated on the Console as **Contact Phone**.

The permissible content of this, `[+()\-0-9\s]+`, should match regular expressions.

For `/v1/shipments_exact` the API validates the existence of `recipient_telephone` in the request body. For CSV upload via `/v1/bulkvalidate`, the API validates the existence of `recipient_telephone` on each row. In both cases, if the country code is IN, the limit is 255 of the alphanumeric characters specified above while all other country codes limit `recipient_telephone` to 40.

M. Delivery Type

ShipmentDeliveryTypeEnum specifies the method of shipping:

- 1 - Normal (standard) shipping (default)
- 2 - Expedited (rush) shipping.

N. InventoryType

The inventory_type requires one of the values given in the *Inventory Types (Stock)* table below.

Table 9: **Product <> inventory type mapping**

Product or Inventory Name shown on Purchase Order	Value to use for inventory_type
YubiKey Lanyard	1
Security Key C NFC by Yubico (Black)	1
Security Key C NFC by Yubico - Enterprise Edition	1
Security Key NFC by Yubico (Black)	1
Security Key NFC by Yubico - Enterprise Edition	1
YubiKey 5 Nano	1
YubiKey 5 Nano FIPS	1
YubiKey 5 NFC	1
YubiKey 5 NFC FIPS	1
YubiKey 5C	1
YubiKey 5C FIPS	1
YubiKey 5C Nano	1
YubiKey 5C Nano FIPS	1
YubiKey 5C NFC	1
YubiKey 5C NFC FIPS	1
YubiKey 5Ci	1
YubiKey 5Ci FIPS	1
YubiKey Bio - FIDO Edition	1
YubiKey C Bio - FIDO Edition	1
Advanced - Plus - Backup	3
Advanced - Plus - Backup - Replacement	5
Advanced - Plus - Primary	3
Advanced - Plus - Primary - Replacement	5
Advanced - Standard - Backup	3
Advanced - Standard - Backup - Replacement	5
Advanced - Standard - Primary	3
Advanced - Standard - Primary - Replacement	5
Advanced/Bio - Plus - Backup	3
Advanced/Bio - Plus - Backup - Replacement	5
Advanced/Bio - Plus - Primary	3
Advanced/Bio - Plus - Primary - Replacement	5
Advanced/Bio - Standard - Backup	3
Advanced/Bio - Standard - Backup - Replacement	5
Advanced/Bio - Standard - Primary	3
Advanced/Bio - Standard - Primary - Replacement	5
Backup Subscr - Adv. Tier: Buffer	4
Backup Subscr - Adv. Tier: Initial	3
Backup Subscr - Adv. Tier: Replacement	5

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Table 9 – continued from previous page

Product or Inventory Name shown on Purchase Order	Value to use for inventory_type
Backup Subscr - Base Tier: Buffer	4
Backup Subscr - Base Tier: Initial	3
Backup Subscr - Base Tier: Replacement	5
Backup Subscr - FIPS Tier: Buffer	4
Backup Subscr - FIPS Tier: Initial	3
Backup Subscr - FIPS Tier: Replacement	5
Backup Subscr - Prem. Tier: Buffer	4
Backup Subscr - Prem. Tier: Initial	3
Backup Subscr - Prem. Tier: Replacement	5
Base - Plus - Backup	3
Base - Plus - Backup - Replacement	5
Base - Plus - Primary	3
Base - Plus - Primary - Replacement	5
Base - Standard - Backup	3
Base - Standard - Backup - Replacement	5
Base - Standard - Primary	3
Base - Standard - Primary - Replacement	5
Base/Bio - Plus - Backup	3
Base/Bio - Plus - Backup - Replacement	5
Base/Bio - Plus - Primary	3
Base/Bio - Plus - Primary - Replacement	5
Base/Bio - Standard - Backup	3
Base/Bio - Standard - Backup - Replacement	5
Base/Bio - Standard - Primary	3
Base/Bio - Standard - Primary - Replacement	5
Compliance - Plus - Backup	3
Compliance - Plus - Backup - Replacement	5
Compliance - Plus - Primary	3
Compliance - Plus - Primary - Replacement	5
Compliance - Standard - Backup	3
Compliance - Standard - Backup - Replacement	5
Compliance - Standard - Primary	3
Compliance - Standard - Primary - Replacement	5
Non-subscription - Advanced Tier	2
Non-subscription - Base Tier	2
Non-subscription - FIPS Tier	2
Non-subscription - Premium Tier	2
Primary Subscr - Adv. Tier: Buffer	4
Primary Subscr - Adv. Tier: Initial	3
Primary Subscr - Adv. Tier: Replacement	5
Primary Subscr - Base Tier: Buffer	4
Primary Subscr - Base Tier: Initial	3
Primary Subscr - Base Tier: Replacement	5
Primary Subscr - FIPS Tier: Buffer	4
Primary Subscr - FIPS Tier: Initial	3
Primary Subscr - FIPS Tier: Replacement	5
Primary Subscr - Prem. Tier: Buffer	4
Primary Subscr - Prem. Tier: Initial	3
Primary Subscr - Prem. Tier: Replacement	5

- Customers who have purchased Subscription (2.0) will be selecting only Inventory Type **3** or **5**.

- If you have purchased keys on the perpetual mode and/or lanyards, use Inventory Type **1**.
- If you are not a subscription customer, but have purchased one or more **tiers of virtual keys** instead of physical keys, use Inventory Type **2**.
- Subscription (1.0) customers: Use Inventory Types **3, 4**, and/or **5**.

Table 10: **Stock: Initial, Buffer, Replacement**

Initial	The stock in this category reflects the total number of users on the subscription. This lot can be drawn upon for 12 months from the start of your subscription term.
Buffer	This category is made available to you free of charge when your subscription begins. You can draw on it throughout the term of your subscription.
Replacement	This category is intended for those who have lost their YubiKeys or want to upgrade. The stock in this category is reset each year of the subscription to the Replacement limit.

- Use up all of your Inventory Type 3, Initial, within the first year of your subscription.
- Use Inventory Type 4 at any time: Buffer stock expires only at the end of your subscription term.
- Use Inventory Type 5, Replacement, for users who have lost their keys or want to upgrade. Any keys not used in a given year are forfeited at the end of that year.

O. Channel Partners

To order keys via API from inventory purchased through channel partners (distributors/resellers), the new `/shipments_exact` APIs must be used; see *Deprecated APIs* below. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico.

The following APIs related to bulk shipments have been updated to handle channel partners:

- POST `/shipments/bulk`
- GET `/shipments/bulk`
- POST `/shipments/bulkvalidate`
- POST `/shipments/bulkdelete` - For the sake of completeness, this is included in the list, but it has not changed.

The GET `/shipments/csv` API will also be updated to support channel partners.

Product ID and Inventory Product ID

The `product_id` is the unique identifier for the product, e.g., 4 is the YubiKey 5C Nano. The `inventory_product_id` can be thought of as the ID for a “bucket” containing credits that your organization bought to cover the purchase of keys, lanyards, etc. Typically organizations with subscriptions have multiple “buckets”, while organizations without a subscription might have only a single “bucket.”

Both `product_id` and `inventory_product_id` are required fields.

Use the `inventory_product_id` to specify which inventory you are pulling from. The inventories correspond exactly to:

- The inventories shown on the YubiEnterprise Console Dashboard and
- The options in the **Choose from stock** dropdown on the **Single shipment** tab accessed by clicking **Create Shipment Request** on the **Shipments** screen.

The *Stock/Inventory* table below lists both `product_id` and `inventory_product_id` in the same column, and contains all inventories and products except custom products.

- To get the complete list of products and inventories **available to your organization**, make a call to GET `/inventory`.
- If you have custom products, calling GET `/inventory` will return a list that also contains your custom products (see also *Custom-programmed YubiKeys*).
- When making requests, use the `/inventory` end point to find the `product_id` to use for that and/or `inventory_product_id`.

Note: The `inventory_product_id` **can** have the same value as the `product_id` field in the individual `inventory_records`.

Table 11: **Stock/Inventory: `product_id` and `inventory_product_id` mapped to Product Name**

<code>inventory_ product_id and/or product_id</code>	<code>product_name</code>
1	YubiKey 5 NFC
2	YubiKey 5 Nano
3	YubiKey 5C
4	YubiKey 5C Nano
5	YubiKey 5Ci
7	Security Key NFC by Yubico
8	YubiKey FIPS
9	YubiKey Nano FIPS
10	YubiKey C FIPS
11	YubiKey C Nano FIPS
12	Primary Subscr - Base Tier: Initial
13	Primary Subscr - Base Tier: Buffer
14	Primary Subscr - Base Tier: Replacement
15	Primary Subscr - Adv. Tier: Initial

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Table 11 – continued from previous page

inventory_ product_id and/or product_id	product_name
16	Primary Subscr - Adv. Tier: Buffer
17	Primary Subscr - Adv. Tier: Replacement
18	Primary Subscr - Prem. Tier: Initial
19	Primary Subscr - Prem. Tier: Buffer
20	Primary Subscr - Prem. Tier: Replacement
21	Primary Subscr - FIPS Tier: Initial
22	Primary Subscr - FIPS Tier: Buffer
23	Primary Subscr - FIPS Tier: Replacement
24	Non-subscription - Base Tier
25	Non-subscription - Advanced Tier
26	Non-subscription - Premium Tier
27	Non-subscription - FIPS Tier
28	YubiKey Lanyard
29	YubiKey 5C NFC
38	Backup Subscr - Base Tier: Initial
39	Backup Subscr - Base Tier: Buffer
40	Backup Subscr - Base Tier: Replacement
41	Backup Subscr - Adv. Tier: Initial
42	Backup Subscr - Adv. Tier: Buffer
43	Backup Subscr - Adv. Tier: Replacement
44	Backup Subscr - Prem. Tier: Initial
45	Backup Subscr - Prem. Tier: Buffer
46	Backup Subscr - Prem. Tier: Replacement
47	Backup Subscr - FIPS Tier: Initial
48	Backup Subscr - FIPS Tier: Buffer
49	Backup Subscr - FIPS Tier: Replacement
54	YubiKey 5 NFC FIPS
55	YubiKey 5C NFC FIPS
56	YubiKey 5Ci FIPS
57	YubiKey 5 Nano FIPS
58	YubiKey 5C FIPS
59	YubiKey 5C Nano FIPS
68	YubiKey C Bio - FIDO Edition
69	YubiKey Bio - FIDO Edition
82	Security Key NFC by Yubico (Black)
83	Security Key C NFC by Yubico (Black)
84	Security Key NFC by Yubico - Enterprise Edition
85	Security Key C NFC by Yubico - Enterprise Edition
86	Base - Standard - Primary
87	Base - Standard - Backup
88	Base - Standard - Primary - Replacement
89	Base - Standard - Backup - Replacement
90	Base - Plus - Primary
91	Base - Plus - Backup
92	Base - Plus - Primary - Replacement

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Table 11 – continued from previous page

inventory_ product_id and/or product_id	product_name
93	Base - Plus - Backup - Replacement
94	Base/Bio - Standard - Primary
95	Base/Bio - Standard - Backup
96	Base/Bio - Standard - Primary - Replacement
97	Base/Bio - Standard - Backup - Replacement
98	Base/Bio - Plus - Primary
99	Base/Bio - Plus - Backup
100	Base/Bio - Plus - Primary - Replacement
101	Base/Bio - Plus - Backup - Replacement
102	Advanced - Standard - Primary
103	Advanced - Standard - Backup
104	Advanced - Standard - Primary - Replacement
105	Advanced - Standard - Backup - Replacement
106	Advanced - Plus - Primary
107	Advanced - Plus - Backup
108	Advanced - Plus - Primary - Replacement
109	Advanced - Plus - Backup - Replacement
110	Advanced/Bio - Standard - Primary
111	Advanced/Bio - Standard - Backup
112	Advanced/Bio - Standard - Primary - Replacement
113	Advanced/Bio - Standard - Backup - Replacement
114	Advanced/Bio - Plus - Primary
115	Advanced/Bio - Plus - Backup
116	Advanced/Bio - Plus - Primary - Replacement
117	Advanced/Bio - Plus - Backup - Replacement
118	Compliance - Standard - Primary
119	Compliance - Standard - Backup
120	Compliance - Standard - Primary - Replacement
121	Compliance - Standard - Backup - Replacement
122	Compliance - Plus - Primary
123	Compliance - Plus - Backup
124	Compliance - Plus - Primary - Replacement
125	Compliance - Plus - Backup - Replacement

Custom-programmed YubiKeys

If your organization has custom-programmed YubiKeys, to make a shipment request, use the `/inventory /products` APIs to get the `inventory_product_id` and `product_id`. Using standard `product_id` codes in shipment requests will result in errors.

Error Messages

In the API

The following response is sent if `recipient_telephone` is not included in the request to create shipment at `shipments_exact` as per POST `/v1/shipments_exact`:

```
400 Bad Request {
  code: 'validation_error',
  message: 'We were unable to create the shipment',
  errors: [
    {
      field: 'recipient_telephone',
      message: 'recipient_telephone is a required field'
    }
  ]
}
```

In the CSV

When uploading a CSV file with no `recipient_telephone` provided in one or more rows:

```
YRIEIXLECHAT-01:shipments yrieix.lechat$ cat my-shipments.csv
Country code 2,Company,First name,Last name,Address 1,Address 2,Address 3,City,Region/
↪ State,Postcode,RecipientEmail,RecipientTelephone,DeliveryType,InventoryType,
↪ ChannelPartnerId,YubiKey 5 NFC,YubiKey 5 Nano,YubiKey 5C,YubiKey 5C Nano,YubiKey 5Ci,
↪ Security Key NFC by Yubico,YubiKey FIPS,YubiKey Nano FIPS,YubiKey C FIPS,YubiKey C
↪ Nano FIPS
US,My Company,Yrieix,LeChat,123 Home Ave,, ,Brooklyn,NY,11111,y.lechat@yubico.com,,Normal,
↪ 1,1,0,0,0,0,0,1,0,0,0,0
YRIEIXLECHAT-01:shipments yrieix.lechat$ curl -v -s -X POST -H "Authorization: Bearer ..."
↪ -F file=./my-shipments.csv http://api.console.local/v1/shipments/bulkvalidate |
↪ json_pp
...
> POST /v1/shipments/bulkvalidate HTTP/1.1
> Host: api.console.local
...
< HTTP/1.1 200 OK
...
{
  "csv_filename" : "my-shipments.csv",
  "failed_rows" : [
    {
      "fatal_messages" : "recipient_telephone is a required field",
      "row_number" : 2
    }
  ]
}
```

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```

    }
  ],
  "lines_in_file" : 2,
  "lines_not_parsable" : 1,
  "lines_read" : 1
}

```

1.14.7 Deprecated APIs

The following tables list deprecated APIs related to shipment requests. For more information, see [Deprecated APIs: Overview](#).

Shipment Request Creation: Address Information

Deprecated	Replacement
street_line3	Starting with release 2.8.0 this field in the recipient address information will be deprecated and will only be available until September 2024. There is no replacement API for this functionality.

Shipping Requests: Bulk Shipment to Multiple Addresses

Deprecated	Replacement
GET /v1/shipments/bulk POST /v1/shipments/bulk POST /v1/shipments/bulkvalidate	From July 2024, the only method to create bulk shipment requests is to use the YubiEnterprise Console There is no replacement API for this functionality.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.15 API Shipment Requests: Listing, Tracking, Searching and Status

1.15.1 Listing Shipment Requests

There is a 100-record limit on all API calls. To illustrate, using /shipments_exact to retrieve a list of all shipments would be unsuccessful unless there were only one hundred or fewer shipments, as only the first 100 records are returned.

Note: The `/shipments_exact{id}` route returns the shipment type ('Automated' or 'Manual') as part of the response. The field is sortable. The `/shipments/search-description` route returns the Type field as a filterable field.

Obtaining Further Records

In cases where there are more than 100 shipments, iterate through the shipments based on the number of shipments provided by the `total_count` parameter.

Use the optional parameters to obtain more records. For example:

```
// get the first 100
/shipments_exact?limit=100&offset=0

// get the second 100
/shipments_exact?limit=100&offset=100

// get the third 100
/shipments_exact?limit=100&offset=200
```

1.15.2 Single Shipment Request Tracking Example

A successful response from the `shipments_exact` resource will include a `shipment_id` which can be used to get the tracking information for this shipment request.

```
{
  "shipment_id": "U89bvFKKctQfhnqaFBrAZW",
  "shipment_items": [
    {
      "inventory_product_id": 15,
      "shipment_product_id": "MZ9bmEYFpKKviHe8nSiq4W",
      "shipment_id": "U89bvFKKctQfhnqaFBrAZW",
      "product_id": 3,
      "product_name": "YubiKey 5C",
      "product_sku": "5060408461488",
      "product_tier": 2,
      "shipment_product_quantity": 16
    }
  ],
  "organization_id": "UEayb8v4LTHdAshpnk1gMd",
  "user_id": "WMktp3sgPSFt4zsgpLDF46",
  "country_code_2": "US",
  "is_delivered": false,
  "is_sent_to_fulfillment": false,
  "is_shipped": false,
  "recipient": "Example Inc.",
  "recipient_email": "jan.lindberg@example.com",
  "recipient_firstname": "Jan",
  "recipient_lastname": "Lindberg",
  "recipient_telephone": "555-5555",
}
```

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```

"street_line1": "7788 Foxrun Street",
"city": "Dedham",
"region": "MA",
"postal_code": "02026",
"delivery_type": 1,
"shipment_state_code": "ShipmentStateAwaitingValidation",
"shipment_state_id": 3,
"shipment_state_message": "Awaiting Validation",
"shipment_summary_description": "Total Keys: 16 yk5c:16",
"shipment_request_date": "2020-12-10T19:56:57Z",
"shipment_updated_date": "2020-12-10T19:56:57Z",
"total_keys_shipped": 16
}

```

1.15.3 Tracking a Shipment Using the shipment_id

```

curl "https://api.console.yubico.com/v1/shipments_exact/Bj4pfrBJ1SCvkTbTP88Ak2" \
--header "Content-Type: application/json" \
--header "Authorization: Bearer eyJhb..." \

```

1.15.4 Search

Some of the lines of code are very long, so it may be necessary to click in the line and scroll horizontally.

You can get a list of shipments filtered by query parameters. We introduced `/search-description` on searchable resources to provide a description of the searchable fields. To look up a shipment using the parameter “Shipping error, contact support” state, for example, set the `search_field` to `shipment_state_id` and set the ID to 99, which is the ID for that shipment state. (See the *Shipment Status Codes* table below for explanations of the various shipment states.)

Example

```

curl "https://api.console.yubico.com/v1/shipments_exact?search=99&search_field=shipment_
↪state_id" \
--header "Content-Type: application/json" \
--header "Authorization: Bearer eyJhb..."

```

Advanced Search

To enable advanced search, add the query string parameter `&advanced_search=true`. Note that the `&search` query parameters will need to respect a different structure: `search=field_name::operation_type::value`. An example search with curl (`--data-urlencode` is used because many characters introduced are illegal in the old query string, such as `:` and `|`):

```

curl -H "$YED_AUTHORIZATION" -G --data-urlencode 'search=shipment_request_
↪date::range::2020-05-10T00:00:00Z|2020-12-10T00:00:00Z' --data-urlencode
↪'search=organization_name::like::alpha comp' --data-urlencode 'search=organization_
↪name::exact::demo_org' 'http://api.console.local/v1/shipments_exact?offset=0&limit=10&
↪sort_by=shipment_request_date&sort_direction=DESC&advanced_search=true'

```

This is the encoded URL.

```
GET /v1/shipments_exact?offset=0&limit=10&sort_by=shipment_request_date&sort_
↳direction=DESC&advanced_search=true&search=shipment_request_date%3A%3Arange%3A%3A2020-
↳05-10T00%3A00%3A00Z%7C2020-12-10T00%3A00%3A00Z&search=organization_name%3A%3Alike%3A
↳%3Aalpha%20comp&search=organization_name%3A%3Aexact%3A%3Ademo_org HTTP/1.1
```

Fields with different names will be searched in an AND, while fields with the same name will be ORed, so the resulting query fragment will be:

```
WHERE (shipment_request_date BETWEEN ? AND ?) AND ((organizations.organization_name = ?)
↳OR (organizations.organization_name LIKE ?)) ORDER BY shipment_request_date DESC LIMIT
↳?
```

with the following array to fill in the ? in the fragment:

```
[2020-05-10 00:00:00 +0000 UTC 2020-12-10 00:00:00 +0000 UTC demo_org %alpha comp% 10]
```

Note: The old search will continue to work as before.

1.15.5 Filtering and Pagination

Refer to the [API docs](#) for the `GetShipmentsExact` operation.

1.15.6 Status

Shipment Status Codes

A shipment request can be edited at any of the states between 1 and 9. From this point on, a shipment request is either processed through to an end state, or set back to state 99.

For information on how address validation affects the success of a shipping request, see the [Troubleshooting](#) chapter.

Table 12: Shipment state codes

shipment_state_code shipment_state_id	Status description (shipment_state_description)	Status message in Console (shipment_state_message)
ShipmentStateIncomplete 1	Shipment request received by YubiEnterprise Delivery system but contained some data that could not be processed. (2), (3)	Incomplete Shipping Request
ShipmentStateDraft 2	Shipment request is being edited and is not ready for processing.	Draft
ShipmentStateAwaitingValidation 3	Shipment request received, no validation done yet.	Awaiting Validation
ShipmentStateProcessingAddress 4	Shipment request locked as it undergoes country check, address validation, sales tax rate lookup (US), DPL check.	Processing
ShipmentStateAddressValid 5	Shipment request address has been validated, ready to be picked up by fulfillment processor.	Accepted for Fulfillment
ShipmentStateAddressInvalid 6	Shipment request address is invalid but an alternative address has been found and suggested. (2), (3)	Incomplete
ShipmentStateAddressFail 7	Shipment request address could not be validated and no alternative could be found for suggesting. suggested. (2), (3)	Address is undeliverable or could not be understood

(1) Refer to [Timing](#) for cutoff times.

(2) Incomplete Address: Secondary line information such as apartment (apt), suite, unit is missing. Therefore it is not possible to guarantee delivery to the correct recipient.

(3) Address is Undeliverable or could not be understood: The address is either not physically deliverable or it could not be resolved to a real location.

(4) Any shipping request with a recipient name and/or address found on the US government's [DPL \(Denied Parties/Persons List\)](#) cannot be fulfilled.

Shipment Status Messages

These error messages accessible via the API tell you why a given shipment request was unsuccessful. It is worth reviewing them before making any shipping requests in order to see what sort of issues might arise and thereby avoid them in the first place.

In the Explanation column, the source of the message is given: YubiEnterprise Delivery system for internal messages, US Validation for the US Postal Service, and finally, International Validation. Messages originating from the last two are simply passed on to you by YubiEnterprise Delivery.

Table 13: **YubiEnterprise Delivery API status messages**

Message	Explanation
InventoryProductId not specified for ProductId %d - ShipmentStateError	See Bulk Shipment: Shipping to Multiple Addresses YubiEnterprise Delivery system
Too many keys in shipment - TotalKeysShipped %d > %d - ShipmentStateError	See Limits and Constraints YubiEnterprise Delivery system
Not enough Inventory for Shipment - ShipmentStateError	See Purchase Orders YubiEnterprise Delivery system
Re-enter the address differently; some parts of it are invalid.	See Troubleshooting US Validation
The address is invalid.	See Troubleshooting US Validation
The address is valid.	No further explanation required. US Validation
Remove the 'secondary unit designator' (apt, suite, department, etc.) because it is superfluous.	Remove the apartment number, unit, etc.: it is considered wrong or unnecessary. US Validation

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Table 13 – continued from previous page

Message	Explanation
Enter second line information (apartment, unit, etc.). The information in the primary line is not specific enough.	Add the apartment number, unit, etc. US Validation
The address is a valid military address.	No further explanation required. US Validation
The address is a valid General Delivery address where individuals without permanent addresses can receive mail.	No further explanation required. US Validation
The address is valid. An organization such as a government agency can have its own zipcode because it receives a large volume of mail.	No further explanation required. US Validation
Enter a street number; for example, for Yubico “Lytton Ave” alone is not sufficient, it needs to be “530 Lytton Ave”.	The number on the primary line, for example the “185” in “185 Berry Street” is missing. US Validation
Enter a valid street number.	The number on the primary line, for example the “185” in “185 Berry Street” not valid. US Validation
Enter a PO Box, Rural Route, or Highway Contract number.	US Validation
Enter a valid PO Box, Rural Route, or Highway Contract box number.	US Validation
Enter the Private Mailbox (PMB) identifier or the # sign, followed by the PMB number.	PMB number is Private Mailbox Number US Validation
This address is not eligible to receive mail.	US Validation

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Table 13 – continued from previous page

Message	Explanation
The address is that of a Commercial Mail Receiving Agency (CMRA) a private business that accepts mail for recipients, and the required private mailbox information is present.	US Validation
The address is missing some important secondary line information (apartment, unit, etc).	No further explanation required. International Validation
Mail is unlikely to arrive at this destination - please verify input.	No further explanation required International Validation
This street could not be found within the city or postal code.	No further explanation required International Validation
Invalid OrganizationId for Shipment	YubiEnterprise Delivery system
Country Code not set for Shipment	YubiEnterprise Delivery system
Country could not be found from CountryCode2: %s	Country code entered is not in YubiEnterprise Delivery system list
Shipment has no shipment items	YubiEnterprise Delivery system
DeliveryType not set for Shipment, defaulting to 1 - <i>normal</i>	YubiEnterprise Delivery system
Invalid DeliveryType %s for Shipment	YubiEnterprise Delivery system
InventoryType not set for Shipment, defaulting to 1	YubiEnterprise Delivery system

continues on next page

Table 13 – continued from previous page

Message	Explanation
InventoryType %s not valid set for Shipment	You cannot use this InventoryType for this shipment - YubiEnterprise Delivery system
Negative quantity entered for ShipmentItem with ProductId=%d defaulting to 0	You set the quantity of the specified ProductID to be shipped to less than zero. YubiEnterprise Delivery system
Invalid ShipmentProductQuantity for ShipmentItem %d	You probably do not have sufficient inventory. YubiEnterprise Delivery system
Invalid ShipmentProductLineCost for ShipmentItem %d	YubiEnterprise Delivery system
Invalid Shipment - Total keys in shipment greater than 500	You cannot ship more than 500 items at once. YubiEnterprise Delivery system
Shipment has zero total item quantity	The number of items to be shipped must be > 0. YubiEnterprise Delivery system
US Address is missing the state name/abbreviation in region field	No further explanation required. YubiEnterprise Delivery system
Bad ProductId in ShipmentProduct for NewShipmentProduct	ProductID is wrongly specified or invalid. YubiEnterprise Delivery system
Input for %s exceeded limit of %d characters	Specified field cannot accept the number of characters that were entered. YubiEnterprise Delivery system
Shipment of these products to this country using this delivery type is not supported For more information, see Delivery Policies .	Shipment request contravenes one or more business rules. YubiEnterprise Delivery system

- See the [USPS FAQ](#).

Response Request Status Codes

The responses to your requests indicate what is happening on the server side. Below are the common status codes in responses from the YubiEnterprise Delivery API, and what they mean.

Table 14: **Status codes**

Code	Meaning	Explanation
200	OK	The request was successful and the response body contains the representation requested
302	FOUND	A common redirect response; this will redirect to the OAUTH login page
400	BAD REQUEST	API validation failed for the request
403	FORBIDDEN	API denied permission to fulfill the requested resource
404	NOT FOUND	The requested resource was not found

1.15.7 Deprecated APIs

The following table lists deprecated APIs related to listing, tracking, searching, and status for shipment requests. For more information, see [Deprecated APIs: Overview](#).

Shipping Requests: Listing, Tracking, Searching, Status etc.

Deprecated	Replacement
GET /shipments	GET /shipments_exact
POST /shipments	POST /shipments_exact
GET /shipments/{shipmentId}	GET /shipments_exact/{shipmentId}
PUT /shipments/{shipmentId}	PUT /shipments_exact/{shipmentId}
DELETE /shipments/{shipmentId}	DELETE /shipments_exact/{shipmentId}
/UpdateShipmentById	shipments_exact/{shipment_id}
/organization/update-setting	None

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.16 API: Best Practices and FAQs

The following best practices are specific to the YubiEnterprise Delivery API. For general best practices, troubleshooting and FAQs for the YubiEnterprise Console, see *Best Practices and Troubleshooting* and *General FAQs*.

1.16.1 Controlling Access to your Accounts

API tokens are used by API caller accounts for authentication when integrating applications with the YubiEnterprise Delivery service.

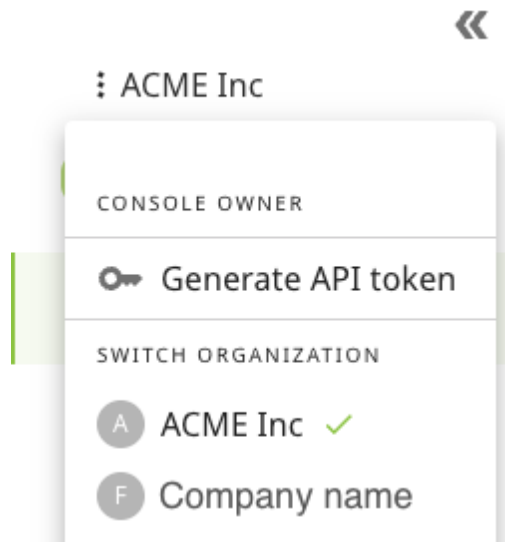
- Protect access to the API token, because whoever is in possession of the token is authorized to perform API operations for your organization.
- Accounts that use machine tokens should have the Admin role, not the Owner role. This reduces the risk if the token is compromised, since the token has only the permissions associated with its role.
- The fact that API tokens can easily be issued and revoked helps to assure the security of accounts that use machine tokens.
- To handle machine token expiry, we recommend using the API (`/auth/machine-token`) to renew the API token. Ideally, logic should be put in to renew by calling the API to get a new token before the existing one expires.
- If a user is removed from an organization and has a token in that organization, the token is revoked. If a user is suspended, all tokens are revoked. The tokens are left untouched if the user is reset or the password is reset.
- Before an API token expires, the system generates and sends a notification to the associated email address. The email notifies that the token will expire in 7 days/1day and will not be accepted by our system after that.

1.16.2 Managing API Tokens

The following section describes how to create and delete API tokens, and regenerate them before they expire.

Generating API Tokens

1. In the **Console**, click the organization name in the top left corner.



1. Select **Generate API token**. The Manage API token dialog appears showing the generated API token.
2. Make a copy of the token and store it in a secure location. The token is shown *only at this time*, if you navigate away from the dialog you will no longer be able to view it.
3. Click **I have saved my token** to close the dialog.

Note: The API token is tied to an account AND an organization. If a token does not exist for an account/organization, the menu option under the organization name will be **Generate API token**. If a token exists for an account/organization, the option will be **Manage API token**.

Notification of API Token Expiry

API tokens expire one year after generation. Since a user (API caller) can have only one API token at a time, you must have a plan to roll-over to a new API token before the old one expires.

The system automatically emails notification that the API token will expire:

- 7 days beforehand
- 1 day beforehand
- On the day of expiry

The notification is emailed to:

- The user (holder) of the API token
- The Console Owner (account owner, in cc)

For more information about user roles, see [Roles and Permissions](#).

Revoking and Deleting API Tokens

An account can have 0 or 1 API access (machine) tokens. Once you have a token, it must be revoked and deleted before you can get a new one - *even if the old one has expired*.

- **From the API:** The GET `/auth/machine-token` request revokes any existing tokens and creates a new machine token. Note that this could cause outages since GET in this instance is not a safe idempotent operation.
- **From the Console:** While logged in to the Console as the user with the relevant API token, click the organization name and select **Manage API token**. Click **Revoke and delete active API token**. Once you revoke and delete the old token, the button to generate a new token appears.

1.16.3 Deprecated APIs

Deprecated APIs are not maintained and will eventually be removed. Ensure that your implementation is not using a deprecated version of the API. For information, see [Deprecated APIs: Overview](#).

1.16.4 API: FAQ

Q. Who should use the API?

A. Customers of YubiEnterprise Delivery.

Q. Does Yubico charge for API calls?

A. No.

Q. How do I get access to the API?

A. Get login credentials from the YubiEnterprise Delivery account owner in your organization, and see [Onboarding Workflow](#).

Q. How should I set up an account to call the API?

A. After you have been given a YubiEnterprise Delivery account, follow the instructions in [API Onboarding Playbook](#).

Q. How do I test the API?

A. In the API Onboarding Playbook in the current guide, see [YubiEnterprise Delivery Self-Service Web Portal](#) and [API: ServiceNow Integrations](#).

Q. How do I revoke an API token?

A. See [Revoking and Deleting API Tokens](#) above.

Q. Where do I go if I need help?

A. Get help now from our support team: to file a support ticket for YubiEnterprise Delivery, click [Support](#), or reach out to the customer success representative who was assigned to your company.

Q. Can I get notification of YubiEnterprise Delivery API changes?

A. Subscribe to the Yubico Developer Program mailing list. Go to <https://www.yubico.com/why-yubico/for-developers/developer-program/>. Although this page looks as if it is just for a coupon, it is actually the sign-up page for the mailing list.

Q. Does the country code look-up API return the countries to which Yubico can ship, or does it return all countries in the world?

A. It returns all the countries in the world. Currently we can ship only to the countries named in [Delivery Policies](#).

Q. Do I need to validate addresses via the API prior to submitting them?

- A. “Pre-qualifying” the address does not eliminate the address validation step. Every shipping request is sent for address validation. Status is updated when address validation is complete. Once the request reaches the “Accepted for Fulfillment” status, it has passed the address validation phase. If the status is “Incomplete Address”, edit or delete the request. See [Reviewing Incompletes](#).
-

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.17 API: ServiceNow Integrations

1.17.1 Introduction

ServiceNow IntegrationHub is a centralized location to build and manage integrations. It is made up of a series of “spokes,” self-contained, scoped applications that contain all of the artifacts that make up an integration, primarily “Actions”.

With the aid of the following example, we will demonstrate how to integrate the YubiEnterprise Delivery API into a ServiceNow spoke in order to enable your end users to order YubiKeys from your organization’s inventory with just a few clicks.

This guide will cover:

1. How to add a YubiKey to your service catalog
2. How to configure your form to send a request to the YED API to create a shipment
3. How to send shipment tracking information to your end user

1.17.2 Step-by-step Guide

The [YubiEnterprise Delivery for ServiceNow Tutorial](#) will walk you through configuring your custom spoke.

Considerations

The aim of this guide is not to create a production-ready prototype, but instead to familiarize you with ServiceNow and the method of integrating it with YubiEnterprise Delivery. Below are a few of the considerations to keep in mind to ensure the success of your integration.

Policies to prevent abuse

This demo will allow a user to request shipment of as many keys as they desire. Additional logic will need to be built in to limit the number of shipment requests based on your requirements.

Selectable security Key

This demo is configured to order the YubiKey 5 NFC, and can be extended a variety of ways to allow different keys.

Error handling

There is one section in this guide that describes handling methods if an error is sent during the initial order. For a production deployment, there are a variety of different error cases that should be considered such as low inventory, shipment failure, undeliverable address, etc.

Auto-filling address

Currently this guide assumes that the user will be shipping their key to the address listed in ServiceNow. The catalog item may need to be extended to allow the user to input their personal address (for example, if they are not located at one of your main offices). You may want to consider leveraging the YubiEnterprise Delivery Verify Address API to allow your users to correct any address errors prior to submitting a shipment request.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.18 User Management

The initial **Console Owner** for an organization using YubiEnterprise Services is set up by YubiEnterprise Services customer support during onboarding. The initial owner then sets up additional YubiEnterprise Console users for the organization.

Note: Ensure your organization has at least two Console Owners. That is the only role that can perform password and account resets for users who have been locked out. If your organization only has one Console Owner and that person locks themselves out or leaves your organization, you must contact Yubico to set up a new Console Owner which might delay shipment requests.

Each user in an organization has a single account, the username for which is their email address. Via email, the user is asked to complete the setup of their account by setting a password and registering a YubiKey (the WebAuthn credential). For more details, see [Onboarding Workflow](#).

In the case of a multinational organization shipping YubiKeys to both the EU and the US, two separate organizations will be set up. Even if the same person is the Console Owner for both, there is a separate account for each.

1.18.1 Viewing Users

In the **Console**, click **Settings** > **Users** to open the **Users** page. What you see here depends on your role. You can only access user information through the **Customer** view with either the **Console Owner**, **Console Admin**, or **Console Auditor** role. Only Console Owners can edit or delete users, Admins and Auditors can only view the user information.

For distributor and reseller types of organizations, there are also **Distributor** and **Reseller** roles that control permissions for these users. For more information, see [Roles and Permissions](#).

Email	Roles	Last login	State	MFA	Pa...	Edit
user1@acme.com	CONSOLE ADMIN	2023-11-...	Active	✓	✓	Edit Delete
user2@acme.com	CONSOLE OWNER	2023-12-...	Active	✓	✓	Edit Delete
user3@acme.com	CONSOLE ADMIN	2024-01-...	Active	✓	✓	Edit Delete
user4@acme.com	CONSOLE ADMIN	2023-10-...	Active	✓	✓	Edit Delete

Customer/Console Owner view of Settings

The following user information is displayed:

- **Email** - Email address used to log in to the Console.
- **Roles** - The role that the user has in the system, see [Roles and Permissions](#).
- **Last login** - Expressed in terms of period in the past, for example, “2 years ago”.
- **State** - The state of the user’s account, for example “Active”, see [User Account States](#).
- **MFA** - Indicates whether the user has enabled multi-factor authentication (tick) or not (x).
- **Password** - Indicates whether the user has set a password (tick) or not (x).
- **Edit / Delete** - Icons for editing or deleting users, only for Console Owners.

1.18.2 Adding or Deleting Users

Note: Adding or deleting users can only be done from the **Customer** view by a Console Owner.

Do the following to *add* a user:

1. On the **Settings > Users** page, click **Add new member**. The **Add new member** dialog appears.

1. Enter the new user’s email address and select a role - **YubiEnterprise Console Owner**, **Admin**, or **Auditor**. If your organization is a distributor or reseller you will also have options to assign **Distributor** or **Reseller** roles to your users. For more information, see [Distributor Role](#) and [Reseller Role](#).
2. Click **Save**.

For each new user, the system generates the following email inviting the user to register:

```

From: no-reply@yubico.com
Date: Sep 10, 2020, 12:34 PM -0700
To: <new-user@example.com>
Subject: Welcome to YubiEnterprise!

**Please activate your account**

Hi,

Your system administrator has created a YubiEnterprise Delivery account for you.

To help you get started with YubiEnterprise Delivery Console, please see
Yubico's `Getting Started <https://www.youtube.com/watch?v=IHW5Qt-r-qM>`_ video.

Click the following link to activate your account:

**Activate your YubiEnterprise account**

This link expires in 7 days.
Your username is: <new-user@example.com>

This is an automatically generated message from Yubico. Replies are not monitored
or answered.

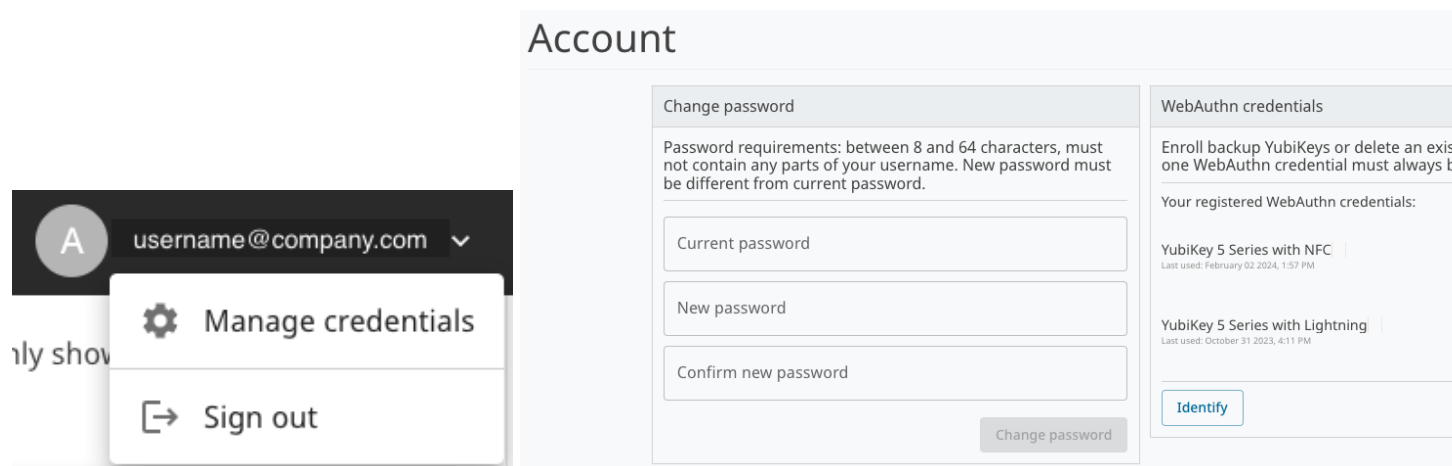
```

Do the following to *delete* a user:

1. On the **Settings > Users** page, click the trashcan icon on the line for the user you want to delete.
2. Click **Remove user** in the confirmation dialog that appears.

1.18.3 Managing Your Account

To manage your account settings, click on your user icon in the upper right corner and select **Manage credentials** to open the **Account** page.



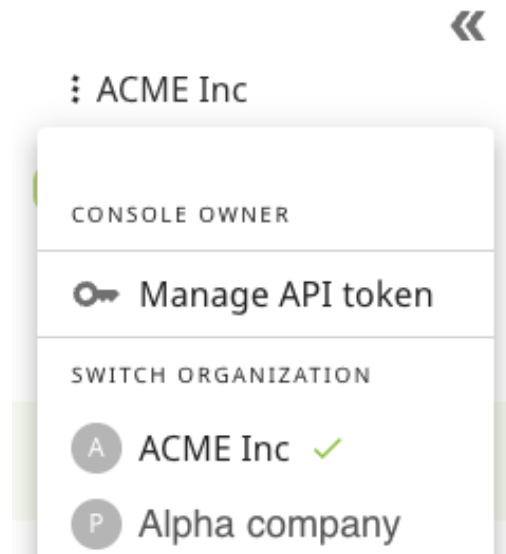
Managing Login Credentials

To change your password, enter your current password and desired new password in the **Change password** section of the [Account page](#). When done, click **Change password**.

If you forgot your password, a Console Owner needs to [reset your password](#). You will receive an email with a link and instructions for creating a new password.

Switching Organizations

If you have login credentials for more than one organization, you can switch between them from the more options menu in the top left corner. Click the organization name to open the menu, then select the name of the desired organization to open the dashboard for that organization.



Adding WebAuthn Credentials

From the **WebAuthn credentials** section in the [Account page](#) you can manage WebAuthn credentials and security keys for your account.

WebAuthn credentials

Enroll backup YubiKeys or delete an existing credential. At least one WebAuthn credential must always be present.

Your registered WebAuthn credentials:

YubiKey 5 Series with NFC

Last used: February 02 2024, 1:57 PM

Edit

Remove

YubiKey 5 Series with Lightning

Last used: October 31 2023, 4:11 PM

Edit

Remove

Identify

Add

To register a security key, click **Add** and follow the instructions in the dialog that appears. Registered keys will appear in the list of WebAuthn credentials.

To change the name of an existing key, click **Edit**, make your changes, and click **Save**. To remove a key from your account, click **Remove**.

Lost or Reset YubiKey

If you lose or reset your YubiKey, you can no longer log in to the Console. If this happens, you must contact a Console Owner for your organization to have your account reset as described in [Account Recovery and Password Reset](#). When you acquire a replacement security key, you can then log in and register that second key.

Important: It is strongly recommended to register at least one other YubiKey at the same time as the first one, and to keep your YubiKeys in a safe place. For more information, see [Spare YubiKeys](#).

Account Recovery and Password Reset

Note: Only Console Owners can manage account recovery, do password resets, and change user roles.

Do the following:

1. Go to the **Settings > Users** page.
2. Click the pencil icon on the line for the user you want to edit. The **Edit member** page appears.

Users / Edit member

Edit member firstname.lastname@acme.com [Go back](#)

Last logged in: Nov 1, 2023, at 4:26 PM (GMT+1), 3 months ago

Reset user

The user recovery process usually entails

1. The user is sent a recovery email
2. The email contains a link that takes them to the account recovery flow
3. The account recovery flow asks the user for a new password and to enroll a security key

Reset user

Reset password

The password reset process entails:

1. The user's password is reset
2. The user is sent a password reset email
3. The user remains logged in if they already have an open session, but cannot log in again before they complete the password reset
4. The email contains a link that takes them to the password reset flow
5. The password reset flow authenticates the user with their security key, if they have one enrolled, and then asks the user for a new password

Reset password

Change role

Customer view

☐ None

☐ YubiEnterprise Console Owner

☒ YubiEnterprise Console Admin

☐ YubiEnterprise Console Auditor

For user management and viewing orders not subject for resale.

Save

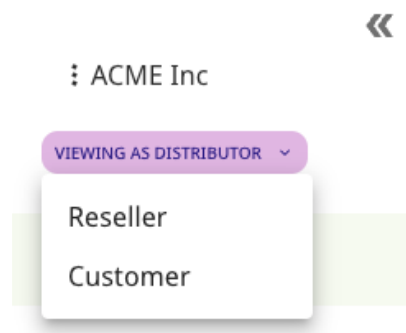
3. You can do the following changes:
- **Reset user** - Enable user account recovery, for example in case of a lost YubiKey.
 - **Reset password** - Reset a user's password, sufficient if the user still have their YubiKey.
 - **Change role** - Update a user's role.
4. Click **Save**.

Managing API Tokens

An API token is used by an API caller account for authentication when integrating applications with the YubiEnterprise Delivery service. For information on how to generate and manage API tokens, see [Managing API Tokens](#).

1.18.4 Roles and Permissions

In addition to the Console Owner, Console Admin and Console Auditor roles for Customer (account) organization members, there are also Reseller and Distributor roles. These provide access to specific views for distributors and resellers to view their customers' purchase orders and inventories.



A Console user can have one or none of the organization member roles, and may have one or both of the Distributor and Reseller roles. All organizations must always have *at least one* Console Owner, and can have one or more users with the Console Admin or Console Auditor roles.

An organization can for example be both a *Customer* ordering keys for its own employees, and a *Reseller* selling keys to end customers. This scenario requires at least one user with the Console Owner role for the organization, and the Reseller role for one or more users in the organization.

The following section describes the different roles and their permissions in more detail.

Customer Roles

The table below describes the permissions for the Console Owner, Console Admin and Console Auditor roles for a Customer (account) organization.

Permission	Owner	Admin	Auditor
Add/delete organization members	yes	no	no
Change member roles	yes	no	no
Reset member login credentials	yes	no	no
Create/edit shipment requests	yes	yes	no
Correct shipping addresses	yes	yes	no
View shipments/purchase orders/org settings	yes	yes	yes
Manage personal login credentials	yes	yes	yes
View other roles' details	yes	yes	yes
Generate API token	yes	yes	no
Download CSV files	yes	no	no

Console Owners, Admins, and Auditors can all view the names, email addresses and assigned roles of organization members displayed on the **Settings > Users** page.

Note: Only the end customer can view the Personally Identifiable Information (PII) entered for creating shipment requests. Neither the distributor nor the reseller can view the PII entered by their end customers for creating shipment requests.

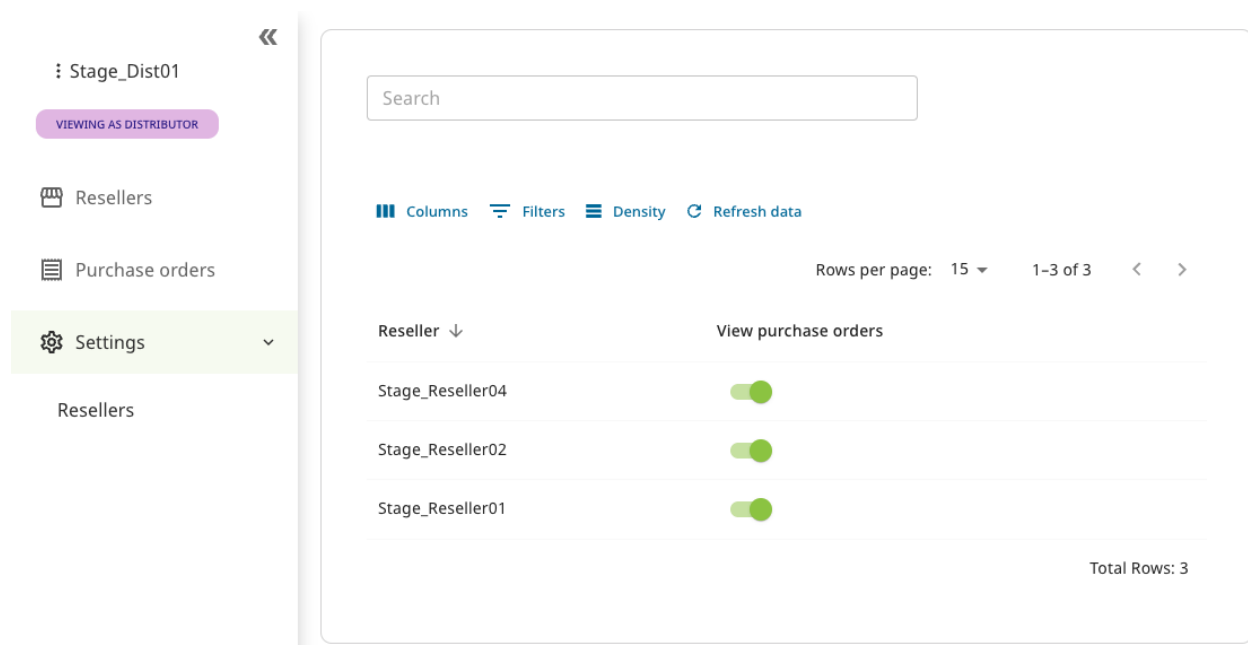
In order to view Personally Identifiable Information (PII), new and existing users must accept the applicable terms and conditions when they log in for the first time after the release of YubiEnterprise Services 2.4.0.

Distributor Role

The Distributor role is used by organizations that sell Yubico products to resellers. As a user with the Distributor role, you have access to the *Distributor view* where you can monitor end customers' product inventory and activities in your reseller network.

Note: The Distributor role does not provide permission to view or manage user information.

The Distributor view lets you access the **Settings > Resellers** page where you can provide access for your resellers to view purchase order information.



To allow your resellers to access purchase order information for end customers, set the **View purchase orders** toggle to “on” for the desired reseller. This setting also enables resellers to allow their *end customers to access purchase order information*. To *revoke* access to purchase order information, set the toggle to “off”.

Important: If you disable this access for a reseller, then neither that reseller nor their end customers can see any inventory purchased through this reseller.

As a Console Owner for a distributor organization, you can assign the Distributor role to users from your organization. When adding a user as described in *Adding or Deleting Users*, you will see the option for assigning the Distributor role in the **Add new member** dialog.

Add new member

Email *
firstname.lastname@company.com

Distributor view

☐ None

☒ Distributor

View orders where organization is listed as "Distributor".

Customer view

☒ None

☐ YubiEnterprise Console Owner

☐ YubiEnterprise Console Admin

☐ YubiEnterprise Console Auditor

For user management and viewing orders not subject for resale.

Save

Cancel

Select at least one view.

Reseller Role

The Reseller role is used by organizations that sell Yubico products to end customers. As a user with the Reseller role, you have access to the [Reseller view](#) where you can monitor end customers' product inventory and purchase orders.

Note: The Reseller role does not provide permission to view or manage user information.

The Reseller view lets you access the **Settings > Customers** page where you can provide access for customers to view purchase order information.

Stage_Reseller01

VIEWING AS RESELLER

Customers

Purchase orders

Settings

Customers

Search

Columns Filters Density Refresh data

Rows per page: 15 1-2 of 2

Customer	View purchase orders
Stage_Cust01	<input checked="" type="checkbox"/>
Stage_Cust02	<input checked="" type="checkbox"/>

Total Rows: 2

To let a customer access purchase order information, set the **View purchase orders** toggle to “on” for the desired customer. To *revoke* access to purchase order information, set the toggle to “off”.

Important: If you disable this access for a customer, this customer will not be able to see any inventory purchased from you. If a distributor is involved, the distributor must also first *enable this setting for you as a reseller*, in order for your end customer to see the purchase order information.

As a Console Owner for a reseller organization, you can assign the Reseller role to users from your organization. When adding a user as described in *Adding or Deleting Users*, you will see the option for assigning the Reseller role in the **Add new member** dialog.

Add new member

Email *

firstname.lastname@company.com

Reseller view

☐ None

☒ Reseller

View orders where organization is listed as reseller.

Customer view

☒ None

☐ YubiEnterprise Console Owner

☐ YubiEnterprise Console Admin

☐ YubiEnterprise Console Auditor

For user management and viewing orders not subject for resale.

Select at least one view.

1.18.5 User Account States

All Console users have one of the following account states. To view a user's account state, click **Settings > Users**, locate the desired user, and view the **State** column.

Invited

The user has been emailed a login link for the system, but they have not yet done so and thereby activated their account. Most users have this state initially.

Active (demo mode)

The user has activated their account, but they have not yet registered a WebAuthn credential such as a YubiKey. Console activity is restricted to the activities described in [Onboarding Workflow](#).

Active

The user has activated their account and registered a WebAuthn credential.

Account Reset

A Console Owner can do this if a user's account has been compromised. The user state remains as "Account Reset" until the user follows the instructions in the Account Reset email sent by the system.

Deactivated

The user has been removed from all organizations, and they can no longer log in to the Console. All associated access tokens have been revoked. Console Owners can add the user to the organization again at a later date.

Suspended

If a user becomes a security concern, disable system access for that user by contacting YubiEnterprise Support to have the user suspended. Any API token the user has is deleted, and their login credentials are temporarily invalidated.

- If a suspended user tries to log in, they get the “userID/password invalid” message.
- Only Yubico can suspend a user and only Yubico can lift such a suspension.
- Although all access tokens are revoked, the user remains associated with their organization, so that if the suspension is lifted, Console Owners are not required to recreate the affected user.
- All owners of the suspended user’s organization receive an email notifying them that this user is suspended and they must contact YubiEnterprise Support to have the suspension lifted.

1.18.6 SSO: Single Sign-On

Single sign-on (SSO) is an authentication method that enables users to use a single set of credentials to access multiple applications and services securely. Employers frequently use SSO to safeguard their resources and streamline work processes by enabling employees to access a whole range or subset of applications and platforms without having to log in to each one separately. Most employees of an enterprise have already encountered SSO by logging in to a service provider using the enterprise’s Identity Provider (IdP), for example, Azure AD, Google for Workgroups, or Okta.

YubiEnterprise Services supports SSO. For an organization with SSO enabled, users do not have to register. Although they are added the same way as non-SSO-enabled users, instead of remaining in the *Invited* state until they follow the emailed instruction to register a security key, they are *immediately* added to the organization in the *Active* state. They can therefore use the service-provider-initiated login link to log in to the Console. For details, see [Single Sign-On \(SSO\)](#).

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.19 Single Sign-On (SSO)

Single-Sign-On (SSO) lets users log in once with a single ID to multiple related software systems. The Security Assertion Markup Language (SAML) open standard is designed to deliver a seamless user experience through SSO flows.

A *service provider (SP)* provides services to end users and rely on an *identity provider (IDP or IdP)* to verify a user’s identity. SSO through SAML can be initiated by an IDP (IDP-initiated SSO) or an SP (SP-initiated SSO).

1.19.1 Supported SSO Initiation Forms

With the release of YubiEnterprise Services 2.4.0, both IDP- and SP-initiated SSO are supported. Console Owners can enable IDP-initiated SSO from the **YubiEnterprise Console**. For more information, see [SSO Enablement](#).

IDP-initiated SSO

The IDP authenticates users when they present their credentials so that those users can then access other websites and applications (relying applications). The SAML flow for an IDP-initiated SSO is as follows:

1. When the IDP and SP established SSO trust, they shared a private key.
2. The user's identity is sent by the IDP to the SP in the form of a SAML assertion signed with the private key.
3. To retrieve the SAML Assertion securely, the IDP uses the user's browser or a reference that the SP can use.

SP-initiated SSO

Service providers rely on an IDP to store the user's information (including attributes for the particular service requested), and make authentication decisions based on that information.

SP-initiated SSO comes into play when a user tries to access an application at the SP end without having first authenticated with an IDP. In this case, the SAML flow is as follows:

1. In the absence of an active browser session, the SP redirects the user to the IDP to request authentication.
2. The user's identity is sent by the IDP to the SP in the form of a SAML assertion signed with the *private* key.
3. If the SP supports SSO from multiple IDPs, it can determine which IDP to use by:
 - Requesting the user to enter additional information.
 - Showing the user the list of supported IdPs so the user can select the right one.
 - Using a resource URL specific to a specific IDP.
 - Restoring an IDP cookie in the user's browser session from initial IDP login.
4. Upon receipt of the SAML assertion, the SP validates the signature using the *public* key and presents the user with its landing page as if the user had logged in with the usual credentials instead of SSO.

1.19.2 SSO as Sole Means of Logging In

SSO enablement introduces a new category of user: those who are able to log in *only* via SSO. Users added *after* SSO is enabled fall into this new category, while users enrolled *prior* to SSO enablement will still be able to log in with username and password.

If SSO is disabled, none of the users added after SSO is enabled will be able to log in. For more information, see [Disabling SSO](#). **API tokens** are not affected by SSO enablement or disablement.

Note: Only a single organization at a time can be logged into with SSO. A user who is a member of multiple organizations cannot use SSO-logged-in sessions to switch between organizations. If a user needs to switch from one SSO-enabled organization to another, they must log out of the first organization and use the login link supplied by the SP for the second organization.

See also [Managing Passwords with SSO](#).

1.19.3 Permissions and SSO

Table 15: Console permissions with and without SSO

Capability	Logging in with SSO	Logging in with credentials
Status	Users invited to join the Console go into the Active state and can log in immediately via the SP's SSO login link.	Users invited to join the Console without SSO go into the Pending state until they enroll their credentials.
Login Redirect	None: not applicable	If SSO has been enabled, users who log in using credentials will be redirected to log in via SSO.
Console Operations	All are permitted (for example shipment request creation, listing POs, inviting users etc.) except configuring SSO and updating credentials.	No operations other than configuring SSO (by Console Owner) and updating credentials are permitted.
Credential Update	Not permitted; credential management page is inaccessible.	All roles can update their credentials: change password, edit, delete, and add new YubiKeys.
SSO Configuration	Not permitted for any role.	Console Owners may configure SSO.

This permissions setup prevents Console Owners who have forgotten their passwords logging in via SSO, then disabling or misconfiguring SSO and inadvertently locking themselves out.

1.19.4 SSO Enablement

The sections below describe how to configure and enable SSO for different identity providers. Console Owners can enable IDP-initiated SSO by logging in to the **Console** with credentials, going to **Settings > SSO**, and selecting **Allow IDP initiated single sign-on**.

ACME Inc

VIEWING AS CUSTOMER

Dashboard

Shipments

Purchase orders

Settings

Users

Email

SSO

Configure SAML Single Sign-On ?

[View instructions for setting up SAML SSO](#)

1 Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier ?

Reply URL (ACS) ?

☒ Allow IDP initiated single sign-on * ?

IDP initiated login URL (ACS) ?

Requirements

To enable SSO integration you need to:

- Use SAML 2.0 with Azure AD or Okta or Google Workspace as your IDP. Other IDPs are likely to be compatible, but are not supported. For more information, see [Enabling SSO for Other IDPs](#).
- Have owner, admin, or super-admin access to the SSO app in your IDP account for permissions to manage the SAML configuration and users.
- Know how to enable, edit and disable your IDP's SSO offering.
- Be able to share the SSO link with the Console users in your organization out-of-band after SSO is enabled, this is not something that the system does automatically.
- Be a Console Owner in the Console.
- Be able to log in to the Console with username/password and a registered YubiKey (via credentials, not SSO).

Known Limitations

- Since Console users invited *after SSO enablement* are not required to have username and password, they will not be able to log in if SSO access is disabled. These users must be reset to be able to log in using credentials. Resetting a user triggers the system to send the user an email directing them to reset their username/password and register a YubiKey. See [Disabling SSO](#).
- Google Workspace cannot support both the SP-initiated and the IDP-initiated ACS URL at the same time. It is also not possible to set up two different SAML Apps in the same Google Workspace, because Google Workspace enforces SP EntityID uniqueness across all SAML Apps in the workspace.

When IDP-initiated SSO is enabled with the Google Workspace SAML application, the IDP-initiated SSO ACS URL (/realms/y4o-azad/broker/sso/endpoint/clients/idp-initiated) must be configured as the ACS URL in order for the Google Dashboard link to work. When the Google Workspace SAML application is configured with this URL, the IDP will not work with the SP-Initiated flow since the *Reply URL (ACS)* endpoint does not match what is configured above.

1.19.5 Enabling SSO with Azure AD

This section describes how to enable SSO between Azure AD and the YubiEnterprise Console. These instructions assume that your company's SAML application has already been created in Azure AD.

Note: The Azure AD SAML Enterprise Application can be made to work with both the SP-initiated and IDP-initiated flows. Configure both the IDP-initiated ACS URL and the SP-initiated ACS URL as valid reply URLs. Make sure to mark the IDP-initiated URL as default.

Copy Entity ID from Console to Azure AD

Step 1

Log in to the **Console** as Console Owner using credentials (password and MFA), and go to **Settings** > **SSO**. The **Configure SAML Single Sign-On** page appears. Click the copy icon at the end of the **EntityID/Identifier** field in section 1.

Configure SAML Single Sign-On ?

[View instructions for setting up SAML SSO](#)

- 1 Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier ?

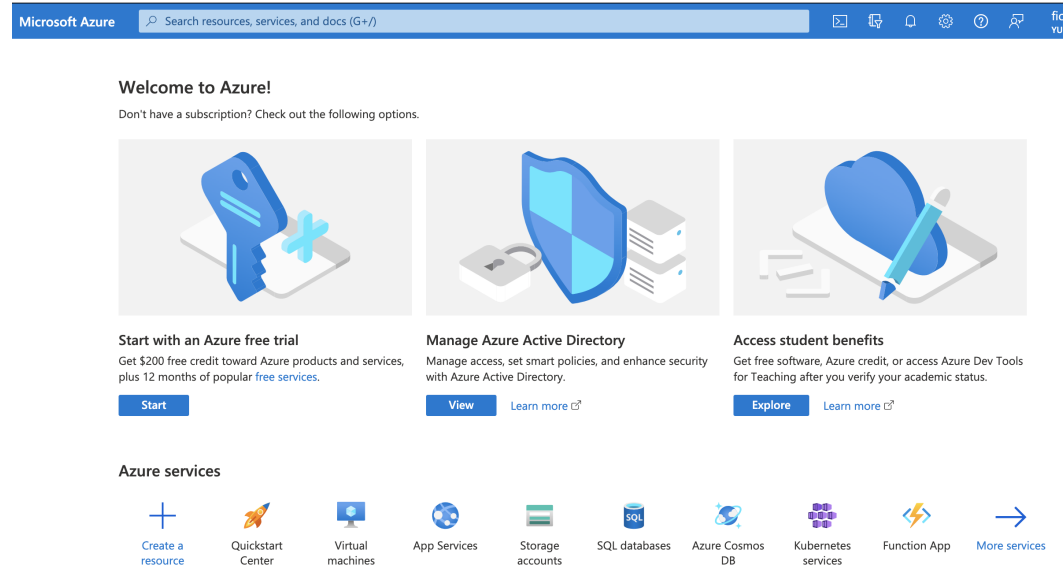
Reply URL (ACS) ?

Step 2

Log in to your Azure tenant <https://portal.azure.com/signin/index/>.

Step 3

Set up the new application in Azure AD (note that this does not mean “create the new application”) by going to **Manage Azure Active Directory** and clicking **View**.



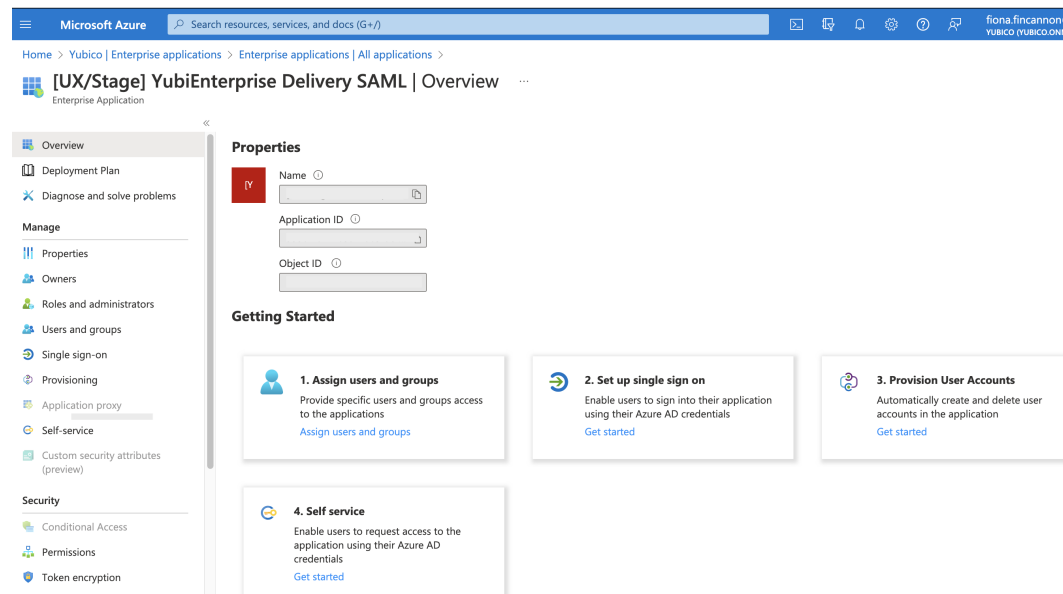
Your company’s **Overview** page for Azure AD appears.

Step 4

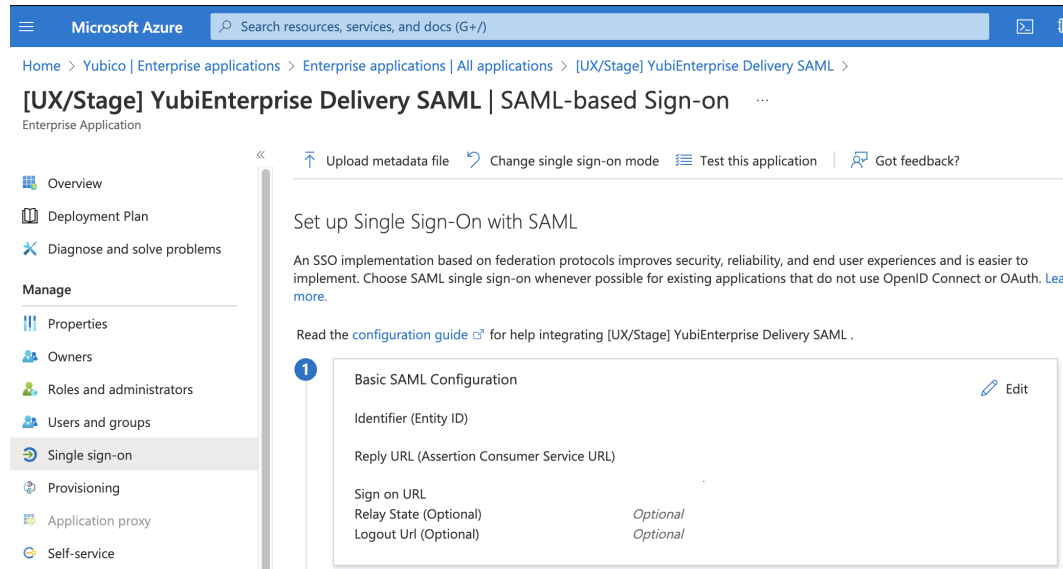
From the menu on the left-hand side, select **Enterprise Applications**. Your company’s Overview page for all applications appears.

Step 5

From the list in the center pane, select the appropriate SAML application. The **Overview** page for that application appears.

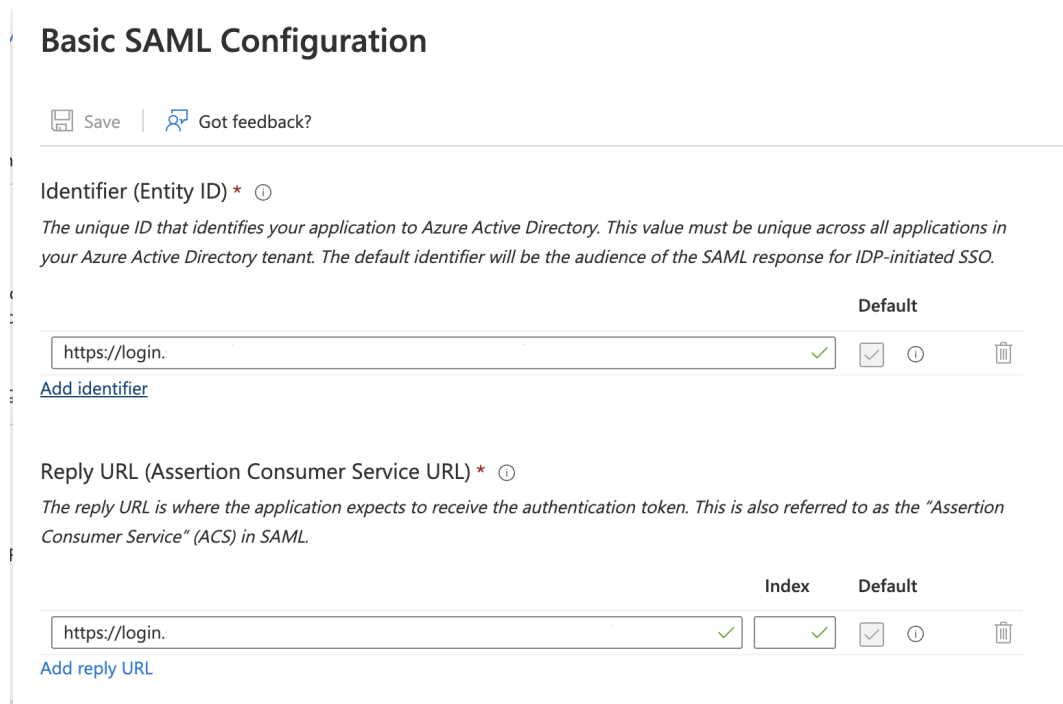
**Step 6**

Click **Get started** in the second box **Set up single sign on**. The **[Name of your organization's enterprise application] SAML | SAML-based Sign-on** page appears.



Step 7

Click the Edit icon for **1 Basic SAML Configuration**. The **Basic SAML Configuration** window appears.



Step 8

Under **Identifier (Entity ID)**, click **Add identifier**. A new field appears.

Basic SAML Configuration

 Save |  Got feedback?

Identifier (Entity ID) * ⓘ

The unique ID that identifies your application to Azure Active Directory. This value must be unique across all applications in your Azure Active Directory tenant. The default identifier will be the audience of the SAML response for IDP-initiated SSO.

	Default
https://login....url...	<input checked="" type="checkbox"/> ⓘ 
<input type="text"/>	<input type="checkbox"/> ⓘ 

[Add identifier](#)

Step 9

Paste what you copied from the Console (in step 1) into the **Identifier (Entity ID)** field in Azure. If you select **Default**, this will be the primary identifier sent for IDP-initiated SAML responses.

Step 10

Save your settings by clicking **Save** in the top left corner of the **Basic SAML Configuration** Edit window.

Copy Reply URL from Console to Azure AD

Step 1


Log in to the **Console** as Console Owner using credentials (password and MFA), and go to **Settings > SSO**. The **Configure SAML Single Sign-On** page appears. Click the copy icon at the end of the **Reply URL (ACS)** field in section 1.

Configure SAML Single Sign-On ?


 [View instructions for setting up SAML SSO](#)

- 1 Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier ?

Reply URL (ACS) ?

Step 2

Unless you are already logged into Azure and on the **Basic SAML Configuration** Edit window, log into your Azure tenant <https://portal.azure.com/signin/index/> and perform steps 2-7 in *Copy Entity ID from Console to Azure AD* above.

Step 3

Under **Reply URL (Assertion Consumer Service URL)**, click **Add reply URL**. A new field appears.

Step 4

Paste what you copied from the Console's **Reply URL (ACS)** field (in "Step 1") into the **Reply URL (Assertion Consumer Service URL)** field in Azure. If you select **Default**, this will be primary and IDP-initiated SAML responses will be sent to this reply URL.

Step 5

In Azure, save your settings by clicking **Save** in the top left corner of the **Basic SAML Configuration** Edit window.

Copy Login URL & Azure AD Identifier from Azure to Console

Step 1

Unless you are already logged into Azure and on the **Basic SAML Configuration** Edit window, log into your Azure tenant <https://portal.azure.com/signin/index/> and perform steps 2-7 in *Copy Entity ID from Console to Azure AD* above.

Step 2

In Azure, in section **4 Set up [your company's] SAML**, click the copy icon at the end of the **Login URL** field.

Step 3

Log in to the **Console** as Console Owner using credentials (password and MFA), and go to **Settings > SSO**. The **Configure SAML Single Sign-On** page appears. Paste the content from the **Login URL** field in Azure into the **IDP login URL** field in section 2.

2 Paste the content from the IDP's SSO setup into the fields below. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Issuer * ?

IDP login URL * ?

X.509 certificate (Base64) * ?

Step 4

Go back to Azure, and in section 4 **Set up [your company's] SAML**, click the copy icon at the end of the **Azure AD Identifier** field.

4 Set up [] YubiEnterprise Delivery SAML

You'll need to configure the application to link with Azure AD.

Login URL	<input type="text" value="https://login..."/> ?
Azure AD Identifier	<input type="text" value="https://sts.windows.net/..."/> ?
Logout URL	<input type="text" value="https://login.microsoftonline.com/..."/> ?

Step 5

In the Console, in **Settings > SSO**, on the **Configure SAML Single Sign-On** page in section 2, paste the content from the **Azure AD Identifier** field in Azure into the **EntityID/Issuer** field.

2

Paste the content from the IDP's SSO setup into the fields below. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Issuer *

https://sts.windows.net...



IDP login URL *

https://login.microsoftonline.com...



X.509 certificate (Base64) *



Copy X509 Certificate from Azure AD to Console

Step 1

Unless you are already logged into Azure and on the **Basic SAML Configuration** Edit window, log into your Azure tenant <https://portal.azure.com/signin/index/> and perform steps 2-7 in *Copy Entity ID from Console to Azure AD* above.

Step 2

In section 3, **SAML Certificates**, download the **Certificate (Base64)** by clicking **Download**.

3

SAML Certificates

Token signing certificate

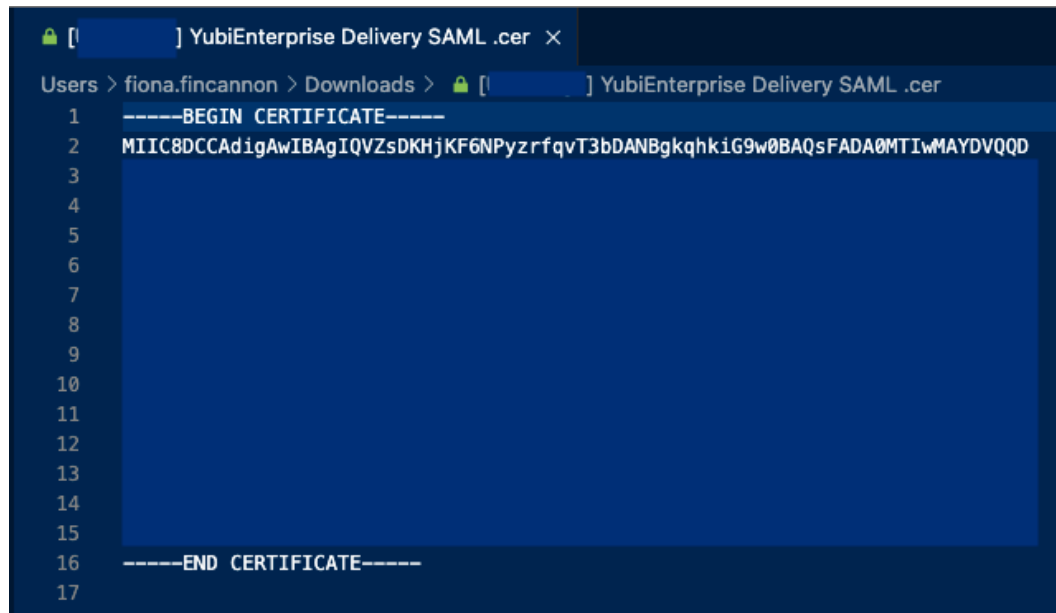
Status	Active	Edit
Thumbprint		
Expiration	1/25/2026, 9:06:06 AM	
Notification Email	r@yubico.com	
App Federation Metadata Url	<input type="text" value="https://login.microsoftonline.com/"/>	
Certificate (Base64)	Download	
Certificate (Raw)	Download	
Federation Metadata XML	Download	

Verification certificates (optional) (Preview)

Required	No	Edit
Active	0	
Expired	0	

Step 3

Open the file in a text editor and copy it. You do not need to remove the header and footer lines:



```

1  -----BEGIN CERTIFICATE-----
2  MIIC8DCCAdigAwIBAgIQVZsDKHjKF6NPzrfqvT3bDANBgkqhkiG9w0BAQsFADA0MTIwMAYDVQQD
3
4
5
6
7
8
9
10
11
12
13
14
15  -----END CERTIFICATE-----
16
17

```

Step 4

In the Console, in **Settings > SSO**, on the **Configure SAML Single Sign-On** page in section 2, paste the certificate content into the **X.509 cert (Base64)** field. (The header and footer in the file will be automatically stripped out when you save.)

Step 5

Click the **Save settings** button at the bottom of the Console page.

Set Attributes & Claims in Azure AD

There is always a required claim. Ensure that the name identifier format is **Email address**.

Step 1

Unless you are already logged into Azure and on the **Basic SAML Configuration** Edit window, log into your Azure tenant <https://portal.azure.com/signin/index/> and perform steps 2-7 in *Copy Entity ID from Console to Azure AD* above.

Step 2

In section 2, **Attributes & Claims**, click the Edit icon.

**Step 3**

In the **Attributes & Claims** window that appears, click the **Unique User Identifier (Name ID)** in the **Required claim** section.

Attributes & Claims



[+ Add new claim](#) [+ Add a group claim](#) [Columns](#) | [Got feedback?](#)

Required claim

Claim name	Type	Value
Unique User Identifier (Name ID)	SAML	user.userprincipalname [...]

Additional claims

Claim name	Type	Value
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailadd...	SAML	user.mail ***
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	SAML	user.givenname ***
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	SAML	user.userprincipalname ***
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname	SAML	user.surname ***

▼ Advanced settings

Step 4

In the **Manage claim** window that opens, if the **Name identifier format** is not **Email address**, select it from the dropdown list.

... > SAML-based Sign-on > Attributes & Claims >

Manage claim

...



Save



Discard changes



Got feedback?

Name

nameidentifier

Namespace

http://schemas.xmlsoap.org/ws/200...

^ Choose name identifier format

Name identifier format *

Email address



Source *



Attribute



Transformation



Directory schema extension
(Preview)

Source attribute *

user.userprincipalname



v Claim conditions

v Advanced SAML claims options

Step 5

Save your settings in Azure by clicking **Save** in the top left corner of the **Manage claim** window. The **Attributes & Claims** window reappears.

Step 6

In the **Attributes & Claims** window, directly underneath the title, click + **Add new claim**. The **Manage claim** window appears.

Microsoft Azure Search resources, services, and docs (G+/)

Home > [UX/Stage] YubiEnterprise Delivery SAML | SAML-based Sign-on > SAML-based Sign-on > Attributes & Claims >

Manage claim ...

Save Discard changes Got feedback?

Name * emailAddress

Namespace Enter a namespace URI

Choose name format

Source * ☒ Attribute ☐ Transformation ☐ Directory schema extension (Preview)

Source attribute * user.mail

Claim conditions

Advanced SAML claims options

Step 7

In the **Manage claim** window, in the **Name** field, enter emailAddress, and for **Source** leave the default setting with the **Attribute** radio button. From the **Source attribute** dropdown, select user.mail. Click **Save**. The **Attributes & Claims** window reappears with your new claim listed.

Microsoft Azure Search resources, services, and docs (G+/)

Home > [UX/Stage] YubiEnterprise Delivery SAML | SAML-based Sign-on > SAML-based Sign-on >

Attributes & Claims ...

+ Add new claim + Add a group claim Columns Got feedback?

Claim name	Type	Value
Unique User Identifier (Name ID)	SAML	user.userprincipalname [...]

Additional claims

Claim name	Type	Value
emailAddress	SAML	user.mail
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailadd...	SAML	user.mail
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	SAML	user.givenname
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	SAML	user.userprincipalname
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname	SAML	user.surname

Verify and Save SSO Settings in Console

Step 1

In the Console, look at **Settings > SSO Configure SAML Single Sign-On** to make sure that the content you pasted in is correct.

Step 2

In section 3, copy the **SP Initiated Login URL** by clicking the copy icon at the end of it. Save the URL so that you can send it to your Console users.

3 Get your single sign-on URL

For org initiated SSO, save this link to share with your users. Do not paste this into your IDP initiated settings.

SP Initiated Login URL

Save settings
Cancel
Enable SSO

Step 3

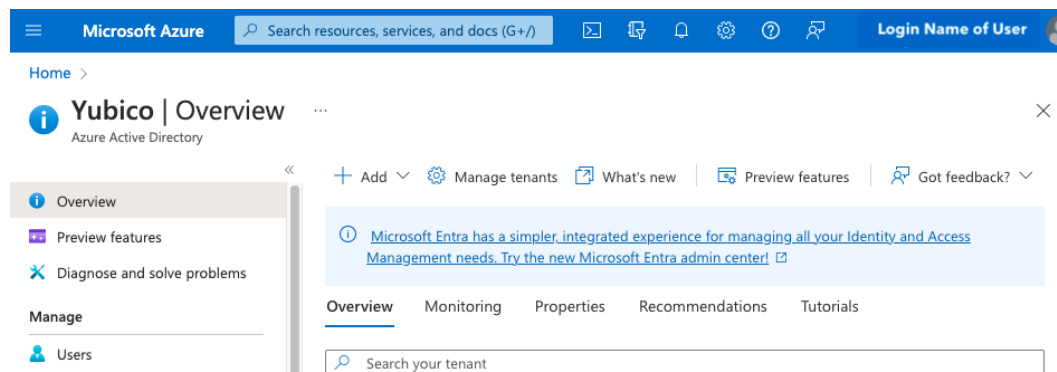
Before enabling SSO, make sure to send all users who will be enabled for it this **SP Initiated Login URL**. The same link will also be shown in the login dialog after you have enabled SSO.

Add Users and Enable User Login via SSO

Add users first to Azure, then to the Console. Before you can add them to your company's SAML application in Azure, the users must be added to your company's Azure AD instance at the top level. If needed, ensure you have the permissions in Azure to have groups available for assignment.

Step 1

On your company's Overview page in Azure, from the menu on the left under **Manage**, select **Users**. On the **Users** page, the entire list of your company's users appears.



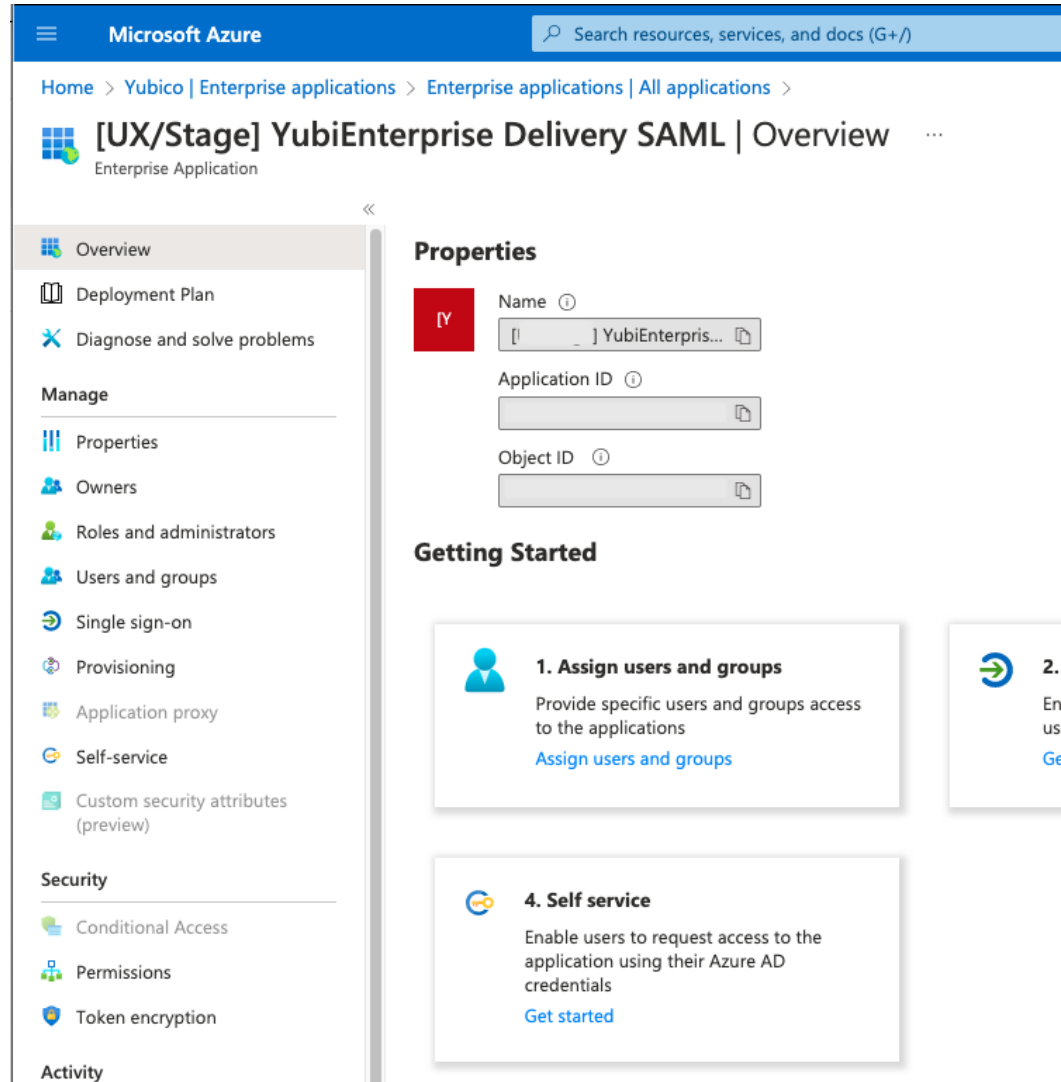
Step 2

To add entirely new users to Azure as opposed to adding them to the SAML organization, click **New user** at the top of the page and follow the directions provided in the subsequent pages. Otherwise

select the users for whom you are enabling SSO by clicking on the checkbox next to the respective **Display name**.

Step 3

From [your company's] **SAML Overview** page, click **Assign users and groups**. The **Users and groups** window appears.




Step 4

Click **Add user/group** at the top of the window. The **Add Assignment** screen appears. Under **Users**, click **None Selected** to display a list of your total users in Azure.

[Home](#) > [\[\] YubiEnterprise Delivery SAML | Users and groups](#) >

Add Assignment ...

Yubico

 Groups are not available for assignment due to your Active Directory plan level. You can assign individual users to the application.

Users

[None Selected](#)

Select a role

[User](#)

Step 5

Select the checkboxes for the requisite users, then click the **Select** button.

Step 6

As Console Owner or Admin, log in to the Console, go to **Settings > Users**, and add users as needed from Azure to the Console.

1.19.6 Enabling SSO with Okta

This section describes how to enable SSO between Okta and the YubiEnterprise Console. These instructions assume that your company's SAML application has already been created in Okta.

Create App Integration

Step 1

Log in to the **Console** as Console Owner with user name and password, and go to **Settings > SSO**. The **Configure SAML Single Sign-On** page appears. This is the location from which you will be copying information.

Configure SAML Single Sign-On ?

[View instructions for setting up SAML SSO](#)

1

Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier ?

Reply URL (ACS) ?

Step 2

Log in to your company's Okta tenant <https://developer.okta.com/login/> as Admin, and navigate to **Applications > Applications**. The Applications page appears on the right.

The screenshot shows the Okta Admin console. The left sidebar has a menu with 'Dashboard', 'Directory', 'Applications', 'Reports', and 'Settings'. 'Applications' is selected. The main content area is titled 'Applications' and has a search bar. Below the search bar are buttons: 'Create App Integration', 'Browse App Catalog', 'Assign Users to App', and 'More'. A table lists applications:

STATUS	Count	Application Name	Actions
ACTIVE	3	demo-test-stage	⚙️ ⚙️
INACTIVE	2	platform-okta-test-stage	⚙️ ⚙️
INACTIVE	2	SSO Integration	⚙️ ⚙️

Step 3

Click **Create App Integration**. The **Create a new app integration** window appears.

Create a new app integration

Sign-in method

[Learn More](#)

- ☐ **OIDC - OpenID Connect**
Token-based OAuth 2.0 authentication for Single Sign-On (SSO) through API endpoints. Recommended if you intend to build a custom app integration with the Okta Sign-In Widget.
- ☒ **SAML 2.0**
XML-based open standard for SSO. Use if the Identity Provider for your application only supports SAML.
- ☐ **SWA - Secure Web Authentication**
Okta-specific SSO method. Use if your application doesn't support OIDC or SAML.
- ☐ **API Services**
Interact with Okta APIs using the scoped OAuth 2.0 access tokens for machine-to-machine authentication.

Cancel

Next

Step 4

Select **SAML 2.0** and click **Next**. The **Create SAML Integration** window appears.

Dashboard
Directory
Applications
Reports
Settings

Create SAML Integration

1 General Settings
2 Configure SAML

1 General Settings

App name

Name of this SAML integration for SSO

App logo (optional)

App visibility
☐ Do not display application icon to users

Cancel
Next

Step 5

On the **1. General Settings** tab, enter the appropriate name in the **App name** field, make any other necessary settings and click **Next**. The **Configure SAML** tab of the **Create SAML Integration** window appears.

A SAML Settings

General

Single sign-on URL ?

☒ Use this for Recipient URL and Destination URL

Audience URI (SP Entity ID) ?

Copy Entity ID from Console to Okta

1. In the Console **Settings > SSO** page from Step 1 in *Enabling SSO with Okta*, click the copy icon to copy the **EntityID/Identifier** from the Console.
2. Paste it into the **Audience URI (SP Entity ID)** field in Okta's **Configure SAML** tab.

Dashboard ▾

Directory ▾

Applications ▾

Reports ▾

Settings ▾

Create SAML Integration

1 General Settings **2 Configure SAML**

A SAML Settings

General

Single sign-on URL ?

☒ Use this for Recipient URL and Destination URL

Audience URI (SP Entity ID) ?

Default RelayState ?

If no value is set, a blank RelayState is sent

Copy Reply URL from Console to Okta

1. In the Console **Settings > SSO** page from Step 1 in *Enabling SSO with Okta*, click the copy icon to copy the **Reply URL (ACS)** from the Console.
2. Paste it into the **Single sign-on URL** field in Okta's **Create SAML Integration** window on the **Configure SAML** tab. Enable the checkbox for **Use this for Recipient URL and Destination URL**.

Create SAML Integration

1 General Settings	2 Configure SAML
--------------------	------------------

A SAML Settings
General
Single sign-on URL ⓘ
☒ Use this for Recipient URL and Destination URL
Audience URI (SP Entity ID) ⓘ

Set Name ID Format, Application Username, and Attribute Statement

Step 1

In Okta, still in the **General** section on the **A SAML Settings** tab, from the **Name ID format** dropdown, select **EmailAddress**.

Step 2

From the **Application username** dropdown, select **Email**.

A

SAML Settings

General

Single sign-on URL ?

Paste Reply URL (ACS) from YubiEnterprise Console

☒ Use this for Recipient URL and Destination URL

Audience URI (SP Entity ID) ?

Paste EntityID/Identifier from YubiEnterprise Console

Default RelayState ?

If no value is set, a blank RelayState is sent

Name ID format ?

EmailAddress

Application username ?

Email

Okta username

Okta username prefix

Email

Email prefix

Custom

(None)

Update application username on

Attribute Statements (optional)

[Show Advanced Settings](#)
[LEARN MORE](#)

Step 3

Scroll down to the **Attribute Statements (optional)** section, and

- Under **Name**, enter emailAddress
- Leave the **Name format** unspecified
- Under **Value** enter user.email.

Attribute Statements (optional)

[LEARN MORE](#)

Name	Name format (optional)	Value
emailAddress	Unspecified	user.email

Add Another

Step 4

Scroll down to the bottom of the tab and click **Next**. The **Feedback** tab appears.

Step 5

On the **Feedback** tab under **Create SAML Integration**, select either:

- **I'm an Okta customer adding an internal app** or
- **I'm a software vendor. I'd like to integrate my app with Okta,**

Provide feedback (optional) and click **Finish**. The **Sign On** tab for your application appears.

General Sign On Import Assignments

Settings [Edit](#)

Sign on methods

The sign-on method determines how a user signs into and manages their credentials for an application. Some sign-on methods require additional configuration in the 3rd party application.

Application username is determined by the user profile mapping. [Configure profile mapping](#)

☒ SAML 2.0

Default Relay State

Metadata details

Metadata URL `https://. /sso/sa` [Copy](#)

[More details](#)

About

SAML 2.0 streamlines the end user experience by not requiring the user to know their credentials. Users cannot edit their credentials when SAML 2.0 is configured for this application. Additional configuration in the 3rd party application may be required to complete the integration with Okta.

Application Username

Choose a format to use as the default username value when assigning the application to users.

If you select **None** you will be prompted to enter the username manually when assigning an application with password or profile push provisioning features.

SAML Setup



Single Sign On using SAML will not work until you configure the app to trust Okta as an IdP.

[View SAML setup instructions](#)

Copy IDP SSO URL & X509 Certificate from Okta to Console


Step 1


On the bottom right of Okta's **Sign On** tab, click the **View SAML setup instructions** tab.



Name of your application integration

Active ▾

 View Logs

 Monitor Imports

General

Sign On

Import

Assignments

Settings

Edit

Sign on methods

The sign-on method determines how a user signs into and manages their credentials for an application. Some sign-on methods require additional configuration in the 3rd party application.

Application username is determined by the user profile mapping. [Configure profile mapping](#)


☒ SAML 2.0


Default Relay State

Metadata details

Metadata URL

https://...url...
...url...

 Copy

 More details

About

SAML 2.0 streamlines the end user experience by not requiring the user to know their credentials. Users cannot edit their credentials when SAML 2.0 is configured for this application. Additional configuration in the 3rd party application may be required to complete the integration with Okta.

Application Username

Choose a format to use as the default username value when assigning the application to users.

If you select **None** you will be prompted to enter the username manually when assigning an application with password or profile push provisioning features.

SAML Setup

Single Sign On using SAML will not work until you configure the app to trust Okta as an IdP.

 [View SAML setup instructions](#)

The **How to Configure SAML 2.0 for [name of your] Application** window appears.

2

Paste the content from the IDP's SSO setup into the fields below. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Issuer *

http://www...



IDP login URL *

https://url...



X.509 certificate (Base64) *

X509 certificate



Step 3

From the Okta **The following is needed to configure [application name]** window, copy the **Identity Provider Issuer** to the Console's **EntityID/Issuer**.

Step 4

In Okta, click **Download certificate** under **X.509 Certificate**, then paste the content to the Console's **X.509 cert (Base64)** field.

Step 5

In the Console, click **Save settings**.

Step 6

From the Console, copy the **SP Initiated Login URL** and send it to your users.

Add Console Users to Okta's SAML App Integration

Users for whom you intend to enable SSO must first be in Okta to be available for adding to the application integration. For information on how to add users, see the Okta documentation.

1. In Okta, navigate to **Applications > Applications** and click **Assign Users to App**. The **[name of app]** page for your app appears.

[← Back to Applications](#)



Name of this SAML integration for SSO

Active ▾



Monitor Imports



Once you have a working SAML integration, submit it for Okta review to publish in the OAN.

General

Sign On

Import

Assignments

Assign ▾

Convert assignments ▾

Search...

People ▾

Filters

Person

Type

People

Groups

01101110
01101111
01101100
01101100
01101101
01101110
01100111

No users found

2. Assign Console organization members as a group or as individuals.
3. In the Console, enable SSO.

Enable IDP- and SP-initiated SAML Flows

This configuration enables both the IDP- and SP- initiated SAML flows for Okta. This subsection assumes that you are familiar with the instructions for IDP-initiated SAML flow with Okta.

Step 1

In the **Console > Settings > SSO**, select **Allow IDP initiated single sign-on** to enable, and copy the **IDP initiated login URL (ACS)**.

- 1 Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier ?

https://login.

Reply URL (ACS) ?

https://login.

ndpoint

☒ Allow IDP initiated single sign-on * ?

IDP initiated login URL (ACS) ?

https://login.

ndpoint/clients/idp-initiated

Step 2

In Okta, go to **App General > SAML Settings > Edit > Edit SAML Integration: General Settings > Configure SAML**.

Step 3

Still in Okta, paste the **IDP-initiated Login URL** from the **Console** into the **Single sign-on URL** field, click **Use this for Recipient URL and Destination URL**, then click **Next** and finally **Finish**.

Edit SAML Integration

1 General Settings

2 Configure SAML

A SAML Settings

General

Single sign-on URL ?

-okta-dev-sso/broker/sso/endpoint/clients/idp-initiated

☒ Use this for Recipient URL and Destination URL

Audience URI (SP Entity ID) ?

https://login.local/sso/platform-okta-dev-sso/entityId

Step 4

Test: in Okta, on **App General > App Embed Link**, copy the IDP-initiated login link from the **Embed link** field into your browser to verify that the link redirects you to the Console after Okta

login.

App Embed Link

Edit

Embed Link

You can use the URL below to sign into platform-okta-dev-local from a portal or other location outside of Okta.

https://[redacted]okta.com/home/dev-[redacted]
[redacted]_platformokta[redacted]/Ooa[redacted]5d7/a[redacted]Ap5d7

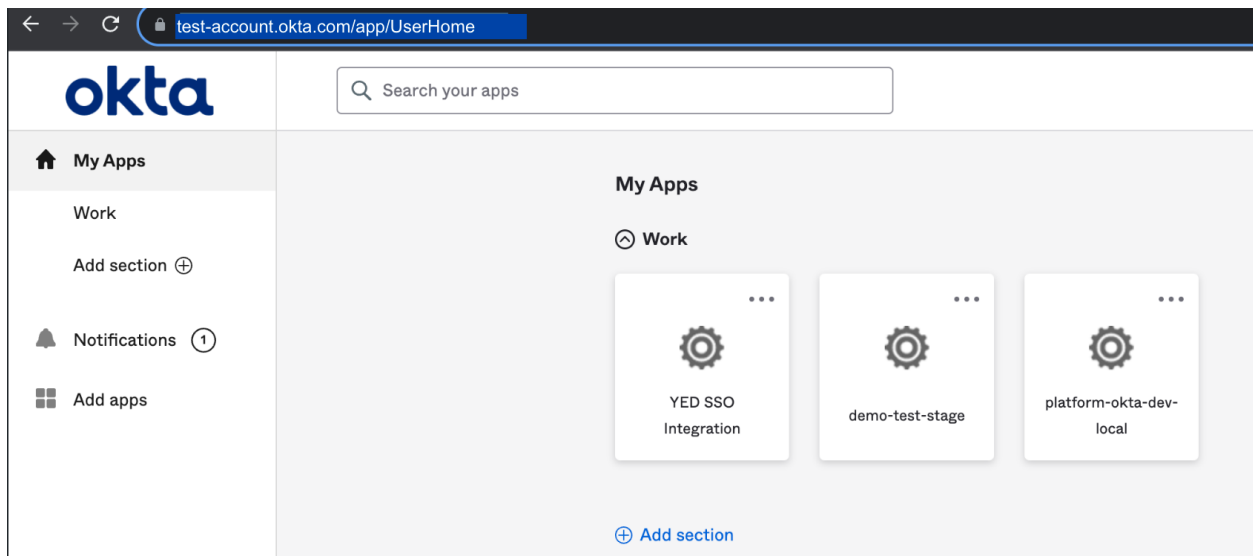
Application Access Error Page

If someone who is not assigned to the application attempts to use an embed link, they will be redirected to a default error page or one that can be customized. An application level setting will override default URL settings.

☒ Use the error page setting on the [global settings](#) page
☐ Use a custom error page for this application

Start App Integration

To start IDP-initiated login, go to the **Okta End User Apps Dashboard** (<https://<account>.okta.com/app/UserHome>) and click on the app for the Console SSO integration.



1.19.7 Enabling SSO with Google Workspace

This section describes how to enable SSO between Google Workspace and the YubiEnterprise Console.

Prerequisites

- Ensure that you are a Console Owner in the Console.
- System role: Your Google Workspace Administrator Seed Role must be Super Admin.
- Ensure you have access to the email account associated with that Google account.

Procedure

Add a Custom SAML App

Step 1

Log into the Google Admin Workspace by going to admin.google.com/ and selecting the appropriate account.

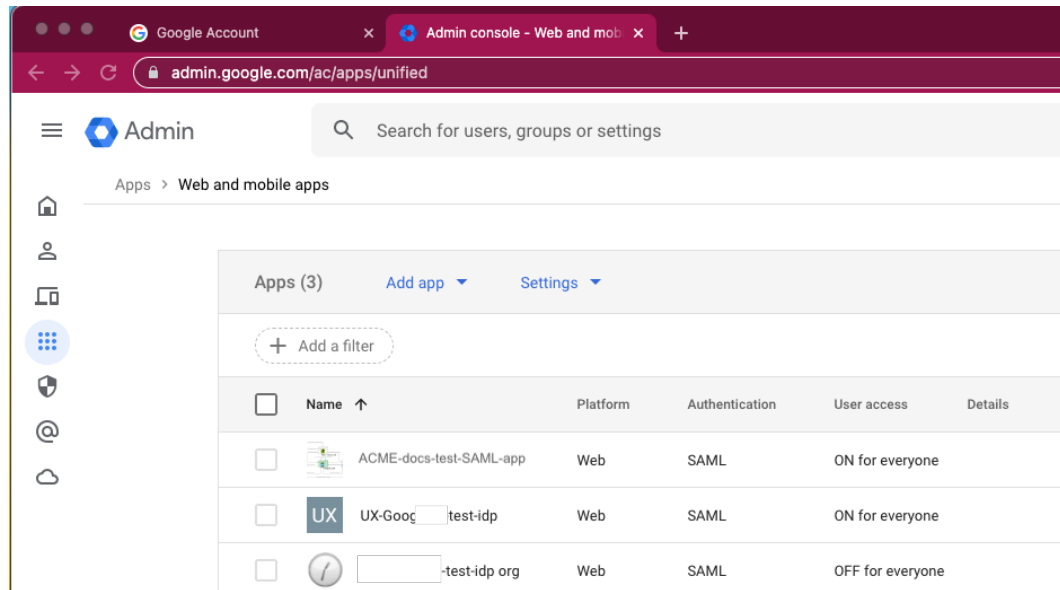
Step 2

Enter username and password for the selected account. If your company has set up Google Groups to require a YubiKey, you will be prompted to plug one in and touch it. After login, the **Admin** page appears.

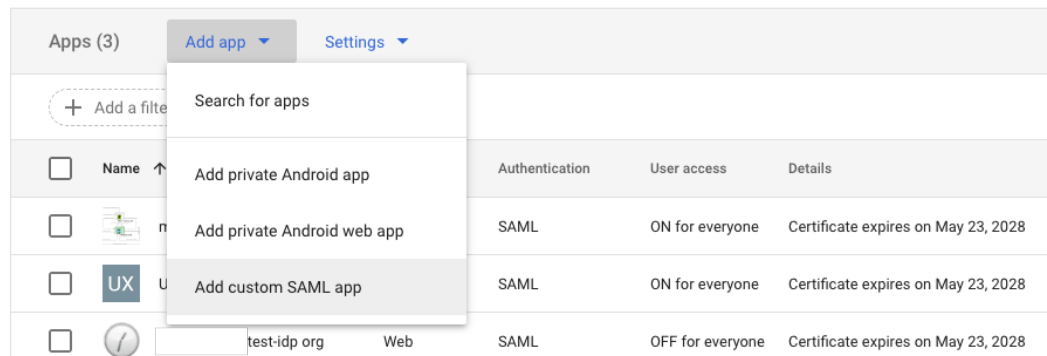
The screenshot shows the Google Admin console interface. At the top, there's a navigation bar with a hamburger menu, the 'Admin' logo, a search bar with the placeholder 'Search for users, groups or setting', and several utility icons (notifications, timer, help, grid, and a profile icon with the letter 'F'). Below the navigation bar, the 'Apps' section is active. It contains four main cards: 1. 'Google Workspace' with a colorful square icon, 'Google Workspace services', and '11 SERVICES'. 2. 'Additional Google services' with the Google 'G' logo, 'Blogging, photos, video, social tools and more', and '65 SERVICES'. 3. 'Web and mobile apps' with a blue square icon containing a plus sign, 'Manage SAML, Android and iOS apps', and '3 APPS'. 4. 'Google Workspace Marketplace apps' with a blue circular icon containing four dots, 'Add and manage third party apps', 'NO APPS', and a blue 'MANAGE' button. At the bottom of the 'Apps' section, there is a disclaimer: 'Google Workspace services are governed by your Google Workspace agreement. Additional Google services are not governed by your Google Workspace agreement, and other terms apply. Learn more about additional services.'

Step 3

Go to **Apps > Web and mobile apps**.

**Step 4**

Create a new SAML app by clicking on the **Add app** dropdown and selecting **Add custom SAML app** (you need be Super Admin to see this option.)



Under the **Add custom SAML app** banner, the **1 App details** tab is displayed:

×

Add custom SAML app

1 App details

2 Google Identity Provider detail:

3 Service provider details

4 Attribute mapping

App details

Enter details for your custom SAML app. This information is shared with app users. [Learn more](#)

App name

App name is required

Description

App icon

Attach an app icon. Maximum upload file size: 4 MB

CANCEL

CONTINUE

Step 5

In the **1 App details** tab:

- (Required) Enter a name in the **App name** field.
- (Optional) Add a description in the **Description** field.
- (Optional) Attach an icon for the app by clicking on the big blue button.

Click **CONTINUE**. Under the **Add custom SAML app**, the **2 Google Identity Provider detail** page appears.

Google Identity Provider detail
Service provider details
Attribute mapping

To configure single sign-on (SSO) for SAML apps, follow your service provider's instructions. [Learn more](#)

Option 1: Download IdP metadata

DOWNLOAD METADATA

OR

Option 2: Copy the SSO URL, entity ID, and certificate

SSO URL

`https://accounts.google.com/o/saml2/idp?idpid=C03aimaf`

Entity ID

`https://accounts.google.com/o/saml2/idp?idpid=C03aimaf`

Certificate

Google_2028-5-23-2265_SAML2_0
Expires May 23, 2028

—BEGIN CERTIFICATE—
MIIDbDCCAlggAwIBAgIGAYh5Oe+QMA0GCSqGSIb3DQEBCwUAMHoxFA58BqNVBAoTC0dvdzdsZSBJbmMuMRYwFAYDVQQHEw1Nb3VudGFpbWV3MQ8wDQYDVQQDEwZhb29nbGUxGDAWBgNVBA4TD0dvb2dsZS80b3JgV29yZzELMAKGA1UEBhMCVVMxEzARBgNVBAGTCkNhbiGimb3JuaWEWHhcnMjMwNTI1

SHA-256 fingerprint

`1D:AD:8C:6D:0D:4A:6A:33:6C:E1:75:E1:38:EE:CA:97:D2:C8:FD:00:21:F5:E6:09:69:80:60:5B:B3:56:BC:89`

BACK CANCEL CONTINUE

Configure the Custom SAML App

Copy and paste information between the Google **Add custom SAML app** and the Console **Configure SAML Single Sign-On** pages, have them open side-by-side in two browser windows.

Step 1

Log in to the Console as Console Owner with username, password, and YubiKey. Go to **Settings > SSO** to open the the SSO configuration page.

yubico | YubiEnterprise Console

Configure SAML Single Sign-On ?

[View instructions for setting up SAML SSO](#)

1

Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier ?

https://login.s

Reply URL (ACS) ?

https://login.s
ndpoint

☐ Allow IDP Initiated single sign-on * ?

2

Paste the content from the IDP's SSO setup into the fields below. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Issuer *

IDP login URL *

X.509 certificate (Base64) *

3

Get your single sign-on URL

For org Initiated SSO, save this link to share with your users. Do not paste this into your IDP Initiated settings.

SP Initiated Login URL

https://login.s

Save settings

Cancel

Enable SSO

Step 2

Enter the following values from Google's **2 Google Identity Provider detail** page into the Console's SSO configuration form, transferring them from the fields listed in the table:

Google	YubiEnterprise Console
SSO URL	IDP login URL (section 2)
Entity ID	EntityID/Issuer (section 2)
Certificate	X.509 cert (Base64)(section 2)

On the Console's **Configure SAML Single Sign-On** page, click **Save settings**.

Step 3

In Google, in the **Add custom SAML app** screen, click **CONTINUE**. The **3 Service provider details** window appears.

Service provider details

To configure single sign on, add service provider details such as ACS URL and entity ID. [Learn more](#)

ACS URL
https://login.dev. [] azad/broker/sso/endpoint

Entity ID
https://login.dev. [] azad/entityId

Start URL (optional)

☐ Signed response

Name ID

Defines the naming format supported by the identity provider. [Learn more](#)

Name ID format
UNSPECIFIED

Name ID
Basic Information > Primary email

BACK CANCEL CONTINUE

Step 4

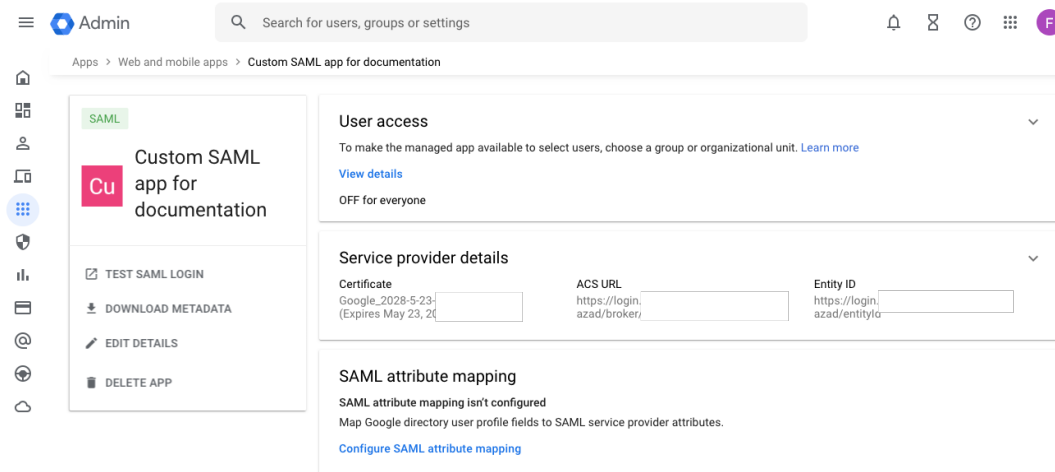
In Google, in the **3 Service provider details** window, enter the following values from the Console into Google's form, transferring them from the fields listed in the table:

Google	YubiEnterprise Console
ACS URL	Reply URL (ACS) (step 1)
Entity ID	EntityID/Identifier (step 1)
Start URL - leave blank	
Name ID format - set EMAIL	
Name ID - leave Basic Information > Primary email	

Step 5

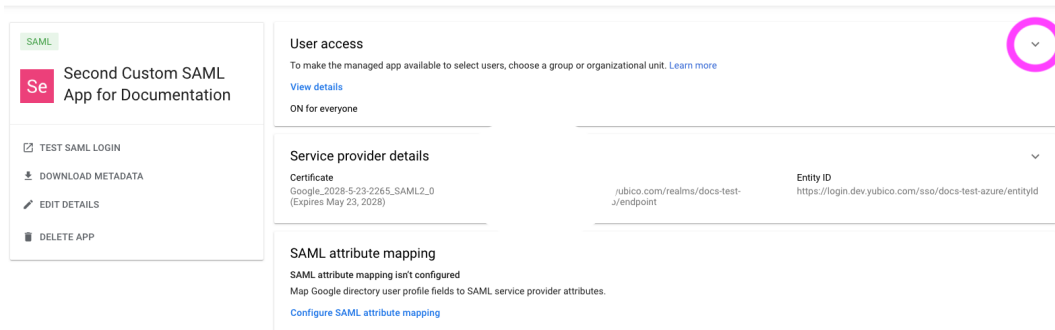
In Google, in the **3 Service provider details** screen, click **CONTINUE**. The **4 Attribute Map-**

ping page appears (with *Attributes* and *Group membership (optional)*). Skip these steps by clicking **FINISH**. The page for your new SAML app appears.

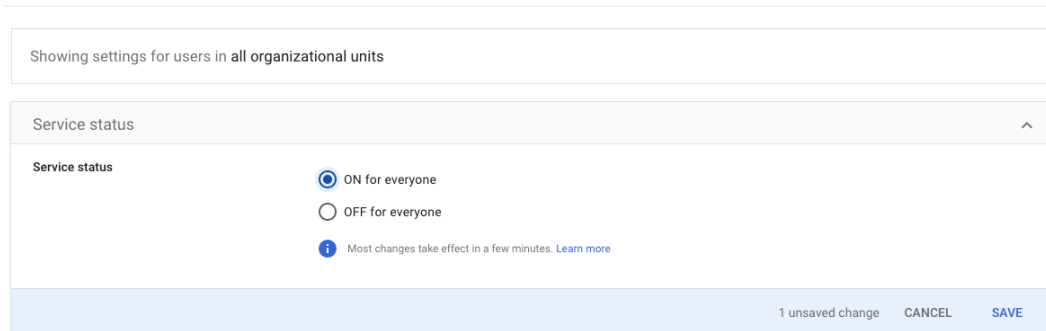


Step 6

In Google, ensure that **User Access** is **ON for everyone** by clicking on the caret in the upper right corner of the **User access** section.



The **Service Status** window opens. Toggle the service status radio control to **ON for everyone** and click **SAVE**.



Step 7

In the Console, click **Save settings** and **Enable SSO** (unless already enabled).

Troubleshooting

- **Issue:** Changing the ACS URL in an existing Google IDP configuration does not appear to be successful even after waiting a significant amount of time.
 - **Workaround:** Start over. Delete your **Web and mobile app** and start again.
- **Issue:** Sometimes the Google site displays the 500 error after SSO configuration.
 - **Workaround:** Update the **Entity ID** with a trailing forward slash “/”. If you already have such a slash, remove it.
- **Issue:** Sometimes Google presents the message “Service is not configured for this user”.
 - **Workaround:** Update the **Entity ID** with a trailing forward slash “/”. If you already have such a slash, remove it.

1.19.8 Enabling SSO with Duo

This section describes how to enable SSO between Duo and the YubiEnterprise Console. Note that unlike the other SAML integrations described above, Duo is not the IDP for the users. The following instructions assume that Duo is configured with Azure as the IDP, so those steps are not included.

Prerequisites

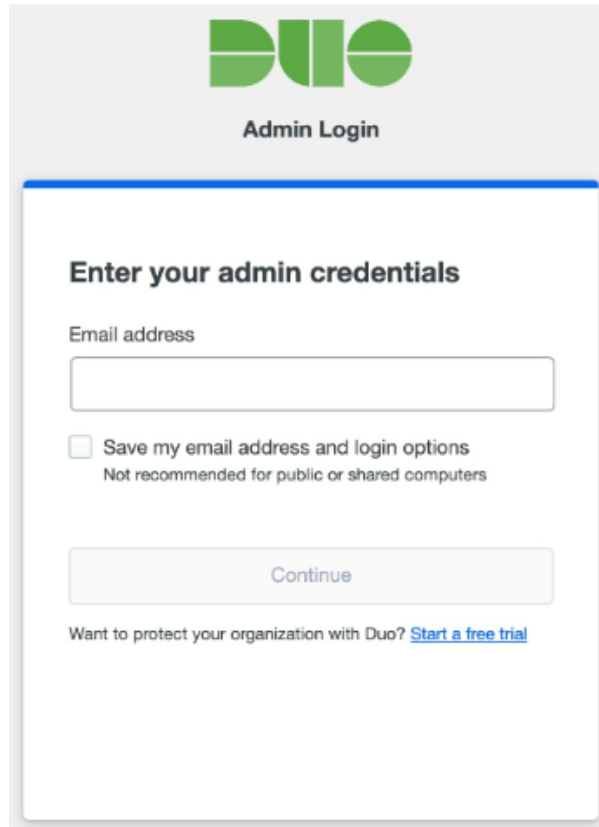
- Ensure that Duo’s IDP is configured (Azure for this environment).
- Ensure that you are a Console Owner in the Console.
- As Console Owner, add the SSO users to your organization in the Console, see [Adding or Deleting Users](#). Each user’s email address must match the email address used for that user in Duo and in Azure.

Procedure

To copy and paste information between the Duo and the Console configuration pages, have them open side-by-side in two browser windows.

Step 1

As administrator, log in to the Duo Tenant Admin portal: <https://admin.duosecurity.com>.

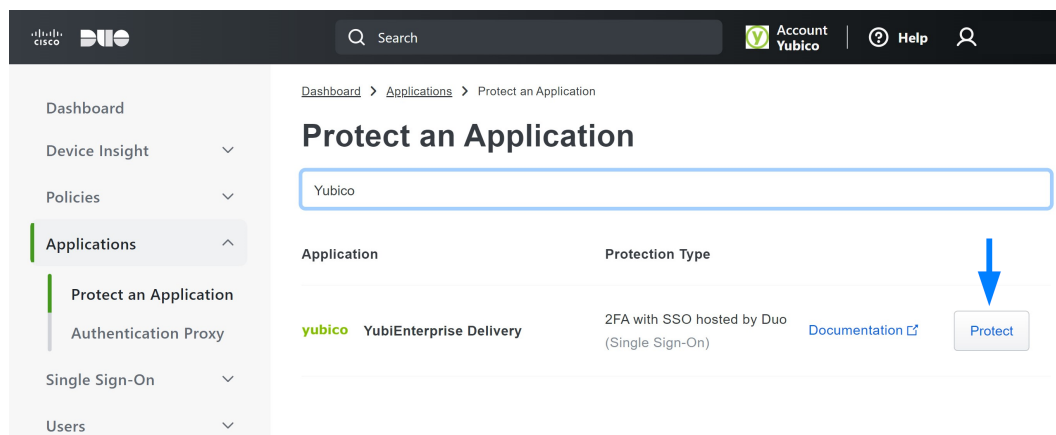


The image shows the Duo Admin Login page. At the top is the Duo logo and the text "Admin Login". Below this is a section titled "Enter your admin credentials". It contains a text input field for "Email address". Below the input field is a checkbox labeled "Save my email address and login options" with a subtext "Not recommended for public or shared computers". At the bottom of the form is a "Continue" button. Below the button is a link: "Want to protect your organization with Duo? [Start a free trial](#)".

Step 2

Add the Console (YubiEnterprise Delivery) application in Duo.

Go to **Applications > Protect an Application > YubiEnterprise Delivery > Protect**.



The image is a screenshot of the Duo Admin Console. The top navigation bar includes the Duo logo, a search bar, and links for "Account Yubico", "Help", and a user profile icon. The left sidebar shows a menu with "Dashboard", "Device Insight", "Policies", "Applications" (selected), "Protect an Application", "Authentication Proxy", "Single Sign-On", and "Users". The main content area shows the "Protect an Application" page. At the top, there's a breadcrumb trail: "Dashboard > Applications > Protect an Application". Below this is a search bar containing "Yubico". A table lists applications with columns "Application" and "Protection Type". The first row shows "yubico YubiEnterprise Delivery" with a protection type of "2FA with SSO hosted by Duo (Single Sign-On)". To the right of this row is a "Protect" button, which is highlighted by a blue arrow pointing down to it. There is also a "Documentation" link next to the protection type.

Step 3

Log in to the Console with the Console Owner role.


Step 4**Configure Console SSO to IDP (Duo).**


In the Console, go to **Settings > SSO** to open the **SAML Single Sign-On** page. Copy the **EntityID/Identifier** field from section 1 in the Console to the **EntityID/Identifier** field in the Duo Service Provider section.

Configure SAML Single Sign-On

 [View instructions for setting up SAML SSO](#)

1 Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier 

https://login. 

Console configuration section

Service Provider

EntityID/Identifier *

Enter your EntityID/Identifier from YubiEnterprise Delivery

Duo configuration section

Step 5**Configure IDP (Duo) to SP (Console).**

- Copy the **EntityID/Identifier** field from the Duo application configuration Metadata section to the **EntityID/Issuer** field in section 2 in the Console configuration page.
- Copy the **IDP login URL** from Duo to the **IDP login URL** field in the Console.
- In Duo, download the **Certificate**, open the file with a text editor, copy the content and paste it into the **X.509 cert (Base64)** field in the Console.

Metadata

EntityID/Identifier

https://sso- .sso.duosecurity.com/saml2/sp/

/meta

[Copy](#)

IDP login URL

https://sso- .sso.duosecurity.com/saml2/sp/

/sso

[Copy](#)

Downloads

Certificate

[Download certificate](#)

Duo configuration section

2

Paste the content from the IDP's SSO setup into the fields below. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Issuer *

https://sso...

IDP login URL *

https://sso...

X.509 certificate (Base64) *

Console configuration section

Step 6

Save settings and enable SSO in the Console.

Ensure to click **Save settings** and **Enable SSO** before closing your browser.

Save settings

Cancel

Enable SSO

Step 7

Configure Duo application attribute mapping.

To configure a Duo attribute other than **Email Address** as the email address attribute sent to the Console in the SAML response, return to the Duo application configuration screen Service Provider section, check the box for **Custom attributes**, and then select the attribute to send as the email address attribute.

Service Provider

EntityID/Identifier *

EntityID/Identifier

Enter your EntityID/Identifier from YubiEnterprise Delivery

Custom attributes

☒ Check this box if your Duo Single Sign-On authentication source uses non-standard attribute names.

Mail attribute

<Email Address>

+ Enter custom value

<Username>

<First Name>

<Last Name>

<Display Name>

<Email Address>

Universal Prompt

[More Information](#)

Learn more about the new prompt experience.

Step 8

Configure Duo application policy.

Duo policies control how users authenticate to specific applications. Steps 8 and 9 ensure that MFA is enforced, and YubiKeys are enabled as Webauthn authentication method. These policies can be configured globally, or per application. If other applications are already being protected with Duo, ensure that the following settings can apply to all applications, or consider creating a unique Application policy for the Console. See the [Duo documentation](#).

- a. To configure global policies, click **Edit Global Policy** in the Duo application configuration page.

Global Policy

This policy always applies to all applications.

[Edit Global Policy](#)

● Enabled

New User policy

Prompt unenrolled users to enroll whenever possible.

● Enabled

Authentication policy

Skip two-factor authentication and enrollment, unless there is a superseding policy configured.

User location

No restrictions.

- b. In the New User Policy section, ensure the **Require enrollment** option is selected. (Optional) if the IdP is forcing 2FA, click **Bypass 2FA** in the Authentication Policy section. To force 2FA in Duo (not relying on the IdP), click **Enforce 2FA**.

Edit Policy

You're editing the Global Policy which is used by all applications. This can be overridden with custom policies.

[Learn more about policies](#) 

[Revert to default](#)

Policy name

Global Policy

Users

- ☒ New User policy
- ☒ Authentication policy
- ☒ User location

Devices

- ☒ Trusted Endpoints
- ☒ Device Health application
- ☒ Remembered devices
- ☒ Operating systems
- ☒ Browsers
- ☒ Plugins

Networks

- ☒ Authorized networks
- ☒ Anonymous networks

Authenticators

- ☒ Risk-based factor selection
- ☒ Authentication methods
- ☒ Duo Mobile app
- ☒ Tampered devices
- ☒ Screen lock
- ☒ Full-disk encryption
- ☒ Mobile device biometrics

New User policy

☒ Require enrollment

Prompt unenrolled users to enroll whenever possible.

☐ Allow access without 2FA

Allow users unknown to Duo to pass through without two-factor authentication. Users who exist in Duo and have not enrolled will be required to enroll.

☐ Deny access

Deny authentication to unenrolled users.

This controls what happens after an unenrolled user passes primary authentication.

Authentication policy

☐ Enforce 2FA

Require two-factor authentication or enrollment when applicable, unless there is a superseding policy configured.

☒ Bypass 2FA

Skip two-factor authentication and enrollment, unless there is a superseding policy configured.

☐ Deny access

Deny authentication to all users.

When enabled, this affects all users.

Step 9

Ensure hardware tokens are selected.

In Duo, scroll down to the **Authentication methods** section, and ensure the **Hardware tokens** option is selected.

Authentication methods

Users will only be allowed to authenticate with 2FA using the checked methods.

☒ Platform authenticator (WebAuthn)

Built-in authenticators that require a biometric, PIN, or passcode (e.g., Face ID, Touch ID, Windows Hello, or Android fingerprint and face recognition.)

Note: The only platform authenticator that Traditional Prompt supports is Touch ID on Chrome browsers.

☒ Roaming authenticator (WebAuthn)

USB, Bluetooth, or NFC security keys

☒ Duo Push

☐ Always require a Verified Duo Push with digits.

This setting requires users to verify Duo Push authentications. ⓘ

☒ Duo Mobile passcodes

☒ SMS passcodes

☐ Automatically send a new passcode up to 3 times if delivery fails. Any retries will use additional telephony credits.

☒ Hardware tokens

Step 10

Save the global policy.

In Duo, click **Save Policy** at the bottom of the Global Policy configuration page.


Step 11

Save the application configuration.

In Duo, click **Save** at the bottom of the application configuration page.

1.19.9 Enabling SSO for Other IDPs

To try out SSO for identity providers that Yubico does not explicitly claim to support, go to **Settings > SSO > Configure SAML Single Sign-On**, and fill in the configuration fields.


YubiEnterprise Console

Configure SAML Single Sign-On ?

[View Instructions for setting up SAML SSO](#)

1
Copy this information for your IDP setup. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Identifier ?
https://login.s

Reply URL (ACS) ?
https://login.s
ndpoint

☐ Allow IDP Initiated single sign-on * ?

2
Paste the content from the IDP's SSO setup into the fields below. Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.

EntityID/Issuer * ?

IDP login URL * ?

X.509 certificate (Base64) * ?

3
Get your single sign-on URL

For org Initiated SSO, save this link to share with your users. Do not paste this into your IDP initiated settings.

SP Initiated Login URL
https://login.s

Save settings

Cancel

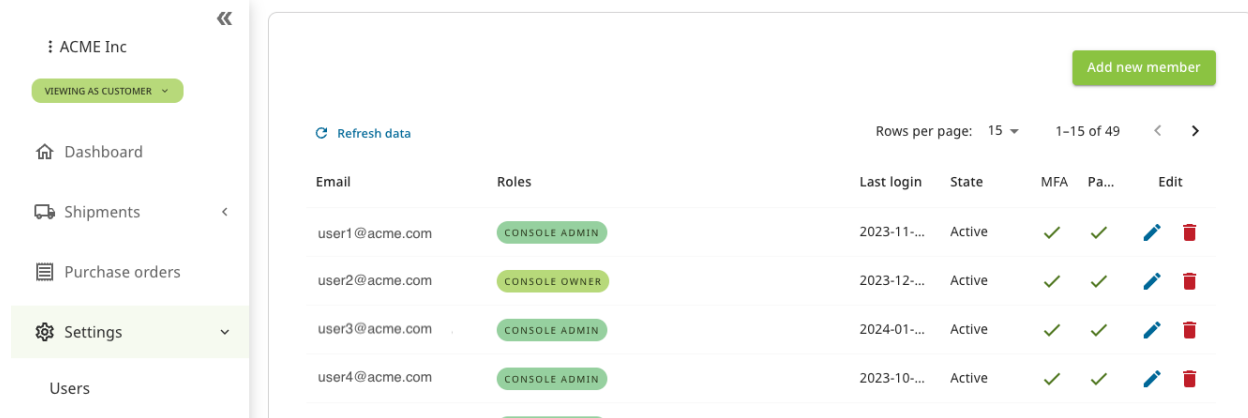
Enable SSO

Note: Be aware that the field labels vary depending on the IDP. For examples of these variances, look at the instructions for supported IDPs Microsoft Azure, Okta, and Google Workspace.

1.19.10 Disabling SSO

To disable SSO, in the **Console**, go to **Settings > SSO**. In the **Configure SAML Single Sign-On** page click the **Disable SSO** button.

Users added *after* SSO was enabled will not be able to login once SSO is disabled. Therefore you need to determine which users need to be enabled to log in with credentials again. To see which users have credentials, log in to the Console as Console Owner with credentials and go to **Settings > Users**. The **MFA** column on the page indicates which users have credentials.



To enable users added after SSO enablement to enroll credentials and log in again, reset them as described in [Account Recovery and Password Reset](#).

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.20 Best Practices and Troubleshooting

1.20.1 Best Practices

Note: The best practices specific to YubiEnterprise APIs are in the [API: Best Practices and FAQs](#) section of [API Shipment Requests](#).

- Have at least two Console Owners who can manage members (see [User Management](#)).
- Inform both your YubiEnterprise users and your end-users in advance of sending notifications of YubiKey delivery that they will receive email from Yubico's YubiEnterprise Delivery. Without this advance notice, they are likely to regard these emails as phishing attempts.
- If YubiEnterprise Delivery appears to be behaving strangely, check the status of YubiEnterprise Services: <http://status.yubico.com/>. Subscribe to that page for updates related to YubiEnterprise Console planned maintenance and/or downtime.
- Subscription customers:
 - To ensure that you do not let keys in any of your inventories expire unused, create a spreadsheet to plan the allocation of products across users and inventory types. See [Example Subscriptions](#).
 - When creating a shipment request, select the inventory type before selecting the item(s) to be shipped.

Limits and Constraints

When planning and executing shipment requests, keep in mind the primary limits and constraints set out in *Delivery Policies*, but also the following:

PO Boxes

Although the system can deliver to Post Office (PO) Boxes within the United States, delivery to the equivalent elsewhere in the world is unlikely to succeed.

Distributors and Resellers (Channel Partners)

The entity through which you submit a PO is always referred to as a channel partner. “Channel partner” is a term that covers distributors, resellers, and even Yubico itself. Yubico’s Channel partner ID (or `ChannelPartnerId` or `channelpartner_id`) is “1”.

Note: The deprecated `/shipments` API did not support indirect sales, i.e. the selection of channel partners (distributors, resellers). That API only supported direct sales in that the `ChannelPartnerID` was always set to 1, which means Yubico. To order inventory purchased through a distributor or reseller, use the `/shipments_exact` API.

Because inventory is sorted according to the source from which it was purchased, when requesting shipment, distinguish between inventory purchased directly from Yubico and inventory purchased through distributors and resellers doing business with Yubico. The **Dashboard** shows your *total* inventory of any given product, combining quantities purchased from all sources: both directly from Yubico and indirectly through channel partners. To find out what is in which inventory, check your purchase orders.

To find out what the channel partner (reseller or distributor) ID is:

BEFORE shipment

The name of the channel partner (reseller or distributor) is shown on the **Purchase orders** tab, and the channel partner ID is shown on the PO detail popup accessed by clicking on the Purchase order number:

Purchase order #: PO01234

Back

YUBIENTERPRISE DELIVERY INCLUDED ?

Order date: 07 Jul 2023

Reseller: Yubico (direct sale)
Reseller ID: 1

123 State Street
Austin
Texas
73301
US

Firstname Lastname
firstname.lastname@acme.cor
+1 999 999 9999

Products

Inventory	Cost per item
500 / 500 - Advanced/Bio - Plus - Primary	\$47.53
125 / 125 - Advanced/Bio - Plus - Primary - Replacement	\$0.00
500 / 500 - Advanced/Bio - Plus - Backup	\$35.65
249 / 250 - Compliance - Plus - Primary	\$49.08
75 / 75 - Compliance - Plus - Primary - Replacement	\$0.00
250 / 250 - Compliance - Plus - Backup	\$36.81

AFTER shipment

The **Channel partner ID (Reseller or Distributor)** is shown on the shipment request detail page, accessible by clicking the ID of the shipment request on the **Shipments tab**.

SHIPMENT ID
PZtDmpRHylcn73YgHbGQPm

AUTOMATED

Go back

Request date: 2023-03-27T18:15:16.206Z

Reseller name: Yubico (direct sale)
Requestor: Firstname Lastname
Reseller ID: 1

Status: Shipped: In transit

- Shipment requested
- Shipped: In transit
- Delivered

Status messages

- No status messages

Address

Firstname Lastname
Firstname
530 Lytton Ave
#301
Palo Alto
California
94301
US
frank@acme.com
Tel: 5559251212

Shipping & tax

Shipping Fee: \$10.00
Shipping Tax: \$0.92
Shipping VAT: --
Product cost: \$75.00
Product tax: \$6.85
Product VAT: --
Total: \$92.77
Delivery type: Normal
Provider: FedEx
Tracking: Vr2W3FDIFPC8tsZj6PRErm

Item details

Inventory product type	PO reference	Quantity	Product name	Cost per item	Cost
Standard products	Perpetual PO	1	YubiKey 5Ci	\$75.00	\$75.00

Names and Addresses: First Line

First name and **Last name** in the Console and in the CSV file for bulk shipments, map to the first line on the shipping label.

Long recipient names can be problematic for all methods of requesting shipment, because the shipment request will fail if the contents of the **First name** and **Last name** fields and/or **Company** or **recipient** fields exceed the maximum number of characters permitted in these fields (shown in the table below).

Workaround: When a recipient's full name or company name exceeds the fields' maximum lengths, split the names across the three fields, as in this example:

Location	Field (limit=15)	Field (limit=20)	Field (limit=20)
API	recipient_firstname	recipient_lastname	recipient
CSV	First name	Last name	Company
Console	First name	Last name	Company
Example of an overly long name before adjustment to fit the fields			
	Johannes-Maximilian	von Derschowitz-Dampfloch zu Querdenker	
Example after adjustment			
	Joh.-Maximilian	v.DerschowitzDampfloch	zu Querdenker

Company Name: Second Line

The second line on the shipping label maps to the name of the recipient's company if the address is not residential. For example, the system's address verification function recognizes that Yubico's Santa Clara facility is in a commercial building, therefore the company name is expected in:

- The **Company** field/table cell in the **Console** and in the CSV file.
- The **recipient** field in the API

Note: **API:** Do not use the `/shipments recipient` field to specify the **name of the individual** to whom products are to be shipped. For this, use the `recipient_firstname` and `recipient_last` name fields instead.

If the address is residential, leave empty:

- The **Company** field/table cell in the **Console** and in the CSV file.
- The **recipient** field in the API.

Address Information

Incomplete or incorrect address information might cause *validation errors*. For example, entering the following information for a shipment request would result in failure because USPS recognizes that there are multiple companies in the building whose address is 530 Lytton Avenue:

```
Jan Lindberg
530 Lytton Avenue
Palo Alto, CA 94301
USA
```

Similarly, entering the following information for a shipment request would result in failure because a residential address would not be associated with a company.

Jan Lindberg
Yubico Inc.
6 Lea Rd
Dronfield S18 1SB
UK

When adding address information, you can for example use the address formats provided by Google Maps, see note in [Troubleshooting](#). The limits on the various fields and the options for the dropdown are given in [Shipment Request Form Fields](#).

Timing Constraints

Shipment Requests

Shipment requests can be edited or deleted until **2am PST (10am GMT)**, the day **after** they were entered. For instructions on these procedures, see [Editing or Deleting a Shipment](#).)

Delivery

Normal (standard) shipping: Typically, shipments will take 5-7 days for delivery in North America and Europe. Delivery to other parts of the world will take longer.

Expedited (rush) shipping: Typically, shipments within North America can be delivered in 1 business day. It may take longer to deliver shipments to other parts of the world, but Yubico will leverage the fastest delivery service reasonably available.

Address Validation

Every 15 minutes, the system validates addresses; therefore you might have to wait up to 15 minutes to find out if your shipment request has been queued for fulfillment. (For details, see [Shipping Status Codes](#).)

Availability of Stock/Inventory

Shipment allocations may be set. (For details, see [Shippable Inventory](#).)

Non-subscription Purchases

Shipment requests can be made for up to one year after a PO is submitted.

Subscription Purchases

Availability of products depends on the stock/inventory from which the products are drawn. (For details, see [Tier Sub-categories](#).)

Inventory Types: Subscription 1.0

The full list of options that were potentially available in Subscription (1.0) is given below. The actual list depends on what you have purchased. Explanations for the terms in the list are given in the table below the list. For more details on subscription and non-subscription purchasing, see [Modes of Purchase](#).

Subscription (1.0): Full List of Inventory Types

- Primary Subscr - Base Tier: Initial
- Primary Subscr - Base Tier: Buffer
- Primary Subscr - Base Tier: Replacement
- Primary Subscr - Adv. Tier: Initial
- Primary Subscr - Adv. Tier: Buffer

- Primary Subscr - Adv. Tier: Replacement
- Primary Subscr - Prem. Tier: Initial
- Primary Subscr - Prem. Tier: Buffer
- Primary Subscr - Prem. Tier: Replacement
- Primary Subscr - FIPS Tier: Initial
- Primary Subscr - FIPS Tier: Buffer
- Primary Subscr - FIPS Tier: Replacement
- Backup Subscr - Base Tier: Initial
- Backup Subscr - Base Tier: Buffer
- Backup Subscr - Base Tier: Replacement
- Backup Subscr - Adv. Tier: Initial
- Backup Subscr - Adv. Tier: Buffer
- Backup Subscr - Adv. Tier: Replacement
- Backup Subscr - Prem. Tier: Initial
- Backup Subscr - Prem. Tier: Buffer
- Backup Subscr - Prem. Tier: Replacement
- Backup Subscr - FIPS Tier: Initial
- Backup Subscr - FIPS Tier: Buffer
- Backup Subscr - FIPS Tier: Replacement
- Non-subscription - Base Tier
- Non-subscription - Advanced Tier
- Non-subscription - Premium Tier
- Non-subscription - FIPS Tier
- Standard Products

Standard Products	Subscription	Non-subscription
Standard products are physical keys purchased outright (on your PO you will not find “Standard Products”, but instead the actual products/models that you purchased).	There is a primary subscription and a backup subscription for each tier (product grouping): Base, Advanced, Premium, and FIPS. Each of those tiers has Initial, Buffer, and Replacement sub-categories, explained in the table below, <i>Tier Sub-categories</i>	The non-subscription tiers are for virtual keys. Unlike subscription tiers, non-subscription tiers have no sub-categories.

Table 16: **Stock: Initial, Buffer, Replacement**

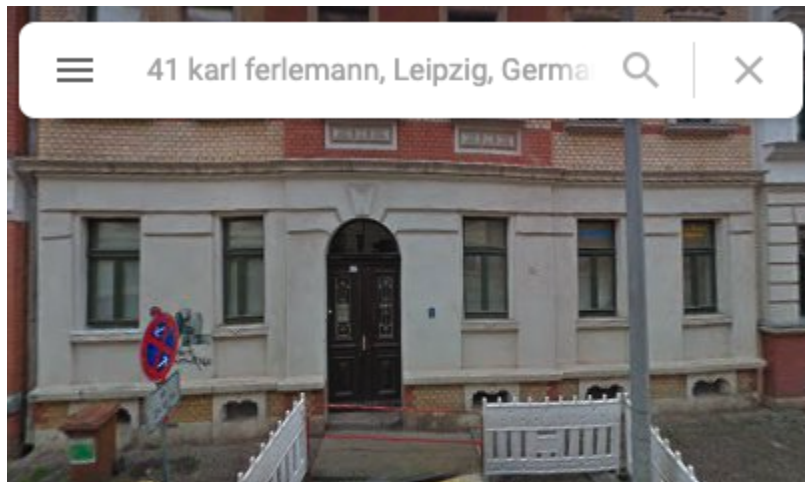
Initial	The stock in this category reflects the total number of users on the subscription. This lot can be drawn upon for 12 months from the start of your subscription term.
Buffer	This category is made available to you free of charge when your subscription begins. You can draw on it throughout the term of your subscription.
Replacement	This category is intended for those who have lost their YubiKeys or want to upgrade. The stock in this category is reset each year of the subscription to the Replacement limit.

1.20.2 Troubleshooting

This section addresses issues that can arise with shipping. YubiEnterprise Delivery notifies you of the situation of any given shipment via the codes in the Status column of the **Shipments** tab. The table below, *Shipping Status Codes*, lists the error codes and their explanations.

YubiEnterprise Delivery uses address validation services to reduce the incidence of issues, but it is important to be aware that just because an address exists in Google Maps, it does not mean that the address is deliverable. ‘Deliverable address’ is a United States Postal Service (USPS) classification for designating addresses to which the USPS has historically been able to deliver. YubiEnterprise Delivery’s ability to deliver is based on address information being input in the format acceptable to the relevant address validation service. The USPS-acceptable formats are set out in detail in the USPS’s *Postal Addressing Standards*.

Note: When revising an address, the best option is to use the format Google Maps presents, because it usually does use the address format preferred by the validation service. In the example below, the address format that was input appears in the upper field, and Google Maps’ format is shown below the photo of the location.



Karl-Ferlemann-Straße 41

04177 Leipzig

Germany

Building

Address Validation Outside the US and Canada

For parts of the world with less standardized address formats, the fact that YubiEnterprise Delivery can accept an address does not mean that it is deliverable. An address will often be classified as “partially deliverable”, which means that we rely on local couriers who are familiar with the complexities of their urban systems and their delivery routes to deliver to the intended recipient.

Typically packages sent to European addresses and some parts of Asia reach their destination. Packages sent to South-east Asia and Eastern Europe typically arrive at the right street. In those parts of the world where there are no numbers in the postal addresses, the local courier’s capability is crucial to ensuring that the package actually arrives at its destination as opposed to ending up in its general area.

Shipping Status Codes

At any of the states between 1 and 9, a shipment request can be edited. From this point on, a shipment request is either processed through to an end state, or set back to state 99.

Table 17: Shipment state codes

shipment_state_code shipment_state_id	Status description (shipment_state_description)	Status message in Console (shipment_state_message)
ShipmentStateIncomplete 1	Shipment request received by YubiEnterprise Delivery system but contained some data that could not be processed. (2), (3)	Incomplete Shipping Request
ShipmentStateDraft 2	Shipment request is being edited and is not ready for processing.	Draft
ShipmentStateAwaitingValidation 3	Shipment request received, no validation done yet.	Awaiting Validation
ShipmentStateProcessingAddress 4	Shipment request locked as it undergoes country check, address validation, sales tax rate lookup (US), DPL check.	Processing
ShipmentStateAddressValid 5	Shipment request address has been validated, ready to be picked up by fulfillment processor.	Accepted for Fulfillment
ShipmentStateAddressInvalid 6	Shipment request address is invalid but an alternative address has been found and suggested. (2), (3)	Incomplete
ShipmentStateAddressFail 7	Shipment request address could not be validated and no alternative could be found for suggesting. suggested. (2), (3)	Address is undeliverable or could not be understood

ShipmentStateError
8

Shipment request has failed processing due to

Error: Processing Error, contact Support

- (1) Refer to [Timing](#) for cutoff times.
- (2) Incomplete Address: Secondary line information such as apartment (apt), suite, unit is missing. Therefore it is not possible to guarantee delivery to the correct recipient.
- (3) Address is Undeliverable or could not be understood: The address is either not physically deliverable or it could not be resolved to a real location.
- (4) Any shipping request with a recipient name and/or address found on the US government's [DPL \(Denied Parties/Persons List\)](#) cannot be fulfilled.

Shipment Status Messages

These error messages accessible via the API tell you why a given shipment request was unsuccessful. It is worth reviewing them before making any shipping requests in order to see what sort of issues might arise and thereby avoid them in the first place.

In the Explanation column, the source of the message is given: YubiEnterprise Delivery system for internal messages, US Validation for the US Postal Service, and finally, International Validation. Messages originating from the last two are simply passed on to you by YubiEnterprise Delivery.

Table 18: YubiEnterprise Delivery API status messages

Message	Explanation
InventoryProductId not specified for ProductId %d - ShipmentStateError	See Bulk Shipment: Shipping to Multiple Addresses YubiEnterprise Delivery system
Too many keys in shipment - TotalKeysShipped %d > %d - ShipmentStateError	See Limits and Constraints YubiEnterprise Delivery system
Not enough Inventory for Shipment - ShipmentStateError	See Purchase Orders YubiEnterprise Delivery system
Re-enter the address differently; some parts of it are invalid.	See Troubleshooting US Validation
The address is invalid.	See Troubleshooting US Validation
The address is valid.	No further explanation required. US Validation
Remove the 'secondary unit designator' (apt, suite, department, etc.) because it is superfluous.	Remove the apartment number, unit, etc.: it is considered wrong or unnecessary. US Validation

continues on next page

Table 18 – continued from previous page

Message	Explanation
Enter second line information (apartment, unit, etc.). The information in the primary line is not specific enough.	Add the apartment number, unit, etc. US Validation
The address is a valid military address.	No further explanation required. US Validation
The address is a valid General Delivery address where individuals without permanent addresses can receive mail.	No further explanation required. US Validation
The address is valid. An organization such as a government agency can have its own zipcode because it receives a large volume of mail.	No further explanation required. US Validation
Enter a street number; for example, for Yubico “Lytton Ave” alone is not sufficient, it needs to be “530 Lytton Ave”.	The number on the primary line, for example the “185” in “185 Berry Street” is missing. US Validation
Enter a valid street number.	The number on the primary line, for example the “185” in “185 Berry Street” not valid. US Validation
Enter a PO Box, Rural Route, or Highway Contract number.	US Validation
Enter a valid PO Box, Rural Route, or Highway Contract box number.	US Validation
Enter the Private Mailbox (PMB) identifier or the # sign, followed by the PMB number.	PMB number is Private Mailbox Number US Validation
This address is not eligible to receive mail.	US Validation

continues on next page

Table 18 – continued from previous page

Message	Explanation
The address is that of a Commercial Mail Receiving Agency (CMRA) a private business that accepts mail for recipients, and the required private mailbox information is present.	US Validation
The address is missing some important secondary line information (apartment, unit, etc).	No further explanation required. International Validation
Mail is unlikely to arrive at this destination - please verify input.	No further explanation required International Validation
This street could not be found within the city or postal code.	No further explanation required International Validation
Invalid OrganizationId for Shipment	YubiEnterprise Delivery system
Country Code not set for Shipment	YubiEnterprise Delivery system
Country could not be found from CountryCode2: %s	Country code entered is not in YubiEnterprise Delivery system list
Shipment has no shipment items	YubiEnterprise Delivery system
DeliveryType not set for Shipment, defaulting to 1 - <i>normal</i>	YubiEnterprise Delivery system
Invalid DeliveryType %s for Shipment	YubiEnterprise Delivery system
InventoryType not set for Shipment, defaulting to 1	YubiEnterprise Delivery system

continues on next page

Table 18 – continued from previous page

Message	Explanation
InventoryType %s not valid set for Shipment	You cannot use this InventoryType for this shipment - YubiEnterprise Delivery system
Negative quantity entered for ShipmentItem with ProductId=%d defaulting to 0	You set the quantity of the specified ProductID to be shipped to less than zero. YubiEnterprise Delivery system
Invalid ShipmentProductQuantity for ShipmentItem %d	You probably do not have sufficient inventory. YubiEnterprise Delivery system
Invalid ShipmentProductLineCost for ShipmentItem %d	YubiEnterprise Delivery system
Invalid Shipment - Total keys in shipment greater than 500	You cannot ship more than 500 items at once. YubiEnterprise Delivery system
Shipment has zero total item quantity	The number of items to be shipped must be > 0. YubiEnterprise Delivery system
US Address is missing the state name/abbreviation in region field	No further explanation required. YubiEnterprise Delivery system
Bad ProductId in ShipmentProduct for NewShipmentProduct	ProductID is wrongly specified or invalid. YubiEnterprise Delivery system
Input for %s exceeded limit of %d characters	Specified field cannot accept the number of characters that were entered. YubiEnterprise Delivery system
Shipment of these products to this country using this delivery type is not supported For more information, see Delivery Policies .	Shipment request contravenes one or more business rules. YubiEnterprise Delivery system

- See the [USPS FAQ](#).

Insufficient Inventory

To maintain the window during which orders can be updated, edited, or recalled/deleted, orders are held and processed in batch. Therefore there might be less inventory available by the time an order is processed than what was shown in purchase order details when the request was created. For example, the person starting to create a shipment request assumes that the 50 keys the console shows they have in inventory will still be available by the time the shipment request is submitted. When this is not the case, any shipment requests processed after the inventory is exhausted will be flagged with this error message:

Error: Processing Error, contact support.
Reason **is** Not enough Inventory **for** Shipment
– ShipmentStateError

A second issue arises from the same source: when the user clicks on the shipment request ID with that error, part of the status message displayed is “Insufficient Inventory of Product X” where “X” is an integer. To find out what X means, consult the [Product Name](#), [Stock/Inventory](#), [product_id](#) and [inventory_product_id](#) table.

A third issue arises from the same source: it is not possible to make single shipment requests for products that are not available in inventory - which is expected if insufficient product has been purchased, but an insufficiency of inventory can also be caused by Yubico itself running out of stock. However, this issue has now been resolved by warning the user before a shipment request is made. See [Shippable Inventory](#).

Workaround

Either contact [Support](#) to get more inventory, or edit the request to switch to another product for which inventory is available.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.21 General FAQs

- **Are there any limits or constraints on shipment requests?** Yes:

Address Validation

Every 15 minutes, the system validates addresses; therefore you might have to wait up to 15 minutes to find out if your shipment request has been queued for fulfillment. (For details, see [Shipping Status Codes](#).)

Availability of Stock/Inventory

Shipment allocations may be set. (For details, see [Shippable Inventory](#).)

Non-subscription Purchases

Shipment requests can be made for up to one year after a PO is submitted.

Subscription Purchases

Availability of products depends on the stock/inventory from which the products are drawn. (For details, see [Tier Sub-categories](#).)

The full list of options that were potentially available in Subscription (1.0) is given below. The actual list depends on what you have purchased. Explanations for the terms in the list are given in the table below the list. For more details on subscription and non-subscription purchasing, see [Modes of Purchase](#).

Subscription (1.0): Full List of Inventory Types

- Primary Subscr - Base Tier: Initial

- Primary Subscr - Base Tier: Buffer
- Primary Subscr - Base Tier: Replacement
- Primary Subscr - Adv. Tier: Initial
- Primary Subscr - Adv. Tier: Buffer
- Primary Subscr - Adv. Tier: Replacement
- Primary Subscr - Prem. Tier: Initial
- Primary Subscr - Prem. Tier: Buffer
- Primary Subscr - Prem. Tier: Replacement
- Primary Subscr - FIPS Tier: Initial
- Primary Subscr - FIPS Tier: Buffer
- Primary Subscr - FIPS Tier: Replacement
- Backup Subscr - Base Tier: Initial
- Backup Subscr - Base Tier: Buffer
- Backup Subscr - Base Tier: Replacement
- Backup Subscr - Adv. Tier: Initial
- Backup Subscr - Adv. Tier: Buffer
- Backup Subscr - Adv. Tier: Replacement
- Backup Subscr - Prem. Tier: Initial
- Backup Subscr - Prem. Tier: Buffer
- Backup Subscr - Prem. Tier: Replacement
- Backup Subscr - FIPS Tier: Initial
- Backup Subscr - FIPS Tier: Buffer
- Backup Subscr - FIPS Tier: Replacement
- Non-subscription - Base Tier
- Non-subscription - Advanced Tier
- Non-subscription - Premium Tier
- Non-subscription - FIPS Tier
- Standard Products

Standard Products	Subscription	Non-subscription
Standard products are physical keys purchased outright (on your PO you will not find “Standard Products”, but instead the actual products/models that you purchased).	There is a primary subscription and a backup subscription for each tier (product grouping): Base, Advanced, Premium, and FIPS. Each of those tiers has Initial, Buffer, and Replacement sub-categories, explained in the table below, <i>Tier Sub-categories</i>	The non-subscription tiers are for virtual keys. Unlike subscription tiers, non-subscription tiers have no sub-categories.

- **Can there be unexpected delays in delivery of shipments?**

YubiEnterprise Delivery Service is only available during regular business days, i.e., weekdays. It is not available on weekends or official holidays, even though there are no time constraints on the creation of shipment requests, which can be generated at any time.

YubiEnterprise Delivery Service is dependent on third parties such as courier services and is therefore impacted by their scheduled holidays.

Yubico tries to provide notification on the Console for delivery delays of more than 2 business days. Please reach out to [YubiEnterprise Services Support](#) with any further queries on shipment delivery delay.

- **Does YubiEnterprise Delivery track YubiKey serial numbers?**

No, Yubico does not track the serial numbers.

- **What Personally Identifiable Information (PII) is retained by Yubico?**

Yubico retains data only as long as necessary to operate our business and to comply with statutory and regulatory requirements. We do not use this data for any purpose other than meeting our obligations to our customers (e.g. shipping YubiKeys) and to comply with applicable laws. In accordance with export controls and tax law, Yubico is required to retain shipment data for up to seven years.

- **What is the data retention policy, i.e., how long is data held within the YubiEnterprise Delivery Console before being purged?**

Data is kept for seven (7) years to comply with export control and financial legal requirements.

- **What happens to YubiKeys purchased on a subscription basis after expiry of the corresponding PO/term?**

Any keys not shipped are forfeited, but the date of forfeiture or expiry depends on their inventory type: see the first question in this FAQ, “Are there any limits or constraints on shipment requests?”

- **What happens to YubiKeys purchased outright (perpetual) after one year in inventory?**

YubiEnterprise Delivery enables customers to request shipments for up to 12 months after the initial PO. YubiEnterprise Delivery will hold the customer’s inventory, regular or custom keys. When the twelve-month period is up, YubiEnterprise Delivery will ship the remainder of the keys to the original customer address on file. The customer will also be notified 60 and 30 days prior to the period expiry via email.

- **What taxes will be charged to the customer?**

See [Shipping](#).

- **How will the customer be invoiced for the cost of shipping and taxes or VAT charged on shipping?**

See [Shipping](#).

- **How does Yubico handle customers who are exempt from VAT/sales tax?**

See [Exemptions](#).

- **What is the warranty on keys on a subscription contract?**

The warranty is extended to cover the full term of the subscription and applies as long as the subscription is active.

- **Where is YubiEnterprise Delivery available?**

YubiEnterprise Delivery is available in USA, Canada, EU, UK, Norway, Switzerland, Iceland, and Liechtenstein. YubiEnterprise Delivery is not available in EU Overseas Countries or Territories.

- **Can organizations that already have accounts with FedEx and UPS use those accounts with YubiEnterprise Delivery?**

No, at the moment, YubiEnterprise Delivery cannot use customer-provided shipping partner accounts.

- **Can Yubico's security keys and YubiKeys be custom programmed by Yubico for a customer?**

Yes: the minimum initial order is 10,000 or more, with subsequent orders being at least 5,000.

- **What reports are available to customers to help better manage their YubiEnterprise Delivery?**

YubiEnterprise Delivery customers can log into the YubiEnterprise Delivery Console and access their purchase orders, shipment requests, address book etc. They can also download all their shipment requests and status / tracking numbers over the period.

- **Our business is based in the US but has locations in Europe. Can YubiEnterprise Delivery support distribution of YubiKeys in this setup?**

Yes, this use case is supported. A business headquartered in North America, but having office locations and users in Europe will be able to receive YubiKeys at their respective locations, including residential addresses.

- **We may need to have several people in the company place orders for YubiKeys. How does YubiEnterprise Delivery satisfy that requirement?**

Any individual who has administrative rights to the YubiEnterprise Delivery Console can place orders for keys through the console. Admins can be delegated across locations so that they can best gauge the numbers of users who will need YubiKeys and request shipments all at once, or over time as needed.

- **What is the maximum number of YubiKeys that can be included in a shipment request?**

It depends on the country to which you are shipping. See [Delivery Policies](#).

- **Can a shipment request be cancelled?**

Yes. Shipment requests can be edited or deleted until **2am PST (10am GMT)**, the day **after** they were entered. Instructions for this procedure are given in [Editing or Deleting a Shipment](#).

- **What shipping delivery options are available?**

Depending on the country being shipped to, one or both of the following will be available:

- Normal (standard) shipping
- Expedited (rush) shipping

For more details, see [Timing](#).

- **What do you do with the zip_code field if it is not applicable, for example, for Canada and the EU countries?**

Leave the zip_code field blank and use the postal_code field instead.

- **Where do I find official Yubico product images and descriptions?**

On Yubico's [Press room images and logos page](#) are the logo and product images.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.22 Release Notes

The changes reported in the release notes are cumulative. We include all customer-visible functionality updates as well as any known issues and suggested workarounds.

1.22.1 Release 2.10.3 (25 April 2024)

Resolved Issues

- Previously when creating a shipment request in the **Create new shipping request** page, the “Shippable count” was not displayed if the remaining allocation was less than the subscription amount for a form factor. Because “Shippable count” is also used for displaying the amount of customized keys available for shipping, this caused inconsistency in the display of the amount of shippable keys. This issue has been fixed. If a form factor has an inventory allocation, “Shippable count” is always displayed when selecting products for a shipment request.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see [Inventory: Channel Partners](#).
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
- Google Workspace cannot support both the Service Provider-initiated ACS URL and the Identity Provider-initiated ACS URL at the same time. Neither is it possible to set up two different SAML Apps in the same Google Workspace, because Google Workspace enforces SP EntityID uniqueness across all SAML Apps in the workspace. For more information, see [SSO: Known Limitations](#).
- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 00000 in that field.

1.22.2 Release 2.10.0 (11 April 2024)

New Features & Enhancements

- **API:** The update shipment validation has been updated to support customization ID and customizable inventory. `BasicShipmentValidation` now verifies the following:
 - The customization has `includes_fpr` flag set to true.
 - The `product_id` product's corresponding shippable item has `is_custom` flag set to true.
 - The `validate-by-partner` check verifies that a partner is configured for FIDO Pre-reg or any shipment type for that organization.
- **Console:** The contact support link in the Console and the login page has been updated to reduce the number of clicks a user has to take to submit a support request. When clicking the support link, users are now taken directly to the YubiEnterprise Delivery support page with the support form opened. Previously a user had to click to open the form to enter data.
- **API:** `validate-address` has been updated to support shipments of type `Auto FIDO Pre-reg` (pre-registered keys). This API is used to verify addresses for shipments of pre-registered keys as part of the fulfillment process.

Resolved Issues

- **API:** When calling the POST endpoint `/v1/organization/users/reset/valid.email@yubico.com` in a scenario where the user does not exist in the organization, the API was incorrectly returning a `500` error. This issue has been resolved and the API returns the correct `404` error.
- **API:** When calling the POST endpoint `/v1/organization/users/reset/invalid-email` in a scenario where the user's email is invalid, the API was incorrectly returning a `500` error. This issue has been resolved, and if the user's email is invalid the API now returns a `400` error.
- **API:** When calling the POST endpoint `/v1/organization/users/reset/valid.user@yubico.com` in a scenario where the user had been suspended and had a `+` sign in their email, the API was incorrectly returning a `500` error. This issue has been resolved. The suspended user is reset and the API returns the correct `200` error.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *[Inventory: Channel Partners](#)*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx ("Evaluate the expression" means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment

request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 000000 in that field.

1.22.3 Release 2.9.2 (29 March 2024)

Resolved Issues

- **Inability to edit shipment request:** When a user attempted to edit a shipment request which (a) contained standard products inventory and (b) failed validation for a reason unrelated to inventory, the original standard products selection was pre-populated and could not be changed. This was caused by the inventory becoming unavailable between shipment request creation and the moment when the user attempted to modify the request. This issue has been resolved and inventory that has become unavailable in the meantime no longer pre-populates the form.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 000000 in that field.

1.22.4 Release 2.9.0 (14 March 2024)

New Features & Enhancements

- **Console:** The Shipment details page has been reorganized to make better use of available space. The shipment, status, recipient, and item details information is presented in clear sections, and a new status progress bar is added for better overview.
- **Console:** The click behavior of the left navigation menu in the Console has been aligned for a more consistent user experience. Clicking on a parent menu item expands the section to display sub-items if these exist. A sub-item must be clicked on to display its page content.
- **Console:** To make it easier for users to navigate the YubiEnterprise Console, all pages now have page headers. These are located under the breadcrumb navigation at the top, informing users what page in the structure they are currently on.

Resolved Issues

- **Console:** When editing an automated shipment with inventory from a subscription or virtual product with inventory allocation “0”, the form factor quantity field was prefilled with the original quantity but could not be edited. This issue has been resolved, and the field can now be edited.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 000000 in that field.

1.22.5 Release 2.8.4 (7 March 2024)

Resolved Issues

- **Console:** Shipment address validation was failing for FIDO Pre-registered shipment types (Limited Early Access feature) even if the address was correct. This issue has been fixed and the address validation for FIDO Pre-registered shipment types is now working as expected.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 000000 in that field.

1.22.6 Release 2.8.3 (6 March 2024)

Resolved Issues

- **Console/bulk shipments:** When creating a shipment request and submitting a valid bulk shipment CSV file, a success message was displayed. However, due to a validation failure the shipment was not actually being generated. This issue has been resolved, and bulk shipment requests are successfully validated and generated.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 000000 in that field.

1.22.7 Release 2.8.1 (22 February 2024)

Resolved Issues

- **Console/bulk shipments:** Uploading a CSV address file containing an incorrect column header caused an error displaying a misleading and uninformative message. This issue has been fixed. Should you submit a file with an incorrect header, the error message displayed is now correct and more helpful.
- **Console:** The Address line 3 field used when creating shipment requests was removed in release 2.8.0. However, the field still appeared in some instances when editing shipments. This issue has been fixed and the Address line 3 field is removed.

- **API:** Following the removal of the `Address_line_3` in forms (release 2.8.0), the corresponding `street_line3` field in all parts of the API documentation where this field appears have been marked as deprecated. API *responses* continue to support `street_line3` for existing shipments and purchase orders that contain this information.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter `00000` in that field.

1.22.8 Release 2.8.0 (15 February 2024)

New Features & Enhancements

- **Console/API:** The `Address_line_3` field in the shipment creation form has been removed for all countries. Following this removal, the corresponding `street_line3` field in the shipment API will be deprecated. The field will only be available until September 2024, and there is no replacement functionality.
- **Console:** You can now conveniently access the functionality for managing your credentials by clicking on your user name in the upper right corner of the page when logged in to the Console. This also provides quick access to log out. The Profile page where this functionality previously existed has been removed. For more information, see *Managing Your Account*.
- **Console:** The page footer has been updated. The Yubico logo is removed, and the footer size has been reduced to take up less space. The footer is no longer “sticky” meaning that you only see the footer when you have reached the end of a page.
- **Console:** The behavior of the left menu navigation is enhanced. You can now collapse and expand the menu by using the `[` key, as well as by hovering over the menu with the mouse. The entire list of a user’s organizations is now displayed without the need of vertical scrolling.
- **Console:** You can now conveniently access the functionality for managing API tokens from the dropdown menu at the top of the left menu. The Profile page where this functionality previously existed has been removed. For more information, see *Managing API Tokens*.

- **Console:** To highlight the recent important changes to the bulk shipment flow and the new CSV templates, a login banner message has been added to the Console. The message notifies about the changes, and provides a link to *Bulk Shipment: Shipping to Multiple Addresses* in the Console user guide for supporting information.

Resolved Issues

- **Console:** The role selector at the top of the left menu was showing the wrong color for Distributor and Reseller roles when these were selected. This issue has been resolved and the correct colors are now rendered for all roles when selected.
- **Console/account management:** A user had MFA registered for their account, and the password was reset but the password reset email was lost. The password was reset again but this time no email was sent. This issue has been resolved. When resetting passwords, any existing reset tokens are discarded, and a new email with a password reset link is sent to the user.
- **Console:** When trying to delete shipments that failed because of insufficient allocated inventory, this was not possible. This issue has been resolved, and you can now delete and resubmit these failing shipment requests once more inventory is allocated.
- **Console:** When selecting an organization at the top of the left menu, long organization names were truncated and could not be read. This issue has been resolved and you can now read the full organization name when switching organizations.
- **Console:** Following the removal of the Address line 3 field in the shipment creation form, the address template CSV file for creating bulk shipments no longer includes a column for Address line 3. Ensure to always *download new template files* when creating a bulk shipment request.

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 000000 in that field.

1.22.9 Release 2.7.0 (18 January 2024)

New Features & Enhancements

- The list of countries supported by YubiEnterprise Delivery has been very substantially extended for single key shipments. The newly available countries are:
 - Albania
 - Argentina
 - Bosnia and Herzegovina
 - Brazil
 - Colombia
 - Costa Rica
 - Dominican Republic (the)
 - Egypt
 - Guatemala
 - Guernsey
 - Isle of Man
 - Jamaica
 - Jersey
 - Malaysia
 - Montenegro
 - Pakistan
 - Panama
 - Peru
 - Puerto Rico
 - Serbia
 - South Africa
 - Korea (the Republic of)
 - Turkey

The full list of countries available is in the [YubiEnterprise Delivery Price list](#).

Please [contact Support](#) if your organization is interested in enabling any of these countries for single-key shipments.

- **Console:** Account security - new functionality has been added so that when a security key is removed or added by a user for an account, or when a password is changed, an email is sent to the user. The email informs about the security-related changes, allowing the user to take actions if needed.
- **Console:** Organizations - if you manage more than one organization, you can now quickly switch between them through a new menu available right next to the organization name at the top. Previously you had to navigate to your Profile page and select a different organization from there.

- **Console:** Bulk shipments - the process has been improved to make it easier when creating shipment requests to multiple addresses. The CSV template for uploading recipient information has been simplified and products can now be selected in the Console, and from all available inventories. For more information, see [Bulk Shipment: Shipping to Multiple Addresses](#).
- **Console:** Previously when logging in to the Console, a notification about the recommendation to add more Console Owners was shown to all users, regardless of whether the user's organization had multiple Console Owners or not. This notification has now been adjusted so that only users belonging to organizations with a single active Console Owner will see the notification.
- **Console:** When creating shipment requests, some of the country names have been changed to match the [ISO 3166 standard for country codes](#). For example, "United States" is renamed to "United States of America (the)", and "United Kingdom" is renamed to "United Kingdom of Great Britain and Northern Ireland (the)". You can see the new names for example when creating shipment requests and selecting destination countries.
- **API:** Starting with release 2.7.0, the APIs for bulk shipment requests will be deprecated. The deprecated APIs will be available only until June 2024. From July 2024, the only method for submitting bulk shipment requests is to use the [YubiEnterprise Console](#). The following APIs will be removed:
 - POST /v1/shipments/bulk
 - GET /v1/shipments/bulk
 - POST /v1/shipments/bulkvalidate

Resolved Issues

- **Inventory/From Stock:** The option to specify the inventory to draw from was not available when using the CSV file with the API or when creating bulk shipments. This issue has now been resolved by the implementation of the new bulk shipment process in release 2.7.0.
- **Console:** When creating bulk shipment requests and uploading the CSV file, the validation processing was slow and sometimes took too long, causing the browser to time out. The issue was caused by a performance problem which has been resolved.
- **Console:** When onboarding the Console for the first time as a *demo user*, a notification about the recommendation to add more Console Owners was shown. However, users in demo mode are not permitted to take the actions described in the message. This issue has been resolved, and demo users will now see a different message.
- **[LAAS-6763]** The flat \$65 fee for single-key shipments that should have been applied to the following territories and countries is not being applied correctly.
 - US:
 - * American Samoa
 - * Guam
 - * Federated States of Micronesia
 - * Marshall Islands
 - * Northern Mariana Islands
 - * Palau
 - * Puerto Rico
 - * The U.S. Virgin Islands
 - International:
 - * · French Guiana: maps to France (FR) country code

- * Guadeloupe: maps to France (FR) country code
- * Saint Martin (French part): maps to France (FR) country code
- * Martinique: maps to France (FR) country code
- * Réunion: maps to France (FR) country code
- * Jersey: maps to United Kingdom (GB) country code
- * Isle of Man: maps to United Kingdom (GB) country code
- * Guernsey: maps to United Kingdom (GB) country code

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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- **Address entry - postal codes:** Several countries supported by YubiEnterprise Delivery do not use postal codes (for example Hong Kong, United Arab Emirates). However, postal codes are required when creating a shipment request, so a request without a postal code will not be successful. **Workaround** - For shipping to countries without postal codes, enter 000000 in that field.

1.22.10 Release 2.6.8 (8 January 2024)

Resolved Issues

- **Console:** When creating a shipment request, entering a region/state was also required for countries other than the US and Canada, when selecting a destination country. This issue has been fixed, and region/state is now only required when selecting the US or Canada as destination country.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
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1.22.11 Release 2.6.7 (8 January 2024)

Resolved Issues

- **Console:** When submitting a shipment request, the country in the address field was changed to the US as default, even if the country originally entered was a different one. This has been fixed, and the correct country is now applied when submitting a shipment request.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
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1.22.12 Release 2.6.2 (7 December 2023)

Resolved Issues

- **API:** A change introduced in release 2.6.0 slightly altered the sorting functionality, breaking backwards compatibility. The correct behavior has now been restored.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
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- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
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1.22.13 Release 2.6.1 (7 December 2023)

Resolved Issues

- **API:** Support for filtering on integer fields using the `exact` operator when performing advanced search was accidentally removed in release 2.6.0. The correct behavior has now been restored.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
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1.22.14 Release 2.6.0 (7 December 2023)

New Features & Enhancements

- **Console:** Customers, distributors and resellers can now get a clearer view of how many products are available for shipping. If there is an allocation set for a specific product due to limited availability, a notification showing the number of allocated shippable products is displayed on the **Dashboard** and when accessing the **Create Shipment Request** form. Users are prevented from creating shipments when their inventory selection exceeds their available shippable inventory. For more information, see *Shippable Inventory*.
- **Console:** The Edit Shipment functionality has been enhanced by improved design. For more information, including screenshots, see *Editing or Deleting a Shipment*.

Resolved Issues

- **Console:** The NetSuite sales order number field in the Purchase Order details page has been removed, as the information was superfluous.
- **Console:** In the Distributor and Reseller views of the Purchase Order details, the Distributor ID line was shown. Since it is not used in any workflows, the line has been removed.
- **API:** The API documentation has been updated for the shipments_exact APIs to indicate that the shipped_date and delivered_date fields are nullable.
- In rare situations, the tracking_link field for Royal Mail shipment details was not being populated. This issue has now been fixed.
- **API:** Because the enum subscription_type should be included in the response for GET /v1/products, the subscription_type field has been added to the /products API.
- **Console and API:** When creating a shipment request, the total number of selected form factors cannot exceed the shippable count. This prevents users from creating shipment requests that would otherwise fail due to insufficient allocation. For more information, see *Shippable Inventory*.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
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1.22.15 Release 2.5.1 (31 October 2023)

Resolved Issues

- **Console:** The search results generated by using the Console’s search function to filter on shipments were not the same in the GUI as they were in the downloaded CSV file. For example, filtering shipments by Shipment address with multiple string terms, each separated from the next by a space, as in `contains: stockholm 1` might have shown 60 shipments in the Console UI, but the downloaded CSV file would have contained none at all. This issue has now been fixed, and the results displayed by the Console UI are accurately reflected in the downloaded CSV file.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
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- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays

is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

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1.22.16 Release 2.5.0 (26 October 2023)

New Features & Enhancements

- **Console** Organizations now receive notification to add at least one more Console Owner if they currently have only a single owner. Console Owner is the only role that can perform password and account resets for users who have been locked out. Organizations that have only a single Console Owner who locks themselves out or leaves the organization will be obliged to contact Yubico to set up a new Console Owner.

Resolved Issues

- **API:** When getting a purchase order by its ID, extra, undocumented fields were returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` was sent, the response included (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`). These extra fields are no longer returned.
- The country name “Vietnam” was wrongly spelt as two words, “Viet Nam”, in several locations, such as in the list of countries to which an organization could ship, and in the shipment creation process. This issue has now been fixed, and “Vietnam” is no longer listed as two words.
- **Console:** On the **Settings** tab, the **Email** field for adding new members is now limited to 255 alpha-numeric characters. This limit applies when adding a new user or editing an existing user.
- **API:** The public API documentation has been corrected to reflect our implementation for shipment APIs. The following were strings in the public API documentation; they have now been corrected to `integer<int64>`.
 - `shipment_product_cost`,
 - `shipment_product_taxes`,
 - `shipment_product_vat`,
 - `shipping_service_cost`,
 - `shipping_service_taxes`,
 - `shipping_service_vat`,
 - `total_shipment_product_cost`,
 - `total_shipment_tax_cost`,
 - `total_shipment_vat_cost`,
 - `total_shipping_service_cost`,
 - `total_keys_shipped`.

Similarly, the `shipment_destination_vat_rate` was a string in the public API documentation; it has now been corrected to `number<double>`.

Known Limitations

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1.22.17 Release 2.4.3 (4 October 2023)

New Features & Enhancements

- `roles`, a new member of the `org` struct that supports multiple roles per org ID per user, has been added to the `/auth/me` endpoint of the openapi spec. The `roles` struct member replaces the top level `roles` field, which has been deprecated.

Resolved Issues

- Previously, when an enterprise console user attempted to download the `shipments.csv` file after sorting some of the **Shipments** table columns, the following error message appeared: “Unable to download refund csv, please try again later.” This has been fixed so that users can successfully download the `shipments.csv` file no matter which columns have been sorted.
- Previously, the error message displayed during a failed attempt to download the `shipments.csv` file mentioned the `refunds.csv` file instead of the `shipments.csv` file. This has been fixed.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
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- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
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1.22.18 Release 2.4.2 (3 October 2023)

New Features & Enhancements

- The file size of the animated YubiKey on the YED Console login screen has been reduced.

Resolved Issues

- The IDP note on the **Configure SAML Single Sign-On** page under **Settings** in the YED Console has been updated to the following statement: “Note that each IDP has different labels for these fields, and the sequence of fields varies from one IDP to the next.”
- The YED console login page was struggling to load due to the file size of the page’s animated YubiKey. This has been fixed so the login page loads as expected.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
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1.22.19 Release 2.4.1 (28 September 2023)

Resolved Issues

- Previously, if a user toggled the **Only show shippable inventory** switch on the customer dashboard, but the customer did not have any remaining shippable inventory, the toggle and the inventory section of the dashboard disappeared. This has been fixed so the inventory section and toggle remain visible, and a message indicating “No shippable inventory found” is displayed.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see [Inventory: Channel Partners](#).
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1.22.20 Release 2.4.0 (28 September 2023)

New Features & Enhancements

- **1-Tier and 2-Tier Sales:** YubiEnterprise Console now supports inventory purchase and consumption for Yubico and its channel partners - Distributors and Resellers as well as End-customers.
- **Console:** The Terms & Conditions for use of YubiEnterprise Services/Delivery have been updated and with the release of version 2.4.0, all new and returning users will need to indicate acceptance, otherwise they will not be able to log in to the Console. Each user’s acceptance will be logged with the relevant timestamp.
- **Console:** Console Owners can now assign, add, view and remove the Distributor role as needed for efficient user management within the organization.
- **Console:** Console Owners can now assign, add, view and remove the Reseller role as needed for efficient user management within the organization.
- **Console:** Distributor view of Reseller list: so that distributors can efficiently manage and monitor the resellers associated with their distributing activities, the Console displays a list of their resellers. For more information, see [Roles and Permissions](#).
- **Console:** Reseller view of End Customer list: so that resellers can efficiently manage and monitor the end-customers associated with their reselling activities, the Console displays a list of their end-customers. For more information, see [Roles and Permissions](#).
- **Console:** Because a user can have multiple roles/views in the same organization, the **Users** page lists the ones that apply for each user.
- **Console:** Automatic Selection of Login Role: If the user logging in to the Console has multiple roles, the highest priority role is selected, with the top role being Org Owner, followed by Org Admin, Org Auditor, Distributor, Reseller in that order. The user then arrives at the appropriate landing page.
- **Console:** SSO: The release of YubiEnterprise Services 2.4.0 heralds support for SSO initiated both by the Service Provider (SP-initiated SSO) and by the Identity Provider (IDP-initiated SSO).
- **Console:** IDP-initiated SSO: Org owners can now enable IDP-initiated SSO by logging in to the **Console** with credentials, going to the **Settings > SSO** tab, configuring IDP-initiated SSO, and clicking the new checkbox for it. For more information, see [Supported SSO Initiation Forms](#).
- **Console:** SSO: Org owners logged in to the Console via SSO are now able to see whether IDP-initiated SSO has been enabled and view the URL for IDP-initiated SSO by going to the **Settings > SSO** tab.

- **Console:** All users are able to see on the **Purchase Orders** page the **YE Delivery** column showing whether the PO in question is available for shipping via YubiEnterprise Delivery.
- **Console:** The **Shipment Creation** page displays new information on the number of items available to be delivered: subscription products plus helper text for standard products.
- **Console:** On the **Dashboard**, there is no **Create Shipment Request** button if there are no products available for delivery.
- In the `refunds.csv` file, the `channelpartner_name` column has been renamed `reseller_name` and the `channelpartner_id` column has been renamed `reseller_id`. The values in the columns continue to be those for the channel partner name and ID.
- In the shipments download file (`shipments.csv`) the `channelpartner_name` column has been renamed `reseller_name`, and the `channelpartner_id` column has been renamed `reseller_id`. The expected values in these columns remain unchanged, i.e., the channel partner name and the channel partner ID.
- In the `bulk_shipment_template.csv` file that is downloaded when preparing to submit shipment requests in bulk, the `ChannelPartnerID` column has been renamed `ResellerID`. The expected values for this column remain the same.

Resolved Issues

- **Console:** New and returning customers are now asked to read and agree to the updated YubiEnterprise Console Acceptable Use Policy. Once the policy has been agreed to, the customer may access the console.
- **Console:** In the **Shipments** table, the tracking number was occasionally missing even though the status showed that the shipment had been delivered; however, the detail view of such a shipment would show the tracking number. This issue has now been resolved; the tracking number always shows up on the main page as well.

Known Issues

- If a user toggles the **Only show shippable inventory** switch on the customer dashboard, but the customer does not have any remaining shippable inventory, the toggle and the inventory section of the dashboard disappear. **Workaround:** reload the page or navigate away from the page and return to it.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for `GET /v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see [Inventory: Channel Partners](#).

- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).
- Google Workspace cannot support both the Service Provider-initiated ACS URL and the Identity Provider-initiated ACS URL at the same time. Neither is it possible to set up two different SAML Apps in the same Google Workspace, because Google Workspace enforces SP EntityID uniqueness across all SAML Apps in the workspace. For more information, see the [Known Limitations](#) section of the SSO topic.

1.22.21 Release 2.3.0 (31 August 2023)

New Features & Enhancements

- **Console:** Typically the shipment carrier needs the recipient’s telephone number for delivery. The **Contact phone** field for single shipments now has a tooltip explaining its purpose and the consequences of omission. “This phone number will be used by the carrier to complete the last stage of delivery. Submitting an invalid phone number may result in the order being returned to sender.” See [Entering Shipping Information](#) for context.

Known Issues

- **Console:** If you are on the second page of viewing a table (showing, for example, items 101-200) and you reload your browser, that second page you were on now displays as page 1 and the items that were 101-200 now display as items 1-100. The first page of the table has thus become inaccessible. **Workaround:** Change the size of the page.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see [Inventory: Channel Partners](#).
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove

that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.22 Release 2.2.0 (27 July 2023)

Resolved Issues

- **Console:** The Dashboard was incorrectly counting some (but not all) refunded keys as remaining inventory. This issue has now been fixed, so that no refunded keys are counted as remaining inventory.
- **Console:** When using filters on the **Shipments** tab or the **Purchase Orders** tab, the operators that offered an alternative to “contains” used to spring back to the default, which is “equals”. This behavior has now been fixed, so that it is now possible to use the “contains” operator for **Country code**, **Recipient**, and **Recipient email**.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.23 Release 2.1.4 (11 July 2023)

Resolved Issues

- **API** When creating a shipment request using the API, if the `delivery_type` (normal or expedited) was not given, the API was not applying the default (normal) to the request as expected. For countries to which only a single key at a time can be shipped and where only the normal delivery type is supported, shipment creation was therefore failing. This issue has now been fixed.

Known Issues

- **Console:** The Dashboard is incorrectly counting some (but not all) refunded keys as remaining inventory.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.24 Release 2.1.2 (29 June 2023)

Resolved Issues

- **API:** Usage of the validate-address API for addresses in the following locations was failing with an undeliverable 400 response. Orders entered directly into the system and validated as part of the usual order processing were unaffected. This issue has now been resolved.
 - Australia
 - Japan
 - New Zealand
 - Indonesia
 - Philippines
 - Singapore
 - Thailand
 - India
 - Mexico
 - Chile

- **Console:** When filters were used, there was a problem clearing (resetting) the filter when no search results were found. For example, if advanced search was used on the **Shipments** tab or the **Purchase Orders** tab, and the search term yielded no results, the search term in the filter could not be changed - unless the browser window was reduced before clicking CLEAR ALL again. This issue has now been resolved; it is no longer necessary to shrink the browser window in order to change the search term.

Known Issues

- **Console:** The Dashboard is incorrectly counting some (but not all) refunded keys as remaining inventory.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.25 Release 2.1.0 (22 June 2023)

New Features & Enhancements

- **Single Sign-on (SSO) for Google Workspace:** YubiEnterprise Console now supports SSO for Google Workspace. For further information and instructions, see *Enabling SSO with Google Workspace*.
- **Self-enablement for Single Sign-On (SSO):** Using the Console, Console Owners can now enable SSO for a variety of Identity Providers (IDPs). For more information, see *Enabling SSO for Other IDPs*.
- **Improved Console Navigation:** To improve user experience and flow for upcoming features, the horizontal navigation menu is now a left sidebar.

Resolved Issues

- The `orgId` field in the response to the following APIs was deprecated by the OpenAPI specs. The following APIs no longer return values for that field. Therefore it is advisable not to write more code that depends on the `orgId` field:
 - GET `v1/inventory`
 - GET `v1/inventory/channelpartners/{channelpartnerId}`
 - GET `v1/purchaseorders`
 - GET `v1/purchaseorders/{purchaseorderId}`
 - GET/POST `v1/shipments`
 - GET/PUT `v1/shipments/{shipmentId}`
 - GET/POST `v1/shipments_exact`
 - GET/PUT `v1/shipments_exact/{shipmentId}`
 - GET `v1/accountbalances`

Known Issues

- **Console:** The Dashboard is incorrectly counting some (but not all) refunded keys as remaining inventory.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.26 Release 2.0.4 (5 June 2023)

Known Issues

- **Console:** The Dashboard is incorrectly counting some (but not all) refunded keys as remaining inventory.
- The `orgId` field in the response to the following APIs has been deprecated by the OpenAPI specs. Although these APIs currently return values for that field, future versions of the API will not return the `orgID` field. Therefore it is advisable not to write more code that depends on that field:
 - GET `v1/inventory`
 - GET `v1/inventory/channelpartners/{channelpartnerId}`
 - GET `v1/purchaseorders`
 - GET `v1/purchaseorders/{purchaseorderId}`
 - GET/POST `v1/shipments`
 - GET/PUT `v1/shipments/{shipmentId}`
 - GET/POST `v1/shipments_exact`
 - GET/PUT `v1/shipments_exact/{shipmentId}`
 - GET `v1/accountbalances`

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.27 Release 2.0.3 (2 June 2023)

Resolved Issues

Console: Individual shipment request: Even though the *Region/State* line of the address had actually been entered and the shipment request submitted, that line was shown as empty in the shipment request record. Updating the request did not resolve the issue; the field remained blank. This issue has now been resolved and the data entered in the *Region/State* line of the address is now displayed in the record of the submitted request.

Known Issues

- The `orgId` field in the response to the following APIs has been deprecated by the OpenAPI specs. Although these APIs currently return values for that field, future versions of the API will not return the `orgID` field. Therefore it is advisable not to write more code that depends on that field:
 - GET `v1/inventory`
 - GET `v1/inventory/channelpartners/{channelpartnerId}`
 - GET `v1/purchaseorders`
 - GET `v1/purchaseorders/{purchaseorderId}`
 - GET/POST `v1/shipments`
 - GET/PUT `v1/shipments/{shipmentId}`
 - GET/POST `v1/shipments_exact`
 - GET/PUT `v1/shipments_exact/{shipmentId}`
 - GET `v1/accountbalances`

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.28 Release 2.0.0 (25 May 2023)

New Features & Enhancements

- **Console Subscription Management:** The dashboard view has been upgraded to enable a better overview of the different subscription plans/tiers within the primary, backup and replacement categories, along with the licenses available as a portion of the total licenses. In addition, the supported form factors are shown for each plan/tier/category. Not only does this improved user interface facilitate subscription management, but it also makes ordering product shipment easier in that the request can be started directly from the inventory display. For more information including screenshots and explanations, see [Dashboard](#).
- **Enhanced Search** The search function on the **Shipments** tab and the **Purchase orders** tab in the YubiEnterprise Console has been enhanced to enable advanced search. All the columns can be displayed and/or hidden; the Filters enable use of “Contains” or “Equals” operators; and the Density option enables setting the display view to compact, standard or comfortable. For more information, see [Shipments Table Controls](#) for the **Shipments** tab and [Purchase Order Table Controls](#) for the **Purchase orders** tab.
- **Sub-processors:** We are pleased to notify users that we have published a sub-processor webpage located [here](#) which lists sub-processors used on Yubico’s behalf as part of Yubico’s product and service offerings. To stay up-to-date on Yubico sub-processors, users can subscribe to an RSS feed or check the webpage for updates.

Resolved Issues

- The API endpoints GET /v1/inventory and GET /v1/inventory/:channelpartnerId no longer return a response that includes the field `product_tier`. The API is therefore now in conformity with the documented behavior.

Known Issues

- The `orgId` field in the response to the following APIs has been deprecated by the OpenAPI specs. Although these APIs currently return values for that field, future versions of the API will not return the `orgID` field. Therefore it is advisable not to write more code that depends on that field:
 - GET `v1/inventory`
 - GET `v1/inventory/channelpartners/{channelpartnerId}`
 - GET `v1/purchaseorders`
 - GET `v1/purchaseorders/{purchaseorderId}`
 - GET/POST `v1/shipments`
 - GET/PUT `v1/shipments/{shipmentId}`
 - GET/POST `v1/shipments_exact`
 - GET/PUT `v1/shipments_exact/{shipmentId}`
 - GET `v1/accountbalances`

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.29 Release 1.33.0 (20 April 2023)

New Features & Enhancements

- **Console:** Shipment Recipient name OR Recipient company name: a new tooltip clarifies requirements for these fields: “At minimum, either a recipient first name and last name is required OR a recipient company name. When sending to a residential address, provide a first and last name but not a company name (can cause delivery issues). A company name should only be provided when sending to a commercial/business address.” This means that for business (corporate) addresses, both recipient name and company name can be provided, whereas for residential addresses, the company name must be left blank.

Resolved Issues

- **Login** When a WebAuthn credential nickname has more than 255 characters, a 500 error would be returned. This validation issue has now been fixed, so that the SQL exception that occurs when attempting to write the new name to the database now returns a 400.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.30 Release 1.32.0 (23 March 2023)

New Features & Enhancements

- **SSO:** YubiEnterprise Services now supports Single Sign-On (SSO). For details, see *Single Sign-On (SSO)*.
- **System Email Upgraded** to UTF-8 in order to support many languages and more email clients.
- **Additional YubiKey Models**
 - The YubiKey 5C NFC is available in Advanced, Premium, and FIPS tiers.
 - The Security Key C NFC by Yubico is available in Base, Advanced, Premium and FIPS tiers.
- **Demo Password Reset:** Console Owners can now reset passwords for Demo users. Those users follow the reset link from the email the system sends them and register passwords. They are not required to have YubiKeys in order to authenticate.

Resolved Issues

- Expedited shipping is not supported for certain countries. Those countries are listed in *Key Quantities and Delivery Types*. It is therefore no longer possible to select this option when shipping to those countries.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.31 Release 1.31.0 (16 February 2023)

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.32 Release 1.30.2 (24 January 2023)

New Features & Enhancements

- **New Products:** As of the current release, 1.30.2 on 24 January 2023, YubiEnterprise Services offers the following new products:
 - Security Key NFC by Yubico
 - Security Key C NFC by Yubico
 - Security Key NFC by Yubico - Enterprise Edition
 - Security Key C NFC by Yubico - Enterprise Edition

Subscription (2.0)

- **Subscription (2.0):** YubiEnterprise Services is launching Subscription (2.0) with this release 1.30.2 on 24 January 2023. Available for 500 users or more, it provides:
 - Procurement that is fast, predictable, and cost-effective
 - The opportunity upgrade to higher tiers as needs evolve
 - Form factor flexibility
 - The option to purchase backup YubiKey subscriptions at a discount to ensure your backup authentication mechanism is as strong as your primary one and to enable easy self-service account recovery.
 - 24x7x365 Priority Technical Support, which offers easy access to Yubico security experts ([Yubico Support Services Overview](#))
 - Extended warranty: Warranties cover the initial term of the subscription plus the first renewal - the duration of the subscription.

Plus Plan

- Replacement licenses allow you to cover up to 25% of subscribed users per year, with an option to add on additional users as needed a la carte, due to turnover, lost or stolen keys, and upgrades.
- Maximum discount on backup licenses
- 5% of base purchase as funds available to apply toward Professional Services
- Option for one bulk customization event per year included.

Standard Plan

- Choose the number of replacement licenses for turnover, lost or stolen keys, and upgrades.

Known Limitations

- **Inventory/From Stock:** Although Console users can specify the inventory they want to draw from, this option is not available when using the CSV file with the API or when creating bulk shipments. These latter two methods only permit specifying the kind of stock (initial, replacement, buffer). When inventory is not specified or cannot be specified, the system uses the “first in, first out” rule, which means it will deduct from the oldest PO first.
- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.

- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.33 Release 1.30.0 (19 January 2023)

Resolved Issues

- **Console** When a user and/or a password was reset, there was no indication whether the action had been successful. This issue has now been fixed: now a message confirming success is displayed after a user and/or a password is reset.
- **Console:** When you created a custom email and your HTML code was validated, the display of your actual code was stuck on the far right of the frame. This issue occurred whether the code had errors or not, and whether or not it exceeded the 65,000-character limit. This issue has now been fixed, and your HTML code is readable as expected, distributed evenly across the whole area of the frame.
- **Console** The Advanced Search by address did not work as expected unless you had street lines 2 and 3 in the address. The workaround was to add a space after each potential line of the address, including lines whose potential was unrealized, i.e., unoccupied fields. Therefore, when you were searching on an address that did not have a street line 2 or 3 you would have needed to add three spaces between `street_line1` and `city`. This issue has now been fixed.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.34 Release 1.29.2 (22 December 2022)

Resolved Issues

- The refunds CSV download button now works as expected.

Known Issues

- The .csv file created when downloading processed refunds is showing the wrong data in the inventory_product_type column. Instead of showing information such as “Standard Products”, “Shipping”, or “Primary Subscr - Adv. Tier: Initial”, it is showing the name of the product that was refunded (e.g. YubiKey 5 NFC) or in the case of Shipping, it is showing an empty field.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.35 Release 1.29.0 (15 December 2022)

New Features & Enhancements

- **Console and API Shipments** initiated without using YubiEnterprise Services are now tracked within the Console and via the API. In order to distinguish between requests shipped using YubiEnterprise and those shipped without, we have introduced two types of shipment: “Automated,” which are those requested using YubiEnterprise Delivery, and “Manual,” which are shipments requested directly from Yubico or a Channel Partner. Therefore the table on the Shipments tab and the CSV download both now have a new column, “Type,” upon which one can filter. For more information, see *Shipments: Overview*.

Resolved Issues

- **Console and API** The limit for the number of alphanumeric characters in the recipient email address, formerly 40, has been expanded to 80 characters. For more information, see the [Shipment Request Fields](#) table.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see [Inventory: Channel Partners](#).
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.36 Release 1.28.0 (17 November 2022)

New Features & Enhancements

- **Console:** A search produces a filtered list of shipments. Until now, when you investigated one of those results and then clicked the **Go back** button, the results of that search were no longer available. With the current release, YubiEnterprise Delivery 1.28.0, the list of search results is retained even after clicking into a particular result or refreshing the browser window while on a page of search results. (For more details, see [Searching Shipments](#).)
- **Console:** Customization of the SHIPPED/DELIVERED/DELIVERY EXCEPTION email template - An owner or an admin can edit the templates for these emails notifying a YubiKey recipient about a shipment. The HTML code for the new template is validated as the content is entered. When the user clicks **Update** the **Send sample** button becomes active so that the user can send themselves a sample email from the customized template. For more details, see [Customizing the Automated Emails](#).
- **Console:** When creating a new shipment, the single shipment tab is shown by default instead of the bulk shipment tab.

Resolved Issues

- **Console:** When logging into YubiEnterprise Delivery with the wrong email or password, the error message in the past was “Access denied.” Now the error message is “Incorrect email or password.”
- The status of some of the GB-destined shipments carried by Royal Mail was not updating promptly. Expected behavior is for the status to be shown as “Delivered” when that is the case; instead the status of shipments that had already been delivered was sometimes shown as “Shipped:In Transit”. This issue has now been fixed.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.37 Release 1.27.3 (28 October 2022)

Resolved Issues

- There was a brief period of time in which the tracking numbers in the links for Blue Dart’s India shipments pointed at nonexistent shipments. Those tracking numbers have been corrected, so the links now point to the appropriate shipments.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost’s page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com’s page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.38 Release 1.27.0 (20 October 2022)

Enhancements

- The advanced search feature for shipments has been substantially enhanced (see *Advanced Search*).

Resolved Issues

- Prior to release 1.27.0, API calls that included saving an excessively long string to the `street_line3` field such as the POST `/v1/shipments_exact` API received a peculiar error. Trying to save a string longer than 60 alpha-numeric characters now throws a better error.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost’s page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com’s page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.39 Release 1.26.1 (26 September 2022)

Resolved Issues

- Previously, if the last remaining user of an org attempted to remove themselves from that org, they were automatically logged out of the console. This has been fixed so that users attempting this operation (which is not allowed and will result in an error message) remain logged in.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com's page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx ("Evaluate the expression" means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.40 Release 1.26.0 (22 September 2022)

New Features & Enhancements

- Whitespace is now trimmed from the following fields in the bulk order request CSV file:
 - channel partner ID
 - inventory type
 - delivery type
 - key quantities

Trimming will help prevent the CSV file parser from falsely rejecting these fields.

- When a user attempts to change their account password, and the new password violates any of the password requirements, an error message in red containing the first violated rule will appear on screen.
- The items in the top navigation bar (**Dashboard**, **Shipments**, **Purchase orders**, **Settings**) are now clickable from within a subpage of a particular item/tab. For example, a user can now click on **Shipments** from within a shipment detail page to navigate back to the main Shipments screen.

Resolved Issues

- The “Inactive” user status has been renamed as “Deactivated.”
- The unused `/organization/update-setting` API endpoint has been removed.
- Previously, when a console user navigated to the **Users** tab under **Settings** and reduced the number of users shown per page to 5, the delete (trash can) icon for the 4th user disappeared. This has been fixed so that the delete icon is available for all users shown on screen.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost’s page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com’s page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for `GET /v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.41 Release 1.25.2 (24 August 2022)

New Features & Enhancements

- **API Token:** Notification of token expiry is now emailed not only to the token holder but also to the org owner. (For more information on this, see *Managing API Tokens*.)

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com's page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx ("Evaluate the expression" means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.42 Release 1.25.0 (18 August 2022)

Resolved Issues

- **CSV:** If the country code column in the CSV upload file had a space inserted in the country code, for example, a trailing space after "US" so that the system read it as "US ", upload of the CSV file would fail without an error. This issue has now been fixed.
- With shipments to the UK, in rare cases a shipment's status was not progressing beyond Shipped: In Transit, although the carrier's website was showing a delivery exception notice. Without a status update, no delivery exception email could be sent to the shipment recipient. This issue has now been resolved.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com's page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.43 Release 1.24.0 (21 July 2022)

New Features & Enhancements

- Shipments destined for the US or Canada have been standardized to use the USPS codes for state or province. Every shipment request method now uses this input: individual shipment requests made via the Console or the API and bulk requests using the CSV file all require the USPS codes. The mappings between full names and codes are given in *USPS Codes for US and Canada*. As of the current release, use of these USPS codes is mandatory. Shipment requests that do not adhere to this standard will generate an error message, and no shipment will be created.

Resolved Issues

- **Console:** In the table on the Shipments tab, shipments were not sorting correctly on the `ship_date` or the `delivery_date` columns. Shipment requests should have been sorted into chronological order based on the selected column. Now the sequencing of requests in these columns is displayed correctly in chronological order when the sort icon for either of these columns is clicked.
- Some shipments sent to India have a status of “Delivered,” even though the carrier and tracking number are still showing as “coming soon.”
- Some shipments sent through India Post and delivered by the Transnet carrier made no progress through the expected statuses; they remained in the `Shipped: In Transit` state even after the shipment was delivered. This issue has now been fixed; all India Post shipments sent via Transnet are now tracked and therefore make the expected progress through the statuses.

Known Issues

- **CSV:** If the country code column in the CSV upload file has a space inserted in the country code, for example, a trailing space after “US” so that the system reads it as “US “, upload of the CSV file will fail without an error.

Known Limitations

- **CSV:** The CSV bulk upload does not support combining subscription and non-subscription products in a single shipment. **Workaround:** Use the API or the Console (from the **Dashboard** or the **Shipments** tab, Create shipment request > Single shipment) to create single shipment request that includes both types of products.
- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com's page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx ("Evaluate the expression" means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.44 Release 1.23.0 (23 June 2022)

New Features & Enhancements

- Shipments destined for the US or Canada can use the USPS codes for state or province. Every shipment request method has been standardized for this input: individual shipment requests made via the Console or the API and bulk requests using the CSV file all take the USPS codes. The mappings between full names and codes are given in *USPS Codes for US and Canada*. As of YubiEnterprise Delivery release 1.24.0 scheduled for 21 July 2022, use of these USPS codes will be mandatory. After this date, shipment requests that do not adhere to this standard will generate an error message, and no shipment will be created.
- **Console** Each Purchase Order now has its own detail page, showing PO number, whether direct or channel sale, and if the latter, the seller's name, the expiring date for initial or perpetual stock, address and contact information. The available inventory is shown as before.

Known Limitations

- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com's page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.
- **India shipments:** Some of our shipments to India use India Post for the last mile. India Post does not support our automated shipment tracking service, and therefore the tracking ID that YubiEnterprise Delivery displays is not actually a link. **Workaround:** Copy the India Post tracking number (typically 13 digits starting with E, R, or C) and paste it into either the India Post website - https://www.indiapost.gov.in/_layouts/15/dop.portal.tracking/trackconsignment.aspx (“Evaluate the expression” means do the arithmetic displayed in the box to prove that you are not a bot) or any of the other tracking service sites that support India Post, such as Ship24.com - (<https://www.ship24.com/couriers/india-post-tracking>).

1.22.45 Release 1.22.1 (25 May 2022)

Resolved Issues

- For shipments sent to India, status emails declaring that the shipment had been sent were being generated every hour. This issue has now been fixed.

Known Limitations

- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost’s page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com’s page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for `GET /v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see `:ref:channel-partners-label`.

1.22.46 Release 1.22.0 (20 May 2022)

New Features & Enhancements

- With the release of version 1.22.0, the tracking of shipments to India becomes more transparent. On the Console, clickable tracking numbers are now provided for shipments delivered by Blue Dart, one of our main carriers on the Indian subcontinent. The API too returns a `tracking_link` value.

Resolved Issues

- Shipments sent to GB/UK now transition relatively quickly to “Delivered” or “Delivery Exception” instead of remaining in the “Shipped: In Transit” status indefinitely.
- **Console:** The Purchase Order sorting function did not work. Clicking on a column heading did not result in the content of the column being sorted. This issue has now been fixed, and any column can now be sorted as expected.

Known Limitations

- For European shipments using Bpost, also known as the Belgium Post Group, the tracking number is not hyperlinked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and paste it into the field for that purpose on Bpost’s page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or into Parcelsapp.com’s page for Bpost tracking, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new /shipments_exact APIs must be used. The older, deprecated /shipments API only supports ordering keys from inventory purchased directly from Yubico. For more information, see :ref:channel-partners-label.

1.22.47 Release 1.21.0 (26 April 2022)

Resolved Issues

- If a field has been selected for sorting on any of the console list screens, that field title will now be shown in bold.
- Email addresses are now validated during shipment request creation for single and bulk shipments.
- The channel partner name field in the shipments .csv file is now populated for all entries, including direct sale shipments.
- Previously, when an order received a **Delivery Exception** status, an internal message was shown in the console. This has been fixed so the message is no longer shown.
- The API documentation has been updated to reflect that the suggested address fields (suggest_street_line1, suggest_street_line2, suggest_street_line3, suggest_city, suggest_region, and suggest_postal_code) are largely deprecated and will return an empty string. This applies to the following APIs: GET /shipments_exact, POST /shipments_exact, GET /shipments_exact{shipmentId}, and POST /shipments_exact{shipmentId}.
- The suggest_recipient field of the API, which is never returned in responses, has been removed from the API.
- On the **Users** screen under **Settings**, the alphabetic sort was not working properly when trying to sort users by email address. The sort function has been fixed and now behaves as expected.
- Role and State are no longer sortable fields on the **Users** screen under **Settings** in the console.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.

1.22.48 Release 1.20.0 (24 March 2022)

New Features & Enhancements

- **Console/CSV/API:** Consistency in the requirement for **recipient telephone number** in shipment requests is now system-wide. When creating a single shipment request in the Console (i.e., using the GUI), phone number has always been a required field. Now bulk shipment requests via CSV upload also require phone number, as do shipment requests made via API. With the current release of YubiEnterprise Delivery - 1.20.0 - shipment requests that do not include recipient telephone number ("Contact phone") will no longer be processed. Although the `/shipments` API is deprecated, this requirement will be enforced on that API too.
- **Console/CSV/API** Shipment request statuses will now be updated to reflect changes reported after requests have reached the "Delivery Exception" state.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.

1.22.49 Release 1.19.0 (24 February 2022)

New Features & Enhancements

- **Console:** The detail view of the shipment request now displays **Total cost** and **Product cost** in the **Shipping and tax** section of the page instead of at the top, where it was previously shown.

Resolved Issues

- The POST `validate-address` API that is used to determine whether an address is acceptable by YED for delivery contradicted the POST `shipments_exact` API in that the first deemed an address without a city acceptable, while the second deemed it unacceptable, since `city` is a required field. The `validate-address` API has now been fixed; it too requires the city field and its rules are consistent with the rules of the POST `shipments_exact` API.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.
- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).
- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs must be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Inventory: Channel Partners*.

1.22.50 Release 1.18.0 (20 January 2022)

New Features & Enhancements

- **API** Holders of API tokens are notified before expiry of a token via an automatically generated email sent to the address associated with the token. The email is sent 7 days before expiry, the day before expiry, and on the day of expiry.

Resolved Issues

- When the CSV file containing shipment requests was generated, the `inventory_type` column was not always populated for every row in the file. This issue has now been fixed.
- In the email that the system sends to notify recipients that a shipment will arrive, the `carrier` field was not consistently populated, nor was the link added to the carrier's tracking number. This issue has now been fixed, and both the carrier and the tracking link are included in the email. **API:** This also resolves the issue of the incomplete response that was returned for the shipment order in the GET `/shipments_exact` and GET `/shipments_exact/<shipmentId>` responses: they now return comprehensive information.
- In the user guide, the section entitled [Using the API to Execute a Shipping Request](#) had a typo in the second sentence, which prevented the following information from being displayed at that location. "Although the system can deliver to Post Office (PO) Boxes within the United States, delivery to PO Boxes (or the equivalent) elsewhere in the world is unlikely to succeed." This has now been fixed, so that the information now appears in this location.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.
- API When getting a purchase order by its ID, extra, undocumented fields are returned. When a GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes is_vat_valid, is_tax_exempt, is_post_pay.

1.22.51 Release 1.17.2 (10 December 2021)

Enhancements

- Fifteen more countries have been added to the list of deliverable shipment destinations. The lists of countries and the corresponding limitations are given in *Key Quantities and Delivery Types*.

Resolved Issues

- **Console:** Shipments to overseas PO boxes (non-USA) are not delivered; instead, they are returned by all carriers. The Console now displays a warning to this effect when a shipment request is created using an overseas PO box. This limitation is referenced in *Post Office Box as Destination*.

1.22.52 Release 1.17.0 (18 November 2021)

New Features & Enhancements

- **Console:** Owners, Admins, and Auditors can now view the list of refunds for lost or missing shipments, drill down into the details of each item, and download a CSV file containing this data. For more information, see *Refunds*.

Resolved Issues

- **Console:** Including leading or following whitespace with a term entered in the Search field yielded no results, even if the search term ought to have produced results. This issue has now been resolved; the system automatically trims any whitespace of this kind before the search is performed.
- When a shipment request was made providing a company name as recipient, plus either recipient first name or recipient last name, a validation error was returned. This issue has now been resolved: no error is thrown when the company name plus either first name or last name is provided.
- **Console:** The edit icon on the shipments page redirected the user to the shipment details page instead of showing the edit view in the same page. This issue has now been resolved, and it is now possible to edit in the same view.
- The status summary for shipments that were cancelled indicated that the shipments had been delivered, even though they were not. This issue has now been fixed: the status summary correctly shows canceled shipments as such.
- **API integrations:** The API documentation for the GET /shipments_exact API (to get all shipments) erroneously said that all the items included in the shipment (shipment_items) would be returned; that was incorrect - the field (shipment_items) was not returned in the response. This is no longer the case, and the API documentation now accurately reflects that the shipment_items field is not returned in the response.

- **Console:** After login, the Dashboard did not show any data. Only when the page was refreshed or one was redirected back from another page did the page load and show relevant data. This issue has now been resolved: the Dashboard page loads upon login and displays all data.

Known Issues

- **API** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).
- When the CSV file containing shipment requests is generated, the inventory_type column is not always populated for every row in the file.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner,

1.22.53 Release 1.16.0 (21 October 2021)

New Features & Enhancements

- Eight new countries are available for existing and new organizations to ship to. They are: India, Saudi Arabia, the United Arab Emirates, Mexico, Chile, Israel, Taiwan, and Hong Kong.
- Fulfillment partner ["Provider"] information is now displayed:
 - On the Console, on the shipment details page, in the **Shipping & tax** section
 - In the API, in the carrier field.
- **API** PUT /shipments/makedraft has been deprecated and is therefore no longer available.

Known Issues

- **API:** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET /v1/purchaseorders/{purchaseorderId} is sent, the response includes (is_vat_valid, is_tax_exempt, is_post_pay).

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.

1.22.54 Release 1.15.0 (23 September 2021)

New Features & Enhancements

- **Seven new countries:** It is now possible to have shipments sent to Australia, New Zealand, Japan, Singapore, the Philippines, Indonesia, and Thailand.

Resolved Issues

- In cases when particular carriers were used to ship an order, shipments were not progressing beyond the `SentForFulfillment` state. The system now handles additional carriers correctly.
- Very occasionally, shipments did not have their `delivered_date` set. This issue has now been resolved, and all shipments that reach their target recipient have a `delivered_date`.
- On the Purchase Order popup, the channel partner name and partner ID were not shown the same way as they were in the shipment popup. The presentation of this information has now been rationalized so that it appears with the same formatting and in the same detail in both locations.
- **Disabled Update Button** When a shipment request was in the `Awaiting validation` state, it was not possible for the creator of the request to edit any field other than the `from stock/key counts` field. Even though the user was able to click the **Shipment id** link to open the shipment details page, the **Update** button remained disabled by default. This issue has now been resolved: it is possible to update all fields on the shipment details page even when the request is in the `Awaiting validation` state.
- **Insufficient inventory**
 - To maintain the window during which orders can be updated, edited, or recalled/deleted, orders are held and processed in batch. Therefore there might be less inventory available by the time an order is processed than what was shown in purchase order details when the request was created. For example, the person starting to create a shipment request assumes that the 50 keys the console shows they have in inventory will still be available by the time the shipment request is submitted. When this is not the case, any shipment requests processed after the inventory is exhausted will be flagged `Error: Processing Error, contact support. Reason is Not enough Inventory for Shipment - ShipmentStateError`.
 - A second issue arises from the same source: when the user clicks on the shipment request ID with that error, part of the status message displayed is “Insufficient Inventory of Product X” where “X” is an integer. To find out what X means, consult the `Product Name, Stock/Inventory, product_id` and `inventory_product_id` table.
 - A third issue arises from the same source: it is not possible to make single shipment requests for products that are not available in inventory - which is expected if insufficient product has been purchased, but an insufficiency of inventory can also be caused by Yubico itself running out of stock.

Workaround: Either contact [Support](#) to get more inventory, or edit the request to switch to another product for which inventory is available.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.

1.22.55 Release 1.14.0 (19 August 2021)

New Features & Enhancements

- **Shipment requests:** The alphanumeric character limits on the Console fields and the cells in the CSV upload file and the API have been expanded. For exact details, see the table detailing these limits in *Shipment Request Form Fields*.
- The shipment request detail popup has been expanded to a full page in order to display more information.

Resolved Issues

- **API:** For POST `validate-address`, `street_line1` limit is 60 alpha-numeric characters.
- The unit price of the products is shown on the Purchase Order popup if the products were purchased directly from Yubico (as opposed to from a channel partner).
- **Single shipment request:** The product list is now filtered by the partner selected. In other words, selecting a channel partner determines which products are available for shipment and the quantities thereof.
- **Bulk shipment request:** The CSV file's **ChannelPartnerId** column requires that the ID be explicitly entered instead of defaulting to "1" for Yubico (direct sale). This facilitates the avoidance of errors.

Known Issues

- **API** When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.

1.22.56 Release 1.13.0 (22 July 2021)

New Features & Enhancements

- **Channel Partners:** This feature enables the inclusion of Yubico’s channel partners in YubiEnterprise Delivery. Customers can distinguish between inventory purchased directly from Yubico and inventory purchased through our channel partners. This information is displayed on the Purchase Order (PO) tab by clicking on the individual PO IDs (see [PO Detail View](#)). When requesting individual shipments using the Console, the channel partner is specified via the **Channel Partner** dropdown (see [Shipping to a Single Address](#)), while for bulk upload of shipment requests, the **ChannelPartnerId** column in the CSV file is must be populated see: [Shipment Request Form Fields](#)). This feature is fully described in [Purchasing Through Resellers/Distributors](#) in “Requesting Shipment” in this guide. The updated APIs are listed under a heading with the same name, [Purchasing Through Resellers/Distributors](#), in the “API Onboarding Playbook” in this guide.
- The default Delivery Exception email no longer references and links to Yubico’s support website. This enables enterprise customers to divert any support requests from shipment recipients (end users) to their own IT team.
- **Download CSV:** A new field, **recipient_company**, is now included in the exportable .csv file containing all shipment requests. This is the equivalent of the **Company** field in a single shipment request.

Resolved Issues

- **API:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs **must** be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see [Purchasing Through Resellers/Distributors](#).
- There was an issue where the user ID associated with a shipment request was being updated to the ID of the last user to edit the shipment. The requester ID is supposed to be the ID of the user who originated the request and should not change once the order is created. A side effect of this was that it was possible for the shipment to get into a state in which it was not viewable/editable/delete-able. The fix was to ensure that the requester ID always remains unchanged.
- **API:** Now `suggest_postal_code` returns the correct information. Previously, this was never correctly returned, which affected the following APIs:
 - GET `/shipments_exact`
 - GET `/shipments_exact/{shipmentId}`
 - PUT `/shipments_exact/{shipmentId}` because the response to that is the full shipment payload, which includes the `suggest_postal_code` field.

It had no effect on the POST `/validate-address` API.

Known Issues

- When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for GET `/v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, `is_post_pay`).

Known Limitations

- **Channel Partners:** To order keys via API from inventory purchased through channel partners, the new `/shipments_exact` APIs **must** be used. The older, deprecated `/shipments` API only supports ordering keys from inventory purchased directly from Yubico. For more information, see *Purchasing Through Resellers/Distributors*.

1.22.57 Release 1.12.0 (24 June 2021)

Resolved Issues

- **Search function:** when a search had 0 results, you could type any page number without an error being displayed. This issue has been resolved.

Known Issues

- When getting a purchase order by its ID, extra, undocumented fields are returned. When a request for `GET /v1/purchaseorders/{purchaseorderId}` is sent, the response includes (`is_vat_valid`, `is_tax_exempt`, and `is_post_pay`).

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.

1.22.58 Release 1.11.2 (26 May 2021)

Resolved Issues

- The status of shipment requests that had already been sent out for fulfillment was not updating as expected. The status of those orders remained stuck at "Processing: Queued for Fulfillment" instead of progressing to "Processing: Sent for Fulfillment". This issue has now been resolved.

Known Issues

- Search function: when a search has 0 results, you can type any page number without an error being displayed.
- The .csv template for bulk shipment requests sometimes contains a column for a product that you do not have, e.g., the YubiKey 5 NFC might not be available to you and yet the template has a column for it. If you attempt to use this column, your bulk shipment request will be rejected for containing an invalid product ID.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. However, the delivery status does, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.

1.22.59 Release 1.11.0 (20 May 2021)

New Features & Enhancements

- API Token: timestamps for creation, last use, and expiry are now shown on the profile page for that user. This information is shown for all tokens used since YubiEnterprise Delivery release 1.10.
- Automated emails sent by the system to end-users upon shipment / delivery / delivery-exception are now fully customizable. Formerly an organization owner or admin could use the Console to customize a paragraph that was then inserted into the standard email template. Now the UI shows one field for the subject of the email and a second for the email body. The customization performed here will apply to all emails sent by the system for that organization.
- The ability to search shipments by recipient_email has now been enabled.
- The Shipped_date now appears on the Dashboard of the Console and on the Shipments tab, as well as in the .csv download file containing the shipment requests.
- The Delivered_date now appears on the Dashboard of the Console and on the Shipments tab, as well as in the .csv download file containing shipment requests. This field is searchable.

Resolved Issues

- CRLF characters (Carriage Return (ASCII 13, r) Line Feed (ASCII 10, n)) were allowed in the address fields of individual shipment requests made via the Console. This resulted in unexpected line breaks in the corresponding row of the download CSV file. Those characters are now stripped from the input, so the CSV file no longer shows those line breaks.
- Data contained in downloaded .csv files of shipment requests was problematic, in that it caused a lack of alignment. This issue has now been corrected.
- When the same item was ordered from different types of inventory, e.g., primary/backup subscription, advanced tier, initial/replacement/buffer, the total quantity of the item from all types of inventory did not always add up correctly. This issue has now been fixed.
- If you entered a product type or quantity that was not available or inactive in the system, the shipping request was rendered incomplete, and the status message used the numeric ID of the product instead of its name (e.g., "ProductId 3 not active in the system"). This issue has now been resolved, so that the actual name of the product is shown, e.g., "YubiKey 5C not active in the system".
- If you canceled a bulk shipment request after having uploaded a .csv file, the previously selected file name was displayed next to the **Choose file** button. This issue has now been resolved.
- If you hovered over your profile icon on the Console, instead of your organization name in the tooltip, you would see its ID in the YubiEnterprise Delivery system. This issue has now been resolved, and so the actual name of your organization is displayed in the tooltip.

Known Issues

- Search function: when a search has 0 results, you can type any page number without an error being displayed.
- The .csv template for bulk shipment requests sometimes contains a column for a product that you do not have, e.g., the YubiKey 5 NFC might not be available to you and yet the template has a column for it. If you attempt to use this column, your bulk shipment request will be rejected for containing an invalid product ID.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. The delivery status does, however, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.

1.22.60 Release 1.10.0 (22 April 2021)

New Features & Enhancements

- The .csv file for bulk import has always been limited to 10MB, but now the system returns a clear error message along with the 400 response code when a user attempts to upload a file that is too large.
- **User Account Management:** The list of users on the Settings > Users tab now displays a user status column. This enables adherence to compliance procedures when reviewing which users have access to the system.
- **Enhanced Security:** Session login limits: YubiEnterprise Delivery users do not stay logged in indefinitely. They are automatically logged out after 24 hours.

Resolved Issues

- Console search widget: the page counter is now reset to 1 for each new search.
- Console search widget: It was not possible to enter a page number that would have contained no search results; in other words, if there were only 10 pages of search results, you could not enter 100. It is now possible to enter a page number that does not exist because there were not that many results, but an error message explaining this is now shown.
- The available inventory displayed on the Purchase Order popup is now sorted.
- Making an /auth/machine-token API request with an expired token used to fail with a 500 error. Now such a request correctly returns a 401.
- When a user created a new API token and then switched orgs, the view did not update - the new token still appeared under the other org, even though the active token reference did update correctly. This has now been fixed.
- The email address of the user who created a shipment request is now shown in the pop-up window displayed by clicking on the ID of the shipment request.
- Broken links in the documentation have now been fixed.
- Users in demo mode are no longer able to edit the email template informing new recipients that they will be receiving shipments from YubiEnterprise Delivery. This capability is reserved for org owners and admins whose accounts are fully enabled (i.e., no longer in demo mode).

1.22.61 Release 1.9.0 (18 March 2021)

The initial API documentation link on Swaggerhub (<https://app.swaggerhub.com/apis/yubico/yubi-enterprise-delivery-public/v1-oas3>) is no longer updated and has therefore been removed. Please refer to: <https://console.yubico.com/apidocs/> for the latest API documentation.

Enhancements

- User input is validated in such a way that the user is able to confirm or change input as required before submitting shipment requests; for example:
 - Indications of the allowed input for any given field are provided
 - Character rules are now provided for each API
 - The verification results for uploaded CSV files are now provided
 - Error codes have been standardized.
- YubiEnterprise Delivery users can now give their security keys (nick)names so that a user with multiple keys can distinguish them from each other. The console displays the keys in the order in which they were registered.
- API: Validation error responses are now consistent across the APIs.
- API Security:
 - If your request body does not contain valid JSON, the system informs you that the JSON contents you presented could not be verified and were therefore discarded.
 - When a user with permissions to change user roles attempts to grant a disallowed privilege level, the requested role is checked against a list of available roles and the error displayed to the user says only “a match was not found for a valid role”.
- When selecting products during the creation of a shipment request, users can now see the entire range of custom product options available to their organization.
- Organization owners can now reset just users’ passwords in addition to the existing option of resetting users entirely.

Resolved Issues

- Telephone numbers entered in shipment requests are now validated. If a mistake is found, the user is given the opportunity to correct it before the request is processed.
- API: Submitting invalid values for the `delivery_type` or `inventory_type` fields now triggers INFO-level errors instead of 500s.
- API: A JSON unmarshall error resulting from a malformed payload for the `/shipments POST CreateShipment` API used to send ‘500 / “unknown error”’. This type of error now sends ‘400 / “invalid payload”’.
- When your login has expired, clicking on the Generate API token on the profile page does not work. This issue has now been fixed.
- API: The auditor role can delete API tokens as well as create them.
- Transaction rollbacks are now logged at INFO level instead of at WARNING level, which was too severe.
- When an attempt is made to delete a shipment request that does not exist, the error code returned is now 404 instead of 500, which erroneously indicated a server problem. This issue has now been fixed.

- API: When Organization Products are returned, the TotalCount is now set.
- API: When calling InviteUserToCurrentOrganization for a user already in an organization, an AlreadyExists response is now returned.
- API: GET /shipments was missing the advanced_search parameter. This is now present.
- The CSV download was timing out. This issue has now been resolved.

Known Limitations

- For European shipments using Bpost, also known as the Belgian Post Group, the tracking number is not hyper-linked. The delivery status does, however, update correctly. **Workaround:** To find out where a Bpost shipment is, copy the tracking number and input it on Bpost's page for that purpose, http://www.bpost2.be/bpostinternational/track_trace/find.php?lng=en or that of their partner, <https://parcelsapp.com/en/carriers/belgium-post>.

1.22.62 Release 1.8.3 (9 March 2021)

Enhancements

- Support for Transport Layer Security (TLS) v1.0 and v1.1 has been removed; the earliest version YubiEnterprise Delivery now supports is TLS 1.2. This update to the cryptographic protocols renders network communication less vulnerable to attack.

1.22.63 Release 1.8.0 (18 February 2021)

Features & Enhancements

- **Security Enhancement:** YubiEnterprise Delivery 1.8.0 implements an infrastructure enhancement that requires all users to reset their passwords. All users will have received an email from Yubico announcing this one week prior to the 1.8.0 release. The email explains the procedure to be followed: click on the link in the email, which takes you to a page enabling you to update your password. If you do not update it within one week, contact your YubiEnterprise Delivery organization owner for an account reset. If you are an Org Owner, contact [YubiEnterprise Support](#).
- Using the API and the Console (GUI) for single shipments, it is now possible to include products from different inventory types within the same shipment. For details, see [Shipping to a Single Address](#).
- **Advanced Search for API** Advanced search capabilities have been introduced for API users. Fields with different names will be searched in an AND, while fields with the same name will be ORed.

Resolved Issues

- When browsers truncated redirection URLs, or users manually copy-pasted incomplete URLs, the missing OAuth authorize parameters caused the login backend to crash.

Known Issues

- When your login has expired, clicking on the **Generate API token** on the profile page does not work.
Workaround: Log in to the Console again.

1.22.64 Release 1.7.0 (21 January 2021)

Features & Enhancements

- **API: Advanced search** Lists of shipment requests can be filtered by query parameters. We introduced / search-description on searchable resources to provide a description of the searchable fields.
- Timestamps for shipment requests and for orders being shipped are now provided with millisecond precision from the Console (the GUI) and via the API.
- **API** We now return “404 Not Found” response {"message": "Product Id <> could not be found"} for GET /products/{product_id} on an invalid product ID, as per the API contract.
- The CSV file download containing shipment requests shows streamlined shipment status, including for shipments carried out before the 1.7.0 release. For details, see [Column Headings in the Shipment Requests Table \(Download CSV\)](#).
- The tracking number for each shipment is now associated directly with the shipping date, just as the “Shipped - in transit” status is directly linked to the date of shipment.

Resolved Issues

- Organization names were not being displayed correctly. This issue has now been fixed.
- Some European shipments did not show the correct tracking number link. This issue has now been fixed.
- When selecting shipments for bulk deletion, the number of shipment requests listed as available for deletion may not have matched the number displayed directly underneath the **Back to Shipments** button (e.g., “1 - 11 of 32” and yet there would be only a single item shown in the list). The number of items listed in the table was correct, not the number shown on the upper right. This issue has now been fixed.
- When the API was used to create a shipment request against a subscription that did not include the product you wanted to ship, the shipment details page (the popup for the shipment ID) on the Console (the GUI) for that request would show that the “ghost product” request was made against Standard products inventory. This issue is now fixed.
- In the YubiEnterprise Console (the GUI), the limit on the number of characters in the “Company” field has been raised from 15 to 20, so it now matches the limits on that field in the bulk upload as a CSV file and the API.
- Shipment requests with shipment_state_id=104 (ShipmentStateDelivered) will always have is_delivered=TRUE.
- Upon completing a single shipment request using the YubiEnterprise Console (the GUI), the button for creating another shipping request did not appear to be functional. Its name is now properly displayed, and this secondary button changes from white to dark blue when you mouse over it.
- When using the Console (GUI) to create a single shipment request and selecting first *Standard products* from the **From stock** dropdown, entering a quantity for any product, then selecting another item from **From stock**, the quantity previously selected in conjunction with *Standard products* disappears from view. However, the number entered is still in the system; it shows up in the confirmation message when you click **Create Shipment**.
- **API** In the validate-address API, some fields in the response payload and the US Address Component did not match the LOB API. This issue is now fixed.

1.22.65 Release 1.6.0 (19 November 2020)

Features & Enhancements

- With the release of YubiEnterprise Delivery 1.6.0, customers have more granular control in determining the stock inventory from which products are shipped. Previously, the system would choose the stock from the oldest Purchase Order in the system to ensure that the customer's stock did not expire before use.
 - Explicit selection is now available for single shipment requests (see [Shipping to a Single Address](#)).
 - Bulk shipment orders will continue to use the original method whereby the system chooses the stock. Bulk shipment ordering will convert to the exact choice method in a future release.
 - A new set of delivery APIs has been made available to support the exact choice method, the suite of `/shipments_exact` APIs. The original `/shipments` APIs are deprecated starting in this 1.6.0 release but they will continue to be available until at least **May 2021**. Customers are encouraged to use the `/shipments_exact` APIs for any new development and to update existing clients soon.

Shipping Requests: Listing, Tracking, Searching, Status etc.

Deprecated	Replacement
GET <code>/shipments</code>	GET <code>/shipments_exact</code>
POST <code>/shipments</code>	POST <code>/shipments_exact</code>
GET <code>/shipments/{shipmentId}</code>	GET <code>/shipments_exact/{shipmentId}</code>
PUT <code>/shipments/{shipmentId}</code>	PUT <code>/shipments_exact/{shipmentId}</code>
DELETE <code>/shipments/{shipmentId}</code>	DELETE <code>/shipments_exact/{shipmentId}</code>
<code>/UpdateShipmentById</code>	<code>shipments_exact/{shipment_id}</code>
<code>/organization/update-setting</code>	None

- Before adding Backup subscriptions to new Purchase Orders (POs), existing POs should be exhausted.
- Download of CSV file with shipment requests has been accelerated.
- Expedited shipments in the US will no longer use USPS Priority (for 1-99 items) and UPS Ground (for 100-500 items) but instead will be using UPS Overnight for 1-500 products. The cost of shipping has been adjusted accordingly.
- A new version of the original `/address-validation` API checks addresses more closely to ensure acceptance by the system. The deprecated API is `/address-validation` and the new one is `/validate-address`. The deprecated API will continue to be available until at least May 2021. Users are encouraged to use the `/validate-address` API for any new development and to update existing clients soon.
- The online Help can now be accessed from the login screen; it is not necessary to log in to access Help.
- Better navigation: When reviewing Incompletes, a new **Go Back to Shipments** button facilitates acceleration of the workflow.
- The Dashboard view more accurately reflects modes of purchase and stock in inventory. The new sections are **Standard products inventory**, **Non-subscription inventory**, and **Subscription inventory**.

Resolved Issues

- It is now possible to create a single shipment request combining different types of stock/inventory, for example both a lanyard from the Standard products option and a key from the Primary Subscr. Advanced Tier - Init option in the **From stock** dropdown.
- The Search function for the online help (User Guide and Release Notes) has now been fixed.
- Purchase Order (PO) display: Inventory counts of zero on POs are no longer shown as just a forward slash, but instead as expected, for example “0/100 - YubiKey 5C”.
- The detail view of Purchase Orders with “ghost” inventory is now available. “Ghost” inventory was caused by Yubico adding a product to an Organization and then removing it.

1.22.66 Release 1.5.0 (22 October 2020)

Features

- It is now possible to delete multiple shipment requests simultaneously. This is useful when the system is unable to validate multiple addresses or when the wrong CSV file was uploaded by mistake.
- The CSV file upload now accepts alternative values for **DeliveryType**: instead of just 1 for Normal and 2 for Expedited, the words **Normal** and **Expedited** are now acceptable input. Integer parsing will be retained for backwards compatibility.

API

- GET `/inventory` has been extended so that it always returns `product_mapping`.

Resolved Issues

- Outstanding error messages are now cleared between shipment updates.
- Products no longer in inventory cannot be selected from the **New shipping request** page in the Console for a single shipment request. In the API, `/shippablekeys` returns only products still in inventory for `inventory_type = 1`.

Known Issues

When selecting shipments for bulk deletion, the number of shipment requests listed as available for deletion may not match the number displayed directly underneath the **Back to Shipments** button (e.g., “1 - 11 of 32” and yet there is only a single item shown in the list). The number of items listed in the table is correct, not the number shown on the upper right.

1.22.67 Release 1.4.0 (24 September 2020)

Features

- Improved /products API endpoint behavior: GET /products returns the list of products that are both a) in inventory and b) shippable.
- The delivery exceptions email feature has been completed.

Resolved Issues

- Inventory type in shipment requests always displays correctly now.
- The product images for multiple subscription tiers concurrently displayed are now consistent.

1.22.68 Release 1.3.1 (10 September 2020)

Known Issue

- When requesting shipment for a YubiKey Lanyard, the Inventory Type must be set at type 1, YubiKey Shipment, even if you are a subscription customer. This means that if you want to send a person both a lanyard and a key from subscription stock, you must make two separate shipment requests. Set the other inventory types as follows:

Table 19: **Product <> inventory type mapping**

Product or Inventory Name shown on Purchase Order	Value to use for inventory_type
YubiKey Lanyard	1
Security Key C NFC by Yubico (Black)	1
Security Key C NFC by Yubico - Enterprise Edition	1
Security Key NFC by Yubico (Black)	1
Security Key NFC by Yubico - Enterprise Edition	1
YubiKey 5 Nano	1
YubiKey 5 Nano FIPS	1
YubiKey 5 NFC	1
YubiKey 5 NFC FIPS	1
YubiKey 5C	1
YubiKey 5C FIPS	1
YubiKey 5C Nano	1
YubiKey 5C Nano FIPS	1
YubiKey 5C NFC	1
YubiKey 5C NFC FIPS	1
YubiKey 5Ci	1
YubiKey 5Ci FIPS	1
YubiKey Bio - FIDO Edition	1
YubiKey C Bio - FIDO Edition	1
Advanced - Plus - Backup	3
Advanced - Plus - Backup - Replacement	5
Advanced - Plus - Primary	3
Advanced - Plus - Primary - Replacement	5
Advanced - Standard - Backup	3
Advanced - Standard - Backup - Replacement	5
Advanced - Standard - Primary	3

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Table 19 – continued from previous page

Product or Inventory Name shown on Purchase Order	Value to use for inventory_type
Advanced - Standard - Primary - Replacement	5
Advanced/Bio - Plus - Backup	3
Advanced/Bio - Plus - Backup - Replacement	5
Advanced/Bio - Plus - Primary	3
Advanced/Bio - Plus - Primary - Replacement	5
Advanced/Bio - Standard - Backup	3
Advanced/Bio - Standard - Backup - Replacement	5
Advanced/Bio - Standard - Primary	3
Advanced/Bio - Standard - Primary - Replacement	5
Backup Subscr - Adv. Tier: Buffer	4
Backup Subscr - Adv. Tier: Initial	3
Backup Subscr - Adv. Tier: Replacement	5
Backup Subscr - Base Tier: Buffer	4
Backup Subscr - Base Tier: Initial	3
Backup Subscr - Base Tier: Replacement	5
Backup Subscr - FIPS Tier: Buffer	4
Backup Subscr - FIPS Tier: Initial	3
Backup Subscr - FIPS Tier: Replacement	5
Backup Subscr - Prem. Tier: Buffer	4
Backup Subscr - Prem. Tier: Initial	3
Backup Subscr - Prem. Tier: Replacement	5
Base - Plus - Backup	3
Base - Plus - Backup - Replacement	5
Base - Plus - Primary	3
Base - Plus - Primary - Replacement	5
Base - Standard - Backup	3
Base - Standard - Backup - Replacement	5
Base - Standard - Primary	3
Base - Standard - Primary - Replacement	5
Base/Bio - Plus - Backup	3
Base/Bio - Plus - Backup - Replacement	5
Base/Bio - Plus - Primary	3
Base/Bio - Plus - Primary - Replacement	5
Base/Bio - Standard - Backup	3
Base/Bio - Standard - Backup - Replacement	5
Base/Bio - Standard - Primary	3
Base/Bio - Standard - Primary - Replacement	5
Compliance - Plus - Backup	3
Compliance - Plus - Backup - Replacement	5
Compliance - Plus - Primary	3
Compliance - Plus - Primary - Replacement	5
Compliance - Standard - Backup	3
Compliance - Standard - Backup - Replacement	5
Compliance - Standard - Primary	3
Compliance - Standard - Primary - Replacement	5
Non-subscription - Advanced Tier	2
Non-subscription - Base Tier	2
Non-subscription - FIPS Tier	2
Non-subscription - Premium Tier	2
Primary Subscr - Adv. Tier: Buffer	4

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Table 19 – continued from previous page

Product or Inventory Name shown on Purchase Order	Value to use for inventory_type
Primary Subscr - Adv. Tier: Initial	3
Primary Subscr - Adv. Tier: Replacement	5
Primary Subscr - Base Tier: Buffer	4
Primary Subscr - Base Tier: Initial	3
Primary Subscr - Base Tier: Replacement	5
Primary Subscr - FIPS Tier: Buffer	4
Primary Subscr - FIPS Tier: Initial	3
Primary Subscr - FIPS Tier: Replacement	5
Primary Subscr - Prem. Tier: Buffer	4
Primary Subscr - Prem. Tier: Initial	3
Primary Subscr - Prem. Tier: Replacement	5

- Use Inventory Type 1 if you have purchased keys on the perpetual mode and/or for lanyards.
- Use Inventory Type 2, YubiKey Tier SKU Shipment, if you are not a subscription customer, but have purchased tiers of keys instead of physical keys.
- Inventory Types 3, 4, and 5 are for subscription customers only.
 - * Make sure to use up all of your Inventory Type 3, Initial, within the first year of your subscription.
 - * Use Inventory Type 4 at any time: Buffer stock expires only at the end of your subscription term.
 - * Use Inventory Type 5, Replacement, for users who have lost their keys or want to upgrade.

1.22.69 Release 1.3.0 (28 August 2020)

Features

- Enhanced and extended address validation status messages: error messages displayed as a result of failed address validation now give instructions for achieving successful validation.
- Improvements to the downloadable shipments CSV. It now shows for each shipment:
 - Organization name as well as org-ID
 - Purchase Order number
 - User email as well as user-ID
 - Delivery type indicating “normal” or “expedited”
 - Both shipment state ID and actual shipment state message
 - Both shipment product cost and shipment product taxes.
- Added YubiKey Lanyard to the product list.
- Begin preview of API to retrieve the available subscriptions.

Resolved Issues

- The customized email for DELIVERY EXCEPTIONS can now be sent as a preview sample to the logged-in YubiEnterprise Delivery user.

1.22.70 Release 1.2.0 (23 July 2020)

Features

- **Updated Pricing**
 - Introducing flat-fee shipping for up to 2 keys:
 - Introducing support for expedited shipping (1-3 days)
- **Email customization and preview:** The notification emails automatically sent to YubiKey recipients can be customized, and can also be previewed. Clicking the *Send Sample* button below the *Customize Email* field sends a sample of the customized email to the email ID logged into YubiEnterprise Delivery. For more details, see [Notifying End-Users of Shipment and Delivery](#).
- **PREVIEW: Ability to download shipments table:** Organization owners, admins, and auditors can download the information on the **Shipments** tab as a CSV file. There are two options:
 - The entire contents can be downloaded - i.e., all the rows in the table, even if there are multiple pages.
 - Search results. If a search term is entered into the Search field, the rows containing the search term will be downloaded as a CSV file.
- **Subscription Shipping through YubiEnterprise Delivery:** Subscription customers can view their inventory on the **Dashboard**, with:
 - Premium Tier Subscription
 - Premium Tier Subscription Replacement
 - Premium Tier Subscription Buffer.

Subscription customers can specify shipment types:

- Initial shipment
- Buffer stock shipments
- Replacement YubiKey shipment

Subscription customers can download a CSV file with the contents of the shipments table (see “Ability to download shipments table” above), showing all the YubiKeys in the subscription tier and Subscription-Fulfillment-Type.

Known Issues

- The customized email for DELIVERY EXCEPTIONS cannot be sent as a preview sample to the logged-in YubiEnterprise Delivery user.

1.22.71 Release 1.0.0 (18 June 2020)

Features

YubiEnterprise Delivery enables organizations to manage orders of Yubico's security keys (including YubiKeys), encompassing:

- Ordering shipment of a key or keys to a single address through the YubiEnterprise Delivery Console (the GUI) or the API
- Bulk upload of shipping orders for fulfillment using CSV files
- Shipping orders via the API
- Inventory management
- Tracking shipping costs
- Tracking shipment of the security keys you purchase from Yubico to the end-user
- Customizing auto-generated delivery notification emails
- Support for Virtual Product Tiers.

Known Limitations

- The following character limitations (including spaces) apply to all three methods of requesting shipment: Console (GUI), CSV, and API:
 - First Name: 15
 - Last Name: 20
 - Company: 20
 - Address lines 1, 2, 3: 40
 - City: 20
- In certain situations, if your computer has a platform FIDO authenticator such as Windows Hello and you want to enroll a YubiKey, the Windows UI displayed may ask you to enroll that other platform authenticator.
Workaround: Hit **Cancel** to get to the YubiKey enrollment option.

Known Issue

- A shipment request whose status is indicated as `ShipmentStateError` must be recreated and resubmitted.

To file a support ticket for YubiEnterprise Delivery, click [Support](#).

1.23 Copyright

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1.23.3 Contact Information

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1.23.4 Getting Help

Documentation is continuously updated on <https://docs.yubico.com/> (this site). Additional support resources are available in the Yubico Knowledge Base.

Click the links to:

- [Submit a support ticket for YubiEnterprise Delivery](#)
- [Submit other support requests](#)
- [Contact our sales team](#)

1.23.5 Feedback

Yubico values and welcomes your feedback. If you think you may have discovered a flaw in our product, please submit a support request at <https://support.yubico.com/hc/en-us> and provide as much detail as you can.

1.23.6 Document Updated

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