



User Guide – Sectigo IoT Portal

CableLabs PKI Operations

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The following provide instructions on issuing certificates for those customers using the Sectigo portal to issue their CableLabs PKI certificates. For those customers using a different portal, please contact pkioops@cablelabs.com for more information.

Login

When your organizations account is set-up or a new admin is added to the portal, you will receive an email from PKI Ops with your username. Note: only those designated as Admins on the organization's account (as defined by the DCSA or a contact change request) will be given access to the portal.

Note:

We suggest using Google Chrome in the "Incognito" mode (see image below) or similar "private" browsing modes from other browser providers. This will ensure there is not a conflict with previous cookies/cache that can sometimes cause issues in accessing your admin cert.

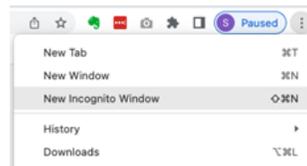


Figure 1 - Google Chrome Incognito Browser Option

When you receive your username for the first time, navigate with a browser to iot.sectigo.com and click "Forgot Password" and follow the instructions for resetting your password.

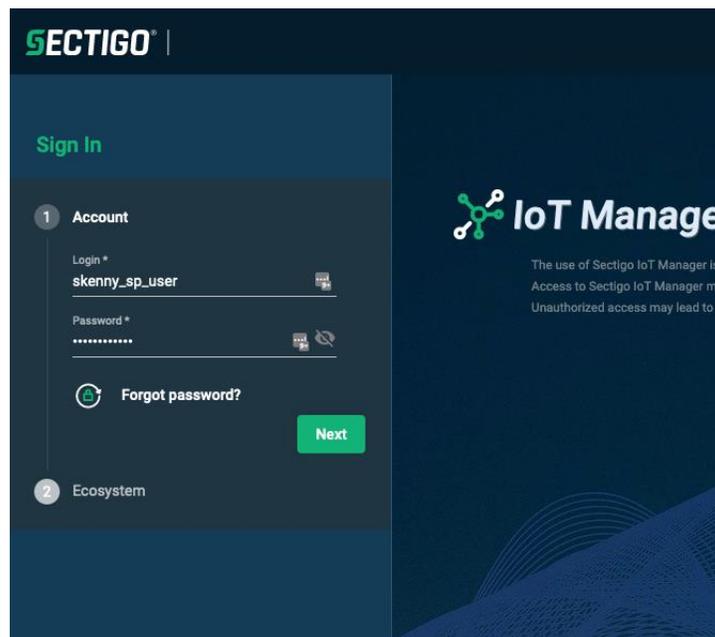


Figure 2 - Login screen

Once reset, return to the login screen and enter your username and password and click “Next”. You will be prompted for your admin certificate, which needs to be previously downloaded and installed in your computer’s certificate store. If you do not have an admin certificate, contact pkiops@cablelabs.com.

Under “Ecosystem” select the cert (e.g. D3.1, D3.0, PacketCable) you would like to request and click “Enter” (You can change to a different certificate type after you login).

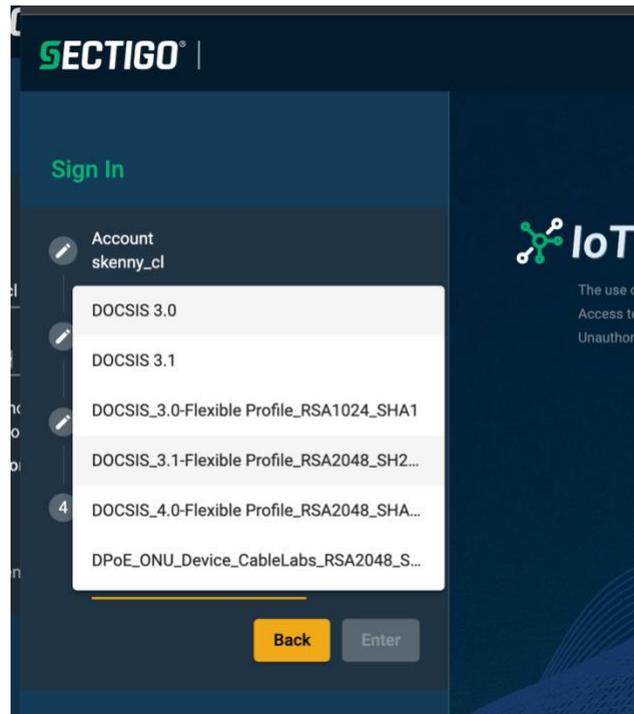


Figure 3 - Profile selection

General Navigation

Once logged in, you will come to the main page and have three main tabs to choose from:

Batches

In Batches, you can view previously created batches for your organization (that will include batches from you or others in your organization) as well as act on those batches such as rejecting them, revoking them or downloading the certificates.

In the Batches tab, you can also [create new orders](#), as described below.

Certificate Profiles

Certificate Profiles shows you which profiles for the ecosystem have been assigned to your user ID.

You can also [download the intermediate and root certificates](#) from this page, as described below.

Certificates

Certificates allows you to search and view the individual certificates previously created in the batches as well as [revoking certificates](#).

Generating and downloading new certificates

Creating, reviewing and downloading new certificates will comprise many of the activities in the portal. Please see the steps below:

- Create a new cert order (New CSR Form)
- Create a new cert order (New CSR Single)
- Create a new cert order (Upload CSR)
- Create a new cert order (Upload CSV)
- Download a batch
- Reject a batch

Create a new cert order

To create a new batch of 1 or more certs, use the following steps:

- From the Batches tab, click on the Shopping Cart icon in the top right portion of the screen.

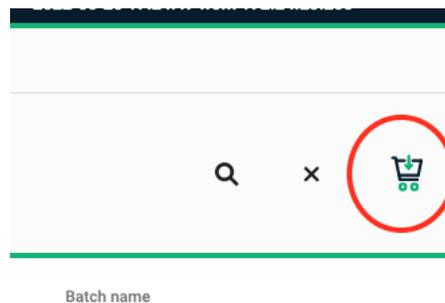


Figure 4 - Start new order (shopping cart icon)

- A new window will appear prompting you to enter the order information. You have three options to do so:

New CSR (Form)

This option allows you to manually enter the certificate details and is useful for creating a single certificate as a time. (If you have multiple certs to create at once, use the Upload CSV option).

The screenshot shows a web interface for creating a new batch of certificates. It is a three-step process: 1. New batch, 2. Confirmation, and 3. Done. The 'New batch' step is currently active. There are four tabs: 'New CSRs(Form)', 'New CSRs(Single)', 'Upload CSRs', and 'Upload CSV'. The 'New CSRs(Form)' tab is selected. Below the tabs, there are four checked checkboxes: 'Batch Name', 'Batch Size', 'PKCS 12 Password', and 'MAC Address'. The 'MAC Address' field has a 'Generator' dropdown menu set to 'None'. At the bottom right, there are 'Cancel' and 'Next' buttons.

Figure 5 - New order - CSR Form

- Enter the Batch Name. This can be whatever you chose but should uniquely reference the cert being created for easier reference on the main Batches page.
- Enter the Batch Size. This is the total number of certificates you want to issue.
- Enter a password for the PKCS12 file. Since this file will contain both private and public keys, it needs to be protected with a password. Do NOT lose this password otherwise you will be unable to access the certificate.
- Enter the starting MAC address to be used in the sequence.
- Select the type of generator you would like to use (e.g. MAC) and the increment value (e.g. 1, 10) you want to use for each subsequent certificate.

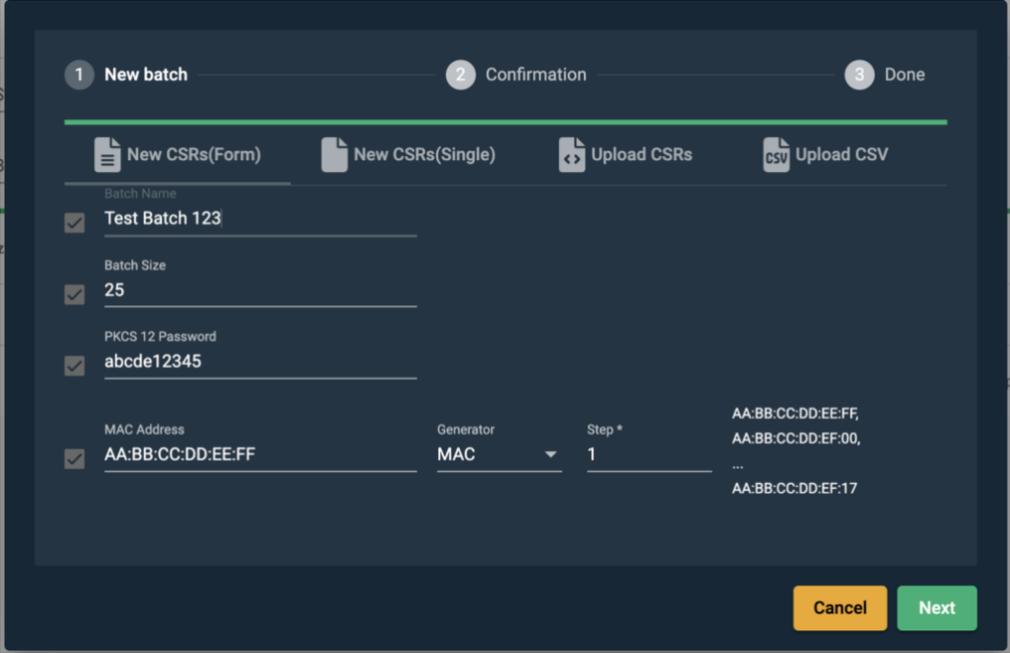


Figure 6 - New order - CSR form completed

- Click **Next**. A new screen will appear confirm the details of the uploaded request.

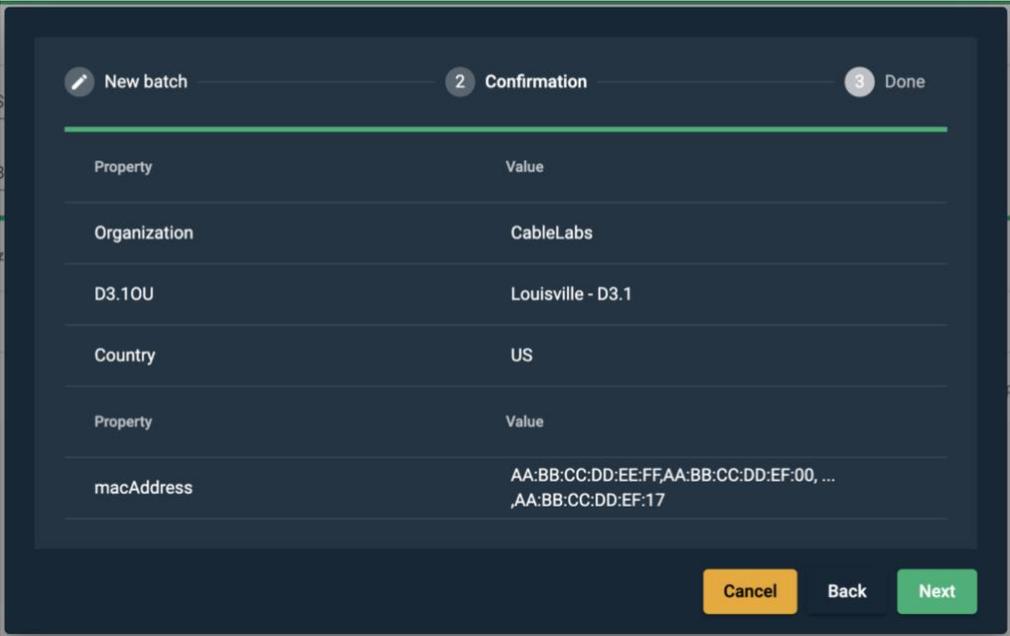


Figure 7 - New order - confirmation screen

- Click **Next**. The request will be submitted for processing. If successful, you will see the order status as **Ready for download** on the Batches screen. If an error occurred, the Status would indicate there is an issue and the details can be found in the information screen for the batch.

New CSR (Single)

This option allows you to manually enter the certificate details and is useful for creating a single certificate as a time. (If you have multiple certs to create at once, use the New CSRs (Form), Upload CSRs or Upload CSV options).

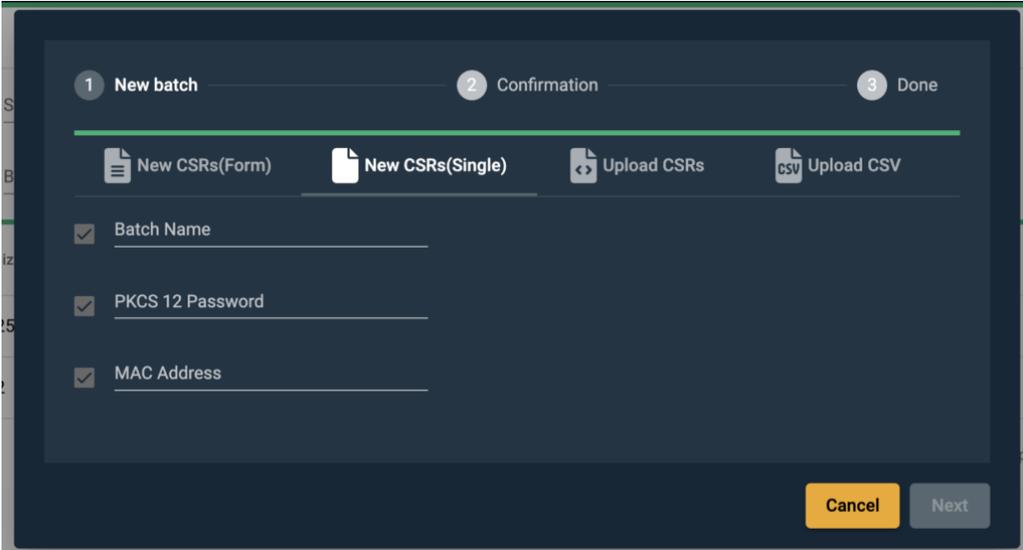


Figure 8 - New order - single certificate form

- Enter the Batch Name. This can be whatever you chose but should uniquely reference the cert being created for easier reference on the main Batches page.
- Enter the Batch Size. This is the total number of certificates you want to issue.
- Enter a password for the PKCS12 file. Since this file will contain both private and public keys, it needs to be protected with a password. Do NOT lose this password otherwise you will be unable to access the certificate.
- Enter the MAC address to be used for the certificate.

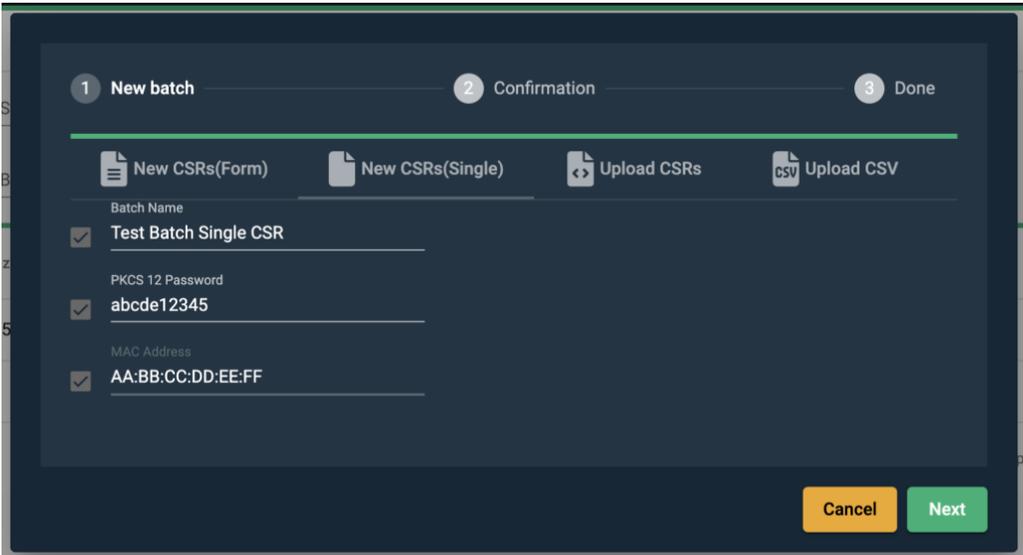


Figure 9 - New order - single certificate form

- Click **Next**. A new screen will appear confirm the details of the uploaded request.
- Click **Next**. The request will be submitted for processing. If successful, you will see the order status as **Ready for download** on the Batches screen. If an error occurred, the Status would indicate there is an issue and the details can be found in the information screen for the batch.

Upload CSR (Multiple)

If you choose to generate the private key on your own system, you can use the Upload CSR option.

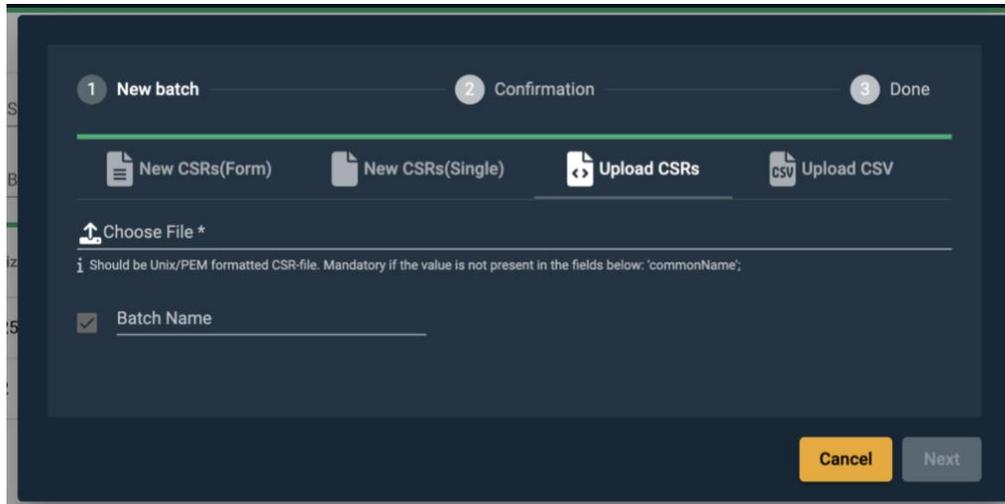
The screenshot shows a web interface for creating a new batch. At the top, there is a progress bar with three steps: '1 New batch', '2 Confirmation', and '3 Done'. Below the progress bar are four tabs: 'New CSRs(Form)', 'New CSRs(Single)', 'Upload CSRs', and 'Upload CSV'. The 'Upload CSRs' tab is selected. Underneath the tabs is a 'Choose File *' button with an upload icon. Below that is a small information icon and a note: 'Should be Unix/PEM formatted CSR-file. Mandatory if the value is not present in the fields below: 'commonName;'. Below the note is a checkbox labeled 'Batch Name' which is checked, followed by a text input field. At the bottom right of the form are two buttons: 'Cancel' (yellow) and 'Next' (grey).

Figure 10 - New order - CSR upload form

- Click on the Upload CSR tab.
- Select the CSR file to upload from your local system.
- The batch name will be prefilled with the filename of the CSR. You can edit the batch name to whatever you chose but should uniquely reference the cert being created for easier reference on the main Batches page.
- Click **Next**. A new screen will appear confirm the details of the uploaded CSR.

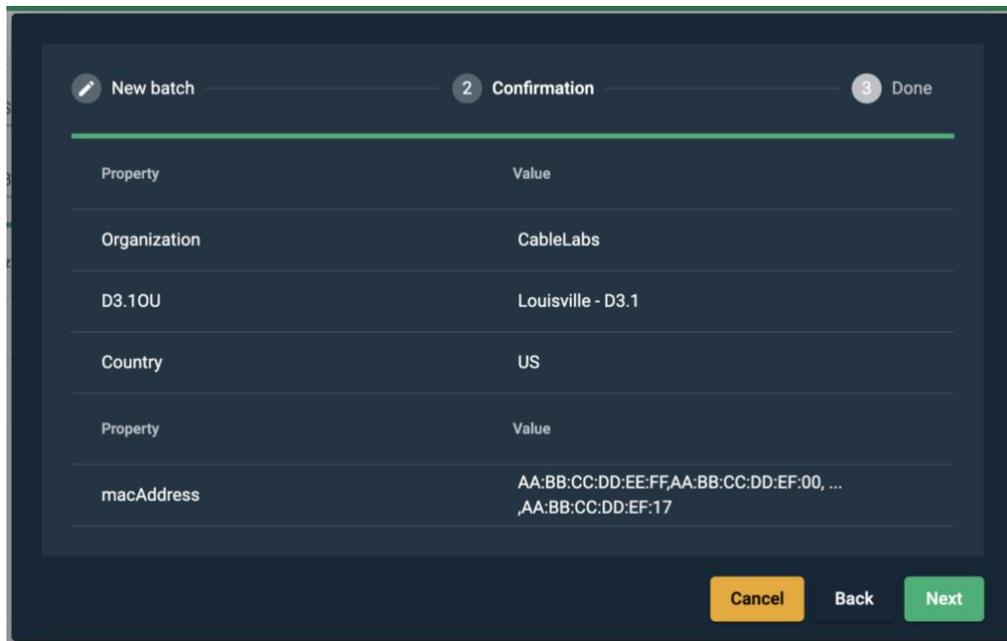


Figure 11 - New order - confirmation screen

- Click **Next**. The CSR will be submitted for processing. If successful, you will see the order status as **Ready for download** on the Batches screen. If an error occurred, the Status would indicate there is an issue and the details can be found in the information screen for the batch.

Upload CSV

If you have multiple certs to create at once, use the Upload CSV option.

- Click on the Upload CSV tab.
- Click on **Choose File*** and select the CSV file to upload from your local system. Note: if you need the latest CSV template to fill in with the cert information, click on the Cloud Download icon and the csv template will be downloaded to your computer.

Figure 12 - New order - CSV upload form

- The batch name will be prefilled with the filename of the CSV. You can edit the batch name to whatever you chose but should uniquely reference the cert being created for easier reference on the main Batches page.
- Enter a password for the PKCS12 file. Since this file will contain both private and public keys, it needs to be protected with a password. Do NOT lose this password otherwise you will be unable to access the certificate.
- Click **Next**. A new screen will appear confirm the details of the uploaded CSV.
- Click **Next**. The CSV will be submitted for processing. If successful, you will see the order status as **Ready for download** on the Batches screen. If an error occurred, the Status would indicate there is an issue and the details can be found in the information screen for the batch.

Reject a batch

If an error is found in a batch after it has been created but **BEFORE** it is downloaded, the batch can be rejected and the certificate quantity returned to your available certs. **Once a batch has been downloaded, it is considered "Issued" and those certs can only be revoked. No credit is given for certs which have been issued (and subsequently revoked).**

- Find the row of the batch to reject and hover your cursor over it. If it is available to reject a small yellow icon with a left-facing arrow will appear

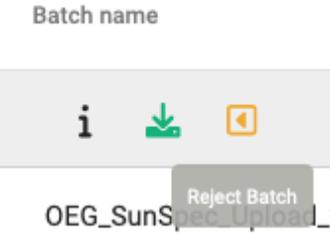


Figure 13 - Reject order button

- Click on the yellow icon. The batch will be rejected and the updated status shown for the batch.

The screenshot shows the SPECTIGO IoT Manager interface. The top navigation bar includes the SPECTIGO logo, version 22.7.1.256, organization information for Kyrio, Inc, and user information for Scott Kenny. The main content area shows a 'Batch Order List' table with columns for Id, Size, Status, Creation date, and Batch name. One row is visible with Id 322364, Size 1, Status Rejected, and Creation date 2022-09-15 17:49:39.

Id	Size	Status	Creation date	Batch name
322364	1	Rejected	2022-09-15 17:49:39	i

Figure 14 - Batch order list - order rejected

View and download a batch

Once a batch has been successfully completed, you can view information on the batch and download the batch file with the associated certs (and private keys, if applicable).

Please note, once a batch has been downloaded, it is considered “issued”. For security and operational reasons, we cannot credit the certs back to your account if an error is found in the certificates. If you recognize there is an error prior to downloading, you can reject the batch and your certs will be credited back to your account.

- From the Batches tab, find the batch which you would like to view and download. It should indicate **Ready for Download**.

The screenshot shows the SPECTIGO IoT Manager interface. The top navigation bar includes the SPECTIGO logo, version 22.7.1.256, organization information for Kyrio, Inc, and user information for Scott Kenny. The main content area shows a 'Batch Order List' table with columns for Id, Size, Status, Creation date, and Batch name. One row is visible with Id 322189, Size 3, Status Ready For Download, and Creation date 2022-09-06 17:04:16.

Id	Size	Status	Creation date	Batch name
322189	3	Ready For Download	2022-09-06 17:04:16	CsvTemplate_Kyrio Inc Device Certificate.csv

Figure 15 - Batch order list - ready for download

- Hover over the line and 3 icons will appear under the Batch Name column. Select the “i” icon to view the details of the batch

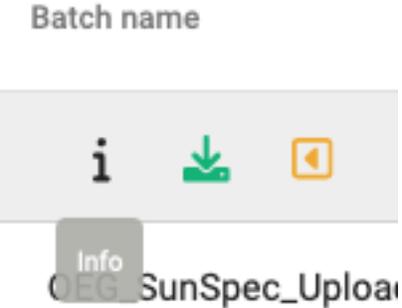


Figure 16 - Batch detail button

- The batch details will indicate details of the batch process including any errors that occurred during the batch.

Batch Processing History:

Batch #322189 :

DATE TIME	STATUS	USER	MESSAGE
2022-09-06 17:04:16	Pending Creation	skenny_sp_user #286	Batch created
2022-09-06 17:04:17	Pending Issue		
2022-09-06 17:04:27	Preparing Download		
2022-09-06 17:04:27	Ready For Download		Processing batch CERT_RESULTS...

Certificates : Succeeded Failed

ITEM #	DATE TIME	CERTIFICATE NAME	S/N	MESSAGE
0	2022-09-06 17:04:17	CsvTemplate_Kyrio Inc Device Cert...		Created from CSV line 0
0	2022-09-06 17:04:27	CsvTemplate_Kyrio Inc Device Cert...	6F51B1552CCE4B0EC18E345CCE135F64	ISSUED
1	2022-09-06 17:04:17	CsvTemplate_Kyrio Inc Device Cert...		Created from CSV line 1
1	2022-09-06 17:04:27	CsvTemplate_Kyrio Inc Device Cert...	18EDF03B45358429085D48414EB9DE58	ISSUED

Close

Figure 17 - Order details

- If satisfied with the results, click **Close** and hover over the line again and select the green download icon

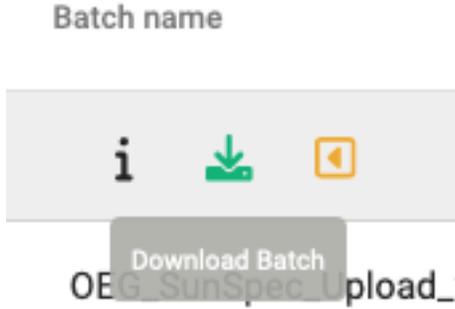


Figure 18 - Download batch button

- The file will be downloaded to your computer and you can continue with your deployment process.

Downloading root and intermediate certificates

You may need to download the root and intermediate (i.e. sub-CA or issuing CA) certificates to chain with your end entity certificates.

- Click on the Certificate Profiles tab.

The screenshot shows the SPECTIGO IoT Manager interface. The top navigation bar includes the SPECTIGO logo, version 'v. 22.7.1.256', organization 'CableLabs', profile 'DOCSIS_3.1-Flexible_Profile_RSA2048_SH256', and certificate statistics. The main content area is titled 'Certificate Profiles List' and contains a table with the following data:

Profile Id	Profile Name	CA	Generator Key Type
47	DOCSIS 3.0	Kyrio:DOCSIS Cable Modem Root Certificate Authority	alg: RSA, keySize: 1024
51	DOCSIS 3.1	Kyrio:CableLabs Device Certificate Authority SHA512	alg: RSA, keySize: 2048
233	DOCSIS_3.0-Flexible_Profile_RSA1024_SHA1	Kyrio:DOCSIS Cable Modem Root Certificate Authority	alg: RSA, keySize: 1024
234	DOCSIS_3.1-Flexible_Profile_RSA2048_SH256	Kyrio:CableLabs Device Certificate Authority SHA512	alg: RSA, keySize: 2048
301	DOCSIS_4.0-Flexible_Profile_RSA2048_SHA256	Kyrio:CableLabs Device Certification Authority	alg: RSA, keySize: 2048
57	DPoE_ONU_Device_CableLabs_RSA2048_SHA256	Kyrio:CableLabs Device Certificate Authority SHA512	alg: RSA, keySize: 2048
58	DPoE_ONU_Device_CableLabs_RSA2048_SHA512	Kyrio:CableLabs Device Certificate Authority SHA512	alg: RSA, keySize: 2048
52	OpenCable CableCard Device CA1-G5	Kyrio:CableLabs Mfg CA1-G5	alg: RSA, keySize: 1024
53	OpenCable Host Device Certificate	Kyrio:CableLabs Mfg CA6-G5	alg: RSA, keySize: 1024

Figure 19 - Certificate profile listing

- Hover over the profile of the certificate you want to download and click on the line. A new window will display.

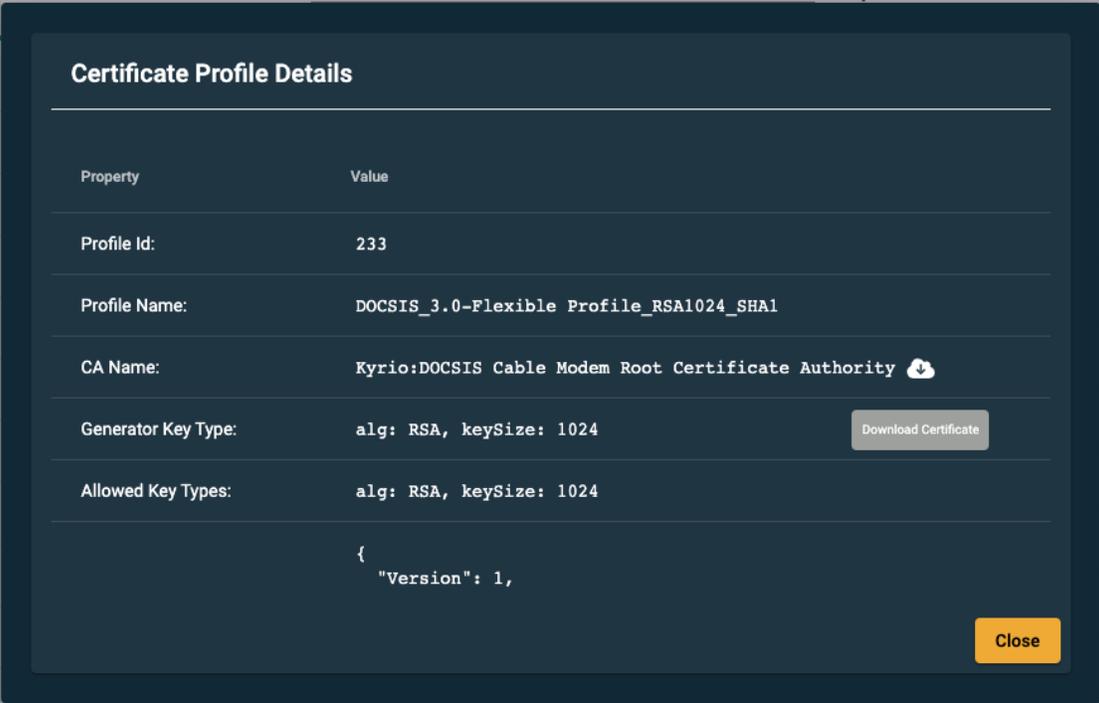


Figure 20 - Certificate profile detail

- Click on the download cloud icon. The root and intermediate certs will be downloaded by your browser as a ZIP file. *File download location will vary by browser and/or user settings.*

Revoking certificates

If you need to revoke the certificates, you have two options: revoke a whole batch or revoke an individual certificate.

Revoke a batch

- From the Batches tab, find the batch you would like to revoke.

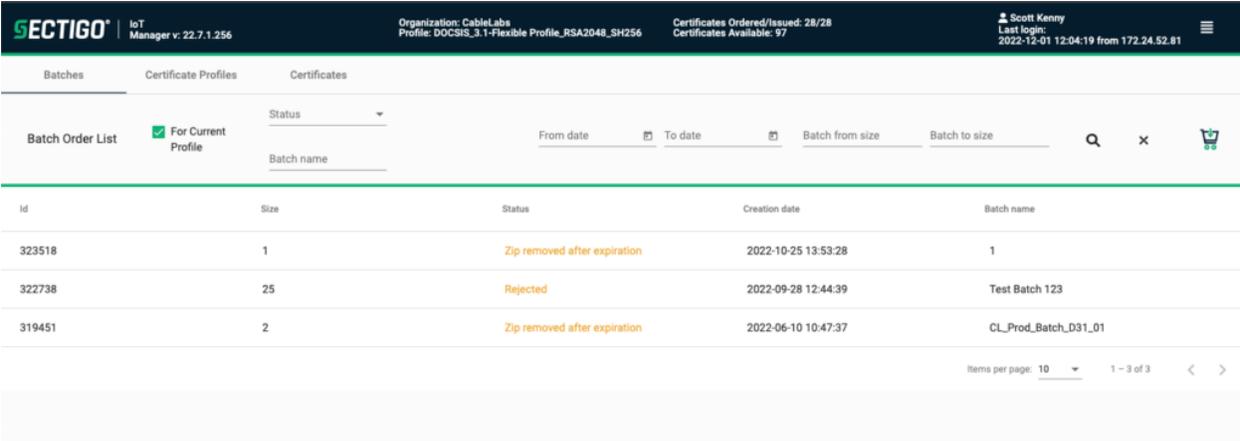


Figure 21 - Batch order list

- Hover your mouse over the line of the batch you would like to revoke.
- On the right side of the line, three icons will appear. Select the right-most icon that is a yellow “X” with the “Revoke” label.

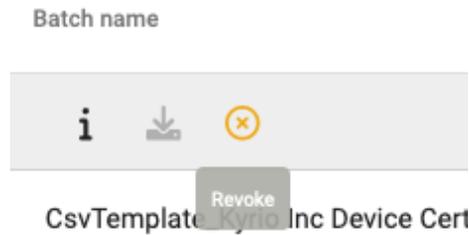


Figure 22 - Revoke batch option

- Confirm the reason to revoke the certificates and click “OK”

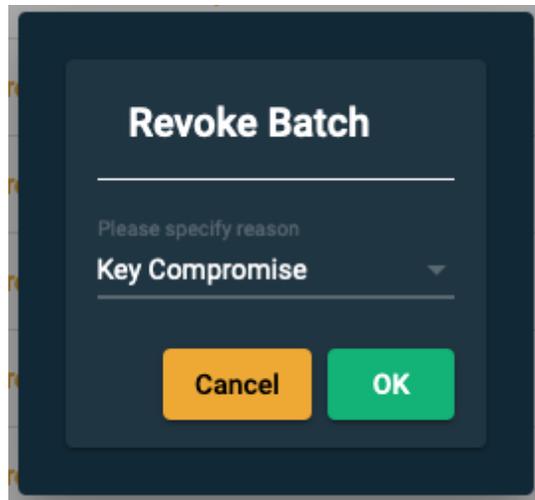


Figure 23 - Revoke batch confirmation

- The Status of the batch will change to Revoked

Batches		Certificate Profiles	Certificates
Batch Order List	<input checked="" type="checkbox"/> For Current Profile	Status	Batch name
From date	To date	Batch from size	Batch to size
Id	Size	Status	Creation date
322189	3	Revoked	2022-09-06 17:04:16
CsvTemplate_Kyrio Inc Device Certificate.csv			

Figure 24 - Batch order list

Revoke an individual certificate

- From the Certificates tab, search on the certificate(s) you want to revoke with the search options at the top (e.g. serial number, Batch ID)

The screenshot shows the SPECTIGO IoT Manager interface. At the top, it displays the organization name 'Kyrio, Inc', profile 'Kyrio Inc Device Certificate', and certificate statistics: 'Certificates Ordered/Issued: 62/62' and 'Certificates Available: 4'. The user 'Scott Kenny' is logged in, with a last login time of '2022-09-06 09:55:52 from 172.24.20.173'. The main content area is titled 'Certificate List' and shows a table with columns: Batch Id, Name, Subject, Serial Number, Creation Date, and Status. The table is currently empty, indicating no certificates are listed due to no filters being applied.

Figure 25 - Certificate list (no filter)

By Batch

The screenshot shows the SPECTIGO IoT Manager interface with the 'Certificate List' filtered by 'Batch Id: 322189'. The table displays three certificates, all with a status of 'Revoked'. The columns are: Batch Id, Name, Subject, Serial Number, Creation Date, and Status.

Batch Id	Name	Subject	Serial Number	Creation Date	Status
322189	CsvTemplate_Kyrio Inc Device Certificate.csv-2		45F3B18E9672052E7805223055F81DD2	2022-09-06 17:04:17	Revoked
322189	CsvTemplate_Kyrio Inc Device Certificate.csv-1		18EDF03845358429085048414EB9DE58	2022-09-06 17:04:17	Revoked
322189	CsvTemplate_Kyrio Inc Device Certificate.csv-0		6F51B1552CCE4B0EC18E345CCE135F64	2022-09-06 17:04:17	Revoked

Figure 26 - Certificate list (filter by batch)

By Serial

The screenshot shows the SPECTIGO IoT Manager interface with the 'Certificate List' filtered by 'Serial Number: 51B1552CCE4B0EC18E345CCE135F64'. The table displays a single certificate with a status of 'Revoked'. The columns are: Batch Id, Name, Subject, Serial Number, Creation Date, and Status.

Batch Id	Name	Subject	Serial Number	Creation Date	Status
322189	CsvTemplate_Kyrio Inc Device Certificate.csv-0		6F51B1552CCE4B0EC18E345CCE135F64	2022-09-06 17:04:17	Revoked

Figure 27 - Certificate list (filter by serial ID)

- Select the certificates you want to revoke by checking the box at the beginning of the line.

The screenshot shows the SPECTIGO IoT Manager interface with the 'Certificate List' filtered by 'Batch Id: 322196'. Three certificates are selected, indicated by green checkmarks in the selection column. The status for all three is 'Ready For Download'. A tooltip 'Revoke selected certificates' is visible over the 'Revoke' icon. The columns are: Batch Id, Name, Subject, Serial Number, Creation Date, and Status.

Batch Id	Name	Subject	Serial Number	Creation Date	Status
<input checked="" type="checkbox"/>	322196	Sample_Batch_20.csv-0	13BF721BB43A609DB69F50BE95793ED9	2022-09-06 17:59:42	Ready For Download
<input checked="" type="checkbox"/>	322196	Sample_Batch_20.csv-2	60E11C573EDDD221D37ADBC6BA181ABA	2022-09-06 17:59:42	Ready For Download
<input type="checkbox"/>	322196	Sample_Batch_20.csv-1	08A4389A9A17939E66A31E7AEB724CB	2022-09-06 17:59:42	Ready For Download

Figure 28 - Certificate list (selected certs)

- Click the “Revoke” icon on the right side of the screen.

- Confirm the reason to revoke the certificates and click “OK”.

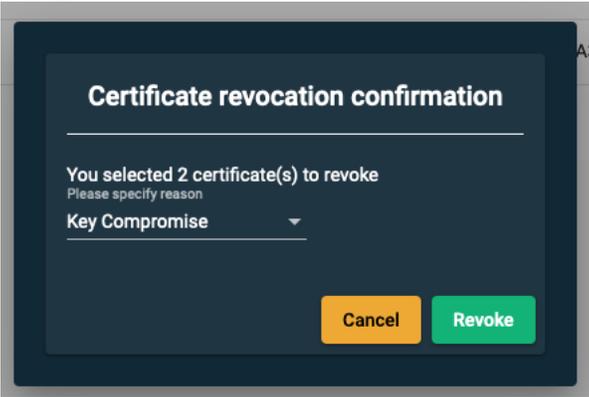


Figure 29 - Revocation confirm

- The Status of the batch will change to Revoked.

Batch Id	Name	Subject	Serial Number	Creation Date	Status
322196	Sample_Batch_20.csv-0		138F7218B43A609D869F50BE95793ED9	2022-09-06 17:59:42	Revoked
322196	Sample_Batch_20.csv-2		60E11C573EDDD221D37ADB68A181ABA	2022-09-06 17:59:42	Revoked
322196	Sample_Batch_20.csv-1		08A4389AB9A17939E66A31E7AEB724CB	2022-09-06 17:59:42	Ready For Download

Figure 30 - Certificate list (revocation completed)