

Cloudprinter.com – Integration Switch App

Description

Integrating with Cloudprinter.com has never been easier. Receiving orders, downloading artwork and signalling back to Cloudprinter.com is all handled for you by the app.

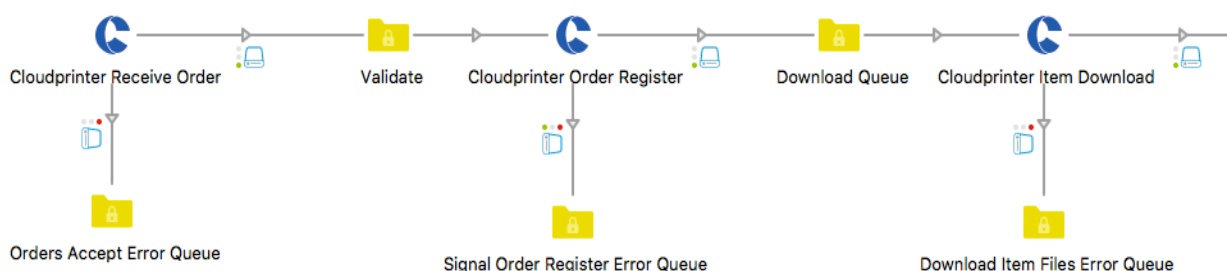
Cloudprinter.com controls an independent world-wide print network. Learn more at www.cloudprinter.com.

The full integration consists of 6 companion apps that each serve their specific purpose and are easy to integrate into your existing flow.

All of the 6 companion apps:

- Cloudprinter Receive Order**
 Receives an order from Cloudprinter through the technology of webhooks or through a Cloudprinter XML v2.1 being injected into the flow.
- Cloudprinter Order Register**
 Signals to the Cloudprinter system that the order was accepted and splits the order into separate jobs with a single item in each of them.
- Cloudprinter Item Download**
 Downloads the artwork for the item from Cloudprinter and validates the content via a checksum.
- Cloudprinter Item Shipped**
 Signals to the Cloudprinter system that the item is ready to ship. This signal includes the shipping option and the tracking code. The signal is generated from the dataset properties.
- Cloudprinter Item Delay**
 Signals to the Cloudprinter system that a production error, that you can recover from, occurred and how long the expected delay is. The signal is generated from the dataset properties.
- Cloudprinter Item Cancel**
 Signals to Cloudprinter that the item cannot be produced and that it has to be cancelled. A cancellation cause and description are included in this signal. The signal is generated from the dataset properties.

Here is an example of an accept, register and download flow:

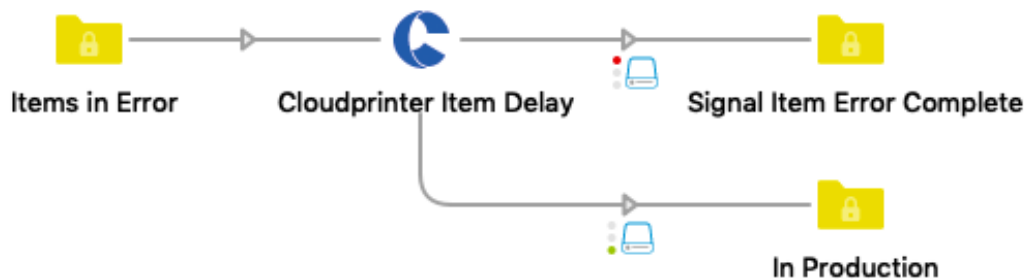


Between the Order Accept and Signal Order Register, it is advised to have your own validation of the order content to validate that the products in the order are supported and can be produced, etc.

Are CloudSignal signals back to Cloudprinter important?

Yes, signals are very important for Cloudprinter and our clients. Signals are used to provide a good user-experience for the end-consumer, as well as, they also form the basis of the statistics that are used by the Cloudprinter routing algorithms. In essence, this means that if you don't send your signals timely, you will get less orders routed to you in the long-run.

Here is an example of **Signal Item Delay** app in a flow:



The Cloudprinter app is designed to use the webhook technology, which means that the Cloudprinter system will call a web endpoint in Switch. Webhooks have to be enabled in your Switch configuration and HTTPS encryption with a valid SSL certificate is required for receiving actual live orders from Cloudprinter. Firewall configuration may be required. Please see the section “External setup” for more details.

Please note: The use of this app requires a Cloudprinter.com account, which can be created at www.cloudprinter.com/printers.

Compatibility

Switch 18 and higher. Windows and Mac.

Connections

Each app has different connections:

- **Cloudprinter Receive Order** - With webhooks (recommended).
The normal operation mode for the “Receive Order” app is with webhooks.
 - *Incoming connection:* None - When webhooks are used, there is no need for an incoming connection. The app will be triggered by the arrival of the Cloudprinter order XML v2.1. The call to the webhook is coming from the Cloudprinter system. The order XML is validated against the CloudCore API key.
 - *Traffic-light outgoing connections:* Success and Error.
The output of the **Success** connection is an XML with the details of the order. The XML content is also attached.
The **Error** connection is used for orders that are not validated or cannot be parsed.

- **Cloudprinter Receive Order** - With incoming connection.
In some cases the Cloudprinter order XML v2.1 can be supplied using a different method, for example in an MIS that will then inject the Cloudprinter XML v2.1 to Switch.
 - *Incoming connection*: Cloudprinter order XML v2.1 is supported. The order XML is validated against the CloudCore API key.
 - *Outgoing Traffic-light connections*: Success and Error.
Success: The Success connection is used when the validation of the Cloudprinter order XML v2.1 was successful. The XML will be sent along the Success connection. The XML content is attached as a dataset, meaning it can be used to validate the order.
Error: The Error connection is used for orders that are not validated or that cannot be parsed.
- **Cloudprinter Order Register**
 - *Incoming connection*: Cloudprinter order XML v2.1 is supported.
 - *Outgoing Traffic-light connections*: Success and Error.
Success: The Success connection is used when the Cloudprinter Order XML V2.1 was successfully split into single jobs, each with only one item, and when the signals to Cloudprinter's system for order registration were also successful. One or more Cloudprinter item XML v2.1 will be sent along the Success connection.
Error: The Error connection is used if the Cloudprinter order XML v2.1 could not be split into single jobs or the register signal to Cloudprinter's system repeatedly failed. The Cloudprinter order XML v2.1 will be sent along the Error connection.
- **Cloudprinter Item Download**
 - *Incoming folder connection*: Cloudprinter item XML v2.1 is supported.
 - *Outgoing Traffic-light connection*: Success and Error.
Success: The Success connection is used for the item-related artwork files. One or more files per job can be sent along.
Error: The Error connection is used when repeated attempts to download the artwork for the item fail or if the validation with checksum repeatedly fails. The Cloudprinter item XML v2.1 that failed will be sent along the Error connection.
- **Cloudprinter Item Shipped, Cloudprinter Item Error and Cloudprinter Item Cancel**
 - *Incoming folder connection*: Cloudprinter item XML v2.1 is supported.
 - *Outgoing Traffic-light connections*: Success and Error.
Success: The Success connection is used when the signal was delivered with success to Cloudprinter's system.
Error: The Error connection is used when the signal for Cloudprinter's system has repeatedly failed. The Cloudprinter item XML v2.1 file will be sent along the Error connection.

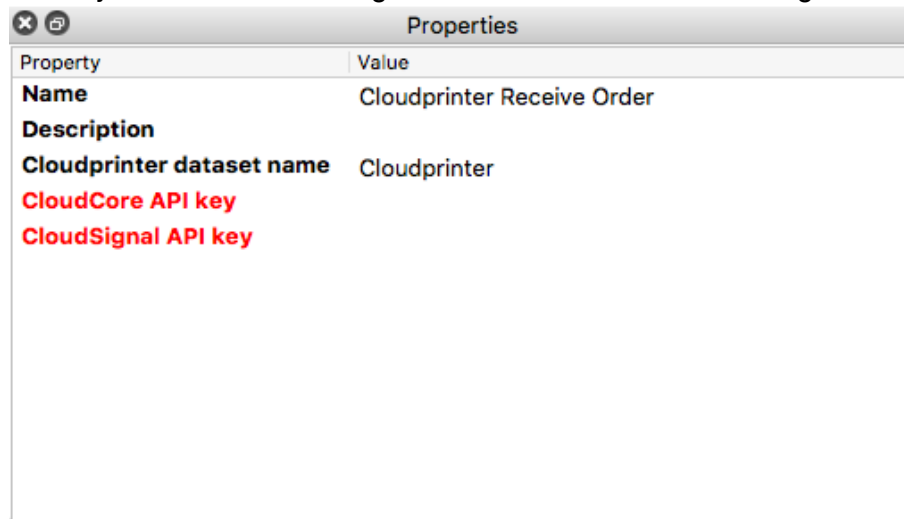
Properties detailed info

The apps have properties that should either be set to fixed values like the Cloudprinter API key during the flow design, or that are dynamically set during flow execution. An example on this is the tracking code for the shipped signal.

Each app with its properties:

- **Cloudprinter Receive Order**

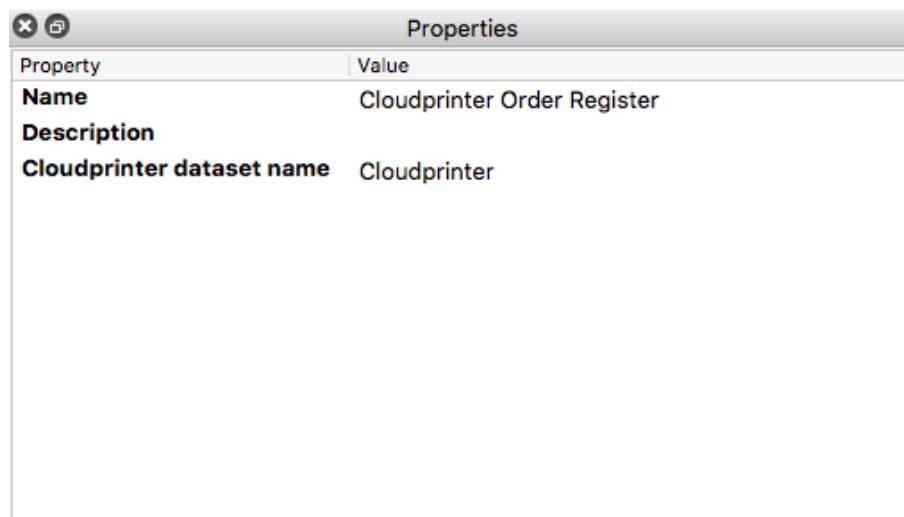
On “Receive order” the two Cloudprinter API keys are set. The API keys are used by all apps, but only set once. They are both found in the Cloudprinter admin Dashboard (admin.cloudprinter.com) under “Production Interface” for the CloudCore API key and under “CloudSignals API Interfaces” for CloudSignal API key.



Property	Value
Name	Cloudprinter Receive Order
Description	
Cloudprinter dataset name	Cloudprinter
CloudCore API key	
CloudSignal API key	

- **Signal Order Register**

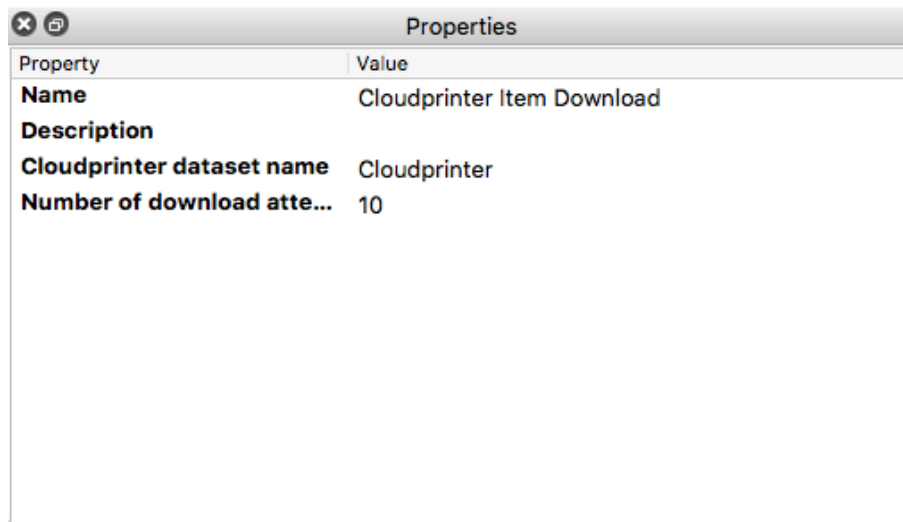
On “Signal Order Register” only the dataset name is defined.



Property	Value
Name	Cloudprinter Order Register
Description	
Cloudprinter dataset name	Cloudprinter

- **Item Download**

On “Item Download” the dataset name is defined and “Number of download attempts”, which defines the number of attempts the download app will have to download the artwork. If the checksum validation fails, the retry mechanism is used.

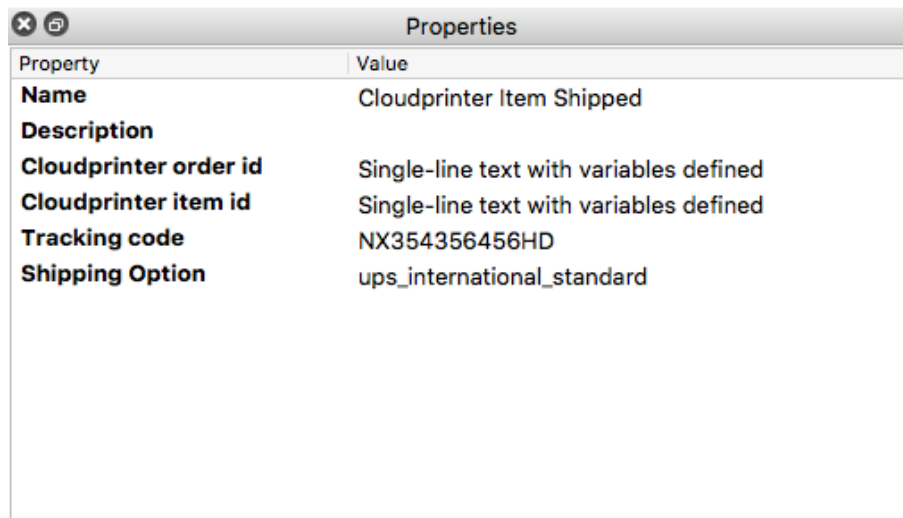


Property	Value
Name	Cloudprinter Item Download
Description	
Cloudprinter dataset name	Cloudprinter
Number of download atte...	10

- **Cloudprinter Item Shipped**

The “Item Shipped” signal requires a shipping option. This string must be one of the shipping reference codes found in the Cloudprinter admin dashboard.

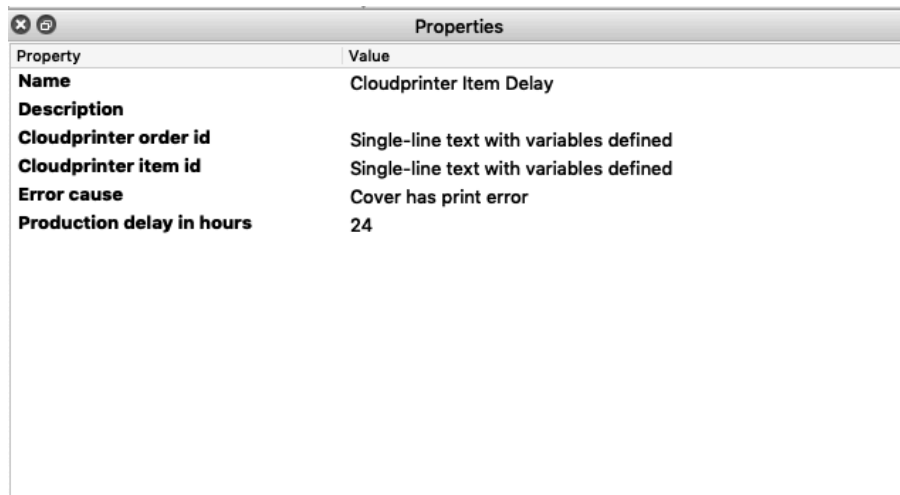
The tracking code is set if the shipment is trackable. If not, it is set to *None*.



Property	Value
Name	Cloudprinter Item Shipped
Description	
Cloudprinter order id	Single-line text with variables defined
Cloudprinter item id	Single-line text with variables defined
Tracking code	NX354356456HD
Shipping Option	ups_international_standard

- **Cloudprinter Item Delay**

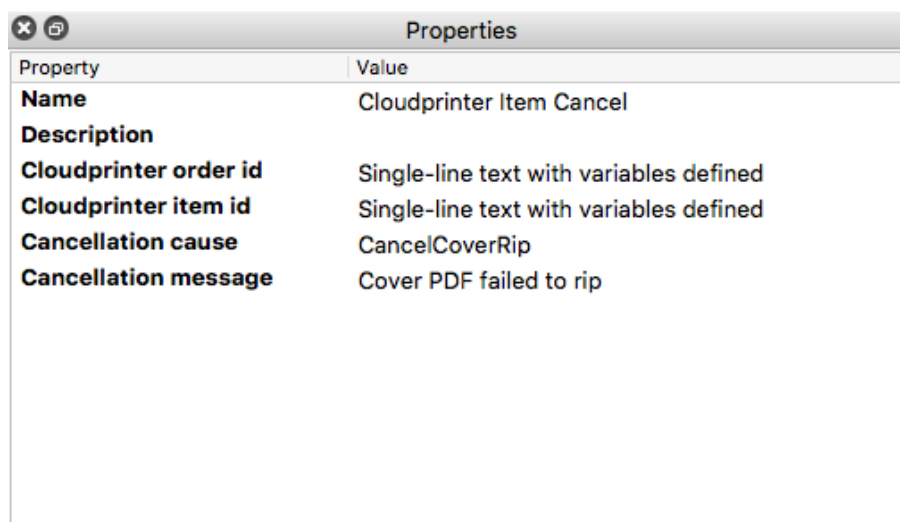
The “Item Delay” signal tells Cloudprinter that something has gone wrong with the production and that the production time will be extended. For this signal it is required to set both the “Error cause” as textual description in English and “Production delay in hours” as an number.



Property	Value
Name	Cloudprinter Item Delay
Description	
Cloudprinter order id	Single-line text with variables defined
Cloudprinter item id	Single-line text with variables defined
Error cause	Cover has print error
Production delay in hours	24

- **Signal Item Cancel**

The “Item Cancel” signals tell Cloudprinter that a specific item cannot be produced and that the item should be cancelled. This information is in turn also given to our clients by Cloudprinter. Both properties here are required. The “Cancellation cause” is one of the Cloudprinter predefined causes and they are selectable in a dropdown menu. The “Cancellation message” is a textual description in English of the cause which should offer additional details.



Property	Value
Name	Cloudprinter Item Cancel
Description	
Cloudprinter order id	Single-line text with variables defined
Cloudprinter item id	Single-line text with variables defined
Cancellation cause	CancelCoverRip
Cancellation message	Cover PDF failed to rip

Flow elements properties

For each app there are a number of element properties:

- **Cloudprinter Receive Order**
 - **CloudCore API key**

Cloudprinter authentication key for incoming orders. Generated by the Cloudprinter admin system on the “Production Interface” configuration. This property is required and must be set to a string before running the flow.
 - **CloudSignals API key**

Cloudprinter authentication key for outgoing signals. Generated by the Cloudprinter admin system on the “CloudSignal API Interface” configuration. This property is required and must be set to a string before running the flow.

- **Cloudprinter Item Download**
 - **Number of download attempts**

If the download of an artwork file fails, the “Item Download” app will retry the download X number of times. There will be a 3 sec delay between the attempts.

- **Cloudprinter Item Shipped**
 - **Tracking code**

The tracking for the shipment of a specific item. Tracking code is provided as a string. For none-trackable postal orders, set the value to *None*. This is a required property.
 - **Shipping option**

Shipping options are predefined by Cloudprinter and can be found in the Cloudprinter admin dashboard. It is the “reference” value. The reference value can be overwritten by the print partner in the Cloudprinter admin dashboard. If this is the cases, the reference defined by the print partner is to be used. This property is required.

- **Cloudprinter Item Delay**
 - **Error cause**

The error cause is a textual description in English describing the error in the production. This signal is used for errors from which the production can recover, e.g. a reprint of a cover. This property is required.
 - **Production delay in hours**

When an error has occurred and something needs manual attention or a reprint, more time is needed normally. The “production delay in hours” property indicates the estimated delay in hours. This property is required.

- **Cloudprinter Item Cancel**

- **Cancellation cause**

The “Cancellation case” is one of a set of by Cloudprinter predefined causes and they are selectable in a dropdown menu. This property is required.

- **Cancellation message**

When an item cannot be produced for some reason, for example because of a wrong size file or a file that cannot be processed by the rip server, it is important to describe the cause in detail in a textual description in English.

This enables our clients to correct the issue(s) before the item is ordered again. This property is required.

External setup

- **Using webhooks behind a firewall**

When using webhooks, the Cloudprinter system must be able to connect to the preconfigured TCP port on the Switch server. The default HTTPS port is 51081. If your Switch server is behind a firewall, it is required for you to forward the HTTPS port 51081 to the server or computer where the Switch server is running.

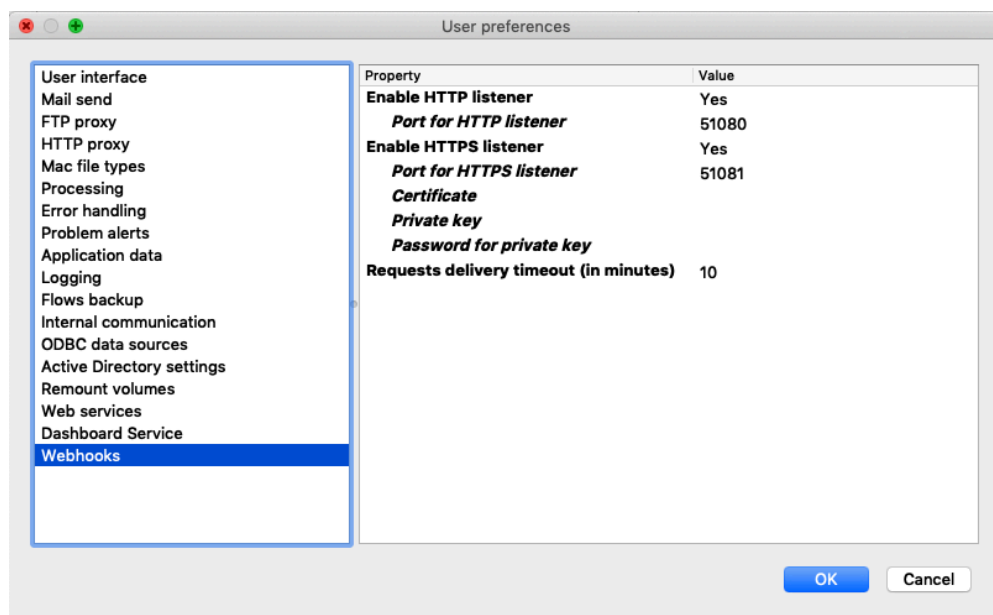
For HTTP connections, it is required to use by default the TCP port 51080.

Note: Running non-encrypted communication is only recommended for testing. Live orders must always be delivered on an HTTPS encrypted connection with a valid SSL Certificate.

- **Enabling HTTPS support in Switch**

Switch will not accept HTTPS connections before you enable them.

In the User Preferences for Switch find the Webhooks section. Change the “Enable HTTPS listener” to “Yes”. Next, add your SSL certificate.



- **Security using webhooks**

Communication from Cloudprinter to Switch must be HTTPS, using TLS encryption. This is configured in the Cloudprinter admin dashboard, under the “Production Interface”.

For an HTTPS connection to be safe, a valid SSL certificate from a registered certificate authority is required. The certificate must be added to Switch.

Setting up IP filtering on a firewall for the communication from Cloudprinter to port 51080 and 51081 will also provide addition access control. The IP numbers of Cloudprinter’s processing servers can be found here docs.cloudprinter.com/production/cloudprinter-servers/.

- **Creating a “Production Interface” in Cloudprinter admin**

Delivering orders from Cloudprinter to the Switch server requires some configuration, meaning that Cloudprinter’s order processor will need to know the endpoint to call to access the information.

This configuration is done in the Cloudprinter Admin dashboard at admin.cloudprinter.com. In the menu select “Production Interfaces”. Click on the production name to see the production interfaces for that specific production account. Click on an existing production interface or create a new one if the list is empty.

The new Production Interface should be configured as follows:

- **Name:** “Switch Test Production Interface”
- **Note:** “Production interface for test orders to Switch”
- **Production:** Select the production from the dropdown
- **Organization:** Select “All” from the dropdown menu
- **Account:** Select “All” from the dropdown menu
- **Priority:** Select 5 from the dropdown menu
- **Production interface mode:** Select “Test mode” from the dropdown
- **Production interface method:** Select “Post XML to API Cloudprinter v2.1”
- **Protocol:** Select “HTTPS” from the dropdown menu
- **Host:** Set to your public IP + “/cloudprinter/add”.
An example is “1.2.3.4/cloudprinter/add”
- **Username:** Leave empty
- **Password:** Leave empty
- **ACL:** Set your public IP where communication from Switch is coming from.
An example is “1.2.3.4”
- **State:** Select “Enabled” from the dropdown menu

After **saving**, your interface will look like this:

The screenshot shows the 'Production Interface - Edit' configuration page. The form is divided into two columns. The left column contains dropdown menus for Name (Switch Test Production Interface), Note (Production interface for test orders to Switch), Production (EU Production), Organization (All), Account (All), Priority (5 - Medium), and State (Enabled). The right column contains dropdown menus for Production interface mode (Test mode - Used for test orders), Production interface method (Post XML to API Cloudprinter v2.1), and Protocol (HTTPS protocol). Below these are text input fields for Host (1.2.3.4/cloudprinter/add), Username, Password, API key (d90683a98006c0a5ba3b28c19fc5cc33), ACL (1.2.3.4), Create date (2018-06-15 13:36:59), and Modify date (2018-06-15 13:36:59). There are 'Generate API key' and 'Save' buttons at the top right.

The above example assumes that port 443 for HTTPS or port 80 for HTTP was forwarded in your router to the Switch server port 51081 for HTTPS or 51080 for HTTP. If a different port is forwarded, the Production Interface needs to be adjusted.

A custom port is specified in the Host field Production Interface and looks like this: "1.2.3.4:51080/cloudprinter/add".

- **Creating a "CloudSignal API Interface" in Cloudprinter admin**

Delivering signals from the Switch server to Cloudprinter requires some configuration, meaning that a Cloudprinter's CloudSignal API interface should be created. The interface has an API key for validation and is linked to one or more Cloudprinter accounts.

This configuration is done in the Cloudprinter Admin dashboard at admin.cloudprinter.com - In the menu select "CloudSignal API Interfaces", then "Interfaces". Click on the existing signal interface or create a new one if the list is empty.

The new Production Interface should be configured as follows:

- **Name:** "Switch Test Production Interface"
- **Note:** "Production interface for test orders to Switch"
- **State:** Select "Enabled" from the dropdown menu
- **Production:** Select the production type from the dropdown menu
- **Production signal interface method:** Select "CloudSignal 2.0" from the dropdown menu
- **Priority:** Select 5 from the dropdown

After **saving** the interface will look like this:

CloudSignal API Interface - Edit

[Generate API key](#) [Save](#)

Basic

Name	Switch CloudSignal Test Interface	Note	Signal interface for Switch signals
Priority	5 - Medium	State	Enabled

Production & Method

Production	EU Production (EU Virtual)	Production signal interface method	CloudSignal 2.0
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Security

API key- [Click to copy](#)
15989ba0e0afc809d3cc181796b1ab7f

System

Create date	2018-06-18 14:52:17	Modify date	2018-06-18 19:44:09
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