



New Features Guide

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Preface

PortaSwitch® Maintenance Release 95 is the next long-life release which is mainly focused on improved system stability. It is supported with bug fixes, contains minor improvements and offers other software support for an extended period of time, thereby enabling customers to better plan the evolution of their PortaSwitch® systems.

Where to get the latest version of this guide

The hard copy of this guide is updated upon major releases only and does not always contain the latest material on enhancements introduced between major releases. The online copy of this guide is always up-to-date and integrates the latest changes to the product. You can access the latest copy of this guide at www.portaone.com/support/documentation/.

Conventions

This publication uses the following conventions:

- Commands and keywords are given in **boldface**.
- Terminal sessions, console screens, or system file names are displayed in `fixed width font`.



The **exclamation mark** draws your attention to important actions that must be taken for proper configuration.

NOTE: Notes contain additional information to supplement or accentuate important points in the text.



Timesaver means that you can save time by performing the action described here.



Archivist explains how the feature worked in previous releases.



Gear points out that this feature must be enabled on the Configuration server.



Tips provide information that might help you solve a problem.

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Cisco IoT Control Center provisioning via iPaaS Workflows

PortaOne iPaaS Workflows is a low-code integration and business process automation platform enabled by Boomi. It allows service providers to implement operation workflows and data synchronization between multiple systems with minimal coding effort.

PortaBilling® is now integrated with Cisco IoT Control Center (former Cisco Jasper Control Center) via iPaaS Workflows. Cisco IoT Control Center is the automated connectivity management platform that allows service providers to deliver IoT connectivity services via SIM cards. With this integration, IoT service providers can configure a specific workflow for SIM card provisioning in a short time.

Let's say, an IoT service provider uses Cisco IoT Control Center to enable their customers to connect their smart devices via SIM cards. For a retail customer, a SIM card can be activated only after successful payment, and for a corporate customer, payment in advance is not required. To implement the needed workflow, the service provider doesn't need to involve qualified developers. With the Boomi low-code platform, it can be implemented visually, without extensive coding.

Service providers with older PortaSwitch® versions, e.g., MR75, can use this integration functionality right away, without a full system update to MR95.

Benefits

- Service providers can automate their SIM card management workflow fast and with less effort.
- Reduced time to market the M2M/IoT services.

Let's consider an example of end-to-end workflow automation.

An IoT service provider "Panda IoT" uses a portal (for example, the IoT portal available in the iPaaS marketplace) where their customers can activate/deactivate a SIM card, change products, etc. The portal communicates with PortaBilling® via API.

A retail customer, John Doe, purchases a SIM card for his drone. John Doe opens the portal and adds the SIM card by entering the ICCID code printed on it. John can see that the SIM card has been added with the pending status.

To activate the SIM card, John opens the SIM card details and chooses the Panda 5 MB plan. The portal page displays the prorated fee to pay for the SIM card activation – \$17.5 for 21 days of usage in the current month. John fills in the credit card details. Once John clicks Activate SIM, the credit card is charged with the specified amount, and the SIM card is activated. John inserts the SIM card in the drone, and it's ready to use.

Let's say that the drone with the SIM card has been lost. John opens the usage history page on the portal and finds the SIM card with the specific ICCID code. John sees suspicious traffic. To stop fraudulent traffic and prevent losses, John Doe deactivates the SIM card. Now the SIM card is displayed in the SIM card list with the canceled status.

The automated workflow mentioned above can be implemented using Boomi capabilities based on events received from PortaBilling®.

This integration can also be available for service providers running older releases of PortaSwitch®, i.e., MR55–MR94. Note that older releases may have fewer handlers or fewer events supported by PortaBilling®.

Contact our [sales team](#) to find out how you can use PortaOne iPaaS Workflows (Boomi) for your specific setup.

Enable service provisioning applications on the PortaBilling® web UI

The External System Provisioning Framework (ESPF) captures changes in entity configuration (e.g., customer, account, product) in PortaBilling® and sends provisioning events to an external application (for example, an IPTV platform). After the external application updates the entity's configuration, it returns the event provisioning status to PortaBilling® via the ESPF API. To provision data to external systems, PortaBilling® is supplied with handlers that process events. You can find the list of supported event handlers in the *Supported event handlers* chapter in the [External System Interfaces Guide](#).

Previously, the administrator enabled and configured event handlers on the Configuration server web interface and through a command line interface. With this release, an administrator can add and configure event handlers right on the PortaBilling® web interface. Thus, the administrator saves time on managing the event handlers.

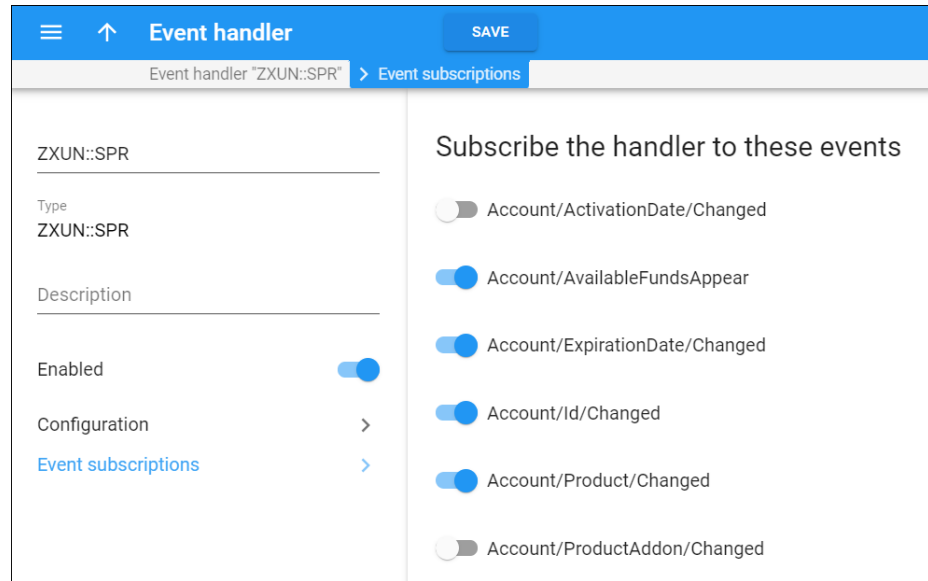
The screenshot shows the 'Event handlers' management page. On the left is a 'Create event handler' form with fields for Name (ZXUN::SPR), Type (ZXUN::SPR), and an Enabled toggle switch. On the right is a table titled 'Event handler list' with columns for Name, Type, and Enabled. The table lists 11 handlers, all of which are enabled.

Name	Type	Enabled
Calix	Calix	✓
CustomerToAccountsDispatcher	CustomerToAccountsDispatcher	✓
EventSender	EventSender	✓
Huawei:HSS	Huawei:HSS	✓
Odoos:CRM of 4th env	Odoos:CRM	✓
ProductToAccountsDispatcher	ProductToAccountsDispatcher	✓
ServiceAttributeDispatcher	ServiceAttributeDispatcher	✓
Zendesk of 4th env 2	Zendesk	✓
Zendesk of 4th env 3	Zendesk	✓
ZXUN:HSS	ZXUN:HSS	✓

The screenshot shows the configuration page for the 'ZXUN::SPR' event handler. It includes a 'Configuration' section with several settings, each with a help icon (question mark):

- concurrency: 1
- ZXUN.SPR.Service.Password: ZXUN_pass_SPR
- ZXUN.SPR.Service.Proxy: https://10.0.2.15:5566
- ZXUN.SPR.Service.URI: https://10.0.2.15:1111
- ZXUN.SPR.Service.Username: ZXUN_user_SPR

By default, each event handler is subscribed to all supported events. The administrator can disable specific events and re-enable them if needed.



Also, the administrator can check event subscriptions supported by added handlers on the **Event subscriptions** panel.

Event Name	Calix	CustomerToAccountsDispatcher	EventSender	Huawei:HSS	Odoo::CRM of 4th env
Account/AvailableFundsAppear	✓	Not supported	✓	Not supported	Not supported
Account/Blocked	✓	Not supported	✓	Not supported	Not supported
Account/IPDeviceAssignment	✓	Not supported	✓	Not supported	Not supported
Account/Product/Changed	✓	Not supported	✓	✓	Not supported
Account/Status/Suspend	✓	Not supported	✓	Not supported	Not supported
Account/Status/Unsuspend	✓	Not supported	✓	Not supported	Not supported
Account/Unblocked	✓	Not supported	✓	Not supported	Not supported
Account/ZeroAvailableFunds	✓	Not supported	✓	Not supported	Not supported

Additional filter parameters and supported entities for provisioning logs

With this release, the search for provisioning logs has been extended with these search filters:

- Handler name
- Entity name

In addition to customer and account entities, the administrator can track the provisioning status of events for these entities:

- Access policy
- Account Add-on Product
- Account commitment
- Connection
- CPE
- CPE profile
- DID number
- Node
- Product
- SIM card

Also, the administrator can view the general list of provisioning logs that includes events with failed, queued, and successful status.

The screenshot shows the 'Provisioning logs' interface. It includes a search bar, filter tabs (ALL, FAILED, QUEUED, SUCCESSFUL), and a table of results. The table has columns for Date, Event, Handler name, Entity type, Entity name, and Handler. The results show various events such as Account/SIMCardAssignment, Account/Status/Closed, and SIMCard/Changed, with their respective dates, handler names, and entity details.

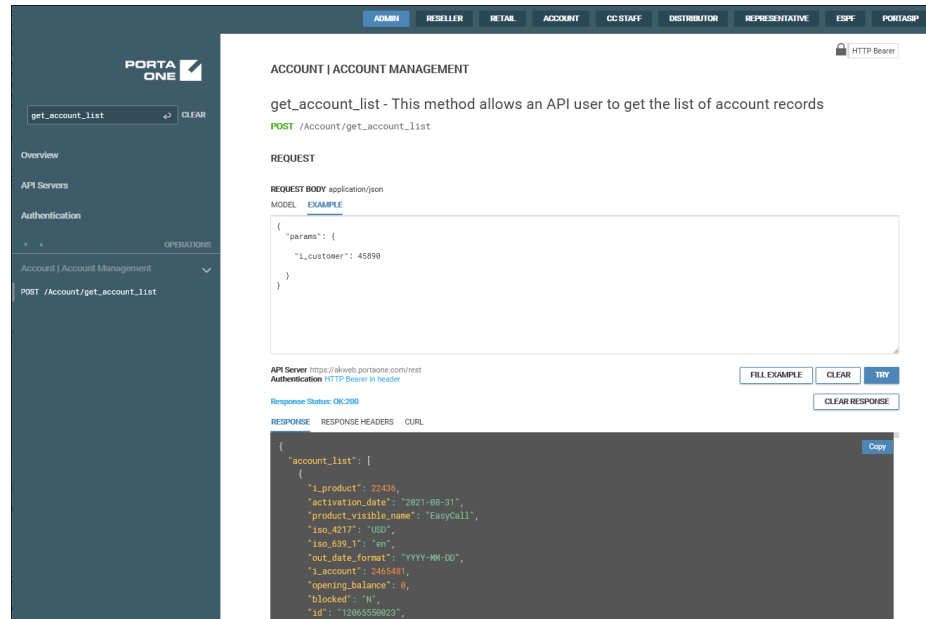
Date	Event	Handler name	Entity type	Entity name	Handler
2021-09-15 16:29:30	Account/SIMCardAssignment	ZKUN:SPR	Account	10119362@msisdn-old...	ZKUN:SPR
2021-09-15 16:29:30	Account/SIMCardAssignment	ZKUN:HSS	Account	10119362@msisdn-old...	ZKUN:HSS
2021-09-15 16:28:45	Account/SIMCardAssignment	EventSender	Account	9361011@msisdn-old000	EventSender
2021-09-15 16:28:45	Account/SIMCardAssignment	Huawei:HSS	Account	9361011@msisdn-old000	Huawei:HSS
2021-09-15 16:28:45	Account/SIMCardAssignment	ZKUN:SPR	Account	9361011@msisdn-old000	ZKUN:SPR
2021-09-15 16:28:45	Account/Status/Closed	ZKUN:HSS	Account	9361011@msisdn-old000	ZKUN:HSS
2021-09-15 16:28:45	SIMCard/Changed	EventSender	SIM Card		EventSender
2021-09-15 16:28:45	Account/ID/Changed	Huawei:HSS	Account	9361011@msisdn-old000	Huawei:HSS
2021-09-15 16:28:45	Account/Status/Closed	ZKUN:SPR	Account	9361011@msisdn-old000	ZKUN:SPR

Benefits

- The administrator saves time on ESPF handlers management.
- The administrator saves time that might be spent on troubleshooting.

PortaBilling®, PortaSIP®, and ESPF APIs available in OpenAPI format

Developers can now test the methods directly on the web interface and faster understand which methods to call by using documentation in the standardized OpenAPI format. PortaBilling®, PortaSIP®, and ESPF APIs in the OpenAPI format are now available on the PortaBilling® server. See an example here: <https://bit.ly/PortaSwitchAPI>.



ACCOUNT | ACCOUNT MANAGEMENT

get_account_list - This method allows an API user to get the list of account records

POST /Account/get_account_list

REQUEST

REQUEST BODY application/json

MODEL EXAMPLE

```
{
  "params": {
    "i_customer": 4899
  }
}
```

API Server <https://akweb.portaone.com/test>
Authentication HTTP Bearer in header

Response Status: OK 200

RESPONSE RESPONSE HEADERS CURL

```
{
  "account_list": [
    {
      "i_product": 22436,
      "activation_date": "2021-08-31",
      "product_visible_name": "EasyCall",
      "iso_4217": "USD",
      "iso_639_1": "en",
      "out_date_format": "YYYY-MM-DD",
      "i_account": 2454401,
      "opening_balance": 0,
      "blocked": "N",
      "id": "12065550823"
    }
  ]
}
```

OpenAPI documentation is available at <https://{HOST}:{PORT}/doc/api/index.html>, where **{HOST}** is the domain name/IP of your PortaBilling® server, and **{PORT}** is 443. For example: <https://pandatelecom:443/doc/api/index.html>.

To call test requests from realms, e.g., reseller, retail customer, account, etc., specify the IP/domain name of the PortaBilling® server on the Configuration server in the **Security.CorsAllowedOrigins** option. To call PortaSIP® API requests, specify the IP/domain name of the PortaBilling® server in the **VirtualHosts.media_server_cors_allowed_origins** option.

Developers can also download OpenAPI documentation in JSON format and open it to third-party viewers.

The screenshot displays a web interface for API documentation. It is divided into two main sections: 'AccessControl | Access control management' and 'AccessPolicy | Access policy management'. Each section lists API endpoints with their methods and descriptions. The 'AccessPolicy' section is expanded to show details for the 'POST /AccessPolicy/add_access_policy' endpoint. It includes a 'Parameters' section (currently empty), a 'Request body' section with a dropdown menu set to 'application/json', and a 'Schema' section showing a JSON object structure for the request body. The JSON structure includes fields like 'access_policy_info', 'access_phases', and 'definition_list' with various sub-parameters and values.

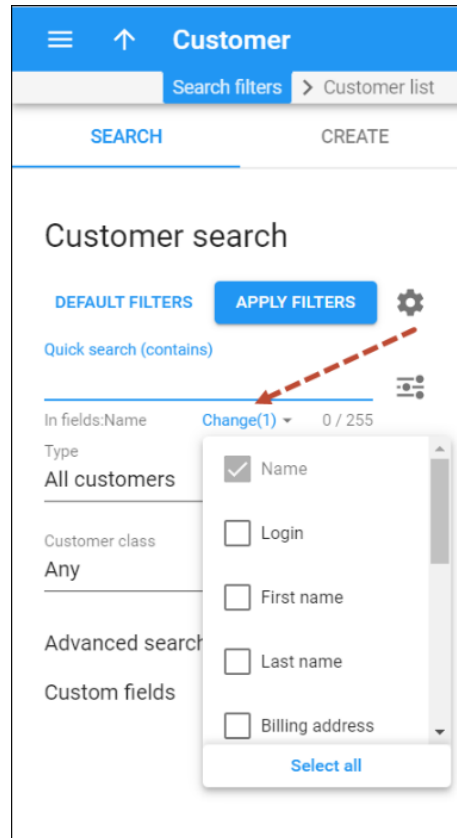
Benefit

Developers can test the methods and save time using documentation in the standardized OpenAPI format.

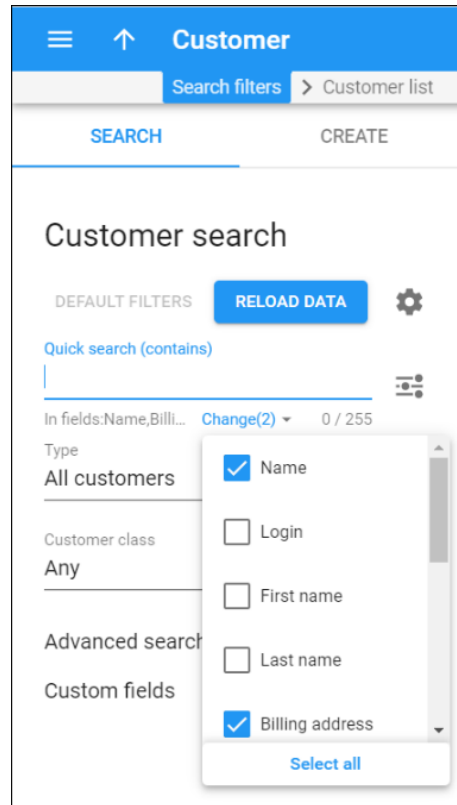
Web interface changes

Customize quick search for customers, resellers, and distributors

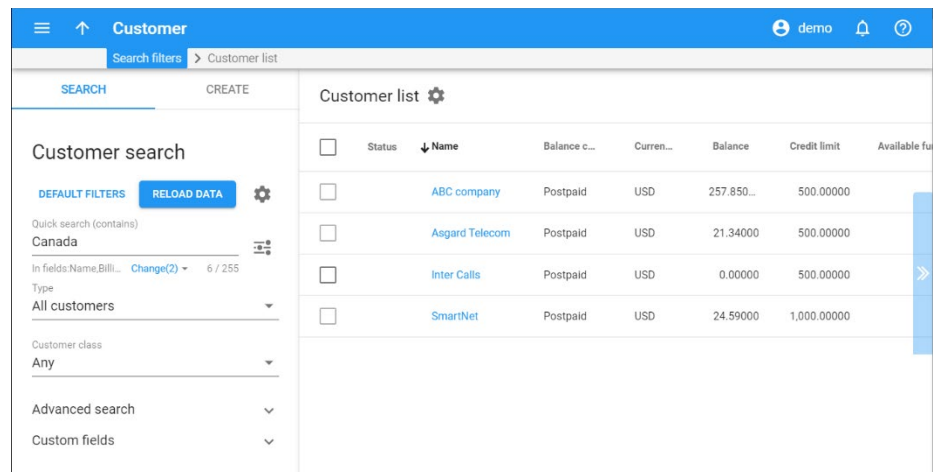
The administrator can now search customers, resellers, and distributors faster by customizing the **Quick search** field. With this release, quick search allows the administrator to select several fields to search through, e.g., login, phone, company name, etc. By default, the quick search is performed only by name.



For example, the administrator wants to search for all customers by name and billing address. To do this, the administrator opens a **Customer search** panel > **Quick search** > clicks **Change** > selects **Billing address** checkbox. Once the option is selected, the changes are automatically saved and applied to the next searches.



Let’s say the administrator wants to find the customers with a billing address in Canada. The administrator types “Canada” in the **Quick search** field. As a result, all the customers with billing addresses in Canada appear on the customer list panel.



Later, to look for the customers from Vancouver, the administrator types “Vancouver” in the Quick search field. Since the search through “Name” and “Billing address” fields was saved, PortaBilling® finds the customers from Vancouver and shows them in the list.

This enhancement allows the administrators to search for customers faster and makes the search more user-friendly and flexible.