PortaSwitch New Features Guide

MAINTENANCE RELEASE 84

www.portaone.com

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Preface

PortaSwitch® Maintenance Release 84 is the next leap-forward release, consistent with our "fast releases, precisely on time" ideology.

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.

Trademarks and copyrights

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Increased call recording performance

With this release, you can speed up call recording conversion and thereby reduce the delay between a completed call and the availability of its recording. Now you can deploy multiple call recording instances to process calls from PortaSIP® in a high-load environment. The load automatically distributes among the instances and as a result, customers can access their call recordings earlier.

You can still configure a call recording instance to process calls from several PortaSIPs® – and for even higher performance, you can add another call recording instance. There is no restriction on the number of call recording instances you can add. This flexibility helps you to effectively manage your computing resources.

With the update to the new release, your existing call recording service is automatically upgraded. The path to converted files remains unchanged so your administrators and resellers don't have to adjust their custom applications.

This deployment of several call recording instances adds high availability to your call recording service: if one instance is down or unavailable, the remaining instances continue operations and distribute the load.

With this enhancement, CSPs benefit from increased performance as it enables them to offer their call recording service to more customers and extend their customer base.

CSPs can also deploy **external storage for call recordings** and offer the storage space as a VAS, which will result in additional revenue. They can also grant access to external storage via external apps such as CallCabinet and thereby offer additional features (e.g. voice analytics, reports, etc.) on top of the basic call recording service.

Deployment recommendations

Call recording requires significant CPU and HDD capacity. It involves media stream conversion, which is a resource-intensive task. Moreover, call recordings take up disk space (e.g. 1 hour of recorded conversation takes up 30MB of disk space). Therefore, we recommend that you deploy call recording on a dedicated physical server.

According to our lab tests, a single call recording instance can process approximately 13 hours of call records per minute. Let's say that 5000 calls are completed simultaneously, with an average call length of 5 minutes. These calls would result in more than 400 hours of call records.

In our tests, if just 7 call records can be processed simultaneously, users might wait up to 25 minutes to access call recordings. However, if you deploy three call recording instances, the maximum waiting time decreases to 3.5 minutes. The servers with these specs are used in our lab tests: 2-E5620 @2.40 GHz (8 core), 12GB RAM, RAID 1+0.

Each call recording instance increases performance by 1.5 times. Thus, if one instance processes, on average, 13 hours of call records per minute, then two instances process 20 hours of records, 3 instances – 26 hours of records, etc.

The actual performance greatly depends on the hardware specs and partially depends on average call duration.

Integration with external call record storage platforms

Third-party applications are often used to provide extra features for stored call recordings. For example, Call Cabinet is popular for its call encryption options that enhance the security of sensitive data, thereby enabling customers to comply with local regulations (FICA, FAIS, POPI, or CPA). To use such applications, call recordings must be transferred to Call Cabinet and stored there. Now, call recordings can be exported in bulk to an external storage platform via SFTP. This new feature helps you integrate PortaSwitch® with third-party applications that require call recording storage on their side.

You can deploy external SFTP storage to store call records along with call metadata such as call duration, direction, calling and called numbers, h323-conf-id and custom fields. Thus, you can offer storage space to customers as a VAS and earn additional revenue. Customers can store call recordings for longer periods, e.g. businesses must store call records for up to 3 years while the default storage period is 59 days.

Calls made by users are recorded in PortaSwitch®. The .wav / .mp3 files are saved to local storage on the call recording server and then copied to external storage via the SFTP protocol. The call metadata is saved in JSON format as a separate file for every call recording to the external storage directly. Data processing via SFTP is much faster than executing API calls for file transfer. This improves call recording performance in high volume environments. To increase call recording conversion speeds, you can deploy **several call recording instances**.
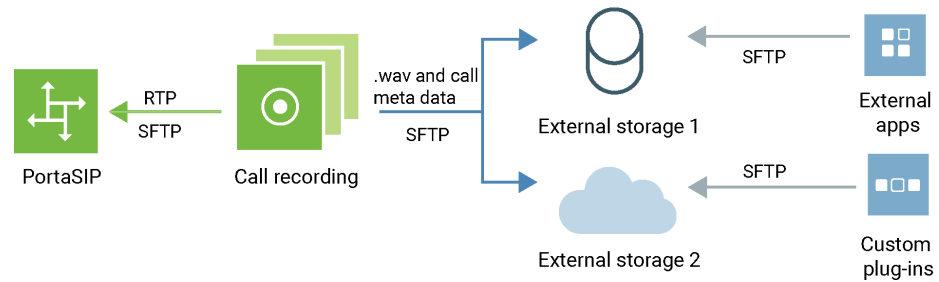
You can grant access to the external SFTP storage via external applications and plug-ins such as Call Cabinet and offer additional features (e.g. voice analytics, encryption, etc.) on top of the basic call recording service.

PortaSwitch® is supplied with a Docker image of external FTP / SFTP storage. You can deploy it either on the hardware server or in the cloud. When deployed, configure external storage for a particular billing environment. You can use the same external storage for multiple billing environments.

Feel free to **contact** the PortaOne Support team for assistance in deploying the external FTP / SFTP storage.

This functionality extends PortaSwitch® integration capabilities and simplifies its integration into a CSP ecosystem.

CSPs benefit from:
1. Selling access to external applications (and thus extra storage / features) as a VAS and earning additional revenue;
2. Offering sophisticated call recording services to customers thus expanding the customer base.

Customers benefit from:
1. Having the ability to store call records in external applications and therefore be compliant with local regulations;
2. Using unified communication features from an external application such as notifications, reporting, sharing a recording, etc.
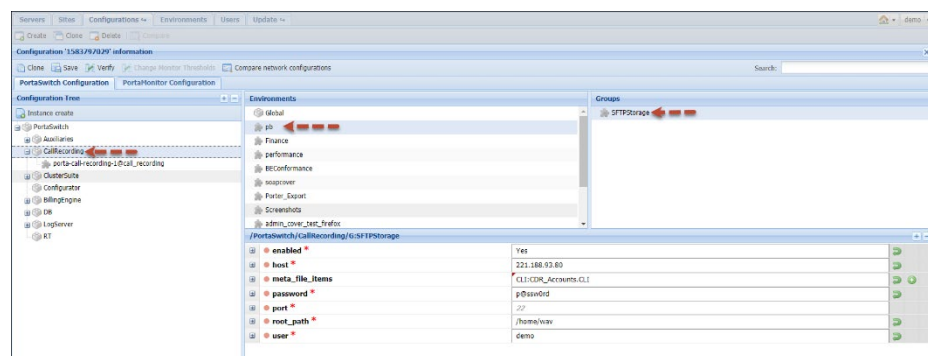
Configuration

Deploy the external SFTP storage. Then configure the storage for a desired billing environment on the Configuration server.
1. Select **Call Recording->SFTPStorage** group and specify these parameters:
   - **enabled** – set Yes;
   - **host** – Specify the SFTP storage IP address;

- **port** – Specify the SFTP storage port. The default port is 22;
- **user** – Specify the user's username to access SFTP storage;
- **password** – Specify the password to access SFTP storage;
- **root_path** – Specify the path to transfer and store call recordings;
- **meta_file_items** – Configure this parameter if you wish to retrieve call meta data. The entries have the format `<name>:<PB_entity.parameter>` where `<name>` is your description of the meta data, `<PB_entity>` is the name of the database table and `<parameter>` is a table column.

  Supported tables are: `CDR_Accounts`, `Accounts`, `Customers`; Supported columns are: any column from the corresponding table.

  Select the entry from the list. Click ![plus icon] to add a new entry.

2. Click **Verify** to save and verify the configuration.
3. Click **Check/Apply** to apply it.

When you apply the configuration, the call recording server restarts. Therefore apply it during an off-peak period.

To configure the call recording service for customers, please refer to the **Call Recording Configuration** handbook.

Provisioning of Calix ONTs in residential gateway mode

Internet service providers can now provision a Calix ONT (Optical Network Terminal) in residential gateway mode (RG). The ONTs are user endpoints within fiber-based networks. The ONTs are located on the customer's premises for Internet access.

Residential gateway mode enables service providers to limit bandwidth on the entire ONT, rather than on a specific Ethernet port. As a result, they can set speed limits per household.

Service providers can create different packages (e.g. 500Mbps, 1Gbps) to meet their customers' needs. For example, they can offer higher speeds to premium customers and enterprises.

PortaBilling® is integrated with the Calix Management System (CMS) for ONT provisioning. When an administrator creates a new user, PortaBilling® provisions the bandwidth profile ID, the account status, etc. In addition to account and service configuration data, the ONT's WAN port type is provisioned to the CMS. This port type is defined as RG.

To provision a port type to Calix CMS, an administrator configures the following in PortaBilling®:
- creates the Internet access policy that selects RG for the ONT slot type;
- assigns the policy to the product;
- assigns the product to a user's account.

Note that only GPON ONTs such as Calix 844E GigaCenter, 803G GigaPoint, etc. can be defined as residential gateways.

Provisioning the ONTs as residential gateways helps service providers deliver Internet services to residential users and effectively manage bandwidth limits for their customers. As a result, service providers remain competitive in the market and prevent revenue leakage.

Other features and enhancements

- **Manage separate notifications in notification groups** – You can notify customers and administrative users about various events in PortaBilling® (e.g. DID uploads, successful payment processing, etc.) Your administrator manages these notifications via notification templates. All notifications in a template are divided into notification groups. Once a notification template is assigned to a customer class or user, the administrator enables a specific notification group.

  Starting with this release, an administrator can select particular notifications from each notification group that customers and users receive by email / SMS.

  Since customers and users receive only necessary notifications, they can respond to these notifications in a timely manner (e.g. top up their balance when their credit limit is exceeded).

  For example, let's say you provide an IP Centrex service to your customers. They would receive all notifications about balance changes and invoicing from the billing notifications group. To enable these notifications, your administrator creates a customer class that is assigned to customers later. The administrator goes to the Notifications panel and enables the whole **Balance change** notification group. Then the administrator opens the **Billing notifications** group and selects invoicing notifications only.
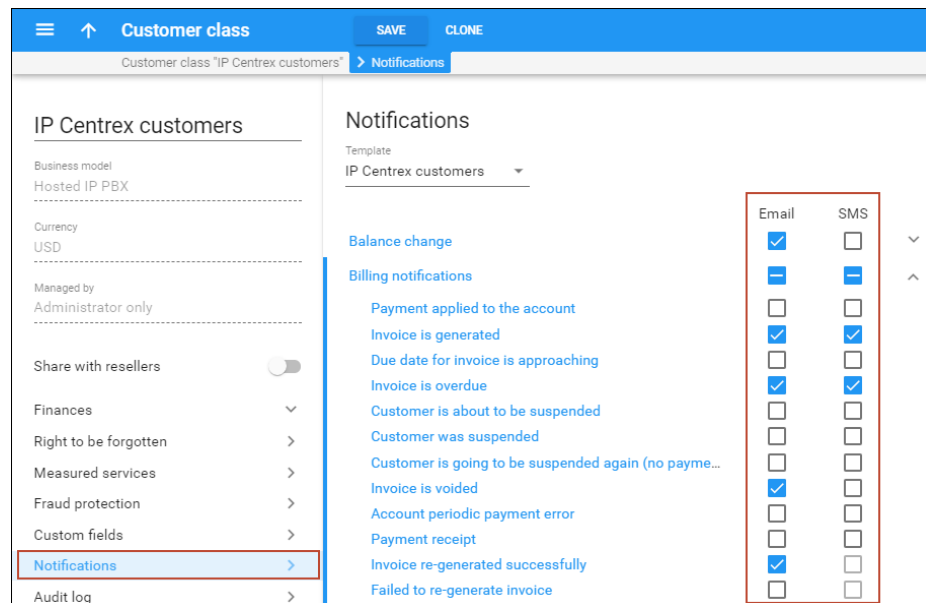
This enhancement enables administrators to fine-tune email / SMS communications with customers and users. It also helps prevent spamming and email overwhelming.

Web interface changes

- **Customizable log viewer** – The ability to resize graphic and text log areas has been added to the **Log viewer** page. You can switch between full diagram and full-text views by dragging the splitting border.