Active Call Monitoring

PortaBilling can collect information about calls in progress from the PortaSIP server, Cisco/Quintum gateways and other VoIP nodes. The only thing required on the VoIP node side is the capability to send Start accounting records, in addition to Stop records.

This enables several options:

- You may see a list of calls in progress on the PortaBilling web interface.
- You may forcibly disconnect a specific call (if the call is routed via PortaSIP).
- You may specify the maximum allowed number of simultaneous calls for each customer. PortaBilling will reject any call attempts above the allowed number of concurrent calls.

IP Device Provisioning and Inventory

If you provide your VoIP customers with IP phone equipment, you know how laborious and yet important the task of performing initial configuration is. If the equipment is not configured properly, it will not work after being delivered to the customer. Or, even if it works initially, problems will arise if you need to change the IP address of the SIP server. How can you reconfigure thousands of devices that are already on the customer's premises? There are two ways to manage the device configuration.

Manual provisioning

The administrator must login to the device provisioning interface (typically HTTP) and change the required parameters. There are several drawbacks to this method:

- The IP phone must be connected to the Internet when the administrator is performing this operation.
- The administrator must know the device's IP address.
- The IP phone must be on the same LAN as the administrator, or on a public IP address (if the device is behind a NAT/firewall, the administrator will not be able to access it).

Due to these reasons, and since every device must be provisioned individually, this method is acceptable for a testing environment or small-scale service deployment, but totally inappropriate for ITSPs with thousands of IP phones around the world.

- The IP phone profile, so that the system knows which generic properties (e.g. preferred codec) to place in the configuration file.
- An entry about the specific IP phone in the IP phone inventory (including the device's MAC address), with a specific profile assigned to it.
- The IP phone (or, in the case of a multi-line device, a port on the phone) is assigned to a specific account in the billing.

Auto-provisioning will only work if your IP phone knows the address of your provisioning server. If you buy IP phones retail, you will probably have to change the address of the provisioning server on every phone manually. However, if you place a large enough order with a specific vendor, these settings can be pre-configured by him, so that you may deliver an IP phone directly to the end-user without even unwrapping it.

IP Phone Inventory

The IP phone directory allows you to keep track of IP devices (SIP phones or adaptors) which are distributed to your customers. The MAC address parameter is essential for every IP phone which is to be automatically provisioned, and so a corresponding entry must be created in the IP phone inventory.

Online Web Signup

PortaBilling allows you to automate the process of subscribing new customers to the service, so that customers can do everything necessary online without requiring any assistance from your administrator. A template-based API for online signup allows you to customize page layout and put a web signup front-end on multiple websites (web portals, web pages of your resellers or affiliates, etc.). The following diagram illustrates the online web signup process:
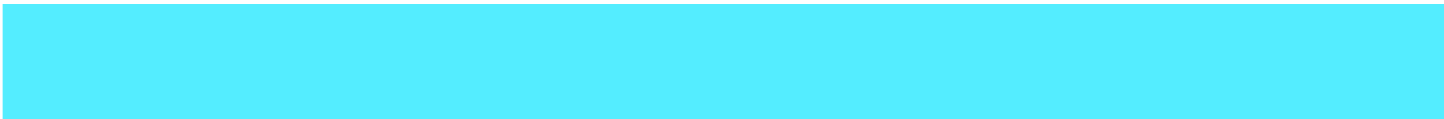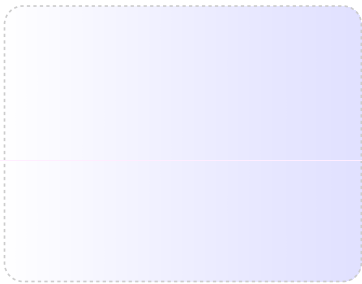
address attempts to sign up as a customer with a US billing and shipping address.

If the validation check fails, the user's web browser is redirected to the initial signup page (with the error code passed as a parameter). Thus he will see the same web pages as before, with a message explaining the error, and may be given a chance to re-enter his information.

6. PortaBilling contacts the online payment processor to charge the customer credit card for the required amount. If the transaction fails (e.g. invalid card number, no funds available) the user is once again redirected to the initial signup page.

7. At this stage, new customer and account objects are created in the database (this may involve allocating a new phone number for the account from among those available). Optional actions (e.g. enter a record to the provisioning database that a certain IP phone must be shipped to the customer via FedEx/UPS) may also be done at this point.

8. The user is redirected to the web signup front-end, with important service attributes (e.g. assigned phone number, password, etc.) being passed as parameters. This request is processed by the front-end site's "signup successful" script, and the user sees a page informing him that the signup process has been completed and providing further information about the service (e.g. his phone number).test

Consequently, even if PortaBilling participates in the process, it remains invisible to the end user. The user accesses the web front-end, fills in the required information, clicks "Sign up", and then, after a short pause, is shown either a "Congratulations!" or "Sorry, there was an error!" page on the same web portal.

Custom Reports

If your business process requires that specific information from PortaBilling be presented in a certain format (e.g. your marketing department needs to know the top 10 countries based solely on calls longer than 15 minutes, including the ratio between these calls and all other calls for each country), and this information is not available among PortaBilling's default reports, then there are two options available:

*   Create your own custom report using tools such as Crystal Reports (for more details, see the *How to …* section). This assumes that you have sufficient experience with relational databases and reporting tools.
*   Contact the PortaOne team, so that a custom report can be developed for you and uploaded to your system. In this case, no technical knowledge on your side is required.