

## Overview of the SRC-VTA

The SRC-VTA allows service providers to track and control the network usage of subscribers and services. You can control volume and time usage on a per subscriber or per service basis. This level of control means that service providers can offer tiered services that use volume as a metric, while also controlling abusive subscribers and applications.

When a subscriber or service exceeds bandwidth limits (or quotas), the SRC-VTA can take actions, including directing the subscriber to a portal to activate additional services or purchase additional bandwidth, imposing rate limits on traffic, sending an e-mail notification, or charging extra for additional bandwidth consumed.

If you use the SRC-VTA with the deep packet inspection (DPI) feature, you can control the volume of traffic for specific applications, such as peer-to-peer file sharing.

### Types of VTAs

SRC software releases earlier than Release 6.3.x supported two types of VTAs—quota and threshold. You can now configure the quota VTA to provide the same functionality as the threshold VTA. (See Example of a Bucket VTA.)

### Terminology

Table 1 on page 1 defines terms that are used in the SRC-VTA documentation and sample data.

**Table 1: SRC-VTA Terms**

Term	Definition
Behaving service	Service that a VTA activates for subscribers when the SRC-VTA is not restricting their rates of data transfer.
Bought quota	Allowance of data volume that subscribers purchase and can transfer (upload or download) at any time.
Bought account	Record that details a subscriber's use of bought quota.
Bucket account	Account that is periodically measured and refilled depending on the usage of the account.
Misbehaving service	Service that a VTA activates for subscribers when the SRC-VTA is restricting their rates of data transfer.
Periodic quota	Allowance of data volume that a service provider allocates to subscribers on a recurrent basis. Subscribers use this allowance to upload or download data.
Periodic account	Record that tracks a subscriber's use of periodic quota.

**Table 1: SRC-VTA Terms** *(continued)*

Term	Definition
Quota service	Service for which a VTA monitors usage. The SRC-VTA activates the service for subscribers when they have a positive balance in their VTA accounts, and deactivates the service when the VTA account has a negative balance.
VTA account	Record of credit and debit entries that track a subscriber's use of a particular network resource.
VTA session	Period of activity between a VTA subscriber and a VTA.

## **VTA Service and Subscriber Accounts**

A VTA account represents the resources available to a service or a subscriber. You can configure VTA accounts and then charge a particular service or subscriber's usage against the account. Each subscriber or service can have a different quota, or allowance of data volume.

You can set up the way the VTA charges accounts and how account balances are updated.

You can also configure actions in response to changes in account balances. Available actions include stopping a service, starting a service, updating an account balance, sending an e-mail, and running a script. For example, if account A is emptied, the action might be to stop service X and Y, and start service Z.

The SRC-VTA requires a relational database to store information about accounts.

## **VTA Sessions**

The SRC-VTA tracks subscriber activity through VTA sessions. A VTA session does not necessarily correspond to an individual subscriber session or service session. For example, a single service session can correspond to multiple VTA sessions if the service session covers multiple billing periods.

The SRC-VTA not only can track the volume and time of a service session, it can track any state of a subscriber derived from SAE plug-in events and respond to the state change.

The SRC-VTA requires a relational database to store information about sessions.

## **Managing Subscriber Accounts with Portals**

We provide two sample portals that manage subscriber accounts. One is an administrator portal that administrators can use to manage VTA subscriber accounts. The second is a subscriber portal that subscribers can use to manage their own accounts. Before you can use these portals, you need to configure the Web applications for the SRC-VTA.

The suggested billing model for services managed by the SRC-VTA is one in which subscribers pay for services when they select them through a Web portal.

### ***Volume-Based Services***

The SRC-VTA lets you set triggers at multiple levels to provide flexible and extensive volume-based services. For example:

- When the volume level reaches 300 MB, turn on the internet-256 service, turn off the internet-512 service, and send an e-mail to the subscriber.
- When the volume level reaches 100 MB, send an e-mail warning to the subscriber.
- When the volume level is 0 MB, turn on the continue-TCP-only service, turn off the internet-256 service, send an e-mail to the subscriber, and notify the accounting server.
- When the volume level is –100 MB, turn off the continue-TCP-only service, send an e-mail to subscriber, and notify the accounting server.

