11.3.12 Details of the Chargeback Proposed Solution

11.3.12.1 Current State

Chargeback is the process used by VITA to bill Commonwealth agencies for services and resources. Currently, there are five separate, decentralized invoicing systems that provide chargeback. The systems are comprised of custom application software. Each of the invoicing systems maintains their own rate tables, account code tables and customer contact tables. Bills are created by each of the five systems for each agency charged for services. The five billing systems are described in the table below:

Billing System	Brief Description	Data Source
Computer Services Billing System (CSBS)	A Commonwealth written application that takes inputs from the IBM and Unisys mainframe tools and combines them into an invoice for each agency. The invoice document is referred to as an IAT (Inter Agency Transfer). For the IBM mainframe, a commercial product, KOMAND, and custom software are used for chargeback.	IBM – SMF records for CPU, CICS, DB2, and ADABASE; DCOLLECT for DASD; Tape Management System (TMS) for tape, and the IMS log tape. Unisys – Unisys Exec log files, MAPPER log file, a disk log file, and STAR for tape.
Direct Billing Services System	VITA directly charges back costs to the agencies plus a VITA administrative support charge. VITA assumed the current equipment and associated costs from each agency during the transition to VITA. Servers and desktops are charged back to the agencies using this system that is based upon the Miscellaneous Billing Application (MBA) and has an internet based viewing and query component.	Files from PeopleSoft ERP for payroll and purchases
Telecommunications Inventory and Billing System (TIBS)	A VITA developed system comprised of six subsystems. The subsystems are: Catalog, Service Order, Inventory, CSR Reconciliation, OC&C Reconciliation and Billing. The telecommunications charges are for user access, available equipment and services, standard equipment configurations, etc.	MCI bills Verizon bills File from TIBS/TEAM system
Manpower Accounting and Control System (MACS)	A VITA developed invoicing system that bills for a variety of services offered to the agencies that VITA serves, e.g., time and	Timesheet file

Billing System	Brief Description	Data Source
	materials consulting expenses, desktop/LAN support, server support, application development, project management, etc.	
Miscellaneous Billing Application (MBA)	VITA developed miscellaneous billing system that handles recurring transactions (i.e., costs to an agency) and one time ad hoc debits or credits.	Input screens to Oracle database

11.3.12.2 Objectives and Requirements

The following objectives for a new Chargeback system have been identified:

- Replace the current invoicing systems. Move from 5 decentralized invoicing systems to a single, integrated invoicing system.
- Collect and process resource usage data from multiple systems.
- Store chargeback data in a database for subsequent retrieval.
- Provide online invoices / reports with drill-down capability.
- Provide a web-based interface.
- Provide historical data to VITA for research and analysis.
- Collect input from external systems for processing and producing invoices in both online and hardcopy formats.
- Accommodate eligible customer requests to receive extracted information.
- Interface with other business systems to collect information and send information out (e.g., telecommunications billing from carriers, manpower information for IT services, PeopleSoft Account Receivable, VITA's planning and forecasting systems).
- Move from Direct Billing Services for distributed systems to consumption based collection and invoicing.
- Move from multiple rate tables, account code tables and customer contact/address tables to a single set of tables.
- Interface with asset management to obtain information for any asset-based invoicing.
- Provide Commonwealth invoicing personnel the capability to change rates from a single online interface.
- Support billing adjustments (e.g., apply credits and debits).
- Support recurring charges without re-inputting data each billing cycle.
- Handle security for granting permissions to access chargeback data.
- Allow queries by business analysts.

11.3.12.3 Commonwealth Partner Responsibilities

The Commonwealth Partners will be responsible for implementing, maintaining, and managing the Chargeback System. Project plans, cost and schedule estimates, technical specifications, and management reports will be created and maintained as documented in our Governance model. Reports on service levels will be provided to VITA. Changes to the Chargeback System will be appropriately managed to maintain the approved service levels. Service delivery coordination will be performed with the other towers, VITA, eligible customers and other appropriate third parties. Access to the chargeback system, data and records will be provided to support federal audits and audits by other regulatory entities. The software development lifecycle for the Chargeback System will follow the processes identified for Internal Applications.

VITA is responsible for identifying the chargeback system processing, invoicing, reconciliation, and reporting requirements. The Commonwealth Partners will document and maintain these requirements. Chargeback reports will be provided and invoices will be generated based on VITA's requirements. Access to the chargeback system and all functions required to administer the system will be provided to VITA.

11.3.12.4 Solution

The importance of metering and chargeback is illustrated by the references in the following figure. Effective metering enables fair billing, on-demand enablement, and identification of resource utilization.

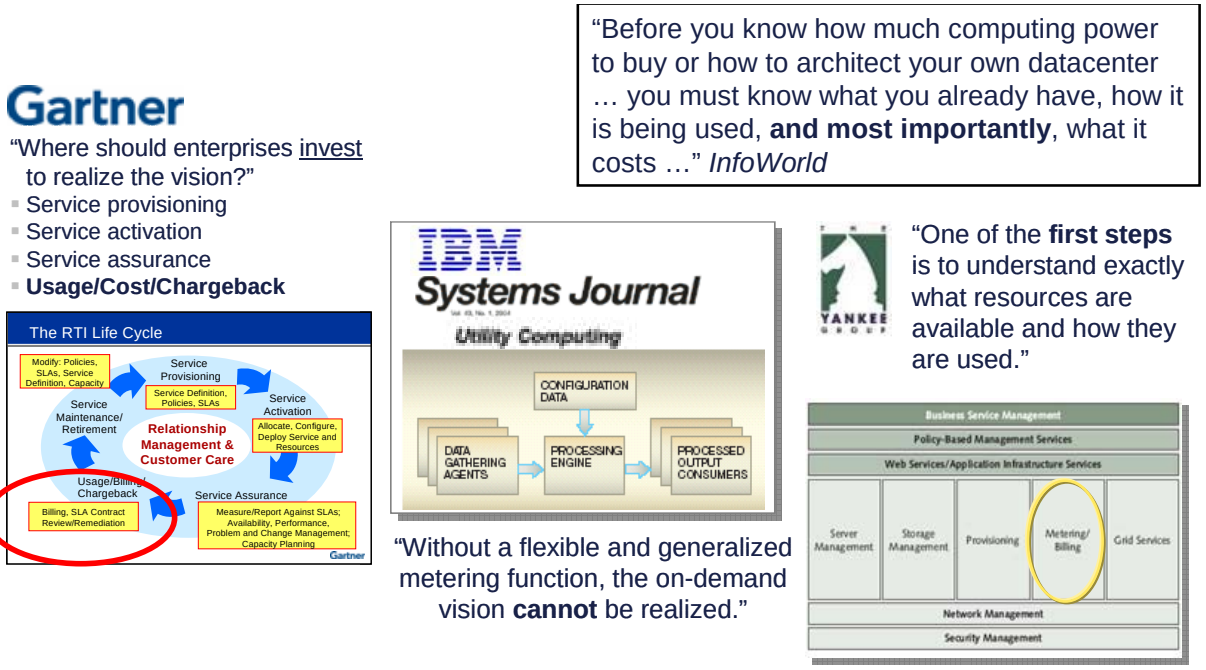

Figure 11.3.12-1 - Analysts Positions on Metering and Chargeback

A consolidated, online chargeback system will be provided to VITA by the Commonwealth Partners. The intent is to provide a single set of rate tables, account code tables, and customer contact/address tables. The end users will be provided a web-base interface to view billing information and drill down for additional detail. In addition, administrators will have a common interface for setting billing rates.

As indicated in the SOW, IBM will assist VITA in defining the chargeback architecture. A proposed chargeback approach is outlined below. This approach has been successfully implemented by IBM in other engagements of comparable or greater size.

1. A commercial billing / accounting software product (SAS IT Charge Manager coupled with SAS IT Resource Manager) will be used for chargeback billing. This web-based software applies rates and displays billing information. Drill-down capability is provided to view billing details. In addition, the ability to perform invoice adjustments (e.g. credits) each billing cycle is supported.

   The SAS IT Resource Manager assesses, manages, analyzes, and presents resource data. The data is stored into a performance data warehouse (PDB) for subsequent access for billing and invoicing. A large number of data collectors are provided by the SAS IT Resource Manager. Examples are Tivoli Netview and BMC PATROL. The ability to create other collectors is also be provided. Collectors load data in to the performance data warehouse through an extract, translate, and load (ETL) process. The SAS IT Charge Manager accesses the data for charging from the PDB. Rate models for establishing varying rates and shift differentials for discounts (e.g., by time of day) to be applied are maintained by the SAS IT Charge Manager. The Charge Manager performs the following functions:

   - Collect the data.
   - Apply charges.
   - Maintain customer information.
   - Generate invoices and reports.
   - Enter supplemental changes.
   - Administer discounts.

2. Use commercial product software (BMC Perform and Predict) for collection of server consumption data. Server resource data (e.g., CPU, storage) will be collected to determine consumption by servers or virtual servers. The collected data is supplied to the chargeback system to be stored in the PDB.

3. Mainframe consumption data collection will be collected:

   - For IBM billing, continue to use SMF records to collect information for the following resources: CPU seconds, Print (per 1000 lines), Tape Service (seconds), Tape Storage (MB/month), Disk Storage (MB/month), and Transaction Handling (1000 transactions)
   - For Unisys billing, continue to use the Unisys Exec log files, MAPPER log file, a disk log file, and STAR to collect information for the following resources: CPU seconds, Print (per 1000 lines), Tape Service (seconds), Tape Storage (MB/month), and Transaction Handling (1000 transactions).
   - Review the current VITA CSBS application for reuse to collect the IBM and Unisys resource data..
   - The collected data will be stored in the PDB

4. Provide desktop data collection.

   - Review the current VITA Direct Billing Services System application for possible reuse. Alternatively, an application may be provided to collect desktop information from the Asset Database.
   - The collected data will be stored in the PDB.

5. Provide telecommunications data collection.

- Review the current VITA TIBS application for reuse. Collect the following information from carrier bills: telephone equipment, circuits, audio services, and video services. Collect other static network circuit data and store in a flat file to the chargeback application. Use of the Asset Database to collect telecommunication resource data will also be considered.
- The collected data will be stored in the PDB.

6. Provide manpower labor billing collection.
    - Review the current VITA MACS application for reuse. Collect service type / number of hours and store in a flat file to the chargeback application. Service hours can continue to be collected from the timesheets. Alternatively, extraction of labor from call center records may be considered.
    - The collected data will be stored in the PDB.

The following figure illustrates the chargeback processing elements:

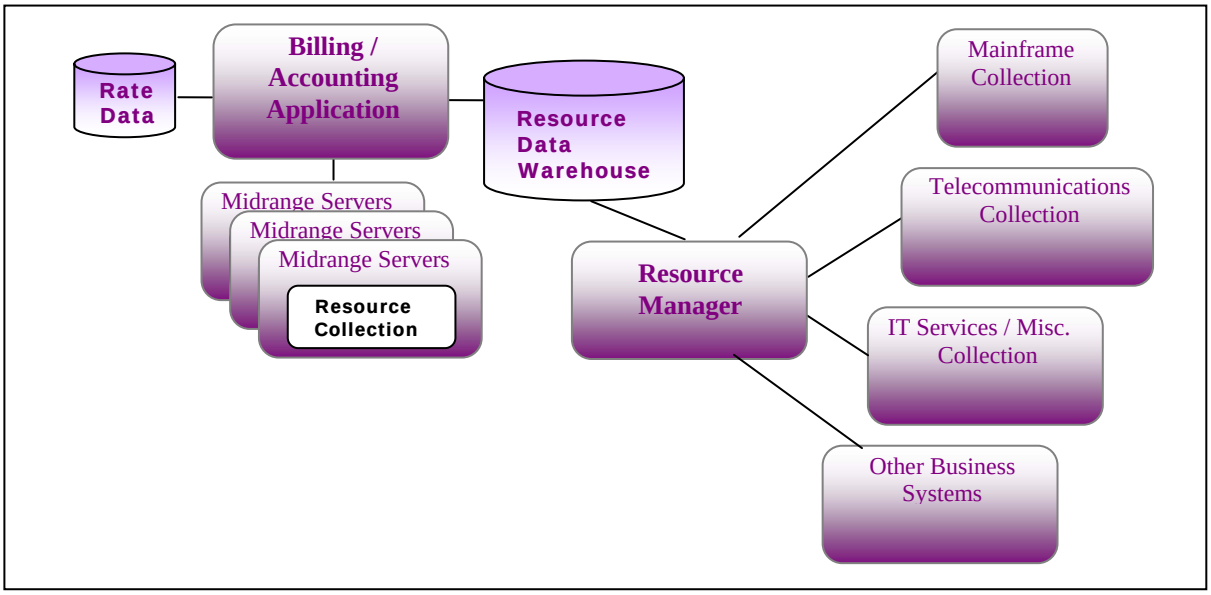

Figure 11.3.12-2 - Chargeback Processing