



# Teradata<sup>®</sup> Manager Getting Started Guide

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# Preface

## Purpose

The purpose of this guide is to help the Teradata Manager user become familiar with some of the general capabilities of this versatile product. You can go straight through the guide, chapter by chapter, or you can skip around and only use the sections applicable to your work situation. The primary goal is to introduce those working with Teradata Manager to this exciting set of tools.

## Supported Releases

This book supports the following releases:

- Teradata V2R4.1.1
- Teradata Tools and Utilities 06.01.01
- Teradata Manager 05.00.01

## Changes to Teradata Manager

The following features and enhancements are new for release 5.0 of Teradata Manager. For details on the contents of this and subsequent minor releases, please see the [Teradata Tools and Utilities Release Summary](#).

Application	Feature / Enhancement
All Applications	Teradata Manager supports Teradata RDBMS V2R4.1.1
Alerts System	<p>The Alert Policy can be set up to monitor three additional types of data:</p> <ul style="list-style-type: none"><li>• CPU Skew % - A measure of how well a session is using the system parallelism.</li><li>• Delta CPU Time - The CPU time accrued by a session during the latest monitoring interval. This can be used to identify runaway queries.</li><li>• Response Time - The time it takes for the alerts system to fetch performance data from the RDBMS. This can be used to identify system hang conditions.</li></ul> <p>The Alert Viewer displays new session skew data when monitoring a V2R4.1 system.</p> <p>Teradata Manager can alert on RDBMS event messages from an SMP Teradata RDBMS running on Windows NT or Windows 2000.</p> <p>New for 5.0.1: The Alerts policy allows specification of a non-TPA node count for the Node Down event.</p>

Application	Feature / Enhancement
General Usability	Most Teradata Manager applications save their window size and position across invocations, so that the next time you start an application, it automatically sizes and positions itself according to its previous position and dimensions.
Monitor Object	<p>New MonitorVersion read-only property allows you to programmatically determine the version of PMPC on the Teradata RDBMS.</p> <p>New GetSQL function allows you to retrieve a session's current SQL, execution step, and explain text from Teradata V2R4.1 systems.</p> <p>The Session object has been extended to provide information on session skewing.</p> <p>C++ users can access new monitor object functionality by incorporating the new TDMon.h and TDMon_i.c files into their projects.</p>
PM Data Collector	<p>New logging options allow you to save detailed performance data for nodes, vprocs, and sessions in tab-delimited files for later analysis.</p> <p>There is support for client-initiated action requests, including: Set Monitor Rates (RSS Monitoring), Set Session Rates, Abort Session, and Modify Session Account.</p>
RDBMS Setup	<p>A new interface allows you to specify perm space and spool space for both the dbcman database and the Teradata Manager user in megabytes or in gigabytes.</p> <p>An Abort button has been added to allow you to stop an in-progress setup.</p>
Remote Console	<p>There is added support for the following Teradata console utilities:</p> <ul style="list-style-type: none"> <li>• DBS Control</li> <li>• Lock Display (available in V2R4)</li> <li>• Priority Scheduler (available via remote console in V2R4.1)</li> <li>• Vproc Manager.</li> </ul>
Resource History	Enhanced reports in support of Teradata V2R4.1 coexistence (mixed platform) systems.

Application	Feature / Enhancement
Session Information	<p>The Session Details dialog contains fields for:</p> <ul style="list-style-type: none"> <li>• CPU Skew % - The degree to which CPU activity was skewed for this session.</li> <li>• Disk Skew % - The degree to which disk activity was skewed for this session.</li> </ul> <p><b>Note:</b> The CPU Skew and Disk Skew fields only show data when monitoring a V2R4.1 Teradata system.</p> <p>The following dialog boxes have been added:</p> <ul style="list-style-type: none"> <li>• Current Query - Accessed by pressing the SQL button on the Session Details dialog, this shows the SQL statements being executed by the current session. It also shows an Explain of the query and which step is currently executing.</li> <li>• Session Skew - Accessed by pressing the Skew button on the Session Details dialog, Shows detailed CPU and disk usage information for the current session.</li> </ul> <p><b>Note:</b> The Query and Skew dialogs are only available when monitoring V2R4.1 or later.</p> <p>The Set Monitor Rates, Abort Session and Modify Session Account commands can be executed in client-mode. (Previously, these commands required you to logon directly to Teradata.)</p> <p>The Local Filters support up to 100 User Names and 20 Host IDs.</p> <p>There is an immediate update selection on the Options menu.</p> <p>Reports are saved with more useful naming schemes.</p>
SNMP agent and MIB	<p>The SNMP agent and MIB support new session data available from Teradata V2R4.1.</p>
Space Usage	<p>Hierarchy report: a % Used column has been added.</p> <p>Space by Vproc report: a Skew column has been added.</p> <p>Space by Vproc for Table report: the Deviation % column is signed -- if current perm on a vproc is less than the average, then deviation is displayed as a negative number.</p> <p>Space by Vproc for Table report: Number of Cylinders and Cylinder Utilization columns have been added.</p>
SQLDC	<p>The SQL Data Collector can pick up RDBMS event messages from an SMP Teradata RDBMS running on Windows NT or Windows 2000. These messages can then be acted on by the Alerts system.</p>
Statistics Collection	<p>Spreadsheet rows containing LONER statistics are highlighted.</p>

Application	Feature / Enhancement
System Maintenance	<p>New reports based on the Teradata Access Log allow you to see activity on databases, database objects, grants, denials, etc. System Maintenance includes 6 predefined access log reports, and allows you to build customized reports with filtering on access times and on table names.</p> <p>The Reset AMP Usage dialog has been redesigned.</p>
Teradata Performance Monitor (previously PMON)	<p>The Session Details dialog contains fields for:</p> <ul style="list-style-type: none"> <li>• CPU Skew % - The degree to which CPU activity was skewed for this session.</li> <li>• Disk Skew % - The degree to which disk activity was skewed for this session.</li> </ul> <p><b>Note:</b> The CPU Skew and Disk Skew fields only show data when monitoring a V2R4.1 Teradata system.</p> <p>The following dialog boxes have been added:</p> <ul style="list-style-type: none"> <li>• Current Query - Accessed by pressing the SQL button on the Session Details dialog, this shows the SQL statements being executed by the current session. It also shows an Explain of the query and which step is currently executing.</li> <li>• Session Skew - Accessed by pressing the Skew button on the Session Details dialog, Shows detailed CPU and disk usage information for the current session.</li> </ul> <p><b>Note:</b> The Query and Skew dialogs are only available when monitoring V2R4.1 or later.</p> <p>The Set Monitor Rates, Abort Session and Modify Session Account commands can be executed in client-mode. (Previously, these commands required you to logon directly to Teradata.)</p> <p>There is a new sort option for the Sessions window: CPU Skew.</p> <p>There is a new listbox in the Filter section of the Session window that allows you to display only those sessions that are skewed towards a selected 'hot' AMP.</p> <p>Teradata Performance Monitor can be executed in client-mode without running (without even installing) the Teradata Manager Executive. No Teradata Manager profile is needed.</p>

Application	Feature / Enhancement
Visual Explain	<p>You can use Query Tags instead of Query IDs.</p> <p>The database that the Explain Plan is stored in can be specified.</p> <p>There is a new View Pad for navigating large explains.</p> <p>The user can enter a query to be explained from within Visual Explain.</p> <p>QCDs can be created and maintained using Control Center.</p> <p>The ability to find a string in the Explain or Query text.</p> <p>Comparison between specified individual steps of different queries.</p> <p>A Bulk Compare option to compare multiple queries in a batch mode.</p> <p>There is additional information provided for the explain steps.</p> <p>A large number of execution plans can be compared across QCDs and RDBMSs using Bulk Compare</p> <p>The explain text of two execution plans can be compared using Explain Text Differences.</p> <p>You can display captured vs. current statistics, indexes, and DDL schema details of the tables involved in the execution plan.</p>
WinDDI	<p>There is a Tools menu command to configure Teradata Access Logging.</p> <p>A popup list describes the account string expansion codes when creating a user. You can click in the list to insert a code at the current position in the account string.</p> <p>Hash Indexes are supported.</p> <p>There is a References report for Tables and Views.</p> <p>There are many improvements to the interface and to reports.</p> <p>New for 5.0.1: Tree Load Filter options allow you to restrict the list of DBs/Users that will initially be loaded, in order to provide a much faster load time.</p>
Wireless Device	Receive Teradata performance data on your Palm VII.

## Audience

This book is intended for system users, programmers, application programmers, and other technical personnel who will be using Teradata Manager.

## Prerequisites

You should be familiar with basic computer technology, the Teradata RDBMS, and the Microsoft Windows 2000, Windows NT, or Windows 95/98 operating system. You should have access to an installed version of Teradata Manager.

## Related Documents

### Teradata Tool and Utilities Support Publications

The general publications that support Teradata Tools and Utilities are listed below. The most recent versions of the publications are maintained on the NCR Information Products Publishing Web site. The online versions of these books will be updated as necessary to reflect any changes introduced between product releases

**Note:** In the book numbers referenced below, the first eight characters are a unique Product ID for the book, and can be used to navigate to the book online. The *mmyx* represents the publication date, where *mm* is the month, *y* is the last digit of the year, and *x* is an internal code.

Document Number	Title
B035-2029- <i>mmyx</i>	<i>Teradata Tools and Utilities Release Definition</i>
B035-2427- <i>mmyx</i>	<i>Teradata Tools and Utilities Release Summary</i>
B035-2407- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for Windows™</i>
B035-2415- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for MVS™</i>
B035-2420- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for NCR UNIX® MP-RAS</i>
B035-2422- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for VM™</i>
B035-2437- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for AIX™</i>
B035-2438- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for HP-UX®</i>
B035-2439- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for Solaris™</i>
B035-2440- <i>mmyx</i>	<i>Teradata Tools and Utilities Installation Guide for OS/390 USS™</i>
B035-1096- <i>mmyx</i>	<i>Teradata RDBMS Messages Reference</i>

### Product Related Publications

The additional publications that support Teradata Manager are listed below.

Document Number	Title
B035-2402- <i>mmyx</i>	<i>Teradata Manager Installation Guide</i>

# Technical Information on the Web

For technical support, additional information, or the latest versions of Teradata publications, you may access online information through the following NCR Web sites:

Link	Description
<a href="http://www.info.ncr.com/">http://www.info.ncr.com/</a>	A direct link to NCR Information Products Publishing library where you can view, download, or order technical documentation and CD-ROMs.
<a href="http://www.ncr.com/">http://www.ncr.com/</a>	The NCR home page provides links to numerous sources of information about Teradata. Among the links provided are sites that deal with the following subjects: <ul style="list-style-type: none"> <li>• Technical support</li> <li>• Customer education courses</li> <li>• Case studies of customer experiences with Teradata</li> <li>• Third party industry analyses of Teradata data warehousing products</li> <li>• White papers</li> <li>• Online periodicals</li> </ul>

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# List of Acronyms

The following acronyms, listed in alphabetical order, are used in this book:

Acronym	Definition
ASCII	American National Standard Code for Information Interchange
BTEQ	Basic Teradata Query facility
CLI	Call-Level Interface
CLI2	Call-Level Interface Version2, also called CLI for Windows
CPU	Central Processing Unit
DBA	Database Administrator
DLL	Dynamic Link Library
E-CLI	Extended Call-Level Interface
ISO	International Standards Organization
MIB	Management Information Base
MPP	Massively Parallel Processing
ODBC	Open Database Connectivity
PPP	Point-to-Point Protocol
PM & PC	Performance Monitor and Production Controls
QCD	Query Capture Database
QCF	Query Capture Facility
RDBMS	Relational Database Management System
RTF	Rich Text File
SMP	Symmetric Multi-Processing
SNMP	Simple Network Management Protocol
SSO	Single Sign On
SQL	Structured Query Language
TCP/IP	Transmission Control Protocol/Internet Protocol
TDFid	Teradata Director Program ID, assigned by the system administrator
TTU	Teradata Tools and Utilities
WinDDI	Windows Data Dictionary Interface

# Contents

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## Preface

Purpose .....	i
Supported Releases .....	i
Changes to Teradata Manager.....	i
Audience.....	v
Prerequisites.....	vi
Related Documents .....	vi
Technical Information on the Web.....	vii
List of Acronyms .....	viii

---

## Chapter 1:

### The Basics

Introducing the Executive .....	1-2
The Executive Menu Bar .....	1-3

---

## Chapter 2:

### Getting Teradata Manager Running

Create the Teradata Manager Databases, Tables, and Macros .....	2-2
Add Teradata Manager Users .....	2-5
Create a Default Profile for Teradata Manager.....	2-7
Start The Executive.....	2-9
Synchronize Teradata Manager (PC) Time With the RDBMS .....	2-11

---

## Chapter 3:

### Starting Teradata Manager Applications

Setting Up Teradata Manager Applications.....	3-2
Application Names .....	3-2
Executable File Names.....	3-3
Parameters .....	3-3
Dependencies .....	3-4
Starting Applications Manually (Menustart) .....	3-5
Starting Applications Automatically (Autostart) .....	3-7
Running Applications Under the Windows 2000/NT Command Shell.....	3-9

---

**Chapter 4:**  
**Creating Charts and Reports**

Create Summary Resource Usage Charts ..... 4-2

Create Historical Resource Usage Reports ..... 4-4

Create Logon Statistics Reports ..... 4-5

Create Performance Charts Using Teradata Performance Monitor ..... 4-6

Create Performance Charts Using DUC ..... 4-7

Create Locking Logger Reports ..... 4-8

---

**Chapter 5:**  
**Performing Administrative Tasks**

Administer Sessions ..... 5-2

Display and Administer Statistics for Tables and Databases ..... 5-4

Monitor and Move Database Space ..... 5-5

Maintain and Monitor System Tables ..... 5-8

Create Databases, Tables and Users ..... 5-9

---

**Chapter 6:**  
**The Performance Monitor Object**

Introduction to the Performance Monitor Object ..... 6-2

Application Distribution Requirements ..... 6-4

The Object Model ..... 6-5

Object Model Error Messages ..... 6-12

---

**Chapter 7:**  
**Teradata Manager Alerts**

Set Up an Alert Policy ..... 7-2

Start the Alert Control Module ..... 7-14

Display the Performance Status of the RDBMS ..... 7-15

---

**Chapter 8:**  
**Visual Explain**

Setting Up the Query Capture Database ..... 8-2

    Setting Up a New Query Capture Database ..... 8-2

    Upgrading an Existing Query Capture Database ..... 8-2

Displaying an Execution Plan ..... 8-4

    Step 1: Connecting to the Teradata RDBMS ..... 8-4

    Step 2: Inserting an Execution Plan Into the QCD ..... 8-4

Step 3: Viewing the Execution Plan ..... 8-5

Entering a Query and Viewing Its Execution Plan..... 8-6

Comparing Execution Plans Visually ..... 8-7

    Step 1: Loading the Execution Plans..... 8-7

    Step 2: Creating the Visual Comparison ..... 8-8

    Step 3: Comparing Steps in Execution Plans ..... 8-8

Displaying Differences in Explain Text..... 8-9

---

**Appendix A:  
The Teradata Manager Applications**

Program Icon - Executive ..... A-2

Program Icon - Profile Builder..... A-3

Tools Menu - Alert Control Module..... A-4

Tools Menu - Alert Policy Editor ..... A-5

Tools Menu - Alert Viewer..... A-6

Tools Menu - BTEQWIN ..... A-7

Tools Menu - DMTEQ..... A-8

Tools Menu - RDBMS Setup ..... A-9

Tools Menu - Time Synchronizer ..... A-10

Tools Menu - Visual Explain..... A-11

Tools Menu - WinDDI ..... A-12

Performance Menu - Dynamic Utilization Charting (Using PM & PC) ..... A-13

Performance Menu - Performance Data Analyzer ..... A-14

Performance Menu - PM Data Collector ..... A-15

Performance Menu - Teradata Performance Monitor ..... A-17

Performance Menu - Resusage Data Collector..... A-20

Production Control Menu - Configuration Check..... A-21

Production Control Menu - Error Log Analyzer ..... A-22

Production Control Menu - Locking Logger..... A-23

Production Control Menu - LogOnOff Usage..... A-24

Production Control Menu - Remote Console..... A-25

Production Control Menu - Resource History ..... A-27

Production Control Menu - Session Information ..... A-29

Production Control Menu - Space Usage..... A-31

Production Control Menu - Statistics Collection ..... A-32

Production Control Menu - System Maintenance ..... A-33

Utility Program - SQL Data Collector ..... A-34

Utility Program - Log Change ..... A-35

Utility Program - Log Delete ..... A-36

Utility Program - TM Server ..... A-37

---

<b>Index</b> .....	Index-1
--------------------	---------



## List of Figures

Figure 3-1	Menustart Setup Dialog for Alert Control Module .....	3-5
Figure 3-2	Menustart Setup Dialog for Session Information .....	3-6
Figure 3-3	Autostart Setup Dialog for Log Change .....	3-7
Figure 3-4	Autostart Setup Dialog for Time Synchronizer.....	3-8
Figure 3-5	Command Shell Setup Example.....	3-9





# List of Tables

Table 3-1 Application Names vs. File Names ..... 3-2



  
**Chapter 1:**

# The Basics

This chapter describes the Executive, which establishes the working environment for running Teradata Manager applications. This chapter covers the following.

- [“Introducing the Executive”](#) describes the uses of this application in the Teradata Manager suite.
- [“The Executive Menu Bar”](#) introduces you to the program’s many menu options.

# Introducing the Executive

The Profile Builder and the Executive establish the working environment for running Teradata Manager applications. The Profile Builder allows you to tailor your Teradata Manager default options, while the Executive provides the interface for working with the Teradata Manager applications themselves.

## Tailor Your Teradata Manager Environment With Profile Builder

Using the Profile Builder application, you can customize many aspects of the working environment, including the name of the RDBMS, the applications that are accessible through the Executive pull-down menus, program autostart information, and the names and locations of various log files. You can create as many profiles as necessary to accommodate the various combinations of activities performed at your site.

## Launch Teradata Manager Applications With the Executive

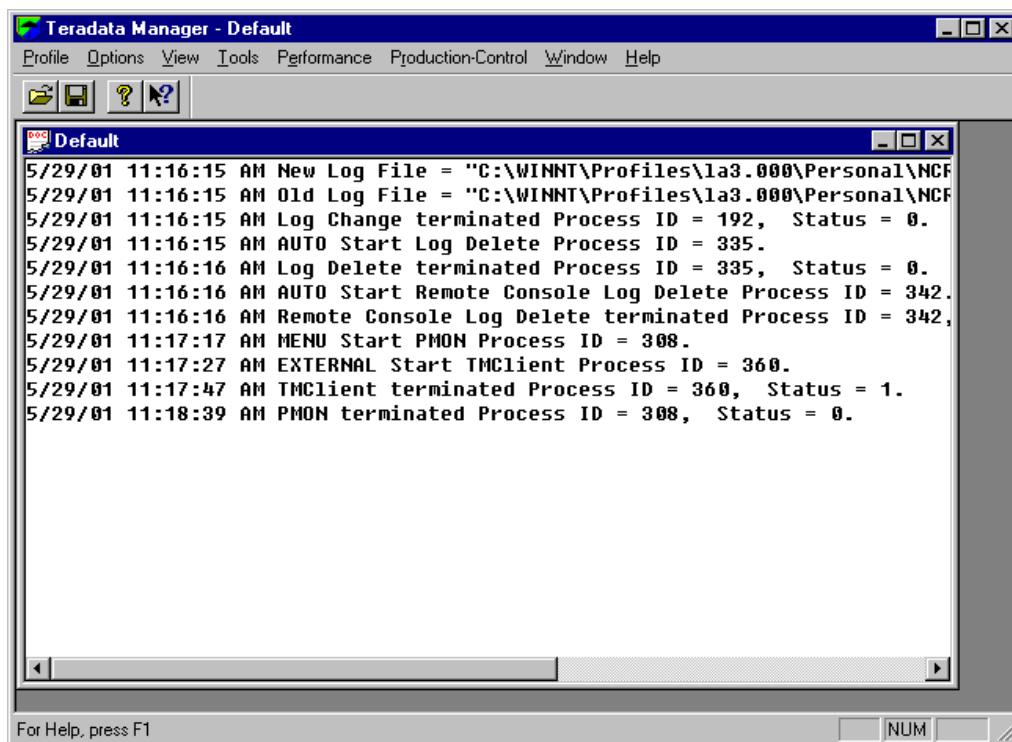
Typically, you will start Teradata Manager by clicking on its shortcut icon, which will in turn start the Executive application. The Executive provides you with facilities for starting other Teradata Manager applications, either by using pull-down menus, or by entering an executable name into the Run dialog.

## Enable and Disable Autostart Applications

Teradata Manager also provides the option of having applications start automatically when the Executive is launched, or at selected times during the day or week. The Executive provides flexible autostart facilities for launching any program you can normally access through Windows.

## The Executive Menu Bar

The Executive window looks like this:



The menu bar runs along the top of the Executive window and contains the names of the Executive pull-down menus.

## The Profile Menu

The Profile menu is the first one on the menu bar (going from left to right). The Profile menu provides options for setting up the application menus and changing other profile options, running applications, and exiting Teradata Manager.

Select This Menu Item...	To...
Menu Setup	Add, change, delete, or rearrange the dynamic menu items on the Executive menu bar.
Menustart Setup	Add, change, delete, or rearrange the menustart applications listed under a dynamic menu item on the Executive menu bar.
Autostart Setup	Add, change, reschedule, or delete autostart applications.

Select This Menu Item...	To...
Run	Run a program through a command-line entry.
Save	Save the changes you have made to a profile.
Log File	Add a note to the log file or start a new log file.
Default Logon Info	Change the logon information.
Exit	Exit Teradata Manager.

## The Options Menu

The Options menu is the next one over on the menu bar. The Options menu allows you to set overall Teradata Manager preferences, font styles and sizes, select profiles, and globally enable/disable the autostart function.

Select This Menu Item...	To...
Preferences	Tailor the working environment of the Teradata Manager Executive.
Font	Change the font, style and size of the characters displayed in the selected (foreground) profile window.
Profiles	Select one of the following: <ul style="list-style-type: none"> <li>• <b>Modify Active Profiles</b> to change the active profiles in your Teradata Manager session</li> <li>• <b>Select Foreground</b> to select a specific active profile as the foreground profile</li> <li>• <b>Toggle Foreground</b> to toggle the active profiles to the foreground position, in sequence.</li> </ul>
Global Autostart Enable	Enable the autostart capability for all profiles.
Global Autostart Disable	Disable the autostart capability for all profiles.

## The View Menu

The View Menu allows you to toggle the toolbar and status bar on and off.

Select This Menu Item...	To...
Toolbar	Toggle the toolbar so that it is visible or not.
Status Bar	Toggle the status bar so that it is visible or not.

## The Tools Menu

This menu gives you access to the Tools set of Teradata Manager applications.

Select This Menu Item...	To...
Alert Control Module	Initiate the alerting process for Teradata Manager.
Alert Policy Editor	Define the actions that should take place when specific events occur on one or more Teradata machines.
Alert Viewer	Provides a single view point on the overall system performance for one, or multiple, Teradata RDBMS systems.
BTEQWIN	Load and extract data from the Teradata RDBMS using a version of BTEQ with a windows interface.
DMTEQ	Load and extract data from the Teradata RDBMS.
RDBMS Setup	Set up the RDBMS to run Teradata Manager and create or modify a Teradata Manager user.
Time Synchronizer	Synchronize your PC clock with the Teradata RDBMS.
Visual Explain	Generate graphic representations of the execution plans chosen by the Teradata RDBMS Optimizer to access data. You can compare execution plans, and even make comparisons across databases.
WinDDI	Perform database administration tasks on the Teradata RDBMS computer.

## The Performance Menu

This menu gives you access to the Performance set of Teradata Manager applications.

Select This Menu Item...	To...
DUC (Using PMPC)	Display near real-time Teradata RDBMS resource usage data (using Performance Monitor data) on your Teradata Manager PC in chart format.
Performance Data Analyzer	Summarize Teradata RDBMS resource usage data in chart format using data from the resource usage tables on the Teradata RDBMS.
PM Data Collector	Collect Teradata RDBMS performance data, while minimizing the impact of obtaining such data from the RDBMS.

Select This Menu Item...	To...
Teradata Performance Monitor	Analyze the performance of a Teradata machine and to perform related control functions on that machine.
Resusage Data Collector	Collect data from tables on the Teradata RDBMS and write the data to files and memory objects on your Teradata Manager PC.

## The Production Control Menu

This menu gives you access to the Production Control set of Teradata Manager applications

Select This Menu Item...	To...
Configuration Check	Collect configuration information related to a Teradata RDBMS.
Error Log Analyzer	View the error log system tables on the Teradata RDBMS.
Locking Logger	Determine whether system performance has been degraded by an inappropriate mix of SQL statements using a table of information extracted from the transaction logs.
LogOnOff Usage	Present daily, weekly, and monthly logon statistics based on information in the DBC LOGONOFF view on the Teradata RDBMS.
Remote Console	Run many of the Teradata RDBMS console utilities from your Teradata Manager PC.
Resource History	View or print reports showing the maximum and average usage of Logical Disk Vprocs (LDVs), AMP Vprocs, and PE Vprocs on the Teradata RDBMS. Run NODE usage macros on the associated Teradata RDBMS. Display data utilization for Teradata coexist platforms.
Session Information	Monitor, identify and abort sessions on the Teradata RDBMS.
Space Usage	Monitor disk space utilization and move permanent space from one database to another.
Statistics Collection	Create, drop and update statistics for the Teradata RDBMS.
System Maintenance	Maintain and monitor system tables on the Teradata RDBMS. Provides Access Log Audit reporting.

## The Window Menu

The Window Menu allows you to open new application windows, arrange the windows on your screen, and select which window to make active from a list of open windows.

Select This Menu Item...	To...
New Window	Open a new log window.
Cascade	Arrange the open windows in a cascading pattern.
Tile	Arrange the open windows in a tile pattern.
Arrange Icons	Clean up the icons on your screen.
Profile Name	Select a window and make it active.

## The Help Menu

The Help Menu allows you to bring up the application help, get information on using the help system, and get version information about the open application.

Select This Menu Item...	To...
Help Topics	Open the application help file.
Using Help	Get information on using the help system.
About Teradata Manager Executive	Get version information about the application.

## Ready to Go

Now that you have become familiar with the Executive interface, you are ready to move on to the next chapter where you will create a profile, then begin using Teradata Manager.





**Chapter 2:**

# Getting Teradata Manager Running

The purpose of this chapter is to help you get Teradata Manager running. You will learn how to:

- [Create the Teradata Manager Databases, Tables, and Macros](#)
- [Add Teradata Manager Users](#)
- [Create a Default Profile for Teradata Manager](#)
- [Start The Executive](#)
- [Synchronize Teradata Manager \(PC\) Time With the RDBMS](#)

## Create the Teradata Manager Databases, Tables, and Macros

Once Teradata Manager has been installed, the Teradata RDBMS needs to be set up with the databases, tables, and macros necessary to run Teradata Manager. The RDBMS Setup application will assist you in this task.

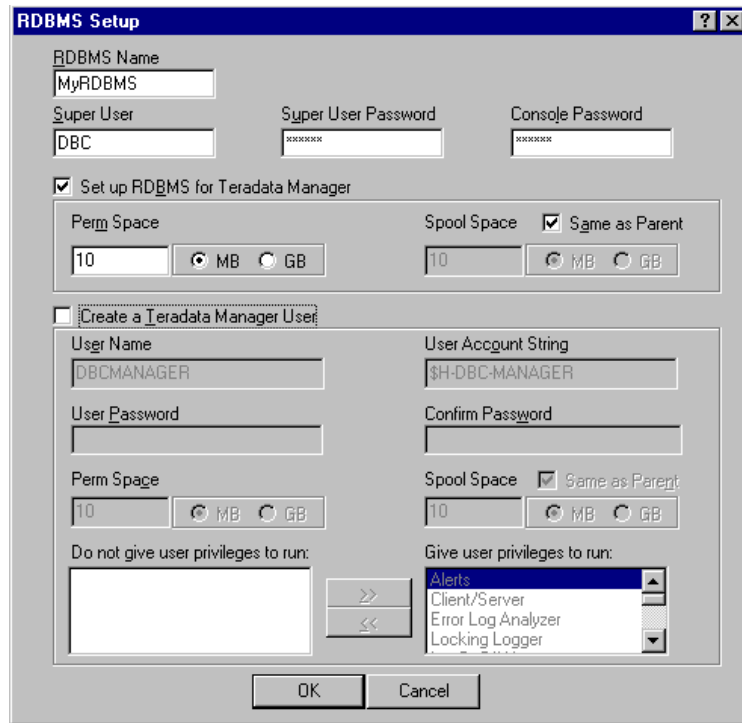
### **How does it work?**

RDBMS Setup uses your parameters to generate SQL statements for creating and modifying databases/tables/macros on the specified RDBMS. Each SQL statement and whether it was submitted successfully or unsuccessfully is logged in the main window of the application.

## Procedure

To set up the Databases, Tables, and Macros required by Teradata Manager, follow this procedure:

Step	Action
1	Start RDBMS Setup by selecting <i>Start &gt; Programs &gt; Teradata Manager 5.0.1 &gt; RDBMS Setup</i> .
2	From the RDBMS Setup menu bar, select <i>File &gt; RDBMS Setup</i> . This displays the RDBMS Setup dialog box.



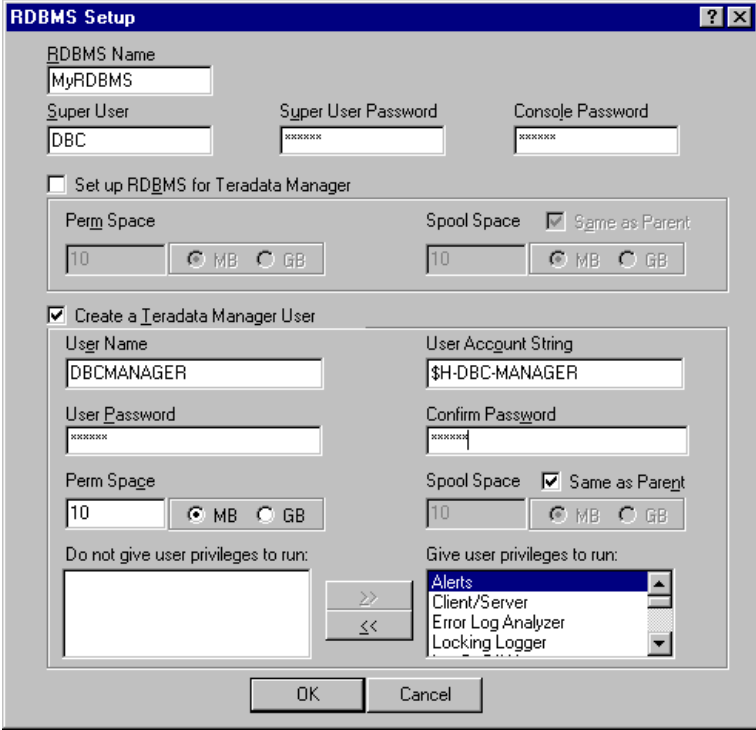
Step	Action
3	<p>Fill in the fields as follows:</p> <ul style="list-style-type: none"> <li>• <i>RDBMS Name</i> is the TDPid of the Teradata RDBMS.</li> <li>• <i>Super User</i> is the name of the primary administrator for the database. This defaults to DBC.</li> <li>• <i>Super User Password</i> is the string the primary administrator enters to access the database.</li> <li>• <i>Console Password</i> is the console user's password. If the console user already exists, then RDBMS Setup will logon to the RDBMS as 'console', using the password that you supply. If the console user does not exist, the 'console' user is created and assigned the supplied password.</li> <li>• <i>Set up RDBMS for Teradata Manager</i> must be checked.</li> <li>• <i>Perm Space</i> is the amount of permanent space allocated to the new RDBMS.</li> <li>• <i>Spool Space</i> is the amount of spool space allocated to the new RDBMS. If you want the new RDBMS to inherit the same amount of space as its parent, check the <i>Same as Parent</i> option.</li> <li>• <i>Create a Teradata Manager User</i> allows you to create a user. For the sake of simplicity, un-check this item (this topic is covered in the next procedure).</li> </ul>
4	<p>Click <b>OK</b> to run RDBMS Setup with your parameters. A log of the program results are displayed in the main window of the application.</p>

# Add Teradata Manager Users

Once the Teradata Manager databases, tables, and macros have been set up, you can add users, giving them the various permissions necessary to run the Teradata Manager applications. The RDBMS Setup application will assist you in this task.

## Procedure

To add a user with permission to run Teradata Manager applications, follow this procedure:

Step	Action
1	Start RDBMS Setup by selecting <i>Start &gt; Programs &gt; Teradata Manager 5.0.1 &gt; RDBMS Setup</i> .
2	From the RDBMS Setup menu bar, select <i>File &gt; RDBMS Setup</i> . This displays the RDBMS Setup dialog box.
	
3	Select the options as follows: <ul style="list-style-type: none"> <li>• Deselect the <i>Set up RDBMS for Teradata Manager</i> option.</li> <li>• Select the <i>Create a Teradata Manager User</i> option.</li> </ul>

Step	Action
4	<p>Fill in the fields as follows:</p> <ul style="list-style-type: none"> <li>• <i>RDBMS Name</i> is the TDPid of the Teradata RDBMS.</li> <li>• <i>Super User</i> is the name of the primary administrator for the database. This defaults to DBC.</li> <li>• <i>Super User Password</i> is the string the primary administrator enters to access the database.</li> <li>• <i>Console Password</i> is the console user's password. If the console user already exists, then RDBMS Setup will logon to the RDBMS as 'console', using the password that you supply. If the console user does not exist, the 'console' user is created and assigned supplied password.</li> <li>• <i>Set up RDBMS for Teradata Manager</i> must be unchecked.</li> <li>• <i>User Name</i> is the login name you wish to give the Teradata Manager user.</li> <li>• <i>User Account String</i> is the RDBMS related account string for the new user.</li> <li>• <i>User Password</i> is the string the user enters to access Teradata Manager.</li> <li>• <i>Confirm Password</i> is the same as the User Password.</li> <li>• <i>Perm Space</i> is the amount of permanent space allocated to the new user. Enter the desired value.</li> <li>• <i>Spool Space</i> is the amount of spool space allocated to the new user. Enter the desired value. If you want the new user to inherit the same amount of space as its parent, check the <i>Same as Parent</i> option.</li> <li>• The user will be able to run all applications listed in the <i>Give user privileges to run</i> box. To move applications from one box to another, highlight them, then click the arrow pointing towards the box you want to move them to.</li> </ul>
5	<p>Click <b>OK</b> to run RDBMS Setup with your parameters. A log of the program results are displayed in the main window of the application.</p>

# Create a Default Profile for Teradata Manager

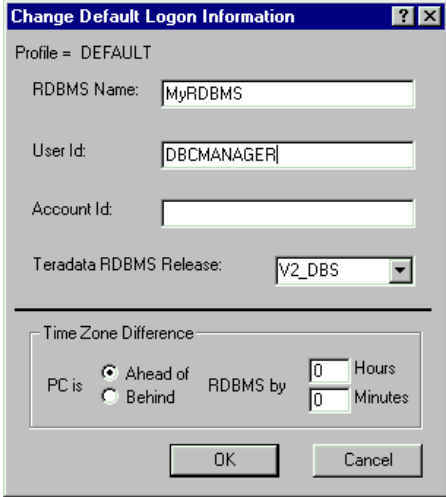
Before running Teradata Manager, you need to create a profile. The function of the profile is to configure Teradata Manager for a specific type of monitoring activity. This ability to create custom configurations provides an effective way for you to use Teradata Manager in various operational situations. For example:

- If you need to access more than one Teradata RDBMS, you can define different profiles for each database.
- If you need more than one person or group of people to use Teradata Manager, you can define different profiles for each person or group.
- If your operational needs change on a regular basis, or from one shift to another, you can define different profiles for each shift.

## Procedure

To create a default profile that will allow you to start Teradata Manager Executive and access the desired applications, follow this procedure:

Step	Action
1	Start Profile Builder by selecting <i>Start &gt; Programs &gt; Teradata Manager 5.0.1 &gt; Profile Builder</i> .
2	From the Profile Builder menu bar, select <i>Profile &gt; Default</i> . Profile Builder creates a new default profile, and adds the profile window as the currently selected (foreground) profile in the Profile Builder window.  <b>Note:</b> If you already have a profile named DEFAULT, Teradata Manager displays a message asking if you want to overwrite it.

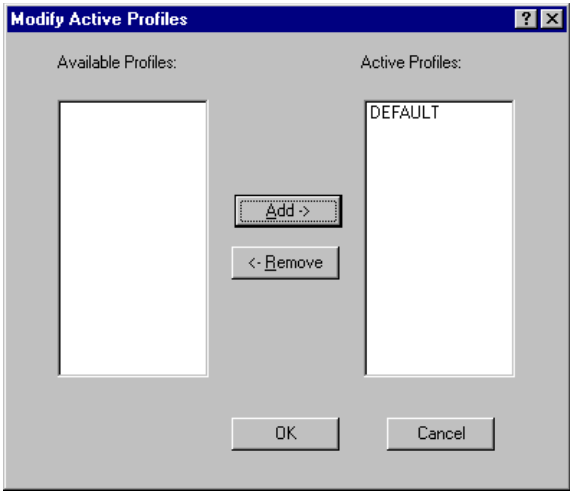
Step	Action
3	<p>Select <i>Profile &gt; Default Logon Info</i> from the menu bar. This displays the Change Default Logon Information dialog box.</p> 
4	<p>Fill in the fields as follows:</p> <ul style="list-style-type: none"> <li>• <i>RDBMS Name</i> is the TDPid of the Teradata RDBMS.</li> <li>• <i>User Id</i> is the default user identifier for the profile. If your site supports the SSO (Single Sign On) feature, you may leave this field blank.</li> <li>• <i>Account Id</i> is optional account information.</li> <li>• <i>Teradata RDBMS Release</i> provides a list box to select the release version of the software running on the Teradata RDBMS.</li> <li>• Use the <i>Ahead of</i> or <i>Behind</i> option buttons and the <i>Hours</i> and <i>Minutes</i> fields to specify any system time differences between your Teradata Manager PC and the Teradata RDBMS. If there is no system time difference, enter 0 in the <i>Hours</i> and <i>Minutes</i> fields.</li> </ul>
5	<p>Select <i>Profile &gt; Save</i> from the menu bar before exiting Profile Builder to save the new default profile.</p>

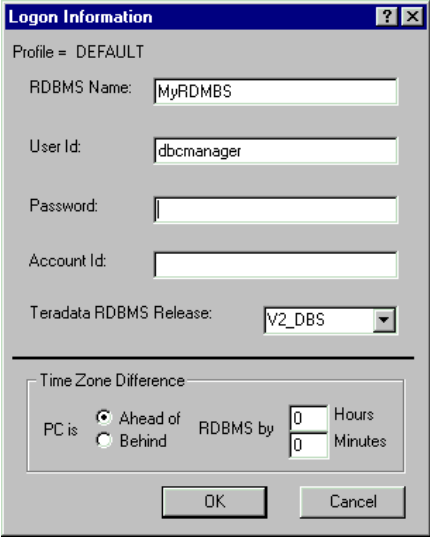
# Start The Executive

Now that all the necessary pieces have been set up, you can start the Teradata Manager Executive.

## Procedure

To start the Teradata Manager Executive, follow this procedure:

Step	Action
1	<p>Start the Executive by selecting <i>Start &gt; Programs &gt; Teradata Manager 5.0.1 &gt; Teradata Manager</i>. This displays the Modify Active Profiles dialog box.</p> 
2	<p>Move the profile DEFAULT from the <i>Available Profiles</i> box to the <i>Active Profiles</i> box by first highlighting the item, then clicking <b>Add</b>. This will cause the Executive to run the DEFAULT profile when it starts.</p>

Step	Action
3	<p>Click <b>OK</b>. This displays the Logon Information dialog box.</p> 
4	<p>The fields appear with the DEFAULT profile parameters. You may make any changes by filling in the fields as follows:</p> <ul style="list-style-type: none"> <li>• <i>RDBMS Name</i> is the TDPid of the Teradata RDBMS.</li> <li>• <i>User Id</i> is the default user identifier for the profile. If your site supports SSO (Single Sign On), you may leave this field blank.</li> <li>• <i>Password</i> is the login password for the User Id. If your site supports SSO, you may leave this field blank.</li> <li>• <i>Account Id</i> is optional account information.</li> <li>• <i>Teradata RDBMS Release</i> provides a list box to select the release version of the software running on the Teradata RDBMS.</li> <li>• Use the <i>Ahead of</i> or <i>Behind</i> option buttons and the <i>Hours</i> and <i>Minutes</i> fields to specify any system time differences between your Teradata Manager PC and the Teradata RDBMS. If there is no system time difference, enter 0 in the <i>Hours</i> and <i>Minutes</i> fields.</li> </ul>
5	<p>Click <b>OK</b> to complete the logon process.</p>

**Note:** If you plan to use single sign-on from Teradata Manager applications on Windows NT 4.0 or Windows 9x and your domain controller is a Windows 2000 server, then make sure the domain is operating in mixed mode. For more information, see Microsoft documentation on domain modes.

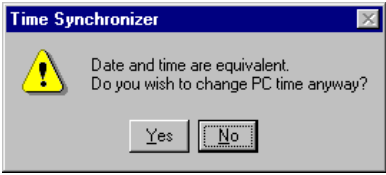
## Synchronize Teradata Manager (PC) Time With the RDBMS


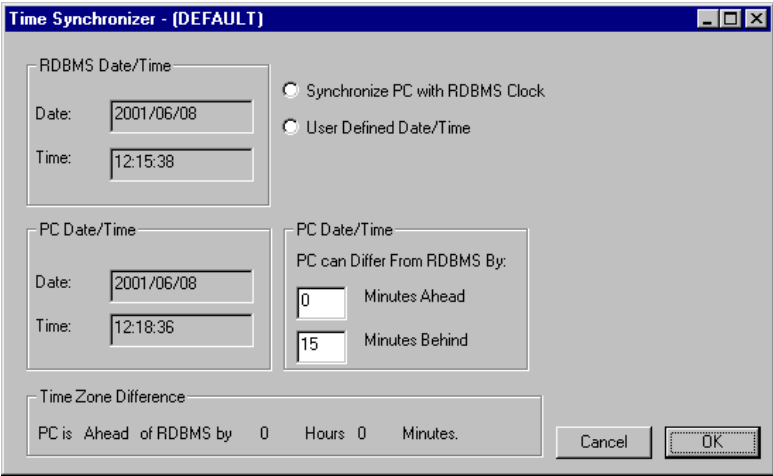
When working with Teradata Manager, it is important that the local clock on your PC is synchronized with the clock on the Teradata RDBMS. The Time Synchronizer application takes care of this task.

**Note:** You must have permission to change the PC time in order to run this application.

### Procedure

To synchronize your PC time with the Teradata RDBMS time, follow this procedure:

Step	Action
1	Start the Executive by selecting <i>Start &gt; Programs &gt; Teradata Manager 5.0.1 &gt; Teradata Manager</i> , and log on to the Teradata RDBMS you will be working with. See <a href="#">“Start The Executive” on page 2-9</a> for instructions.
2	<p>Select <i>Tools &gt; Time Synchronizer</i> from the Executive menu bar. Time Synchronizer starts in a minimized mode, and after a few moments, displays one of the following dialogs.</p> <p>If your PC time is within the allowable limit set up in Time Synchronizer, this dialog box is displayed:</p>  <p>If you see this dialog box, click <b>No</b> to close it. Time Synchronizer will terminate with no actions taken.</p>

Step	Action
<p><b>3</b></p>	<p>If your PC time is <i>not</i> within the allowable limit set up in Time Synchronizer, this dialog box is displayed:</p>  <p>Click <b>Yes</b> to display the following dialog box.</p> 
<p><b>4</b></p>	<p>The fields display the date and time as they are set on the two platforms, as well as the allowable time difference. Fill in the fields as follows:</p> <ul style="list-style-type: none"> <li>• Select <i>Synchronize PC with RDBMS Clock</i> to automatically set your PC to the RDBMS date/time.</li> <li>• Select <i>User Defined Date/Time</i> if you want to change the PC settings, but do not want them set exactly the same as the RDBMS date/time. When you make this selection, date and time input fields appear which you must then fill in.</li> <li>• The settings in the <i>PC Date/Time</i> area allow you to set the acceptable limits (ahead and behind) the PC may be from the RDBMS clock before you are warned by Time Synchronizer.</li> </ul>
<p><b>5</b></p>	<p>Click <b>OK</b>. Time Synchronizer will terminate after setting the PC time and defined limits as you requested.</p>

  
**Chapter 3:**

# Starting Teradata Manager Applications

This chapter contains information on running the Teradata Manager applications. This chapter contains sections on:

- [Setting Up Teradata Manager Applications](#)
- [Starting Applications Manually \(Menustart\)](#)
- [Starting Applications Automatically \(Autostart\)](#)
- [Running Applications Under the Windows 2000/NT Command Shell](#)

# Setting Up Teradata Manager Applications

The menu items at the top of the Executive window are associated with the selected profile. For example, the Default profile has the Tools, Performance, and Production-Control menu items. (The Profile, Options, and Window menu items are common to all profiles.) Pulling down each of these menus displays applications that you can select to start

## Application Names

Each Teradata Manager application is identified by its program executable file name and an *application name*. The application name is the name by which the executable is referenced in this guide, in profiles, and on menus. You can rename an application, for example, to more easily identify it with an operation. The maximum length of an application name is 30 characters. You specify the name of an application in the Application Name field on the Autostart or Menustart setup dialog of either the Executive or Profile Builder. A cross-reference of executable file names to application names is shown in [Table 3-1](#).

Table 3-1 Application Names vs. File Names

Application Name	Executable File Name
Alert Control Module	ACM.EXE
Alert Policy Editor	APE.EXE
Alert Viewer	ALERT.EXE
Configuration Check	CCHK.EXE
PM Data Collector	TMDATCOL.EXE
SQL Data Collector	SQLDC.EXE
DMTEQ	DMTEQ.EXE
Dynamic Utilization Charting (using PM & PC)	PMDUC.EXE
Error Log Analyzer	ELA.EXE
Locking Logger	LOCK.EXE
Log Change	LOGCHG.EXE
Log Delete	LOGDEL.EXE
LogOnOffUsage	LOGUSE.EXE
Performance Data Analyzer	PDA.EXE
Teradata Performance Monitor	PMONV2.EXE

Table 3-1 (Continued) Application Names vs. File Names

Application Name	Executable File Name
Profile Builder	PROBUILD.EXE
RDBMS Setup	DBSSETUP.EXE
Remote Console	RCONS.EXE
Resource History	HISTORY.EXE
Resusage Data Collector	RDC.EXE
Session Information	SI.EXE
Space Usage	SPACE.EXE
Statistics Collection	STAT.EXE
System Maintenance	SM.EXE
BTEQWIN	BTEQWIN.EXE
Time Synchronizer	TIMESYNC.EXE
TMCLIENT	TMCLIENT.EXE
TMSERVER	TMSERVER.EXE
Visual Explain	VECOMP.EXE
WinDDI	WINDDI.EXE
Wireless	DISTSrv.EXE

## Executable File Names

The executable file name for a Teradata Manager application is the name of the program file for the application. Like the application name, the executable file name is requested when setting up an application to run under the Executive. You enter the executable file name in the Execution Path field on the Autostart or Menustart Setup dialog of either the Executive or Profile Builder. The full path is not required unless the application is user-supplied and is in a directory other than the one specified in the search path.

Names for applications that are renamed can be determined by the executable file name. A cross-reference of executable file names to application names is shown in [Table 3-1](#).

## Parameters

Parameters specify the options for running some applications. Parameters are normally required when setting up an application to run in batch mode.

You enter the parameters for an application in the Parameters field on the Autostart or Menustart Setup dialog of either the Executive or Profile Builder.

## Setting Up Teradata Manager Applications

Some applications allow using substitutable parameters. For example, you can use `%PROFILE%` to indicate the name of an associated profile, or `%PROF8%` to indicate the first eight characters of the associated profile name. For additional information about parameters refer to the Profile Builder online help.

## Dependencies

Most dependencies for running applications are handled by Teradata Manager. Exceptions are described in the associated online help for the application. However, not all dependencies related to the configuration of data files are handled by Teradata Manager. We recommend that you do not move any Teradata Manager files unless you know it is safe to do so.

## Starting Applications Manually (Menustart)

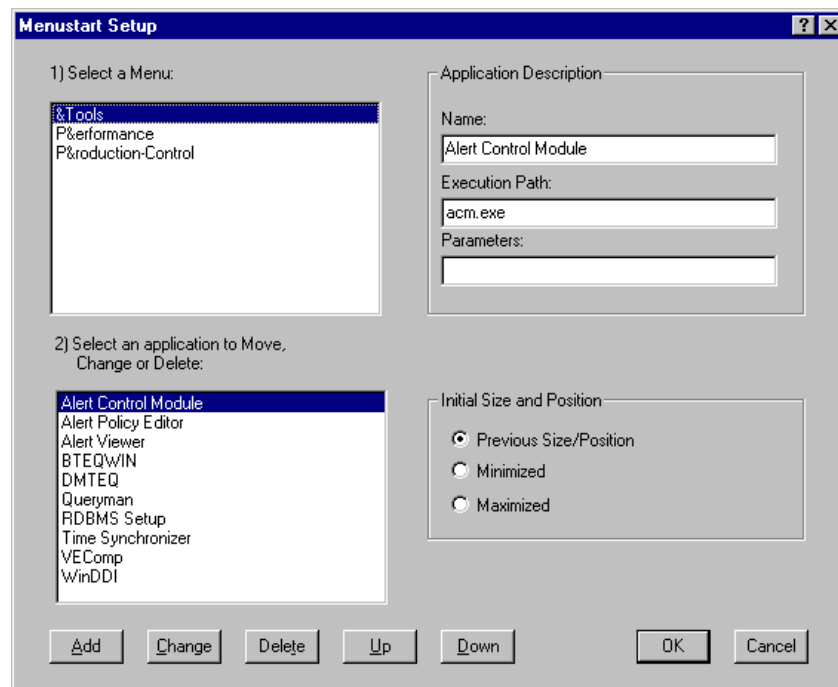
Use the Menustart Setup dialog under either the Executive or Profile Builder to set up menustart applications. From the Menustart Setup dialog you can specify:

- The menu in which an application is to appear
- The name associated with the application
- The execution path for the application
- Any parameters for the application
- The initial size and position of the application window

Select the Menustart Setup command from the Profile menu of either the Executive or Profile Builder to open the Menustart Setup dialog. The procedure for completing the dialog is described in the Profile Builder online help.

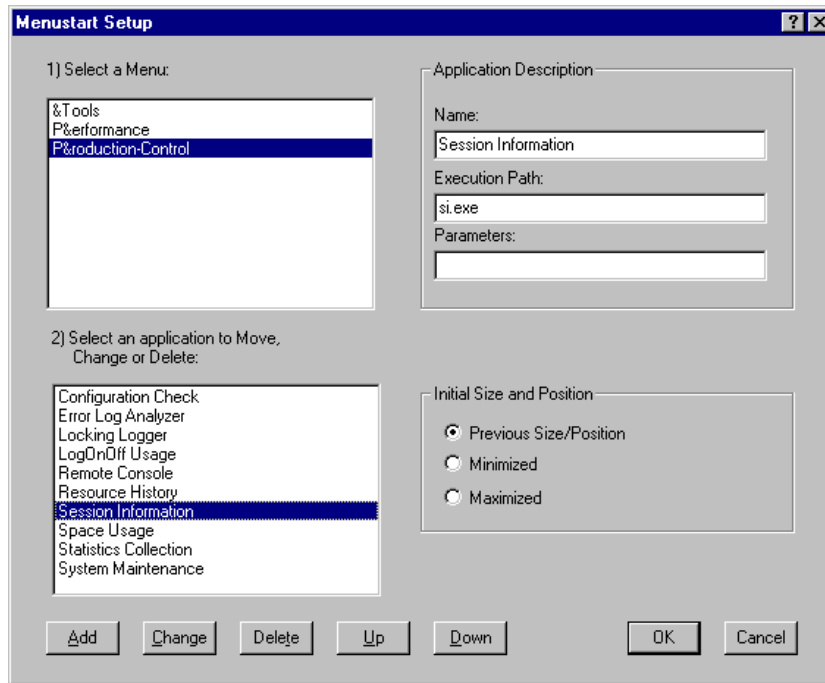
Figure 3-1 and Figure 3-2 show examples of completing the Menustart Setup dialog for the Alert Control Module and Session Information applications. These applications are both from the initial configuration of the Default profile.

Figure 3-1 Menustart Setup Dialog for Alert Control Module



Chapter 3: Starting Teradata Manager Applications  
Starting Applications Manually (Menustart)

Figure 3-2 Menustart Setup Dialog for Session Information



## Starting Applications Automatically (Autostart)

Use the Autostart Setup dialog under either the Executive or Profile Builder to set up applications to start automatically. From the Autostart Setup dialog you can specify that an application will start:

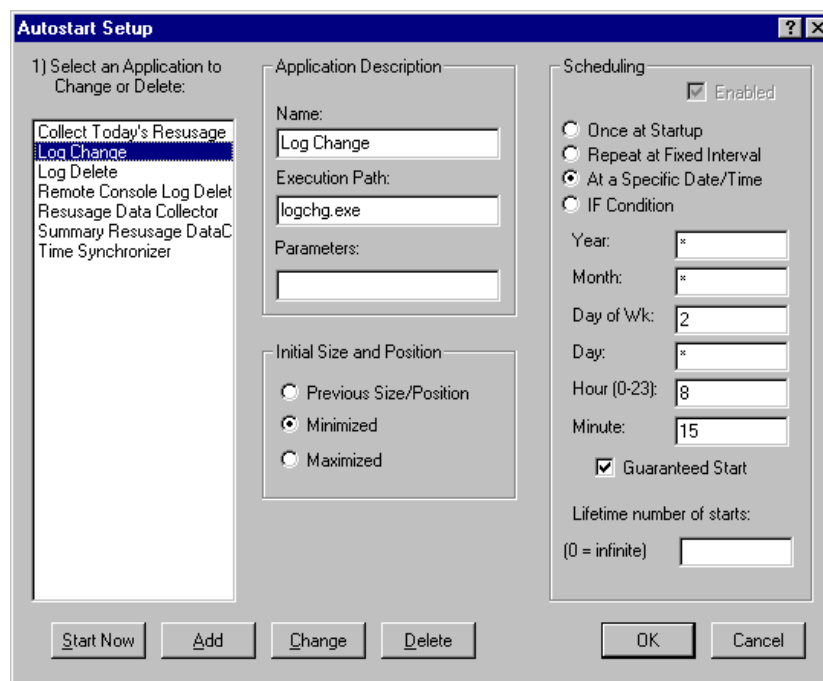
- At program start-up
- At fixed intervals
- At a fixed time/date
- When an IF condition tests true

In addition to the required name and execution path, the Autostart Setup dialog allows you to enter any parameters for the application, as well as the initial size and position of the application window.

To open the dialog, select the *Profile > Autostart Setup > Setup* from the menu bar of the Executive, or *Profile > Autostart Setup* from the menu bar of Profile Builder. The procedure for completing the dialog is described in detail in the Profile Builder online help.

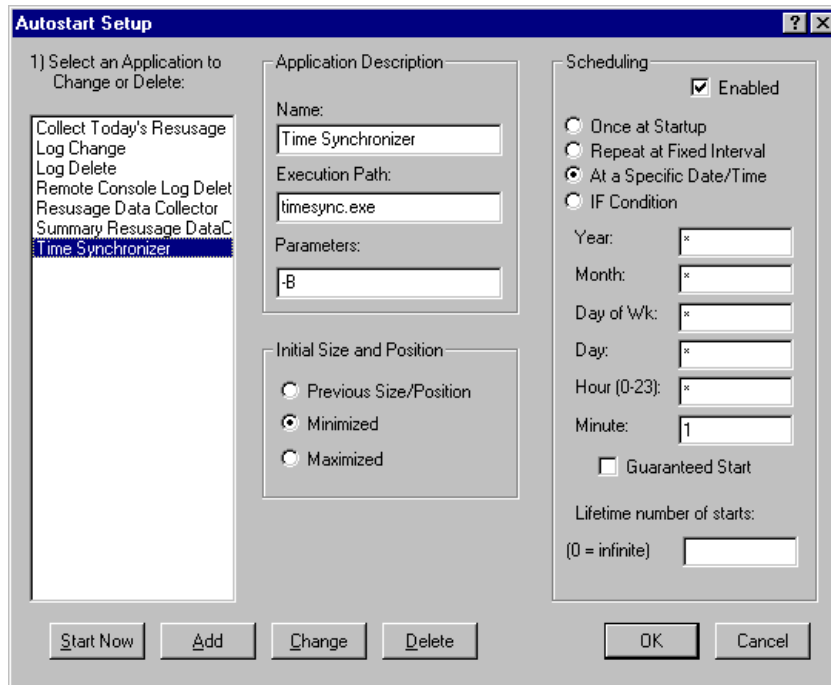
Figure 3-3 and Figure 3-4 show examples of completing the Autostart Setup dialog for the Log Change and Time Synchronizer applications. These applications are both from the initial configuration of the Default profile.

Figure 3-3 Autostart Setup Dialog for Log Change



Chapter 3: Starting Teradata Manager Applications  
Starting Applications Automatically (Autostart)

Figure 3-4 Autostart Setup Dialog for Time Synchronizer



## Running Applications Under the Windows 2000/NT Command Shell

You can also set up Teradata Manager applications to run under the Windows 2000/NT operating system command shell. Typically you would do this if you wanted to chain one application to one or more additional applications.

**Note:** This procedure will not work under Windows 95/98.

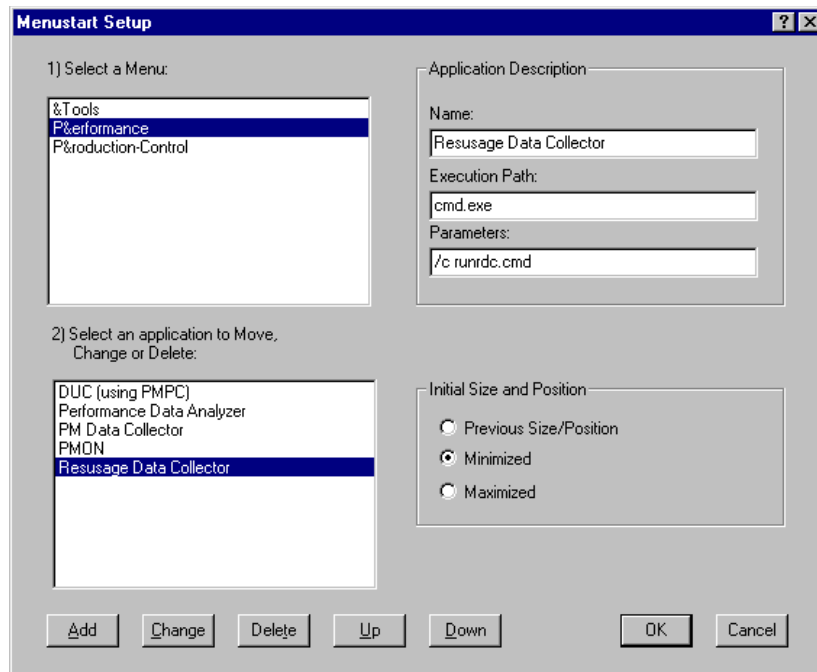
For example, it is a good idea to synchronize the time on the PC with the time on the database before running Resusage Data Collector. If you want Time Synchronizer to run before Resusage Data Collector, use a Windows editor to create a command file containing the following lines:

```
timesync  
rdc resbase -f 600
```

Then, complete an Autostart or Menustart setup dialog using CMD.EXE as the execution path.

Use the name of your command file as the parameter. For example, if you named your command file RUNRDC.CMD, the menustart setup dialog may appear as shown in [Figure 3-5](#) for a Windows 2000/NT system.

Figure 3-5 Command Shell Setup Example



Or you may want to run an application under the operating system command shell to redirect output to or from an application that does not provide alternate

**Running Applications Under the Windows 2000/NT Command Shell**

input and output sources. DMTEQ, for example, does not allow input and output parameters, but you can set it to run under the command shell to redirect input and output.

To set up DMTEQ to use the script *MyScript* as input, and to redirect the output to *MyScript.Out*, use the following parameters with the appropriate execution path:

```
/c dmteq -P %PROFILE% < \MyScript > \MyScript.Out
```

  
**Chapter 4:**

# Creating Charts and Reports

One of the great benefits of Teradata Manager is the ability to produce reports on many types of database usage statistics. This chapter shows you how to get many types of resource usage reports, as well as reports showing system performance, logon statistics, and locking logger activity. This chapter shows you how to:

- [Create Summary Resource Usage Charts](#)
- [Create Historical Resource Usage Reports](#)
- [Create Logon Statistics Reports](#)
- [Create Performance Charts Using Teradata Performance Monitor](#)
- [Create Performance Charts Using DUC](#)
- [Create Locking Logger Reports](#)

## Create Summary Resource Usage Charts

Performance Data Analyzer (PDA) summarizes Teradata RDBMS resource usage data in chart format on your Teradata Manager PC. Trends depicted in the charts can help you detect abnormalities in resource usage, schedule production jobs, and balance Teradata RDBMS work loads.

You can chart a single column for several time periods, or several columns for a single time period. Resource usage data is collected from the resource usage tables on the associated Teradata RDBMS by Resusage Data Collector.

### Procedure

To create the Summary Resource Usage Charts, do the following:

Step	Action
1	PDA creates charts from the data collected by Resusage Data Collector (RDC). It is recommended in general that you let RDC run continuously to keep the data updated. If Resusage Data Collector has not been run, you can start it now by selecting <i>Performance &gt; Resusage Data Collector</i> from the Executive menu bar.
2	Start PDA by selecting <i>Performance &gt; Performance Data Analyzer</i> from the Executive menu bar.
3	Display the dialog to set the charting time periods by selecting <i>Time &gt; Define Time Period</i> from the PDA menu bar.
4	Select the date or dates you want included from the <i>Date Available</i> list box in the Define Time Periods dialog.
5	Enter the time period(s) you want to include. Time periods may be entered in one of three formats: <ul style="list-style-type: none"><li>• All hours on the selected dates (default).</li><li>• A specific period of time on the selected dates.</li><li>• A predefined shift on the selected dates.</li></ul>
6	Select one or more processor types by checking one or more Data Type Boxes: <i>AMP vproc</i> , <i>PE vproc</i> , or <i>Node</i> .
7	Click <b>Define</b> .
8	Repeat steps 4 - 7 until all the required time periods are defined.
9	Click <b>Done</b> to close the dialog.
10	Display the dialog to create charts by selecting <i>Date &gt; Chart Data</i> from the PDA menu bar.

Step	Action
11	Select a data type ( <i>AMP vproc</i> , <i>PE vproc</i> , or <i>Node</i> ) from the Data Type group box. <b>Note:</b> If time periods for a processor type have not been defined, the option for that type is not available.
12	Choose either the <i>Multiple Data Columns</i> or the <i>Multiple Time Periods</i> chart type from the Chart Type group box.
13	Select one or more data columns from the <i>Data Columns</i> list box.
14	Select a time period from the <i>Defined Time Periods</i> list box.
15	When you are finished defining the chart, generate the chart by clicking <b>OK</b> . Once PDA finishes building the chart, it displays it on the work space.

## Create Historical Resource Usage Reports

Resource History provides reports that show the maximum and average usage for Logical Devices (LDVs), AMP Vprocs, and PE Vprocs on the associated system. The NODE command is used to run NODE usage macros on the associated Teradata RDBMS. In addition, you can request coexistence reports that support mixed platform systems.

### Procedure

To create the Historical Resource Usage Reports, do the following:

Step	Action
1	Select <i>Production Control &gt; Resource History</i> from the Executive menu bar.
2	Choose one of the commands from the <i>View</i> menu on the Resource History menu bar.  If your site is running a mixed platform system, you can choose one of the commands from the CoExist Macro menu.
3	Enter a date for the period of time you want the report to cover. Dates can be actual dates (in yyyy/mm/dd format), or expressions (such as date-30).
4	Click <b>OK</b> to initiate the macro and display the report.
5	Print the results if desired by choosing <i>File &gt; Print</i> , or save the results by choosing <i>File &gt; Save As</i> .

**Note:** Running the Resource History macros can take several minutes, depending on the size of the table being searched and the load on the associated Teradata RDBMS. You can continue doing other Teradata Manager activities while you wait.

# Create Logon Statistics Reports

LogOnOff Usage presents daily, weekly, and monthly logon statistics based on information in the DBC LOGONOFF view on the associated Teradata RDBMS. Three macros are included with LogOnOff Usage to help you retrieve this information:

- DailyReport shows the number of logons across several days, either in ten-minute or one-hour intervals, grouped by time interval and user.
- WeeklyReport summarizes all logons for the last ten weeks, grouped by week.
- MonthlyReport summarizes all logons over the last month (from 30 days previous to the current date) grouped by date.

## Procedure

To create Logon Statistics Reports, do the following:

Step	Action
1	Select <i>Production Control &gt; LogOnOff Usage</i> from the Executive menu bar.
2	Choose one of the macro commands from the <i>View</i> menu on the Logonoff Usage menu bar: <ul style="list-style-type: none"> <li>• <i>DailyReport</i> shows the number of logons across several days.</li> <li>• <i>WeeklyReport</i> summarizes all logons for the last ten weeks.</li> <li>• <i>MonthlyReport</i> summarizes all logons for the last month.</li> </ul>
3	If you selected WeeklyReport or MonthlyReport, the report is generated without any additional input.  If you selected DailyReport, do the following: <ul style="list-style-type: none"> <li>• Enter the Begin Date and the End Date in the following form: yyyy/mm/dd. The default entries, date-1 and date, will result in a report for yesterday and today.</li> <li>• Choose either 10 minutes or Hour as the interval for the output.</li> <li>• Click <b>OK</b> to initiate the macro and display the report.</li> </ul>
4	Print the results if desired by choosing <i>File &gt; Print</i> , or save the results by choosing <i>File &gt; Save As</i> .

# Create Performance Charts Using Teradata Performance Monitor

Teradata Performance Monitor is the Teradata Manager application that you use to monitor the general health of a Teradata RDBMS. It also allows you to analyze current performance and both current and historical session information, and to abort sessions that are causing system problems.

## Procedure

To create a chart showing the general health of your system, do the following:

Step	Action
1	Select <i>Performance &gt; Teradata Performance Monitor</i> from the Executive menu bar.
2	Select <i>File &gt; Logon</i> from the Teradata Performance Monitor menu bar. If in Client/Server mode, select a Teradata Manager server from the displayed list.
3	Once Teradata Performance Monitor has logged on, select <i>View &gt; Start</i> from the menu bar, or click the <b>Start</b> button to display the data.
4	Select <i>View &gt; Chart</i> from the menu bar, or click the <b>Chart</b> button to display the Chart dialog.
5	Select the data points you want charted. The chart will update automatically at the defined refresh rate. (The refresh rate is defined by selecting <i>Tools &gt; Options</i> and selecting the Start tab).
6	To change the time period displayed on the chart, increase or decrease the number in the <i>Intervals</i> field. The total time covered by the chart is the number of intervals multiplied by the interval duration. The interval duration is the <i>Refresh Rate</i> specified on the <i>Start</i> tab of the <i>Options</i> screen.
7	To change the color of a charted value, click on the color next to the charted value, then select a new color from the Select Color dialog box. (An alternate way to do this is to select the charted value, then choose <i>View &gt; Select Color</i> from the menu bar. You can then choose a new color from the Select Color dialog box.)
8	To update the chart with the new data points instantly (before the specified update interval), click <b>Redraw</b> .

# Create Performance Charts Using DUC

Dynamic Utilization Charting (using PM & PC), or DUC (using PM & PC), displays near real-time Teradata RDBMS resource usage data in chart format on your Teradata Manager PC. You can set the frequency at which the charts are updated. The update frequency range is 6 to 3600 seconds while the system is running.

The charts can help you:

- Detect down nodes and down Vprocs
- Detect resource usage abnormalities on the associated Teradata RDBMS, such as the CPU Parallelism among Vprocs and Nodes

## Procedure

To create the Performance Charts, do the following:

Step	Action
1	From the Executive menu bar, select <i>Performance &gt; DUC (using PMPC)</i> .
2	Once the application starts, select from the following on the Charts menu: <ul style="list-style-type: none"> <li>• <i>All Charts</i> displays all of the following six charts simultaneously.</li> <li>• <i>All AMP Vprocs CPU Usage</i> shows the percentage of CPU usage for each AMP of the nodes.</li> <li>• <i>All PE Vprocs CPU Usage</i> shows the percentage of CPU usage for each PE of the nodes.</li> <li>• <i>All Nodes CPU Usage</i> shows the percentage of CPU usage for each node.</li> <li>• <i>All Nodes Disk Usage</i> shows the percentage of Disk usage for each node.</li> <li>• <i>Down Vprocs</i> shows the number of AMPs and PEs that are down on the associated Teradata RDBMS.</li> <li>• <i>Down Nodes</i> shows the down nodes numbers on the associated Teradata RDBMS.</li> </ul>

When you select a chart, DUC (using PM & PC) will activate and draw the chart. If you select it again, DUC (using PM & PC) will redraw the existing window.

If you select a chart other than the one currently displayed on the screen, DUC (using PM & PC) will display the newly activated chart in addition to the existing one.

# Create Locking Logger Reports

The Teradata Manager Locking Logger application is a menu-driven interface to the Locking Logger (dumplocklog) console utility of the Teradata RDBMS software.

When the RDBMS Locking Logger option (general GDO flag) is enabled, the Teradata RDBMS maintains ongoing logs of:

- Transaction Identifiers
- Session Identifiers
- Lock Object Identifiers
- Lock Levels associated with executing SQL statements which have been delayed because of database lock contention

To create the report, Locking Logger joins your Lock Log Table with the system DBC.EventLog table to determine the blocked and blocking user names. To do this, it uses the begindate/time information from your lock log table and the logondate/time information from the DBC.EventLog table.

## Procedure

Before you can generate a Locking Logger report, you need to create a Lock Log table as follows:

Step	Action
1	Select <i>Production Control &gt; Locking Logger</i> from the Executive menu bar.
2	Maximize the Locking Logger main window so you can see any messages displayed in the status bar.
3	From the Locking Logger menu bar, select <i>Tools &gt; Create Table</i> .
4	<p>Type the name of your log table in the <i>Log Table Name</i> box, or accept the default name. You can specify an existing table or a new table (the Locking Logger utility will create it for you).</p> <p>In either case, your logon username must have the appropriate database access privileges.</p> <p><b>a</b> To specify a table under a database other than the default database of your logon username, enter both the database name and the table name as follows:</p> <p style="padding-left: 40px;">&lt;db_name&gt; . &lt;table_name&gt;</p> <p><b>b</b> To specify a table that is under the default database of your logon username, enter only the table name as follows:</p> <p style="padding-left: 40px;">&lt;table_name&gt;</p> <p><b>Note:</b> The table name will be truncated to 30 characters.</p>

Step	Action
5	<p>Select snapshot or continuous mode. If you selected snapshot mode, do one of the following:</p> <ul style="list-style-type: none"> <li>• To use all available sessions to create or update your lock log table, check the SQL Sessions <i>Maximum</i> check box</li> <li>• To specify the number of SQL sessions that the Locking Logger utility will use, uncheck the <i>Maximum</i> check box and enter the desired number in the <i>SQL Sessions</i> field. The minimum number of sessions is 1; the maximum is the total number of system AMP Vprocs that are online--one session per online AMP Vproc. If the selected number is greater than the actual number of sessions available (because a Vproc is offline), an error will result.</li> </ul>
6	<p>Optionally, use the <i>Beginning / Ending Date</i> and <i>Beginning / Ending Time</i> fields of the <i>Time Constraints</i> box to specify a time period for selecting lock log entries. The time constraints that you can select are:</p> <ul style="list-style-type: none"> <li>• All entries that were created at or after a specified time. To specify this time constraint, enter the date and time in the <i>Beginning</i> boxes and leave the <i>Ending</i> boxes blank.</li> <li>• All entries that were created at or before a specified time. To specify this time constraint, enter the date and time in the <i>Ending</i> boxes and leave the <i>Beginning</i> boxes blank.</li> <li>• All entries that were created within a range of times. To specify this time constraint, enter both the <i>Beginning</i> and <i>Ending</i> dates and times.</li> </ul> <p>If you do not specify a time period, all lock log entries that are related to the selected objects will be selected regardless of the time.</p>

Step	Action
7	<p>Use the <i>Database</i>, <i>Table</i>, and <i>Selected Objects</i> list boxes to specify up to ten database object constraints for selecting lock entries. Teradata Manager adds the selections that you make to the <i>Selected Objects</i> box.</p> <ul style="list-style-type: none"> <li>• You can add an object to the <i>Selected Objects</i> list by either double-clicking on the object in the <i>Tables</i> list or by highlighting one or more objects and clicking <b>Add</b>.</li> <li>• You can remove an object from the <i>Selected Objects</i> list at any time by either double-clicking on the object or by highlighting one or more objects and clicking <b>Remove</b>.</li> <li>• To specify all tables in all databases, select <b>All Objects</b>. Teradata Manager will display an asterisk (*) in the <i>Selected Objects</i> list box and disable the <i>Database</i> and <i>Table</i> list boxes.</li> <li>• To specify all tables under a selected database, first, if they are selected, deselect <i>All Objects</i> and <i>Default Database</i>. Then select the database that you want from the <i>Database</i> list and click <b>All Tables</b>.</li> <li>• To specify a specific table under the default database, first, if it is selected, deselect <i>All Objects</i>. Then, select <i>Default Database</i> and select a table from the <i>Table</i> list.</li> <li>• To specify a specific table under a database other than the default database, first, if they are selected, deselect <i>All Objects</i> and <i>Default Database</i>. Then select the database that you want from the <i>Databases</i> list and select a table from the <i>Table</i> list.</li> </ul>
8	<p>To initiate the Locking Logger console utility and create the table that you have specified, click on <b>Submit</b>. The minimum information required to enable the Submit button is a Log Table Name and one item in the Selected Objects list.</p> <p>If you specified a new lock log table name, a confirmation box asks if you want to create the new table. Click <b>Yes</b> to continue.</p>
9	<p>After initiating the Locking Logger console utility click on <b>Close</b> at any time to re-enable the menu items. Locking Logger displays messages on the main window status bar about the work it is doing, ending with the number of rows it inserted into the Lock Log Table. The number of rows is also written to the Executive log.</p> <ul style="list-style-type: none"> <li>• If you specified snapshot mode, <ul style="list-style-type: none"> <li>– if you did not close the Create Table dialog, the Submit button will be re-enabled when the work is complete.</li> <li>– the Locking Logger console utility terminates automatically after completing the operation.</li> </ul> </li> <li>• If you specified the continuous mode, the Locking Logger console utility runs continuously until you stop it by selecting the Stop Logging option from the Logging Menu.</li> </ul>

## Procedure

Now that you have created a Lock Log table, you can generate a Locking Logger report, as follows:

Step	Action
1	If Locking Logger is not running, select <i>Production Control &gt; Locking Logger</i> from the Executive menu bar.
2	From the Locking Logger menu bar, select <i>Tools &gt; Generate Report</i> .
3	Enter the name of the lock log table in the <i>Log Table Name</i> box, or accept the default table name.
4	Enter the <i>Beginning</i> and <i>Ending Dates</i> , or accept the defaults.
5	Enter the <i>Beginning</i> and <i>Ending Times</i> , or accept the defaults.
6	Click on <b>Generate</b> to produce the report. Locking Logger opens an empty document, displays messages on the main window status bar about the work it is doing, then finally formats the report in the open document.



  
**Chapter 5:**

# Performing Administrative Tasks

Teradata Manager provides you with lots of system administration options. This chapter shows you how to:

- [Administer Sessions](#)
- [Display and Administer Statistics for Tables and Databases](#)
- [Monitor and Move Database Space](#)
- [Maintain and Monitor System Tables](#)
- [Create Databases, Tables and Users](#)

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# Administer Sessions

Session Information (SI) uses the PM Data Collector to collect the session PM & PC data from the Teradata RDBMS. It then formats and displays key information about each session, based on the current collection rate. SI shows logon sessions in different categories, and helps you to identify blocked and long idle sessions and abort sessions as desired on the Teradata RDBMS.

## Session Information Reports

Most of the SI reports are categorized based on the session's status. These reports can be used in many different ways. You can open the reports based on your needs, and set up the desired Collection Frequency. Once this is done SI will update the reports automatically.

The following reports provide very useful information, and you may wish to leave them open all the time.

### Summary Report

This report gives you a general idea of how many sessions are logged on to the system and their status.

### Blocked Report

If there is a blocked session, it will be displayed in this report. Double clicking on the blocked session in the report displays the Host/Session detail dialog. This dialog shows who is blocking the session, and allows you to examine how many sessions are being blocked. You can also use the Host/Session dialog to abort the session.

### Idle Report

You can define thresholds for the Idle report so that all long idle sessions will be displayed in this report. You can also define the Auto Abort Threshold so that the long idle sessions will abort automatically. It is recommended that a local filter be defined and used with this report in order to avoid aborting critical sessions/users.

## Procedure

To view Session Information reports and/or abort sessions, do the following:

Step	Action
1	Select <i>Production Control &gt; Session Information</i> from the Executive menu bar.
2	Select the report(s) that you want to view from the <i>Report Type</i> pulldown list.

Step	Action
3	From all report types except the Summary Report, you can double-click on any session in the report to display the Host/Session dialog.
4	<p>From the Host/Session dialog, you can do the following:</p> <ul style="list-style-type: none"> <li>• Click <i>Modify</i> to change the account string either for only the currently running request, or for all requests. This allows the priority to be changed while the session is active.</li> <li>• Click <i>Abort</i> to display a dialog allowing you to abort the selected session or all sessions associated with either the host or the user name of the selected session.</li> <li>• Click <i>Blocked</i> to get information about the session(s) that are blocking the displayed session.</li> <li>• Click <i>Blocking</i> to get a list of the session(s) being blocked by the displayed session.</li> <li>• Click <i>Skew</i> to view detailed CPU and disk usage information for the current session. <b>Note:</b> This option is only available when monitoring a V2R4.1 or later Teradata system.</li> <li>• Click <i>SQL</i> to view the SQL statements currently being executed by this session. You can also see job step information and associated Explain text. <b>Note:</b> This option is only available when monitoring a V2R4.1 or later Teradata system, and the selected session is logged onto the DBC/SQL partition.</li> </ul>

# Display and Administer Statistics for Tables and Databases

Collecting statistics on a column or Key field assists the query optimizer in choosing an execution plan that will minimize query time. Because the optimizer bases the execution plan on the actual values in the table, statistics should be updated whenever there have been a significant number of row additions or deletions.

Statistics Collection allows you to:

- Determine which tables have statistics
- Create statistics for columns or indexes
- Drop statistics by column/index, or for the entire table
- Update statistics for column/index, table, database, or the entire Teradata RDBMS

This application can also help you create SQL scripts to collect/drop statistics and set up the Autostart menu.

## Procedure

To view statistics for your database, do the following:

Step	Action
1	Select <i>Production Control &gt; Statistics Collection</i> from the Executive menu bar.
2	When the Statistics application opens, the Database pane is displayed. This is a listing of all the databases on the system. Click on a database icon to see the children of that database and to retrieve the associated tables. <ul style="list-style-type: none"><li>• If there are no databases below the one selected, the table data for that database is displayed in the Table pane.</li><li>• If there is a database below the one you selected, the tree view will expand to display it.</li></ul>
3	The Tables pane lists the tables contained in the selected database. Double-click on the desired item in the Table pane to display the column statistics in the Column pane.
4	The Statistics pane shows statistics for the selected database/table. Double-click on the desired item in the Column pane to display the Interval Statistics for that item.

# Monitor and Move Database Space

Space Usage is the Teradata Manager application that you use to monitor the use of database space on the associated Teradata RDBMS computer and to reallocate permanent space from one database to another.

Space Usage has some functionality overlap with WinDDI. Both Space Usage and WinDDI provide capabilities to move permanent space between databases and to view the database hierarchy and space utilization reports. Space Usage offers a richer set of reports specifically for monitoring database space usage on the Teradata RDBMS. Space Usage also contains direct support for changing the database hierarchy (via Move Database command).

## Procedure

To view a Space Usage Report, do the following:

Step	Action
1	Select <i>Production Control &gt; Space Usage</i> from the Executive menu bar.
2	From the Space Usage menu bar, select <i>Tools &gt; Space by Database</i> . This will display a Space by Database report.
3	If you right-click on a database name, a popup menu is displayed with various options, including <i>Table Space</i> and <i>Help Database</i> reports. Select the <i>Table Space</i> option to display a Table Space Report.
4	If you right-click on a table name, a popup menu is displayed with various options, including <i>Space by Vproc</i> and <i>Show Table</i> reports. Select the <i>Space by Vproc</i> option to display a Space by Vproc Report.
5	Explore the other options under the Tools menu, including the <i>Hierarchy</i> and <i>Cylinders by Vproc</i> reports.

## Procedure

To reallocate permanent space, do the following:

Step	Action
1	If Space Usage is not running, select <i>Production Control &gt; Space Usage</i> from the Executive menu bar.
2	<p>Select <i>Tools &gt; Options</i> from the menu bar to display the Options dialog and click on the Reports tab:</p> <ul style="list-style-type: none"> <li>• To automatically refresh your Space Usage reports after each move space operation, click on the Reports tab, and select the <i>Automatically Refresh Reports after each Move Space</i> check box.</li> <li>• To enable an audible notification that the refresh operation has completed, select the <i>Sound when Refresh Reports completes</i> check box.</li> </ul>
3	<p>Click on the Move Space tab:</p> <ul style="list-style-type: none"> <li>• Use the <i>Default Amount to Move</i> field to specify the amount of disk space you want to reallocate. The amount must be a whole number without commas, periods, or abbreviations.</li> <li>• Select <i>Show all databases</i> to list all databases on the associated Teradata RDBMS computer. If this item is unchecked, then the <i>Only show databases for which...</i> options become enabled.</li> <li>• Selecting the option to only show databases for which the <i>Maximum Perm &gt;= Amount To Move</i> will display only those databases with an amount of maximum permanent disk space that is equal to or greater than the amount you specified in the <i>Default Amount to Move</i> entry box.</li> <li>• Selecting the option to only show databases for which the <i>Unused Perm &gt;= Amount To Move</i> will display only those databases with an amount of unused permanent disk space that is equal to or greater than the amount you specified in the <i>Default Amount to Move</i> entry box.</li> <li>• Select <i>Order by Database Name</i> if you want to sort the database list alphabetically by Database name in the <i>From</i> selection box on the Move Space dialog.</li> <li>• Select <i>Order by Maximum Perm Space</i> if you want to sort the database list numerically by the amount of Maximum perm space.</li> <li>• Select <i>Order by Unused Perm Space</i> if you want to sort the database list numerically by the amount of Unused perm space.</li> <li>• The entry displayed in the <i>User ID</i> field is the default User Id for the profile that Space Usage is running under. Either accept the default User Id or enter an alternate one. If you enter an alternate User Id, you will be prompted for a password each time you try to move space.  <b>Note:</b> If your site is set up for Single Sign On (SSO), you have the option to leave the User ID field blank. If you do this, you will be prompted for an ID and password each time you try to move space.</li> <li>• The entry displayed in the <i>Account</i> field is the default Account Id for the profile that Space Usage is running under. Either accept the default Account Id or enter an alternate one. If you enter an alternate Account Id, you will be prompted for a password each time you try to move space.</li> </ul>

Step	Action
4	Click <b>OK</b> to save your entries and close the Options dialog.
5	Select <i>Tools &gt; Move Space</i> from the menu bar to display the Move Space dialog.
6	Use the <i>From</i> selection box to specify a source database.
7	Use the <i>To</i> selection box to specify a destination database.
8	Click <b>OK</b> to initiate the move space operation.
9	Click <b>OK</b> in response to the confirmation prompt.

The Space Usage status bar indicates the progress of the move space operation while it is taking place.

## Maintain and Monitor System Tables

System Maintenance allows you to run the macros needed to maintain and monitor system tables. The commands used to delete rows in system tables and to reset accounting statistics for AMP usage and disk space are invoked from the Clean menu. Other system monitoring and reporting commands are found in the Configuration and Audit menus.

### Procedure

To run a clean macro in order to remove rows of data from specified system tables, do the following:

Step	Action
1	Select <i>Production Control &gt; System Maintenance</i> from the Executive menu bar.
2	From the System Maintenance menu bar, select <i>Clean &gt; System Tables</i> .
3	Select a macro from the list box in the Select Clean Macro to Execute dialog.  The list box contains only the macros listed using the SM_CleanMacros application-specific entry in the associated profile. The Clean macros provided with System Maintenance include: <ul style="list-style-type: none"><li>• Macros to clean the Error Logs</li><li>• A macro to clean the Logonoff Table</li><li>• Macros to clean the Resusage Tables</li><li>• A macro to clean the SecurityLog Table.</li></ul>
4	Enter the beginning and ending dates in the <i>Begin Date</i> and <i>End Date</i> boxes. <b>Note:</b> Dates can be actual dates (in yyyy/mm/dd format), or expressions (such as date-30).
5	Click <b>OK</b> to start execution.
6	If you have the Warning Preference set on, a warning message appears on the screen. Click <b>Yes</b> to run the macro.  When the macro has finished running, the output window shows the number of rows deleted. If the macro encounters an error, the output window shows the error number.
7	Click <b>Exit</b> to close the Select Clean Macro dialog.

# Create Databases, Tables and Users

WinDDI (Windows Data Dictionary Interface) is the Teradata Manager application that you use to perform database administration tasks.

## Logging On

To Log on to the desired database, do the following:

Step	Action
1	Select <i>Tools &gt; WinDDI</i> from the Executive menu bar.
2	Select the desired data source options and click <b>OK</b> .
3	Fill in the Connect dialog and click <b>OK</b> to log on to the database.

## Create Or Modify a Database

To create or modify a database, do the following:

Step	Action
1	Log on to the desired data source using the Logging On procedure above.
2	<p>To create an entirely new database, with no shared specifications from an existing database:</p> <ul style="list-style-type: none"> <li><b>a</b> Select <i>Tools &gt; Create Database</i> from the menu bar.</li> <li><b>b</b> Use the Create Database Dialog to define the attributes of the new database.</li> <li><b>c</b> Click <b>OK</b> when finished.</li> </ul> <p>To create a new database that is either identical or closely related to an existing database:</p> <ul style="list-style-type: none"> <li><b>a</b> Select <i>Tools &gt; Clone Database</i> from the menu bar.</li> <li><b>b</b> Use the Create Database Dialog to define the attributes of the cloned database.</li> <li><b>c</b> Click <b>OK</b> when finished.</li> </ul> <p>To change the specifications of an existing database:</p> <ul style="list-style-type: none"> <li><b>a</b> Select <i>Tools &gt; Modify Database</i> from the menu bar.</li> <li><b>b</b> Use the Modify Database Dialog to modify the attributes of the database.</li> <li><b>c</b> Click <b>OK</b> when finished.</li> </ul>

## Create or Modify a User

To create or modify a user, do the following:

Step	Action
1	Log on to the desired data source using the Logging On procedure above.
2	<p>To create an entirely new user, with no shared specifications from an existing user:</p> <ul style="list-style-type: none"> <li><b>a</b> Select <i>Tools &gt; Create User</i> from the menu bar.</li> <li><b>b</b> Use the Create User Dialog to define the attributes of the new user.</li> <li><b>c</b> Click <b>OK</b> when finished.</li> </ul> <p>To create a new user either identical or closely related to an existing user:</p> <ul style="list-style-type: none"> <li><b>a</b> Select <i>Tools &gt; Clone User</i> from the menu bar. The Create User dialog displays the specifications for the currently selected user.</li> <li><b>b</b> Use the Create User Dialog to change the specification for your cloned version of the existing user.</li> <li><b>c</b> Click <b>OK</b> when finished.</li> </ul> <p>To change the specifications of an existing user:</p> <ul style="list-style-type: none"> <li><b>a</b> Select <i>Tools &gt; Modify User</i> from the menu bar.</li> <li><b>b</b> Use the Modify User Dialog to change the attributes of the selected user.</li> <li><b>c</b> Click <b>OK</b> when finished.</li> </ul>

## Create a Table

To create a table, do the following:

Step	Action
1	Log on to the desired data source using the Logging On procedure above.
2	<p>To create a new table in Teradata format:</p> <ul style="list-style-type: none"> <li><b>a</b> Select <i>Tools &gt; Create Table</i> from the menu bar.</li> <li><b>b</b> Use the Create Table Dialog to define the attributes of the new table.</li> <li><b>c</b> Click <b>OK</b> when finished.</li> </ul>

  
**Chapter 6:**

# The Performance Monitor Object

This chapter describes the Teradata Performance Monitor Object, and contains the following sections:

- [Introduction to the Performance Monitor Object](#)
- [Application Distribution Requirements](#)
- [The Object Model](#)
- [Object Model Error Messages](#)

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# Introduction to the Performance Monitor Object

The Performance Monitor Object is an ActiveX (COM) object that exposes methods to allow retrieval of PM & PC data. Each method will return a collection of objects, each of which encapsulates the performance data for that object. It also provides for execution of the production control (action) functions of PM & PC.

## Before You Start

The Performance Monitor object can be run in both Visual Basic (VB) and C++ environments.

- To use this object in a new VB program you must use the Project, References menu to add a reference to it. You will find it in the listbox under TeradataPerformance3. For more information on using the Monitor Object with VB, please refer to the sample code in `\<install_directory>\Samples\VB\SimpleMon`.
- To use this object in C++, you will need to include the files TDMon.h and TDMon\_i.c into your source code. These files can be found in `\<install_directory>\Samples\VC\Simplemon`. Your code must call the function `CoInitialize()` to prepare for the use of COM objects. For more information please refer to the sample application in the directory mentioned above.

You will need to add the `\<install_directory>\Bin` directory to your path if you are not executing all components from within this directory (this applies during debugging also). This will allow the object to find its required support files.

## Object Modes

The Monitor object can be used in 2 modes. The mode is controlled by the setting of the `UseClient` property. Initially `UseClient` will be set to `False`.

### Direct mode

In direct mode all data is fetched directly from the Teradata RDBMS. You must establish a session using the `Connect` method before calling any of the data retrieval or action methods.

### Client mode

Initially in Client mode, a RDBMS session is temporarily established in order to retrieve some control information. Once this information is obtained, the session is disconnected and all future data is retrieved from a Teradata Manager server. You do not need to establish a session on the Teradata RDBMS.

You start client mode by setting `UseClient = True`. This will fail if communication can not be established with a Teradata Manager server. You should therefore check the value of the `UseClient` property, after setting it, to ensure that it has been successfully set to `True`.

When you set `UseClient` to `True`, a `tmclient` application will be launched on your workstation. This will normally display a selection list for you to choose the Teradata Manager server you wish to use. If you wish to run in unattended mode you may set the `AutoClient` property to `True` before setting `UseClient` to `True`. This will cause the server name to be read from the registry. In order to use this feature you must previously have saved the server name to the registry. This can be done from the Select a Server dialog that is displayed when using Client mode in any of the Client capable applications. (Session Information, Teradata Performance Monitor, Dynamic Utilization Charting, or any application using the Monitor object.)

## Object Scope

In general you will want to create a Monitor object at application startup and destroy it (In VB set the object = `Nothing`) at program termination. The `GetSessionData` function uses an internal cache that allows the object to calculate `CurrentCPU`, `Time Blocked`, and `Time Idle`. If you destroy and re-create the object these values will keep resetting to zero. This internal cache applies only when running in Direct mode. Although the object will take care of `Disconnect` and `Client Shutdown` when it is destroyed, it is good practice to specifically call `Disconnect`, or to set `UseClient` to `False`.

## Sample Files

There are sample files included with the Teradata Manager installation to help you get started with the Object Model. You can find these samples in `\<install_directory>\Samples`.

---

# Application Distribution Requirements

You can run the object model in both Client and Direct modes on any machine that has Teradata Manager installed.

## Required Files

If you would like to run the application on a machine that *does not* have Teradata Manager installed, you can run in Direct mode with the following files installed on your machine.

---

### Required Microsoft Support Files

---

asycfilt.dll  
comcat.dll  
mfc42.dll  
msvbm60.dll  
msvcirt.dll  
msvcrt.dll  
msvcrt40.dll  
oleaut32.dll  
olepro32.dll  
stdole2.tlb

---

**Note:** The required versions of these support files are distributed with the current release of Teradata Manager.

---

### Required Teradata Manager Support Files

---

dbsm\_ipc.dll  
mgrcli.dll  
monpm.dll  
ncrvbext.dll  
regkey.dll  
tmipc.dll

---

## File Registration

In addition to having the above files on your machine, you also need to register the TDMon3.dll by executing the following command.

```
regsvr32 tdmon3.dll
```

**Note:** The application regsvr32.exe is a Microsoft application. The file TDMon3.dll must be prefixed by its full path if the command is not executed from within the directory that contains the file.

# The Object Model

This section describes the makeup of the Object Model. When reading the model descriptions, note that the fonts have these meanings:

Font	Meaning
Plain	Property
Italic	Read Only Property (optional parameter)
Bold	Method

The Object Model is made up of the following objects:

Monitor (Object)
<p>AppName  System  UserId  Password  UseClient  AutoClient  IdNames</p> <p><b>Connect</b> (<i>System, UserName, Password</i>)  <b>Disconnect</b> ()  <b>GetVprocSummary</b> () (returns a VprocSummary object)  <b>GetNodeSummary</b> () (returns a NodeSummary object)  <b>GetVprocDetail</b> (PEs) (returns an AMPs collection)  <b>GetNodeDetail</b> () (returns a Nodes collection)  <b>GetSessionData</b> (HostID) (returns a Sessions collection)  <b>GetSessionSQL</b>  <b>AbortSession</b> (HostID, SessionOrUserName)  <b>ModifyAccount</b> (HostID, SessionNum, NewAccount, <i>CurrentRqstOnly</i>)  <b>MonitorVersion</b>  <b>SetNodeMonitorRate</b> (Rate)  <b>SetVprocLoggingRate</b> (Rate)  <b>SetVprocMonitorRate</b> (Rate)  <b>SetNodeLoggingRate</b> (Rate)  <b>SetSessionRate</b> (Rate, <i>SetLocalRate</i>)</p> <p><i>Connected</i>  <i>Profile</i></p>

---

<b>VprocSummary (Not Creatable)</b>	
AvgAMPUse	
AvgPEUse	
AvgDiskUse	
AvgDiskIOs	
HiAmpUse	
HiAmpNode	
HiAmp	
LoAmpUse	
LoAmpNode	
LoAmp	
HiPeUse	
HiPeNode	
HiPe	
LoPeUse	
LoPeNode	
LoPe	
HiDiskUse	
HiDiskNode	
HiDiskAmp	
LoDiskUse	
LoDiskNode	
LoDiskAmp	

---



---

<b>NodeSummary (Not Creatable)</b>	
AvgDiskUse	Version
AvgDiskIOs	TDRRelease
HiCPUUse	HiDiskIOs
HiCPUNode	HiDiskIONode
LoCPUUse	HiDiskIOAmp
LoCPUNode	LoDiskIOs
HiDiskUse	LoDiskIONode
HiDiskNode	LoDiskIOAmp
LoDiskUse	SessionCount
LoDiskIOs	SessionRateLocal
LoDiskIONode	SessionRateSystem
AvgBynetUse	VprocLoggingRate
BynetAStatus	VprocMonitorRate
BynetBStatus	
NodeLoggingRate	
NodeMonitorRate	
LoDiskNode	
LoDiskAmp	

---

---

**AMPs (Collection / Not Creatable)**

---

AvgCpuUse  
MaxCpuUse  
ParallelEfficiency  
BynetAStatus  
BynetBStatus  
MonitorRate  
Count  
Item

---

---

**AMP (Object)**

---

Key (AMP Number)  
NodeId  
Status  
CpuUse  
AmpWorkerUse  
SystemUse  
DiskUse  
DiskReads  
DiskWrites  
AvgDiskRequests  
MemSegsAllocated  
MemKBAllocated  
NetReads  
NetWrites  
Cluster  
RunCount  
BackupSegsAllocated

---

---

**PEs (Collection / Not Creatable)**

---

AvgCpuUse  
MaxCpuUse  
Count  
Item

---

---

PE Object
Key (PE Number)
NodeId
Status
HostId
LogonCount
RunCount
CpuUse
SystemUse
ParserUse
DispatcherUse
CICUse
HostReads
HostWrites
MemSegsAllocated
MemKBAllocated
NetReads
NetWrites

---

Nodes (Collection / Not Creatable)
AvgCpuUse
MaxCpuUse
AvgDiskUse
MaxDiskUse
AvgBynetUse
ParallelEfficiency
BynetAStatus
BynetBStatus
MonitorRate
Count
Item

---

---

Node (Object)
Key (Node Id)
AmpCount
PeCount
Status
CpuUse
IOWaitUse
SystemUse
UserUse
BynetAUse
BynetBUse
DiskUse
CICUse
DiskReads
DiskWrites
AvgDiskRequests
HostReads
HostWrites
SwapReads
SwapWrites
SwapDrops
MemSegsAllocated
MemKBAllocated
MemAllocateFailed
MemSegsAged
NetReads
NetWrites
BackupSegsAllocated
BackupKBAllocated
BackupSegsAged

---

Sessions (Collection / Not Creatable)
MonitorRate
Count
Item

---

<b>Session (Object)</b>	
Key (HostId/Session)	AvgAmpCpu
SessionNum	AvgDiskIO
HostId	HighAmpCpu1
UserName	HighAmpCpu2
Partition	HighAmpCpu3
Priority	LowAmpCpu1
Account	LowAmpCpu2
LogonPE	LowAmpCpu3
RunVproc	HighAmp1
LogonDateTime	HighAmp2
LogonSequence	HighAmp3
LogonSource	LowAmp1
PEState	LowAmp2
AMPState	LowAmp3
TotalPeCpu	HighDiskIO1
TotalAmpCpu	HighDiskIO2
TotalAmpIO	HighDiskIO3
CurrentAmpCpu	LowDiskIO1
DeltaSpool	LowDiskIO2
TempSpace	LowDiskIO3
TransactionCount	HighDiskAmp1
RequestCount	HighDiskAmp2
RequestCacheHits	HighDiskAmp3
TimeIdle	LowDiskAmp1
TimeBlocked	LowDiskAmp2
MoreBlockers	LowDiskAmp2
AmpCount	
AmpSkew	
DiskSkew	

<b>Blocks (Collection / Not Creatable)</b>	
Count	
Item	

---

**Block (Object)**

---

SessionNum  
HostId  
Severity  
LockType  
Granted  
UserName  
DbName  
TableName

---

## Object Model Error Messages

The following table describes the possible error messages that may be generated by running the Performance Monitor.

Error Code	Message
20001	WinCLI not found
20002	Already connected
20003	System, UserId or Password is not set
20008	The system can not be changed when running under a Teradata Manager profile
20009	Your application must have been launched by Teradata Manager to use Client mode
20010	Parameter 2 must be the session number (Long) or UserName (String)
20011	Invalid parameter passed to ModifyAccount
20012	The Session rate must be in the range 6 to 3600, or 0
20013	The Resource rate must be an integer divisor of 3600, or 0
20014	You are not connected to a Teradata system
20015	You are not connected to a Teradata system, or using Client mode

**Note:** Messages between 10000 and 19999 are 4 digit Teradata Error codes with a "1" appended at the start. For example, Message 12345 would be returned for Teradata Error code 2345.



## Chapter 7:

# Teradata Manager Alerts

This chapter explains the setup and usage of the Alerts system.

Alerts provides you with a single vantage point for monitoring the overall system performance of one or more Teradata RDBMS systems. In addition to viewing system performance, you can set the Alerts system to automatically take user-defined actions when defined limits are exceeded. Using the simple graphical interface, you can easily drill down from an overall picture to identify problem areas, using this information to prevent hazard situations.

The Alerts system also provides a performance status graphing function, allowing you to display a graph showing system performance by simply clicking on any data point value.

This chapter shows you how to:

- [Set Up an Alert Policy](#)
- [Start the Alert Control Module](#)
- [Display the Performance Status of the RDBMS](#)

## Set Up an Alert Policy

The key to the Alerts system is the user-defined action. An action can consist of various tasks, such as paging a systems programmer, sending an Email to a customer support center, displaying a banner, or running an executable program that automatically corrects a problem.

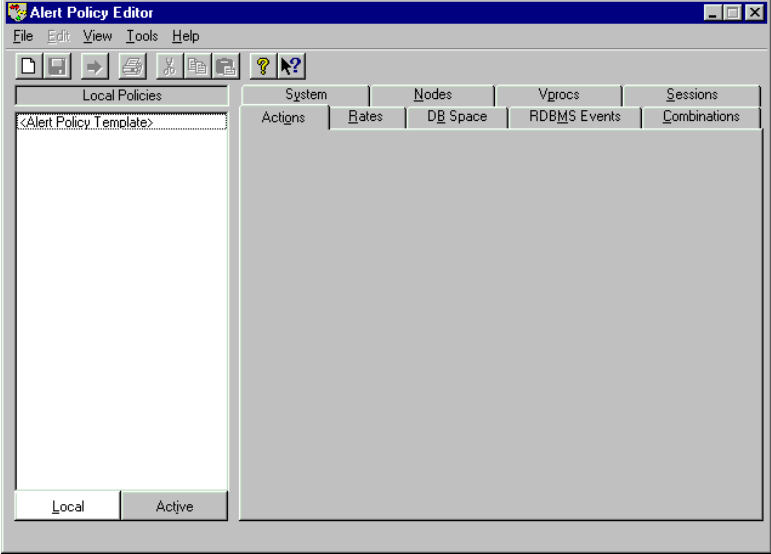
Once the actions are defined, you can define the events that trigger them. Events occur when a monitored system parameter crosses a threshold that you have defined. These events are defined based on data collected from the following areas:


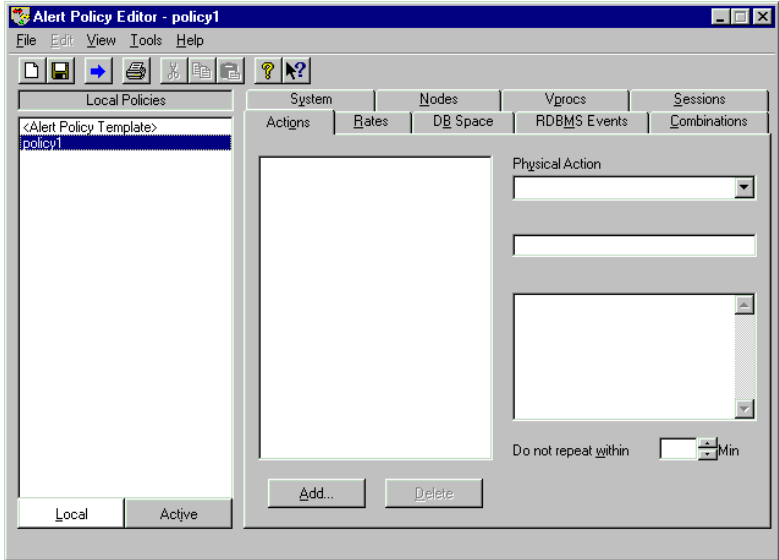
- PM Physical Resource data
- PM Virtual Resource data
- Database Space information
- Session information
- Teradata messages
- Event Combinations

The combination of action and event definitions is called an Alert Policy, and is created using the Alert Policy Editor.

## Create a New Policy

To create an Alert Policy, complete the following procedure:

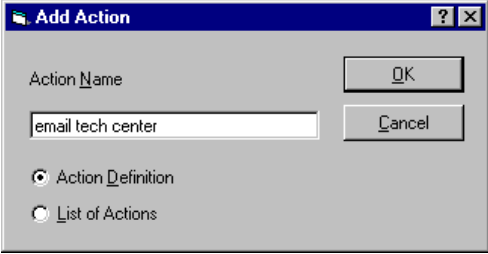
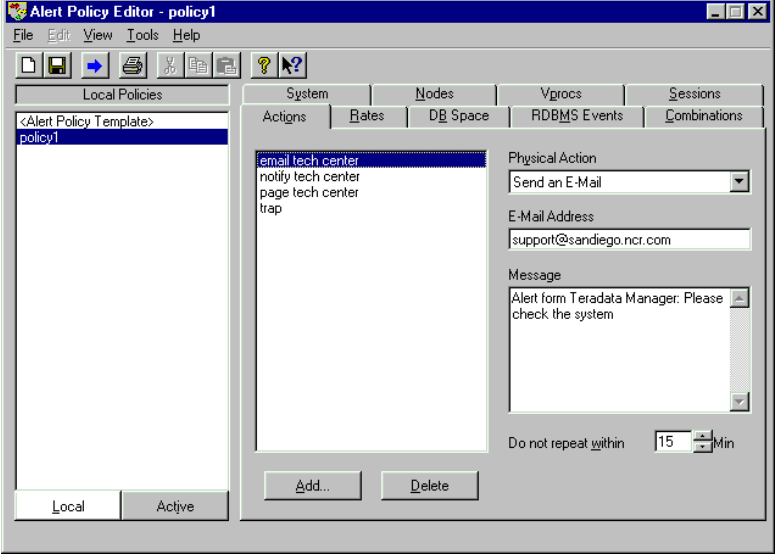
Step	Action
1	Start the Executive and log on to the Teradata RDBMS you will be working with. See <a href="#">“Start The Executive” on page 2-9</a> for instructions.
2	<p>Select <i>Tools &gt; Alert Policy Editor</i> from the Executive menu bar. The Alert Policy Editor starts and displays the following window.</p> 

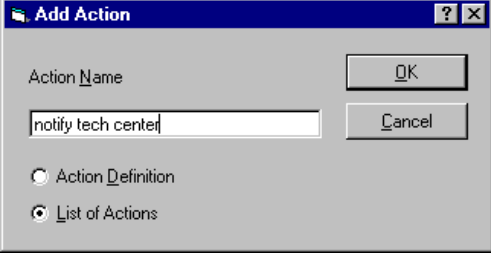
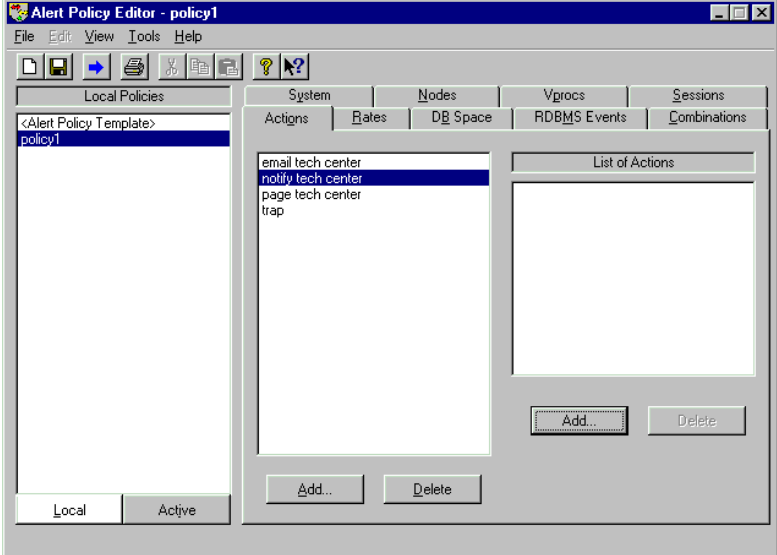
Step	Action
3	<p>To create a new policy based on the Alert Policy Template, select <i>File &gt; New</i> from the Alert Policy Editor menu bar. This displays the Create Alert Policy dialog box.</p>  <p><b>Note:</b> To create a new policy based on an existing one, click the <b>Local</b> or <b>Active</b> button on the main window of the Alert Policy Editor, then click on a name in the list. Select <i>File &gt; Save As</i>, and save the policy with the new name.</p>
4	<p>Enter a name for the new Alert Policy, then click <b>OK</b>.</p> <p>The Alert Policy Editor creates a new Policy based on the Alert Policy Template.</p> 

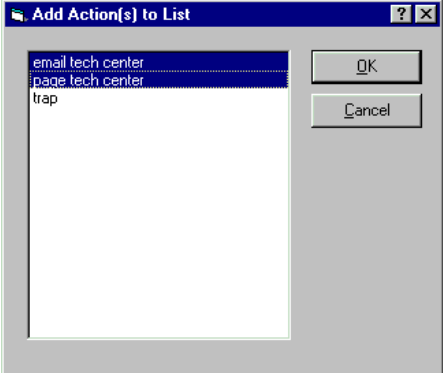
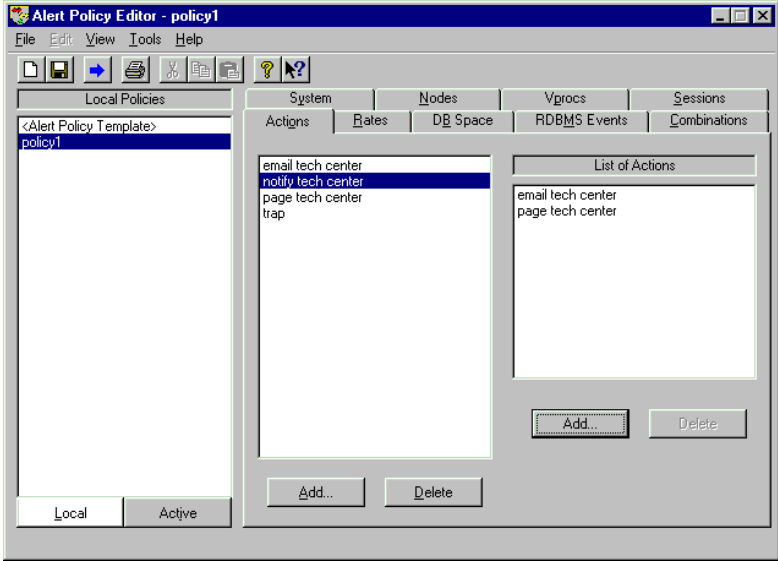
## Add Actions to the Policy

Actions are the first thing you need to add to the Policy. Actions are the steps that the system takes when the system performance falls outside of the specified limits. Actions must be defined before setting any system limits.

To create an Action, complete the following procedure:

Step	Action
1	<p>Click on the <b>Actions</b> tab to make it active, then click <b>Add</b>. This displays the Add Action dialog box.</p> 
2	<p>Enter a name for the action, and make sure that the <i>Action Definition</i> option is selected, then click <b>OK</b>. The new name appears in the list of actions.</p> 
3	<p>Make sure the action name is highlighted in the list, then use the <i>Physical Action</i> list to select the appropriate type of action.</p>
4	<p>The fields below the selected Physical Action will change depending on your selection. Fill them in as necessary.</p> <p>You can change the value in the <i>Do not repeat within field</i> to set the amount of time the system waits before repeating the Physical Action.</p>
5	<p>Repeat this procedure from step one to add as many actions as are required.</p>

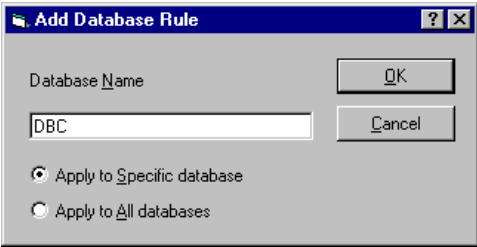
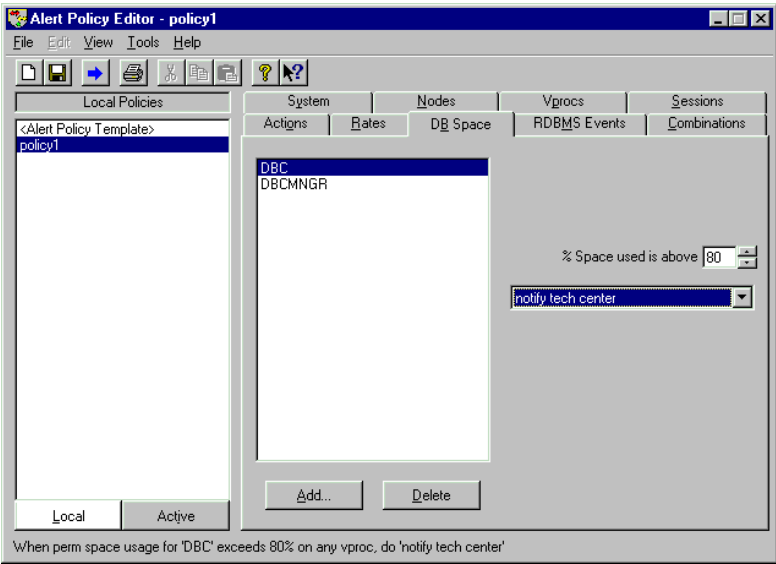
Step	Action
<p><b>6</b></p>	<p>If you wish to add an action that consists of several sub-actions, click <b>Add</b>. This displays the Add Action dialog box.</p> 
<p><b>7</b></p>	<p>Enter a name for the action, and make sure that <i>List of Actions</i> is selected, then click <b>OK</b>. The new name appears in the list of actions.</p> 

Step	Action
<p><b>8</b></p>	<p>Make sure the List of Actions name is highlighted in the list, then click <b>Add</b> under the <i>List of Actions</i>. This displays the Add Actions to List dialog box.</p> 
<p><b>9</b></p>	<p>Hold down the <b>Ctrl</b> key and select the actions you would like to be grouped under the List of Actions, then click <b>OK</b>. The actions you selected are now displayed in the List of Actions.</p> 

## Add Database Space Events to the Policy

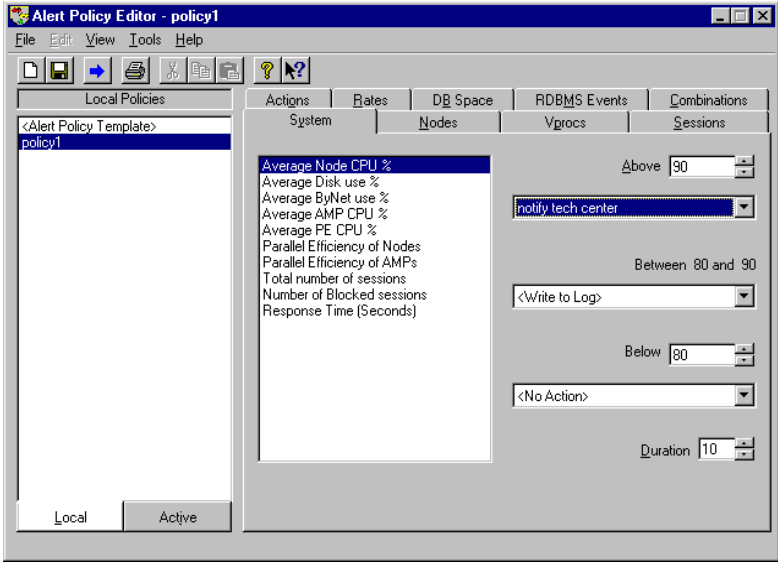
Database Space events are defined to raise an alert whenever the space used on any AMP exceeds the specified percentage. Make sure you have defined the appropriate actions before continuing.

To add a Database Space event, complete the following procedure:

Step	Action
1	<p>Click on the <b>DB Space</b> tab to make it active, then click <b>Add</b>. This displays the Add Database Rule dialog box.</p> 
2	<p>Do one of the following:</p> <ul style="list-style-type: none"> <li>To apply the rule to a specific database, click <i>Apply to specific database</i>, then enter the name of the database in the <i>Database name</i> field.</li> <li>To apply the rule globally to all databases, click <i>Apply to all databases</i>.</li> </ul> <p>Click <b>OK</b> to add the new database rule to the list.</p> 
3	<p>Make sure the rule is highlighted, then enter the desired percentage limit in the <i>% Space used is above</i> field.</p>
4	<p>With the same rule highlighted, use the pulldown list to select the desired action to be taken when the rule is exceeded.</p>
5	<p>Repeat this procedure from step one to add as many rules as are required.</p>

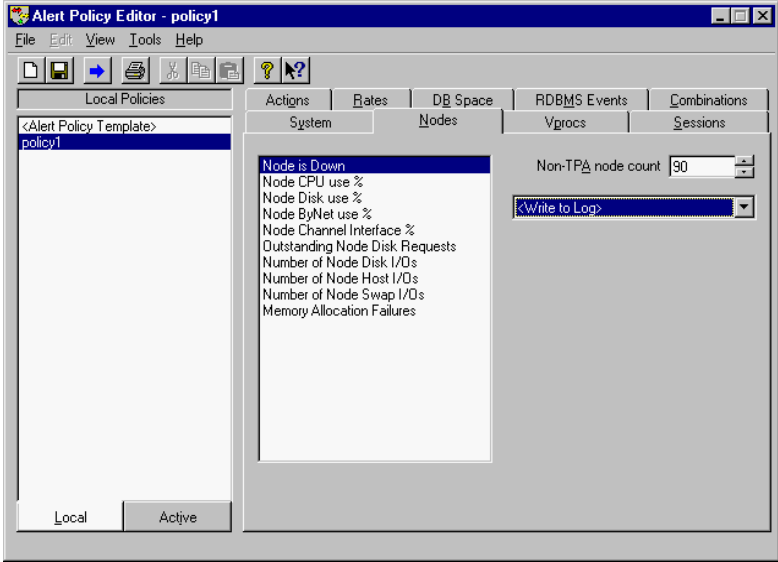
## Add System Level Performance Events to the Policy

To add a System level performance event, complete the following procedure:

Step	Action
1	<p>Click on the <b>System</b> tab to make it active.</p> 
2	<p>Click on the desired event, then use the <i>Above</i> and <i>Below</i> fields to set the system limits.</p>
3	<p>Use the pulldown menus to define the appropriate actions to take for the <i>Above</i>, <i>Between</i>, and <i>Below</i> conditions.</p>
4	<p>Repeat this procedure from step two to set up as many System level events as are required.</p>

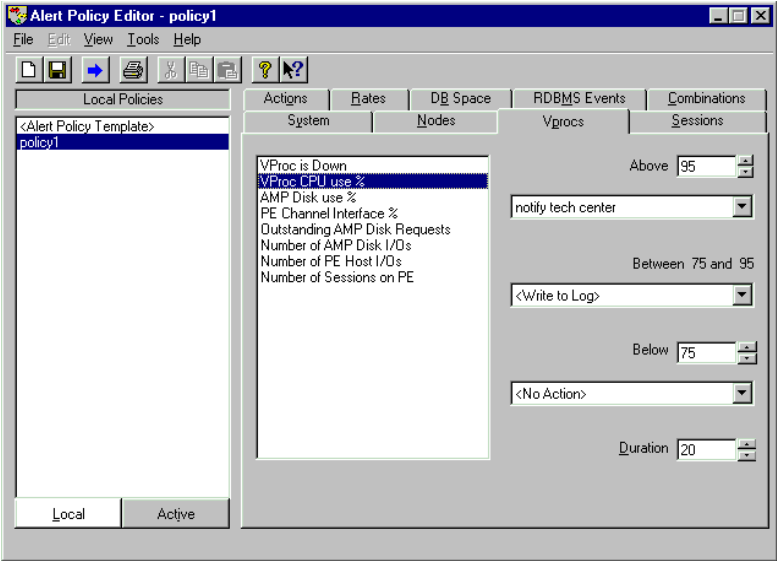
## Add Node Level Performance Events to the Policy

To add a Node level performance event, complete the following procedure:

Step	Action
1	<p>Click on the <b>Nodes</b> tab to make it active.</p>  <p>The screenshot shows the 'Alert Policy Editor - policy1' window. The 'Nodes' tab is active, displaying a list of events including 'Node is Down', 'Node CPU use %', 'Node Disk use %', 'Node ByNet use %', 'Node Channel Interface %', 'Outstanding Node Disk Requests', 'Number of Node Disk I/Os', 'Number of Node Host I/Os', 'Number of Node Swap I/Os', and 'Memory Allocation Failures'. The 'Write to Log' action is selected in the dropdown menu. The 'Non-TPA node count' is set to 90. The 'Local' and 'Active' buttons are visible at the bottom.</p>
2	<p>Click on the desired event, then use the <i>Above</i> and <i>Below</i> or <i>Count</i> fields to set the system limits.</p>
3	<p>Use the pulldown menus to define the appropriate actions to take for the <i>Above</i>, <i>Between</i>, and <i>Below</i> conditions.</p>
4	<p>Repeat this procedure from step two to set up as many Node level events as are required.</p>

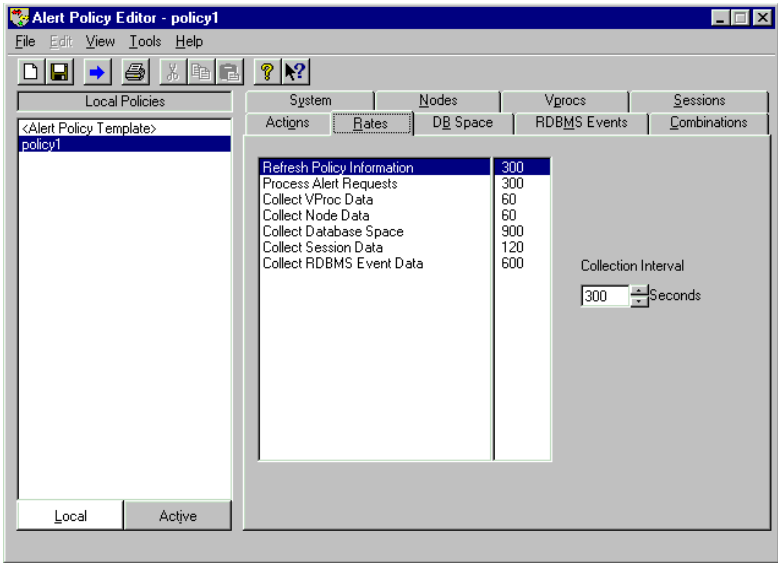
## Add Vproc Level Performance Events to the Policy

To add a Vproc level performance event, complete the following procedure:

Step	Action
1	<p>Click on the <b>Vprocs</b> tab to make it active.</p> 
2	<p>Click on the desired event, then use the <i>Above</i> and <i>Below</i> fields to set the system limits.</p> <p><b>Note:</b> The <i>Vproc is Down</i> event is a simple condition, and thus has no limit fields attached to it.</p>
3	<p>Use the pulldown menus to define the appropriate actions to take for the <i>Above</i>, <i>Between</i>, and <i>Below</i> conditions.</p>
4	<p>Repeat this procedure from step two to set up as many Vproc level events as are required.</p>

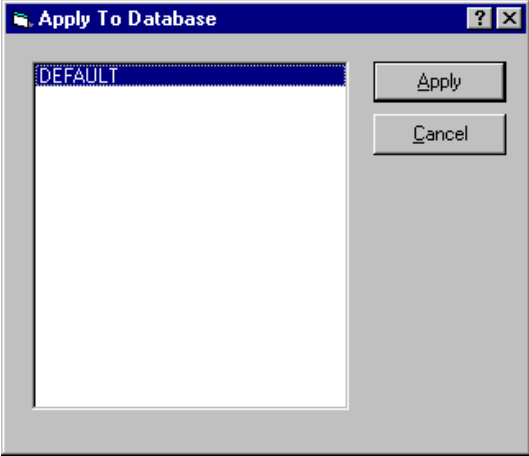
## Define Data Collection Rates for the Policy

To define data collection rates, complete the following procedure:

Step	Action
1	<p>Click on the <b>Rates</b> tab to make it active.</p> 
2	<p>Highlight the appropriate collection type, then change the collection frequency by entering the new value in the <i>Collection Interval</i> box.</p> <ul style="list-style-type: none"> <li>• The Refresh Policy Information rate is the frequency at which the Alert Control Module checks to see if the active policy has been updated, and if so, notifies the collectors to refresh their copy of the policy.</li> <li>• The Process Alert Requests rate is the frequency at which the Alert Control Module checks to see if alerts need to be raised for the user jobs. The criteria for alerts is based on the rows that have been inserted into the Alert Request and Monitor Request tables.</li> </ul>
3	<p>Repeat step two to set up as many rates as are required.</p>
4	<p>Now that you have seen how the Alert Policy Editor tab dialog works, you can set up any additional alert parameters by selecting the appropriate tab and filling in the fields.</p>

## Save and Apply the Policy to the RDBMS

To save the new policy and apply it to the RDBMS, complete the following procedure:

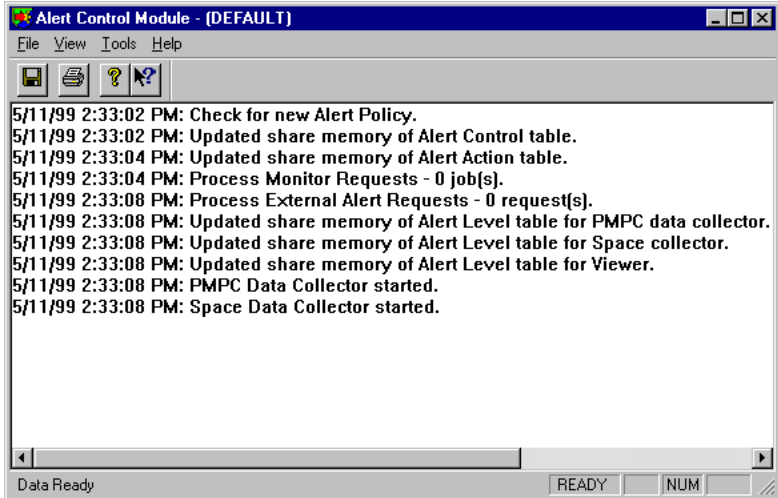
Step	Action
1	Select <i>File &gt; Save</i> from the menu bar to save the policy.
2	<p>If you want to apply the new policy to the database (make it an Active policy), select <i>Tools &gt; Apply to Database</i> from the menu bar. This displays a list of profiles currently in the active list.</p> 
3	Select the desired profile from the list, then click <b>OK</b> to apply the Policy to the associated RDBMS.

## Start the Alert Control Module

Before running the Alert Viewer, you must first start the Alert Control Module (ACM). ACM will in turn start the necessary Data Collectors, enabling the Alerts system to monitor the status of the Teradata RDBMS.

### Start the Alert Control Module

Follow this procedure to start the Alert Control Module:

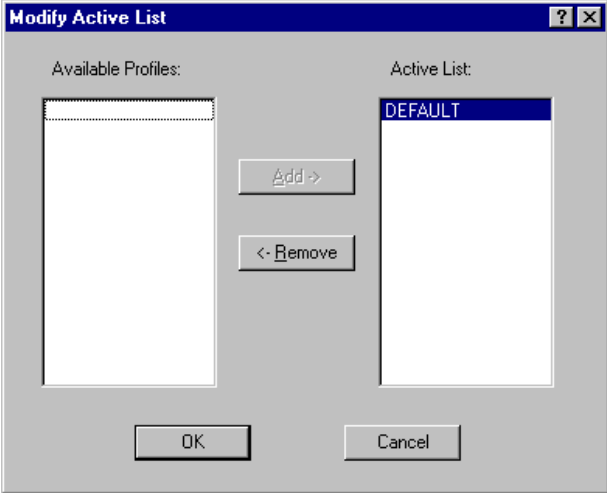
Step	Action
1	Start the Executive and log on to the Teradata RDBMS you will be working with. See <a href="#">“Start The Executive” on page 2-9</a> for instructions.
2	Select <i>Tools &gt; Alert Control Module</i> from the Executive menu bar. The Alert Control Module starts, logs on to the database, and displays the following window. 

# Display the Performance Status of the RDBMS

Once you have set up an Alert Policy and started the Alert Control Module, you are ready to use the Alert Viewer to display the status of the RDBMS.

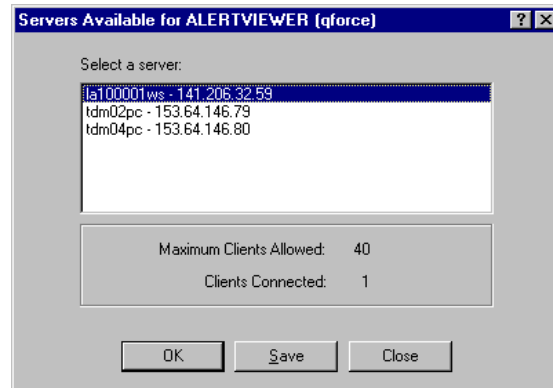
## Start the Alert Viewer

Follow this procedure to start the Alert Viewer:

Step	Action
1	Make sure the Alert Control Module is running (see <a href="#">“Start the Alert Control Module”</a> on page 7-14 for instructions).
2	<p>Start the Alert Viewer by selecting <i>Tools &gt; Alert Viewer</i> from the Executive menu bar. This displays the Modify Active List dialog box.</p> 
3	Move one or more profiles from the Available Profiles box to the Active Profiles box by first highlighting the item (highlight multiple items by holding Shift while clicking), then clicking <b>Add</b> .

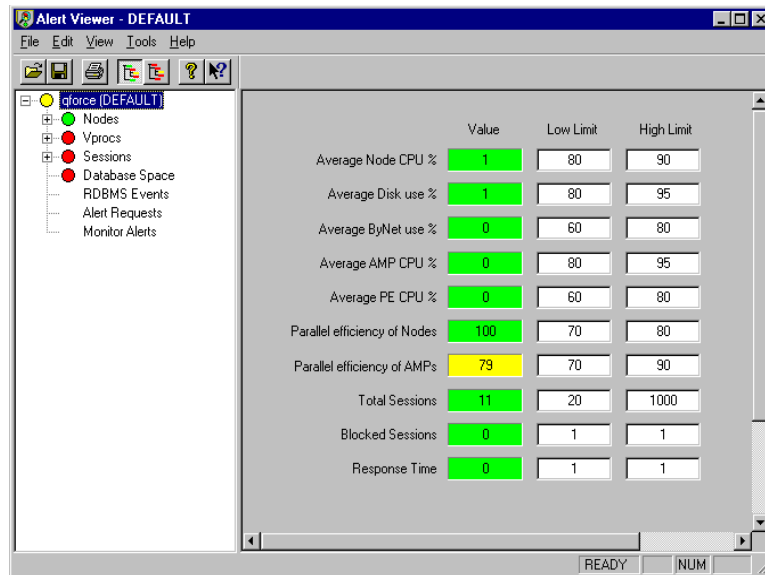
Step	Action
------	--------

4 Click **OK**. This displays the Servers Available dialog box.



**Note:** A dialog box will appear for each profile in the Active list.

5 Select the desired server, then click **OK**. This displays the Alert Viewer main window.



Step	Action
6	<p>The Alert Viewer window displays a tree structure containing your active profiles. To expand the tree view, click on a “+” sign next to a profile or group. To collapse the tree view, click on a “-” sign.</p> <p>Try the following:</p> <ul style="list-style-type: none"> <li>• Click on each profile (displayed as a top-level item in the tree structure in the left window) to display the related system level data in the panel to the right.</li> <li>• Click on the second or third-level group items below each profile to show the actual item together with the associated detail data.</li> </ul>
7	<p>You can create a chart from any of the data points by doing one of the following:</p> <ul style="list-style-type: none"> <li>• Move your cursor across the value fields on the main window. When the cursor changes to a “hand” shape (meaning the field contains chartable data) double-click on the field to create a chart.</li> <li>• Select <i>View &gt; Chart</i> from the menu bar, then select one of the chartable items from the Chart submenu to create a chart for that item.</li> </ul> <p><b>Note:</b> If the data for this profile is being charted for the first time, then the Alert Viewer will just open the graph window and draw the data. If the data is being charted for the second time (or more), the Viewer will pop up a Select Chart dialog box. This allows you to group the data any way you want if there are several charts associated with the one profile.</p>





## Chapter 8:

# Visual Explain

Visual Explain provides visual depictions of the execution plans chosen by the Teradata RDBMS Optimizer to access data. It does this by turning the output text of the EXPLAIN modifier into a series of easily readable icons.

Visual Explain is especially useful in comparing the execution plans of similar queries. Using the compare feature allows you to easily resolve Optimizer related discrepancies.

**Note:** The Query Capture Facility (QCF) must be installed on your RDBMS before running Visual Explain. For information about installing this feature, refer to Chapter 4 – “Query Capture Facility” of the *Teradata RDBMS SQL Reference, Volume 2*.

This chapter contains procedures on:

- [Setting Up the Query Capture Database](#)
- [Displaying an Execution Plan](#)
- [Entering a Query and Viewing Its Execution Plan](#)
- [Comparing Execution Plans Visually](#)
- [Displaying Differences in Explain Text](#)

# Setting Up the Query Capture Database

Before running Visual Explain, you need to set up a Query Capture Database. This is easily done from inside Visual Explain.

## Setting Up a New Query Capture Database

Follow this procedure to create a new Query Capture Database (QCD) on your system.

**Note:** If you have a QCD that was created prior to the latest Teradata RDBMS upgrade, you need to upgrade the QCD. For instructions, skip to the next procedure, [“Upgrading an Existing Query Capture Database” on page 8-2.](#)

Step	Action
1	Select <i>Tools &gt; Control Center</i> from the menu bar.
2	Click the <i>Manage QCD</i> tab, then click the <b>Setup QCD</b> button.
3	Select the option <i>Create all QCD database objects (tables and macros)</i> .
4	Enter a name for the QCD in the <i>QCD Name</i> field.
5	Enter an owner name in the <i>Owner</i> field. If this field is left blank, the owner defaults to the name of the logged on user.
6	Specify the <i>Perm</i> and <i>Spool Space</i> , selecting the appropriate units (KB, MB or GB) by clicking the desired option. (If no Perm Space is specified, the default is 1MB. If no Spool Space is specified, the default is 0.)
7	If you want the fallback option, check the <i>Fallback</i> check box.
8	If you want to view the schema of the Tables and Macros that will be created in the new QCD, click the <b>View Schema</b> button.
9	If you want to clear all fields to their default options, click <b>Clear</b> .
10	Click <b>Create</b> to set up the QCD.

## Upgrading an Existing Query Capture Database

Follow this procedure if you need to upgrade an existing QCD database. You only need to do this if you have a QCD database that was created prior to the latest Teradata RDBMS upgrade,.

Step	Action
1	Select <i>Tools &gt; Control Center</i> from the menu bar.
2	Click the <i>Manage QCD</i> tab, then click the <b>Upgrade/Revert QCF Version</b> button.

Step	Action
3	Enter the name of the QCD in the <i>Database Name</i> field. The current version of QCF is displayed in the <i>Present Version</i> field.
4	Choose the version you want to change to by selecting it in the <i>Intended Version</i> field.
5	Click <b>OK</b> to begin the conversion.

---

# Displaying an Execution Plan

What is exciting about Visual Explain is that it turns even the most complex textual explain statement into a flow diagram of easily recognized icons. Follow the steps below to use Visual Explain to display an execution plan inserted into the database.

## Step 1: Connecting to the Teradata RDBMS

The first step is to connect to the Teradata RDBMS.

Step	Action
1	Select <i>File &gt; Connect</i> from the menu bar.
2	Enter the following: <ul style="list-style-type: none"><li>• RDBMS Name</li><li>• User Name</li><li>• Password</li><li>• Database Name (optional)</li><li>• Account String (optional)</li></ul>
3	Click <b>OK</b> to connect to the RDBMS.

## Step 2: Inserting an Execution Plan Into the QCD

In order to view an Execution Plan using Visual Explain, the plan must first be inserted into the Query Capture Database (QCD) using the SQL INSERT EXPLAIN command.

You can insert the query Execution Plan using other applications (BTEQWIN, Queryman, etc.), or you can run it from Visual Explain itself.

Use the following procedure if you want to insert the execution plan from the desired query into the QCD using Visual Explain.

Step	Action
1	Select <i>Tools &gt; Execute SQL</i> from the menu bar.
2	In the dialog that appears, do one of the following to execute a query containing the INSERT EXPLAIN statement: <ul style="list-style-type: none"><li>• To select a query to be executed from a file, click <b>Browse</b>, and locate the file to be executed.</li><li>• Enter the text for the query in the <i>Query</i> window.</li></ul>
3	Click <b>Execute</b> . The results of the query are displayed in the <i>Query Results</i> area.

### Step 3: Viewing the Execution Plan

Once the explain text for the query has been inserted into the QCD database (via the INSERT EXPLAIN statement, you can use Visual Explain to view the explain results graphically, or textually.

Follow this procedure to view the execution plan:

Step	Action
1	Once you are connected to the RDBMS, select <i>File &gt; Open Plan from Database</i> from the menu bar. This displays the Select Execution Plans to Open dialog box.
2	Specify the <i>Database</i> from which you want to load the queries.
3	Do one of the following to select the desired queries from the selected database: <ul style="list-style-type: none"> <li>To load all queries, enter the “%” character in the <i>Query Tag</i> field.</li> <li>To load a range of queries, enter the range in the <i>Query ID</i> field (for example, “1-100”).</li> <li>To load a specific query, enter the query tag in the <i>Query Tag</i> field, or the query id in the <i>Query ID</i> field.</li> </ul>
4	Click <b>Browse QCD</b> to load the specified queries into the list of Available Execution Plans.
5	To load plans from additional servers, click <b>Connect To</b> .
6	To load offline plans, click <b>Offline Plan</b> .
7	To select plans for opening, in the Available Execution Plans list, click on the <i>Select</i> column of the desired plan(s). A check will mark the plan as selected.
8	Once the desired plans are selected, click <b>Add</b> to add the selected plan(s), to the Selected Execution Plans list. To add all available plans, click <b>Add All</b> .
9	Once the desired plan(s) are in the Selected list, click <b>Open</b> to display the plan(s). To easily navigate around larger plans, select <i>View &gt; View Pad</i> .
10	In addition to viewing the visual description of the plan, you can do the following: <ul style="list-style-type: none"> <li>To view Statement text, select <i>Plans &gt; Statement Text</i> from the menu bar.</li> <li>To view Explain text, select <i>Plans &gt; Explain Text</i> from the menu bar.</li> <li>To view Step text, move the mouse pointer over the desired step number, click the right mouse button, and choose the <i>Step Text</i> option.</li> <li>To view summary information, select <i>View &gt; Summary Information</i>.</li> </ul>

## Entering a Query and Viewing Its Execution Plan

As an alternative to running a query using the INSERT EXPLAIN statement and then locating it and displaying the results, Visual Explain allows you to simply enter the statement text and immediately view the execution plan for that query. Use the following procedure to do this.

Step	Action
1	Select <i>Tools &gt; Launch QCF</i> from the menu bar.
2	Select one of the following options: <ul style="list-style-type: none"><li>• If you want to insert the execution plan information into the specified QCD, select <i>View Execution Plan (Insert Explain)</i>.</li><li>• If you want to capture the execution plan as a series of INSERT statements that can be saved to a BTEQ file and printed or inserted into the QCD, select <i>Capture Execution Plan (Dump Explain)</i>.</li></ul>
3	If you have selected the Insert Explain option and you want the execution plan information deleted from the QCD once it is displayed, check the option <i>Delete After Use</i> .
4	Enter the name of the desired QCD database in the <i>Database</i> field.
5	Enter the desired name you want to use to identify the query in the <i>Query Name</i> field.
6	Do one of the following: <ul style="list-style-type: none"><li>• If you want to enter the statement text, enter it in the <i>Query</i> window.</li><li>• If you want to open a file containing statement text, click <b>Browse</b> to locate the file.</li></ul>
7	If you want to recreate a system environment by setting the Cost Parameters and/or Random AMP Samples at session level, click <b>Set/Reset</b> .
8	Click <b>Submit</b> to create the execution plan. To easily navigate around larger plans, select <i>View &gt; View Pad</i> .
9	In addition to viewing the visual description of the plan, you can do the following: <ul style="list-style-type: none"><li>• To view Statement text, select <i>Plans &gt; Statement Text</i> from the menu bar.</li><li>• To view Explain text, select <i>Plans &gt; Explain Text</i> from the menu bar.</li><li>• To view Step text, move the mouse pointer over the desired step number, click the right mouse button, and choose the <i>Step Text</i> option.</li><li>• To view summary information, select <i>View &gt; Summary Information</i>.</li></ul>

# Comparing Execution Plans Visually

Now we'll use Visual Explain to compare execution plans. This first comparison is visual, with the differences in plans highlighted by red arrows.

## Step 1: Loading the Execution Plans

Before you can compare execution plans, you first need to load them into Visual Explain. Do the following:

Step	Action
1	Once you are connected to the RDBMS, select <i>File &gt; Open Plan from Database</i> from the menu bar. This displays the Select Execution Plans to Open dialog box.
2	Specify the <b>Database</b> from which you want to load the queries.
3	Do one of the following to select the desired queries from the selected database: <ul style="list-style-type: none"> <li>To load all queries, enter the “%” character in the <i>Query Tag</i> field.</li> <li>To load a range of queries, enter the range in the <i>Query ID</i> field (for example, “1-100”).</li> <li>To load a specific query, enter the query tag in the <i>Query Tag</i> field, or the query id in the <i>Query ID</i> field.</li> </ul>
4	Click <b>Browse QCD</b> to load the specified queries into the list of Available Execution Plans.
5	To load plans from additional servers, click <b>Connect To</b> .
6	To load offline plans, click <b>Offline Plan</b> .
7	To select plans for opening, in the <i>Available Execution Plans</i> list, click on the <i>Select</i> column of the desired plan(s). A check will mark the plan as selected.
8	Once the desired plans are selected, click <b>Add</b> to add the selected plan(s), to the <i>Selected Execution Plans</i> list. To add all available plans, click <b>Add All</b> .
9	Once the desired plan(s) are in the Selected list, click <b>Open</b> to display the plan(s).

## Step 2: Creating the Visual Comparison

Follow this procedure to create a visual comparison of execution plans:

Step	Action
1	Once you have loaded the desired execution plans, select <i>Plans &gt; Compare</i> from the menu bar.
2	Select one query to be used for the basis of the comparison by double-clicking on its row. The query row turns green to indicate it is selected.
3	Select the plans to be compared to the base plan by clicking on its <i>Compare</i> column. A check mark in this column indicates the query is selected for comparison.
4	Click <b>OK</b> to create the comparison.
5	Note that the differences are displayed by a red arrow next to the appropriate steps. Move the mouse pointer over this red arrow for Tool Tip text explaining the differences.

## Step 3: Comparing Steps in Execution Plans

Follow this procedure to create a visual comparison of execution plans:

Step	Action
1	Once you have loaded the desired execution plans, select <i>Select Plans &gt; Compare Steps</i> from the menu bar.
2	In the dialog that appears, double-click on the step you want to use as base for the comparison.
3	Single-click on the steps you want to compare to the selected base step.
4	Click <b>Compare</b> to create the comparison.

# Displaying Differences in Explain Text

Follow this procedure to create a report showing the differences in explain text between two queries.

Step	Action
1	Select <i>Plans &gt; Explain Text Diff</i> from the menu bar. This displays the Select Execution Plans for Explain Text Differences dialog box.
2	Select the Database from which you want to load the queries.
3	Do one of the following to select the desired queries from the selected database: <ul style="list-style-type: none"> <li>• To load all queries, enter the “%” character in the <i>Query Tag</i> field.</li> <li>• To load a range of queries, enter the range in the <i>Query ID</i> field (for example, 1-100’).</li> <li>• To load a specific query, enter the query tag in the <i>Query Tag</i> field, or the query id in the <i>Query ID</i> field.</li> </ul>
4	Click <b>Browse QCD</b> to load the specified queries into the list of Available Execution Plans.
5	To load opened plans for the compare operation, check the <i>Opened Plans</i> box, then click <b>Browse</b> to load the plans into the list of Available Execution Plans.
6	To load plans from additional servers, click <b>Connect To</b> .
7	To load offline plans, click <b>Offline Plan</b> .
8	To select plans for comparison, in the <i>Available Execution Plans</i> list, click on the <i>Select</i> column of the desired plan(s). A check will mark the plan as selected.
9	Once the desired plans are selected, click <b>Add</b> to add the selected plan(s), to the <i>Selected Execution Plans</i> list. To add all available plans, click <b>Add All</b> .
10	Select a base plan for the comparison by double-clicking on a row in the <i>Selected Execution Plan</i> list.
11	Select a plan to compare to the base by clicking in its <i>Compare</i> column. A check will mark the plan for comparison.  <b>Note:</b> Only two plans can be compared at a time.
12	Click <b>Compare</b> to display the report. The textual differences are displayed in red.

Step	Action
13	Use the commands on the Navigate menu (or the corresponding buttons on the tool bar) to move from one difference to another.
14	You can also do the following: <ul style="list-style-type: none"><li data-bbox="516 390 1430 447">• To view the Execution Plan, select <i>View &gt; Execution Plan</i> from the menu bar.</li><li data-bbox="516 457 1430 501">• To view Statement text, select <i>View &gt; Explain Text</i> from the menu bar.</li></ul>



**Appendix A:**

# The Teradata Manager Applications

This chapter provides a brief description of each Teradata Manager application. The applications are listed in the order that they appear on the Executive pull-down Menus.

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# Program Icon - Executive

## Function

The Executive provides the interface for working with all of the other Teradata Manager applications. It allows you to:

- Tailor your Teradata Manager working environment
- Work with profiles and profile logs
- Launch other Teradata Manager Applications
- Enable and disable autostart applications

## How It Works

It starts automatically each time you start Teradata Manager, and it runs continuously until you exit the application.

## Getting Started

Make sure you have created a default profile using Profile Builder before launching the Executive. See [“Create a Default Profile for Teradata Manager” on page 2-7](#) for more information.

# Program Icon - Profile Builder

## Function

Profile Builder allows you to define and modify profiles. A profile is a set of Teradata Manager applications that is configured for a specific type of monitoring activity. This ability to create custom configurations provides an effective way for you to use Teradata Manager in various operational situations. For example:

- If you need to access more than one Teradata RDBMS, you can define different profiles for each database.
- If you need more than one person or group of people to use Teradata Manager, you can define different profiles for each person or group.
- If your operational needs change on a regular basis, or from one shift to another, you can define different profiles for each shift.

## How It Works

Profile Builder runs in a standard Windows application window. It runs separately from the Executive, and you can use Profile Builder whether the Executive is running or not.

## Getting Started

The first thing you need to do is to create a default profile. This profile will allow you to start Teradata Manager Executive and access the desired applications.

## Tools Menu - Alert Control Module

### Function

The Alert Control Module (ACM) initiates the alerting process for Teradata Manager.

### How It Works

ACM reads the Alert system tables for the Teradata RDBMS associated with the current Teradata Manager profile, and starts the set of Data Collectors that are required to support the current Alert Policy.

It then monitors the Alert Policy for changes. If the user changes the Alert Policy so that a new collector must be started up, or a running collector is no longer required, ACM takes the appropriate action. ACM can also accept requests from other Teradata utilities or user programs to generate alerts.

The Alert Control Module writes a detailed report of all Alert activity to the ACM Log File.

## Tools Menu - Alert Policy Editor

### Function

The Alert Policy Editor allows the DBA to define the actions that should take place when Performance or Database Space events occur on one or more Teradata machines. These events are defined based on data collected from the following areas:

- PM Physical Resource data
- PM Virtual Resource data
- Database Space information
- Session information
- Teradata messages
- Event Combinations

The collection rates for each type of data can be set independently by data type and machine.

---

## Tools Menu - Alert Viewer

### Function

The Alert Viewer provides the user a with single view point on the overall system performance for one, or multiple, Teradata RDBMS systems. Through the easy to use graphical user interface and colored icons, users can easily drill down from an overall picture to identify the problem area, possibly preventing a hazardous situation.

The Alert Viewer also provides a graphing function, which allows you to display a graph for any data point value by simply clicking on it.

### How It Works

Each profile is displayed as a top-level item in a tree structure, with the related system level data displayed in the panel to the right. Below each profile are the group items for Nodes, Vprocs, Sessions, RDBMS Events, Monitor Alerts, and Alert Requests. These second level items display a List View of third level items consisting of Nodes, Vprocs or Sessions. For example, the Nodes group item will display the number of Node records below it. The third level shows the actual Node, Vproc or Session together with the associated detail data.

### Important

Before running the Alert Viewer, you must first start the Alert Control Module (ACM). ACM will in turn start the necessary Data Collectors which allow the Alert Viewer to get data from the ServerPC.

## Tools Menu - BTEQWIN

### Function

BTEQWIN is an application that allows the user to run multiple DMTEQ sessions and to access different databases simultaneously under Teradata Manager.

### How It Works

BTEQWIN provides pulldown menus and dialog boxes that you use to send SQL statements to the Teradata RDBMS. By default, BTEQWIN is configured as a menustart application under the Tools pulldown menu on the Executive menu bar of the DEFAULT profile.

### What It Does

Running BTEQWIN allows you to:

- Run multiple DMTEQ sessions simultaneously under the Teradata Manager
- Access different RDBMS's simultaneously under the Teradata Manager
- Scroll back the window display
- Save all BTEQWIN output to a file
- Use editing functions to modify a BTEQ or a SQL statement
- Re-send a BTEQ or a SQL statement to the Teradata RDBMS without retyping
- Run a BTEQ script using drag and drop functionality

---

## Tools Menu - DMTEQ

### Function

DMTEQ is a version of the Basic Teradata Query (BTEQ) Facility that runs under Teradata Manager. Use DMTEQ to submit Teradata SQL statements and requests to the associated Teradata RDBMS with the use of macros.

### How It Works

DMTEQ runs in a standard Windows application window. By default, DMTEQ is configured as a menustart application under the Tools pulldown menu on the Executive menu bar of the DEFAULT profile.

## Tools Menu - RDBMS Setup

### Function

RDBMS Setup is a tool for setting up the Teradata RDBMS with the databases, tables, macros and users necessary to run Teradata Manager.

### How It Works

RDBMS Setup uses your parameters to generate SQL statements for creating and modifying databases/tables/macros/users on the specified RDBMS. Each SQL statement and whether it was submitted successfully or unsuccessfully is logged in the main window of the application.

## Tools Menu - Time Synchronizer

### Function

Time Synchronizer allows you to synchronize your PC clock with the Teradata RDBMS.

You can run Time Synchronizer in interactive mode to:

- Synchronize the clock on your PC with the clock on the associated Teradata RDBMS.
- Set the clock on your PC.

You can run Time Synchronizer in batch mode to:

- Periodically compare both times.
- Notify you if the two times differ by more than a specified amount.
- Re-synchronize the clocks when they are out of synchronization.

**Note:** The logged on user must have permission to alter the PC time.

# Tools Menu - Visual Explain

## Function

Visual Explain provides a visual depiction of the execution plan chosen by the Teradata RDBMS Optimizer to access data. It does this by turning the output text of the EXPLAIN modifier into a series of easily readable icons.

Visual Explain is especially useful in comparing the execution plans of similar queries. Using the compare feature allows you to easily resolve Optimizer related discrepancies.

## How It Works

Visual Explain reads the contents of the Query Capture Database (QCD) and turns it into a series of icons. In order to view an execution plan using Visual Explain, the execution plan information must first be captured into the QCD using the Query Capture Facility (QCF), which includes the “insert explain” and “dump explain” commands.

---

# Tools Menu - WinDDI

## Function

WinDDI (Windows Data Dictionary Interface), is the Teradata Manager application that you use to perform database administration tasks on the associated Teradata RDBMS computer.

## How It Works

WinDDI runs in a standard Windows application window.

By default, WinDDI is configured as a menustart application on the Tools pulldown menu of the Executive menu bar in the DEFAULT profile. WinDDI is also configured as a separate application icon in the Teradata Manager folder so you can run it separately, independent of the Executive

## What It Does

WinDDI provides an easy-to-use Windows-based graphical interface to the Teradata RDBMS Data Dictionary. You may use WinDDI to perform the following functions:

- Create, Modify and Drop Users or Databases
- Create Tables (using ANSI or Teradata syntax)
- Grant or Revoke access/monitor rights
- Copy Table, View or Macro definitions to another database, or to another system
- Drop or Rename Tables, Views or Macros
- Move space from one database to another
- Run an SQL query
- Display information about a Database
- Display information about a Table, View or Macro

WinDDI keeps a record of all the actions you take and can optionally save this record to a file. This record contains a time stamp together with the SQL that was executed, and other information such as the statement's success or failure.

## Prerequisites

To use the viewing functions of WinDDI, you must have Select access to the DBC views of the Teradata RDBMS. To use the Copy, Drop, Create or Grant tools you must have the corresponding privilege on the table or database that you are trying to modify or create. To use the Browse or Row Count features you must have select access to the Table or View.

WinDDI has no dependencies on any other Teradata Manager application.

# Performance Menu - Dynamic Utilization Charting (Using PM & PC)

## Function

Dynamic Utilization Charting (using PM & PC), or DUC (using PM & PC), displays near real-time Teradata RDBMS resource usage data in chart format on your Teradata Manager PC. You can set the frequency at which the charts are updated. The update frequency range is 6 to 3600 seconds while the system is running.

The charts can help you:

- Detect down nodes and down Vprocs.
- Detect resource usage abnormalities on the associated Teradata RDBMS, such as the CPU Parallelism among Vprocs and Nodes.
- Detect resource usage abnormalities on the associated Teradata RDBMS.

## How It Works

DUC (using PM & PC) runs in a standard Windows application window. By default, DUC (using PM & PC) is configured as a menustart application under the Performance pulldown menu on the Executive menu bar of the DEFAULT profile.

# Performance Menu - Performance Data Analyzer

## Function

Performance Data Analyzer (PDA) summarizes Teradata RDBMS resource usage data in chart format on your Teradata Manager PC. You can chart a single column for several time periods, or several columns for a single time period. Resource usage data comes from the resource usage tables on the associated Teradata RDBMS by Resusage Data Collector.

## How It Works

Performance Data Analyzer runs in a standard application window. By default, it is configured as a menustart application under the Performance pulldown menu on the Executive menu bar of the DEFAULT profile.

Because Performance Data Analyzer relies on resusage data files, you must first run Resusage Data Collector to generate data before you can start PDA.

# Performance Menu - PM Data Collector

## Function

The PM Data Collector is the component of Teradata Manager's client/server support facility that gets performance monitoring (PM & PC) data from the Teradata RDBMS.

PM Data Collector serves as a single point of Teradata RDBMS performance data collection. This means you can run applications that report RDBMS activity and performance data while minimizing the impact of obtaining such data from the RDBMS.

## How It Works

The PM Data Collector and TMServer typically run on a central administrative server. Data is distributed to requesting applications (such as Teradata Performance Monitor, Session Information, and Alert Viewer) by the TMServer application. Applications request performance data via the TMClient application. All other Teradata Manager workstations run on desktops as clients and receive performance data from the central server.

## Prerequisites

To use all of the functions in PM Data Collector, you must have the following user privileges on the Teradata RDBMS:

- SETSESSRATE
- SETRESRATE
- MONSESSION
- MONRESOURCE

## Resusage Tables

Before PM Data Collector will be able to return any data you will need to use the xctl utility to enable the following Resusage tables on the Teradata RDBMS system(s) that you wish to monitor:

- SVPR
- SPMA
- SCTL
- IPMA
- SLDV
- SHST

After enabling these tables you must use Teradata Performance Monitor, or the Operator commands, to set the session and resource collection rates to non zero values.

## Starting the Collector

There are two methods of starting the collector: if the Alerts system is in use, then the collector is automatically started by the Alert Control Module; otherwise the collector can be started manually by selecting the appropriate menu command in the Teradata Manager Executive (by default *Performance > PM Data Collector*).

In both cases the collector automatically starts a partner TMServer.

**Note:** The DEFAULT profile may be customized by administrator so that the collector does not appear on any of the menus. This way the day-to-day user is not tempted to run an unnecessary copy of the PM Data Collector.

---

# Performance Menu - Teradata Performance Monitor

## Function

Teradata Performance Monitor is the Teradata Manager application that you use to monitor the general health of a Teradata RDBMS. It also allows you to analyze current performance and both current and historical session information, and to abort sessions that are causing system problems.

## Where It Runs

Teradata Performance Monitor runs in a standard Windows application window. By default, Teradata Performance Monitor is configured as a menustart application under the Performance pulldown menu on the Executive menu bar of the DEFAULT profile.

## How It Works

Teradata Performance Monitor uses the Teradata RDBMS Performance Monitor to collect near real-time system configuration, Resource usage, and Session information from the Teradata RDBMS. It then formats and displays this information as requested.

Teradata Performance Monitor displays this performance data on four sets of screens. One for each of the following types of data:

- **General Health information (Configuration and Summary)**  
This data is displayed on the main screen and is refreshed automatically at a user defined interval. This data can also be displayed as a chart of summary values over time by clicking on the Chart button.
- **Resource information (Nodes and Vprocs)**  
This data is collected and displayed only when requested by the user. Graphs showing a user selected data point for each Node (or Vproc) may be displayed by double clicking the required data point.
- **Session Information (Statistics and Lock information)**  
This data is collected and displayed only when requested by the user. The session summary screen shows all the sessions currently logged onto the system and allows the user to filter these sessions and to sort them in various ways. It also shows which sessions are currently blocked.  
Detail session information, for a specific session may be seen by double clicking on that session. Graphs showing a user selected data point for each Session may be displayed by double clicking the required data point. Graphs showing data point A by data point B may be displayed by clicking on one data point and dragging it to the other.

Detail lock information may be displayed by double clicking on any session that is shown to be blocking, or blocked by, another session.

You can also display Session Sqew information and SQL Text/Explain steps.

- Historical session information

A list of historical session files is displayed. By choosing from this list the user may analyze a problem after the fact. The data itself is displayed on the regular Session Information screens.

## General Notes

The Main Teradata Performance Monitor screen must remain open. Closing it will end your Teradata Performance Monitor session.

In general, each screen is displayed maximized within the parent frame. This may be required in order to see the entire screen contents.

If an error occurs in this program please see Problem Resolution for more information.

## Prerequisites

To use all of the functions in Teradata Performance Monitor, you must have the following user privileges on the Teradata RDBMS:

- SETSESSRATE
- SETRESRATE
- MONSESSION
- MONRESOURCE
- ABORTSESSION

## Resusage Tables

Before Teradata Performance Monitor will be able to return any data you will need to use the xctl utility to enable the following Resusage tables on the Teradata RDBMS system(s) that you wish to monitor:

- SVPR
- SPMA
- SCTL
- IPMA
- SLDV
- SHST

After enabling these tables you must use Teradata Performance Monitor, or the Operator commands, to set the session and resource collection rates to non zero values.

## **Status Bar**

The Status Bar across the bottom of the window provides three important pieces of information. It tells you:

- whether you are logged on or not,
- what Teradata Database you are logged on to, and
- what is Teradata Performance Monitor's processing state, which is either Idle or processing a request.

# Performance Menu - Resusage Data Collector

## Function

Resusage Data Collector (RDC) gathers information for AMP vprocs, PE vprocs and Nodes. RDC runs as a minimized icon and requires very little user interaction.

## What It Does

Use Resusage Data Collector to perform the following functions:

- Collect data from tables on the associated Teradata RDBMS. (The Resusage tables on the RDBMS must be enabled and logging must also be enabled.)
- Write the data to files and memory objects on your Teradata Manager PC.
- Access the resource usage tables.
- When configured, access data from other tables to depict trends over user defined intervals using PDA.

## How It Works

Resusage Data Collector (RDC) requires, or uses, the following:

- A current configuration file, DBCONFIG.DAT, must be present in the PARAMS sub-directory of the profile. If the configuration is not there, RDC will create one.
- RDC uses a 10 minute logging cycle.
- RDC requires that your PC and the RDBMS be in synchronization. (Run the Time Synchronizer application to insure that your PC is not more than one minute ahead of the system.)

Use RDC to collect only the data for the current logging cycle on the associated Teradata RDBMS. A file for each of the three data types is generated with the collected data is found in `\<install_directory>\profiles\<profile_name>\resbase`.

# Production Control Menu - Configuration Check

## Function

Configuration Check is a Teradata Manager utility that collects configuration information related to an associated Teradata RDBMS and stores it on the client PC.

## Where It Runs

Configuration Check runs in a minimized window, and can be run as an autostart application. Locking Logger and Resusage Data Collector run it automatically to create the dbconfig.dat file.

It is recommended that you run Configuration Check whenever the number of Nodes/AMPs/PE Vprocs changes on the database server.

# Production Control Menu - Error Log Analyzer

## Function

Error Log Analyzer (ELA) allows you to view the error log system tables on the Teradata RDBMS. You may view the log tables

- by Category
- by Message Screen, and
- by Reports.

Teradata RDBMS monitors hardware and software error events and logs error messages into two separate tables:

- dbc.software\_event\_log
- dbc.hardware\_event\_log

The ELA macros included with the Teradata Manager include AllRestarts, BynetEvents, DiskEvents, EventCount, LogHistory, MemEvents, MiniCylPacks, PackDisk and RestartLogonEvents. You can add other macros by using application-specific entries.

## Where It Runs

Error Log Analyzer runs in a standard application window. By default, it is configured as a menustart application under the Production Control pulldown menu on the Executive menu bar of the DEFAULT profile.

## Application

Error Log Analyzer (ELA) is used to create a daily report of Teradata RDBMS errors which occurred during the previous 24-hour period. Using the report, you can determine if anything unusual occurred on the Teradata RDBMS during that period and correct any problems, if needed.

## Macros

You can set up Error Log Analyzer as an autostart application from Profile Builder or from the Executive. Additional macros can be added using application-specific entries from Profile Builder. The ELA macros run under DMTEQ.

---

# Production Control Menu - Locking Logger

## Function

The Teradata Manager Locking Logger application is a menu-driven interface to the Locking Logger console utility of the Teradata Database Software (RDBMS).

When the Locking Logger option is enabled, the Teradata RDBMS maintains ongoing logs of:

- Transaction Identifiers
- Session Identifiers
- Lock Object Identifier
- Lock Levels associated with executing SQL statements which have been delayed because of database lock contention.

## Where It Runs

Locking Logger runs in a standard application window. By default, it is configured as a menustart application under the Production Control pulldown menu on the Executive menu bar of the DEFAULT profile.

## Application

The Locking Logger application runs the Locking Logger console utility which creates a table of information extracted from the transaction logs. The Locking Logger application can then use this table to create a report that helps you determine whether system performance has been degraded by an inappropriate mix of SQL statements.

## Enabling Locking Logger

You must enable the Locking Logger option before you can use the Teradata Manager Locking Logger application. Modify the RDBMS Control Record by running the dbscontrol console utility via Remote Console. You should then restart the system.

# Production Control Menu - LogOnOff Usage

## Function

LogOnOff Usage presents daily, weekly, and monthly logon statistics based on information in the DBC LOGONOFF view on the associated Teradata RDBMS. Three macros are included with LogOnOff Usage to help you retrieve this information:

This report...	Displays...
DailyReport	the number of logons across several days, either in ten-minute or one-hour intervals, grouped by time interval and user.
WeeklyReport	a summary of all logons for the last ten weeks, grouped by week.
MonthlyReport	a summary of all logons over the last month (from 30 days previous to the current date) grouped by date.

## Where It Runs

LogOnOff Usage runs in a standard application window. By default, it is configured as a menustart application under the Production Control pulldown menu on the Executive menu bar of the DEFAULT profile.

## Application

LogOnOff Usage allows you to create and execute macros on the associated Teradata RDBMS and to display the results in a scrollable window.

The DEFAULT profile has been configured to contain three macros which present you with daily, weekly, and monthly logon statistics: DailyReport, WeeklyReport and MonthlyReport.

## Additional Macros

You can create additional macros or modify existing macros via the Application Specific Entries feature of the Profile Builder. The SQL scripts for the included macros serve as templates for any new macro you create.

# Production Control Menu - Remote Console

## Function

Remote Console allows you to run many of the Teradata RDBMS console utilities from your Teradata Manager PC. Supported utilities include:

This utility...	Allows you to...
Abort Host	cancel all outstanding transactions running on a host that is no longer operating.
CheckTable	check for inconsistencies in internal data structures and for corruption.
Configure	review and update the configuration of the Teradata RDBMS.
DBS Control	display the values of the DBS Control Record fields. You can also modify the values, if the field is writable.
Ferret	display and set various disk space utilization attributes, and dynamically reconfigure the data on the disks to correspond with the selections.
Gateway Global	inspect and modify the gateway operating parameters for any network attached to the associated Teradata RDBMS.
Lock Display	see a snapshot capture of all real-time database locks. <b>Note:</b> You can only invoke this utility against a V2R4 or higher RDBMS.
Operator Console	run supervisor commands to manage the programs that perform Teradata RDBMS operations.
Priority Scheduler	control resource allocation for RDBMS sessions based on either session-related priority designations or system-level scheduling parameters. <b>Note:</b> You can only invoke this utility against a V2R4.1 or higher RDBMS.
Query Configuration	display the current Teradata RDBMS configuration.
Query Session	monitor the state of database sessions on logical host IDs attached to the Teradata RDBMS.
Recovery Manager	monitor the progress of a Teradata RDBMS recovery.

This utility...	Allows you to...
Show Locks	provide information about hosts utility locks.
Vproc Manager	obtain the status of Vprocs, change Vproc states, initialize and boot a specific Vproc, initialize the Vdisk associated with a specific Vproc, or force an RDBMS restart.

## Where It Runs

Remote Console runs in a standard application window. By default, it is configured as a menustart application under the Production Control pulldown menu on the Executive menu bar of the DEFAULT profile.

## Application

The Remote Console log contains the input and output for all console utilities started. The list of available console utilities is taken from the application-specific entry RCONSUTILS. When you select a utility to run, the output for the utility appears on the main window.

The script feature of Remote Console allows you to record commands associated with starting, running, and stopping console utilities. The commands you enter are saved as scripts and can be played back at a later time. Scripts may be run interactively from the main menu via the **Scripts > Run** command, or in batch mode by setting up an Autostart entry in the Executive.

# Production Control Menu - Resource History

## What It Does

Resource History provides reports that show the maximum and average usage for Logical Disk Vprocs (LDVs), AMP Vprocs, and PE Vprocs on the associated system. The NODE command is used to run NODE usage macros on the associated Teradata RDBMS.

## Where It Runs

Resource History runs in a standard Windows application window. By default, Resource History is configured as a menustart application under the Production Control pulldown menu on the Executive menu bar of the DEFAULT profile.

## Applications

Resource History provides pulldown menus and dialogs that you use to provide reports that show the maximum and average use of Teradata RDBMS system components.

## Macros

Resource History includes the following macros to assist you retrieve this information.

This command...	Creates a report showing...
AverageUse	the average Logical Disk, AMP, or PE Vproc usage for up to 31 days, starting on the date you specify.
MaximumUse	the maximum Logical Disk, AMP, or PE Vproc usage for up to 31 days, starting on the date you specify.
DifferenceUse	the difference in Logical Disk, AMP, or PE Vproc usage (MaximumUse - AverageUse) for each hour for up to 31 days, starting on the date you specify.
LDVActivity	logical Disk activity at the controller level for 31 days, starting on the date you specify.
NODE CPU Average Util	NODE CPU average utilization for each hour for up to 31 days, starting on the date you specify.
NODE CPU Efficiency	NODE CPU Efficiency (Average/Maximum) for each hour for up to 31 days, starting on the date you specify.

This command...	Creates a report showing...
NODE LDV Activity	the Logical Disk activity per NODE for 31 days, starting on the date you specify.
ResNodeByGroup	general system information summarized by Node Groups.
ResMemByGroup	The ResMemByGroup report provides information about memory allocation, aging, paging, and swapping activities on the Nodes, summarized by Node Groups. The resulting numbers become the average across the group.
ResNetByGroup	The ResNetByGroup report provides information about network traffic on the Nodes, summarized by Node Groups. The resulting numbers become the average across the group.
ResCpuByGroup	The ResCpuByGroup report provides information about how the Nodes are utilizing the system CPUs, summarized by Node Groups. The resulting numbers become the average across the group.
ResAmpCpuByGroup	The ResAmpCpuByGroup report provides information about how the AMPs are utilizing the system CPUs, summarized by Node Groups. The resulting numbers become the average across the group.
ResPeCpuByGroup	The ResPeCpuByGroup report provides information about how PEs are utilizing the system CPUs, summarized by Node Groups. The resulting numbers become the average across the group.
ResHostByGroup	The ResHostByGroup report provides general communication link information summarizing statistics by node grouping. The HstType is also used in the GroupBy statement so that IBM Host channels and Network links can be differentiated in the output rows. Most of the resulting numbers become the average across the group.
ResLdvByGroup	The ResLdvByGroup report provides general logical disk information, summarizing statistics by node grouping. Most of the resulting numbers become the average across the group. The exception is the Max number of concurrent requests, which reports the maximum value for any logical disk in the group.

# Production Control Menu - Session Information

## Function

Session Information (SI) uses the Teradata RDBMS Performance Monitor to collect the session PM data from the Teradata RDBMS. It then formats and displays key information about each session, based on the current collection rate. SI shows logon sessions in different categories, and helps you to identify blocked and long idle sessions and abort sessions as desired on the Teradata RDBMS.

## Where It Runs

SI runs in a standard Windows application window. By default, SI is configured as a menustart application under the Production Control pulldown menu on the Executive menu bar of the DEFAULT profile.

## Reports

Most of the SI reports are categorized based on the session's status. These reports can be used in many different ways. You can open the reports based on your needs, and set up the desired Collection Frequency. Once this is done SI will update the reports automatically.

The following reports provide very useful information, and you may wish to leave them open all the time:

This report...	Shows you...
Summary Report	how many sessions are logged on to the system, their status and where they are logging on from.
Blocked Report	blocked sessions on the system. Double clicking on the blocked session in the report displays the Host/Session detail dialog. This dialog shows who is blocking the session, and allows you to examine how many sessions are being blocked. You can also use the Host/Session dialog to abort the session.
Idle Report	idle sessions on the system. You can define thresholds for the Idle report so that all long idle sessions will be displayed in this report. You can also define the Auto Abort Threshold so that the long idle sessions will abort automatically. It is recommended that local filter be defined with this report in order to avoid aborting critical sessions/users.

## **Connection Options**

SI can either:

- Logon to the RDBMS to get the PM & PC session data from the system directly.
- Connect to another Teradata Manager PC that is running Data Collector and TMServer, and get the PM & PC data from the server PC.

## **What it means**

When SI is connected to a server PC, it starts a partner TMClient application in order to set up the link between itself and the Teradata Manager Server PC.

## **Changing connections**

The type of connection can be changed at any time. You can have SI disconnect from the Server and logon directly to the RDBMS. As long as you have the proper privileges, you can abort sessions or change the Local Session Rate.

# Production Control Menu - Space Usage

## Function

Space Usage is the Teradata Manager application that you use to monitor the use of disk space on the associated Teradata RDBMS computer and to reallocate permanent disk space from one database to another.

## How It Works

Space Usage runs in a standard application window. By default, Space Usage is configured as a menustart application under the Production Control pulldown menu on the Executive menu bar of the DEFAULT profile.

## What It Does

Space Usage has some functionality overlap with WinDDI. Both Space Usage and WinDDI provide capabilities to move permanent space between databases and to view the database hierarchy and space utilization reports. Space Usage offers a richer set of reports specifically for monitoring disk space usage on the Teradata RDBMS. Space Usage also contains direct support for changing the database hierarchy (via Move Database command).

**Note:** Access to the Teradata RDBMS Show Space utility is through the Ferret file system tool. To use all of the Space Usage functions, you must have sufficient privilege to run Ferret on the associated Teradata RDBMS computer. You must also have the following privileges on the associated databases:

- CREATE DATABASE
- DROP DATABASE

## Application

Space Usage's reports and commands are useful for:

- Monitoring permanent space on your Teradata RDBMS for signs of performance bottlenecks (high utilization), or under utilization (Cylinders by Processor, Space by Processor, Space by Database and Table Space reports).
- Giving additional database capacity to individual users or databases (Move Space command).
- Managing the database hierarchy (Hierarchy report and Move Database command).

# Production Control Menu - Statistics Collection

## Function

Collecting statistics on a column or Key field assists the query optimizer in choosing an execution plan that will minimize query time. Because the optimizer bases the execution plan on the actual values in the table, statistics should be updated whenever there have been a significant number of row additions or deletions.

## What It Does

Statistics Collection allows you to:

- Determine which tables have statistics
- Create statistics for columns or indexes
- Drop statistics by column/index, or for the entire table
- Update statistics for column/index, table, database, or the entire Teradata RDBMS

This application can also help you create SQL scripts to collect/drop statistics and setup the Autostart menu.

## How It Works

Statistics Collection displays Teradata RDBMS statistics in three windows:

- The Database window, which provides you with a tree view of the databases.
- The Table window, which displays the tables in the selected database.
- The Statistics window, which displays the columns/indices for the selected table.

# Production Control Menu - System Maintenance

## Function

System Maintenance is an essential member of Teradata Manager, enabling your team of DBAs and power analysts to monitor and to keep your Teradata database systems running smoothly from desktops throughout the organization.

## How It Works

System Maintenance provides pulldown menus and dialogs that you use to run applications to maintain and monitor system tables. The commands used to delete rows in system tables and to reset accounting statistics for AMP usage and disk space are invoked from the Clean menu. Other system monitoring and reporting commands are found in the Configuration menu.

## What It Does

System Maintenance includes macros that perform the following functions in order to help you perform maintenance tasks:

- Rows can be deleted from DBC.SW\_EVENT\_LOG, DBC.HW\_EVENT\_LOG, DBC.LOGONOFF, DBC.SECURITYLOG, and DBC.RESUSAGE tables based on the beginning and ending dates that you specify.
- For cleaning AMP usage data, a choice is provided to 'clean' (set columns to zero), or 'delete' (delete the matching rows) in DBC.AMPUSAGE view.
- DiskIO and CPUTime can be reset in DBC.AMPUSAGE view.
- PeakPerm and PeakSpool can be reset in DBC.DISKSPACE view.
- ReconfigCheck estimates the number of bytes required for an AMP re-configuration.
- StorageMap shows spool space, perm space, used perm and other useful statistics for each database and user.
- NewModObjects shows new and modified tables, views, and macros for each database.
- DroppedObjects shows dropped tables, views, and macros for each database.
- Selections under the Audit menu allow you to produce reports from the AccessLog.

# Utility Program - SQL Data Collector

## Function

The SQL Data Collector is a component of Teradata Manager's Alerts system that runs automatically on the central administrative system. (The central administrative system is the computer on which server-side Teradata Manager components are run: Data Collector, TMServer, ACM.)

The Alert Control Module starts and stops the SQL Data Collector. It also tells the collector what databases to monitor and how often. This application normally does not require user interaction.

## What It Does

The SQL Data Collector periodically queries the RDBMS for perm space utilization data and compares the results against database space thresholds defined in the Alert Policy. It also queries the Teradata software event log for messages that have been specified as alertable RDBMS Events in the alert policy. When a threshold is exceeded, the collector executes the corresponding alert actions (also defined by the Alert Policy).

The SQL Data Collector also monitors the Teradata software event log for alertable event messages based on the RDBMS Events category of the active alert policy.

## Where It Runs

This application is started automatically by the Alert Control Module. Normally, the program will run in minimized mode.

## Utility Program - Log Change

### Function

Log Change is a utility used to change the Executive Log File at specific intervals. Entries for all the Teradata Manager activities are in the Executive Log File displayed in the work space of the Executive window. The Executive maintains a separate log file for each profile in a corresponding LOGS directory.

For example, the log file for the DEFAULT profile is located in the \NCR\Teradata Manager\profiles\default\logs directory.

Log Change does not include a user interface, and does not have application-specific entries. All dependencies for Log Change are managed by Teradata Manager.

---

## Utility Program - Log Delete

### Function

Log Delete is a Teradata Manager utility that allows you to delete the Executive log file or Remote Console log file on a random basis, or automatically at specific intervals. It can be run as an autostart application.

The Executive and Remote Console maintain separate log files in the LOGS subdirectory of each profile directory. The profile directories are stored under the user's Personal or My Documents folder.

Log file names are as follows:

- Executive log files begin with the letter d.
- Remote Console log file names begin with the letter r.

The Executive and Remote Console log files are closed and new log files are opened when the current log files are full. A log file is considered full when it contains approximately 30,000 lines.

# Utility Program - TM Server

## What It Is

TMServer is a component of the Teradata Manager client/server support facility. It allows you to configure a Teradata Manager workstation as server to distribute performance monitoring (PM & PC) data to the remote workstations that run TMClients.

## What It Does

TMServer is an essential member of Teradata Manager's Client/Server support facility, enabling your team of DBAs and power analysts to monitor your Teradata database systems from desktops throughout the organization while minimizing the impact of such monitoring on critical database production jobs.

Data is collected by the Data Collector application. Applications request performance data via the TMClient application.

## How It Works

In a typical setup, the Data Collector and TMServer run on a central administrative server. All other Teradata Manager workstations run on desktops as clients, getting performance data from the central server.

TMServer is automatically started when Data Collector is initialized on the workstation that is to act as the server.

TMClient is started by a PM & PC application.

## Default Port Number

TMServer uses a default port number starting from 2010. You can override that port number by using the parameter “-t” to start TMServer. To do that, you have to close the copy of TMServer that has been started from Data Collector. Then go to the Run command under Profile menu on the Executive and type the following in the Run command dialog:

```
TMServer -tXXXX
```

where XXXX is the port number that you want to use.

## User Interaction

TMServer does not require user interaction and is therefore defaulted to run in minimized mode. You only need to open the application to change the maximum number of clients allowed to connect, or to view the server activities. Do not close TMServer while there are clients connected.

## Relation to Teradata Applications

The Data Collector and TMServer work together to make Teradata RDBMS performance data available to PM & PC applications. TMServer is automatically started by the Data Collector. You should not start it manually, except for special circumstances (such as to use a specific port number, as described above).

# Index

---

## A

- aborting sessions 4-6
  - using Session Information 5-3
- action, user-defined
  - adding to Alert Policy 7-4
  - creating 7-2
- actions
  - adding to Alert Policy 7-4
- ActiveX (COM) object 6-2
  - application distribution requirements 6-4
- Alert Control Module
  - description A-4
  - starting 7-14
- Alert Policy
  - adding actions 7-4
  - adding events 7-7
  - applying to the RDBMS 7-13
  - creating 7-2
- Alert Policy Editor
  - description A-5
- Alert Viewer
  - description A-6
  - starting 7-15
- AMP object 6-7
- application descriptions
  - Alert Control Module A-4
  - Alert Policy Editor A-5
  - Alert Viewer A-6
  - BTEQWIN A-7
  - Configuration Check A-21
  - DMTEQ A-8
  - Dynamic Utilization Charting (Using PM & PC) A-13
  - Error Log Analyzer A-22
  - Executive A-2
  - Locking Logger A-23
  - Log Change A-35
  - Log Delete A-36
  - LogOnOff Usage A-24
  - Performance Data Analyzer A-14
  - PM Data Collector A-15
  - Profile Builder A-3
  - RDBMS Setup A-9
  - Remote Console A-25
  - Resource History A-27
  - Resusage Data Collector A-20
  - Session Information A-29

- Space Usage A-31
- SQL Data Collector A-34
- Statistics Collection A-32
- System Maintenance A-33
- Teradata Performance Monitor A-17
- Time Synchronizer A-10
- TM Server A-37
- Visual Explain A-11
- WinDDI A-12
- application names vs. file names 3-2
- Application Setup dialog
  - execution path field 3-3
- applications
  - dependencies for running 3-4
  - executable file names 3-2
  - launching 1-2
  - parameters 3-3
  - redirecting output 3-9
  - renaming 3-2
  - setting up
    - autostart 3-7
    - menustart 3-5
- autostart applications
  - launching 1-2
  - setup 3-7
- Autostart Setup dialog 3-7

---

## B

- Block object 6-11
- BTEQWIN
  - description A-7

---

## C

- charts, creating
  - performance 4-6
  - resource usage 4-7
  - resource usage summary 4-2
- clean macros, running 5-8
- client mode 6-2
- column statistics
  - display/create/update 5-4
- command shell
  - CMD.EXE 3-9

Configuration Check  
 description A-21

CPU parallelism  
 detecting 4-7

customizing Teradata Manager  
 using Profile Builder 1-2

---

**D**

database  
 creating with WinDDI 5-9  
 initial setup 2-2

database hierarchy  
 changing with Space Usage 5-5

default profile  
 creating 2-7

dialogs  
 Application Setup 3-3  
 Autostart Setup 3-7  
 Menustart Setup 3-5

direct mode  
 Performance Monitor object 6-2

disk space  
 monitor and move 5-5

DMTEQ  
 description A-8

documentation  
 installation vi

down nodes/vprocs  
 detecting 4-7

Dynamic Utilization Charting (Using PM & PC)  
 creating resource usage charts 4-7  
 description A-13

---

**E**

Error Log Analyzer  
 description A-22

error messages  
 Performance Model object 6-12

events  
 adding to Alert Policy 7-7

executable file name 3-3

executable files 3-3

execution path field 3-3

execution plan  
 comparing visually 8-7  
 creating using QCF 8-6  
 displaying with Visual Explain 8-4

inserting into the QCD 8-4

loading 8-4

viewing with Visual Explain 8-5

Executive  
 description 1-2, A-2  
 Help menu 1-7  
 menu bar 1-3  
 Options menu 1-4  
 Performance menu 1-5  
 Production Control menu 1-6  
 Profile menu 1-3  
 pulldown menu 3-2  
 starting 2-9  
 Tools menu 1-5  
 View menu 1-4  
 Window menu 1-7

explain text  
 displaying differences 8-9

---

**F**

file names vs. application names 3-2

---

**H**

Help menu  
 Executive 1-7

---

**I**

index statistics  
 display/create/update 5-4

initial setup 2-2

INSERT EXPLAIN sql statement 8-4

installation information vi

---

**L**

local time  
 vs. RDBMS time 2-11

Lock contention  
 detecting 4-8

Locking Logger  
 description A-23

Locking Logger reports  
 creating 4-8

- Log Change
  - description A-35
- Log Delete
  - description A-36
- logon statistics reports
  - creating 4-5
- LogOnOff Usage
  - creating reports 4-5
  - description A-24

---

## M

- macros 2-2
- Menus, Executive
  - Window 1-7
- menus, Executive
  - Help 1-7
  - Options 1-4
  - Performance 1-5
  - Production Control 1-6
  - Profile 1-3
  - Tools 1-5
  - View 1-4
- menustart applications
  - setup 3-5
- Menustart Setup dialog 3-5
- Microsoft support files
  - for Performance Monitor object 6-4
- Monitor object 6-5

---

## N

- Node object 6-9
- nodes/vprocs
  - detecting problems with 4-7
- NodeSummary object 6-6

---

## O

- object collection
  - returning 6-2
- objects
  - AMP object 6-7
  - Block object 6-11
  - monitor object 6-5
  - Node object 6-9
  - NodeSummary object 6-6

- PE object 6-8
- Session object 6-10
- VprocSummary object 6-6
- Options menu
  - Executive 1-4

---

## P

- parameters
  - for applications 3-3
  - substitutable 3-3
- PE object 6-8
- performance charts
  - creating 4-6
- Performance Data Analyzer
  - creating resource usage summary charts 4-2
  - description A-14
- Performance menu
  - Executive 1-5
- Performance Monitor object 6-2
  - AMP object 6-7
  - application distribution requirements 6-4
  - Block object 6-11
  - client mode 6-2
  - direct mode 6-2
  - error messages 6-12
  - Microsoft support files 6-4
  - monitor object 6-5
  - Node object 6-9
  - NodeSummary object 6-6
  - PE object 6-8
  - sample files 6-3
  - Session object 6-10
  - Teradata Manager support files 6-4
  - VprocSummary object 6-6
- performance status
  - displaying with Alert Viewer 7-15
- PM & PC data
  - retrieving 6-2
- PM Data Collector
  - description A-15
- policy
  - adding actions 7-4
  - adding events 7-7
  - applying to the RDBMS 7-13
  - creating 7-2
- Production Control menu
  - Executive 1-6
- profile
  - creating 2-7
- Profile Builder

- creating profiles 2-7
- description 1-2, A-3
- Profile menu
  - Executive 1-3
- profiles
  - selecting 2-9
- program output, redirecting 3-9
- pulldown menu, Executive 3-2

---

## Q

- Query Capture Database (QCD)
  - inserting an execution plan 8-4
  - setting up 8-2
  - upgrading 8-2
- Query Capture Facility (QCF)
  - creating and viewing an execution plan 8-6
  - requirement for Visual Explain 8-1

---

## R

- RDBMS performance status
  - displaying with Alert Viewer 7-15
- RDBMS Setup
  - databases, tables and macros 2-2
  - description A-9
  - users 2-5
- RDBMS time
  - vs. local time 2-11
- RDBMS work loads
  - balancing 4-2
- redirecting program output 3-9
- release definition vi
- release summary vi
- Remote Console
  - description A-25
- reports, creating
  - blocked report 5-2
  - historical resource usage 4-4
  - idle report 5-2
  - Locking Logger 4-8
  - logon statistics 4-5
  - Session Information 5-2
  - summary report 5-2
- Resource History
  - creating reports 4-4
  - description A-27
- resource usage
  - historical reports

- creating 4-4
- resource usage abnormalities
  - detecting 4-2, 4-7
- resource usage charts
  - creating 4-7
- resource usage summary charts
  - creating 4-2
- Resusage Data Collector
  - description A-20
- retrieving PM & PC data 6-2
- running under Windows 2000/NT command shell 3-9

---

## S

- sample files
  - Performance Monitor object 6-3
- Session Information
  - aborting sessions 5-3
  - administering sessions 5-2
  - blocked report 5-2
  - description A-29
  - idle report 5-2
  - summary report 5-2
- Session object 6-10
- setting up
  - databases tables and macros 2-2
  - profiles 2-7
  - users 2-5
- Space Usage
  - description A-31
  - monitor and move disk space 5-5
- SQL Data Collector
  - description A-34
- Statistics Collection
  - description A-32
  - using to display/create/update statistics 5-4
- status of RDBMS
  - displaying with Alert Viewer 7-15
- system health
  - monitoring 4-6
- System Maintenance
  - description A-33
  - maintaining system tables 5-8
- system tables
  - maintaining with System Maintenance 5-8
- system usage
  - determining 4-4

---

**T**

- table statistics
  - display/create/update 5-4
- tables
  - creating with WinDDI 5-9
  - initial setup 2-2
- tdmonitor.dll
  - registering 6-4
- Teradata Manager
  - initial setup 2-2
  - profile 2-7
  - starting 2-9
- Teradata Manager support files
  - for Performance Monitor object 6-4
- Teradata Manager users
  - initial setup 2-5
- Teradata Performance Monitor
  - creating performance charts 4-6
  - description A-17
- time
  - synchronizing with the RDBMS 2-11
- Time Synchronizer
  - description A-10
- TM Server
  - description A-37
- Tools menu
  - Executive 1-5
- trends
  - detecting 4-2

---

**U**

- user-defined action
  - adding to Alert Policy 7-4
  - creating 7-2
- users
  - creating with WinDDI 5-9
  - initial setup 2-5

---

**V**

- View menu
  - Executive 1-4
- Visual Basic 6-3
- visual comparison of execution plans 8-7
- Visual Explain
  - connecting to the Teradata RDBMS 8-4
  - description A-11

- displaying an execution plan 8-4
- displaying differences in explain text 8-9
- inserting an execution plan into the QCD 8-4
- loading an execution plan 8-4
- setting up the QCD database 8-2
- viewing the execution plan 8-5
- visual comparison, creating 8-7

VprocSummary object 6-6

---

**W**

- WinDDI
  - creating databases tables and users 5-9
  - description A-12
- Window menu
  - Executive 1-7
- Windows 2000/NT command shell, running applications under 3-9

