

# **PATROL® History Loader User Guide**

**Version 1.4**

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  - product version (release number)
  - license number and password (trial or permanent)
- operating-system and environment information
  - machine type
  - operating system type, version, and service pack or program temporary fix (PTF)
  - system hardware configuration
  - serial numbers
  - related software (database, application, and communication) including type, version, and service pack or PTF
- sequence of events leading to the problem
- commands and options that you used
- messages received (and the time and date that you received them)
  - product error messages
  - messages from the operating system, such as `file system full`
  - messages from related software



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# Product Components and Capabilities

This chapter provides you with an overview of PATROL<sup>®</sup> History Loader.

This chapter presents the following topics:

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# PATROL History Loader Features

PATROL History Loader consists of a series of application definitions, commands, and parameters associated with extracting and loading PATROL parameter history into your RDBMS (relational database management system).

Once PATROL history data is stored in an RDBMS, you can perform complex analysis and statistical planning on all monitored activity.

By allowing you to export, store, review, and analyze history data, PATROL History Loader helps you detect problems, optimize systems, analyze trends, plan capacity, and manage multiple hosts simultaneously. This ability can help you ensure that your systems run efficiently 24 hours a day.

## Components

PATROL History Loader consists of two components:

- History Propagator
- History Loader

## History Propagator Component

The History Propagator checks the file system size on the target machine before and after sending data files. If all data files were not transferred, a message displays in an output window. Only one History Propagator exists per PATROL Agent. The History Propagator

- extracts PATROL parameter history data
- summarizes history data
- sends history data to a user-specified target machine

The History Propagator uses the **dump\_hist** utility, which extracts PATROL parameter history data, summarizes history data, and converts history data to ASCII.

## About the dump\_hist Utility

The **dump\_hist** utility contains the following options:

- -port
- -host hostname
- -class regexp
- -inst regexp
- -param regexp
- -s mmddhhmm[yyyy]
- -e mmddhhmm[yyyy]
- -timestamp
- -annotate
- -format arguments

By default, the **dump\_hist** utility extracts data in the following order (-**format** arguments are in parentheses):

- host name (**%H**)
- application name (**%A**)
- instance name (**%I**)
- parameter name (**%P**)
- year (yyyy) (**%y**)
- month (mm) (**%m**)
- day (dd) (**%d**)
- hour (hh) (**%h**)
- minutes (MM) (**%M**)
- seconds (ss) (**%s**)
- parameter value stored in **param.hist** file (**%v**)

## History Loader Component

The History Loader component takes the propagated history data and loads it into supported RDBMS databases and into predefined tables. The History Loader component has to be resident with the PATROL Agent on the RDBMS computer.

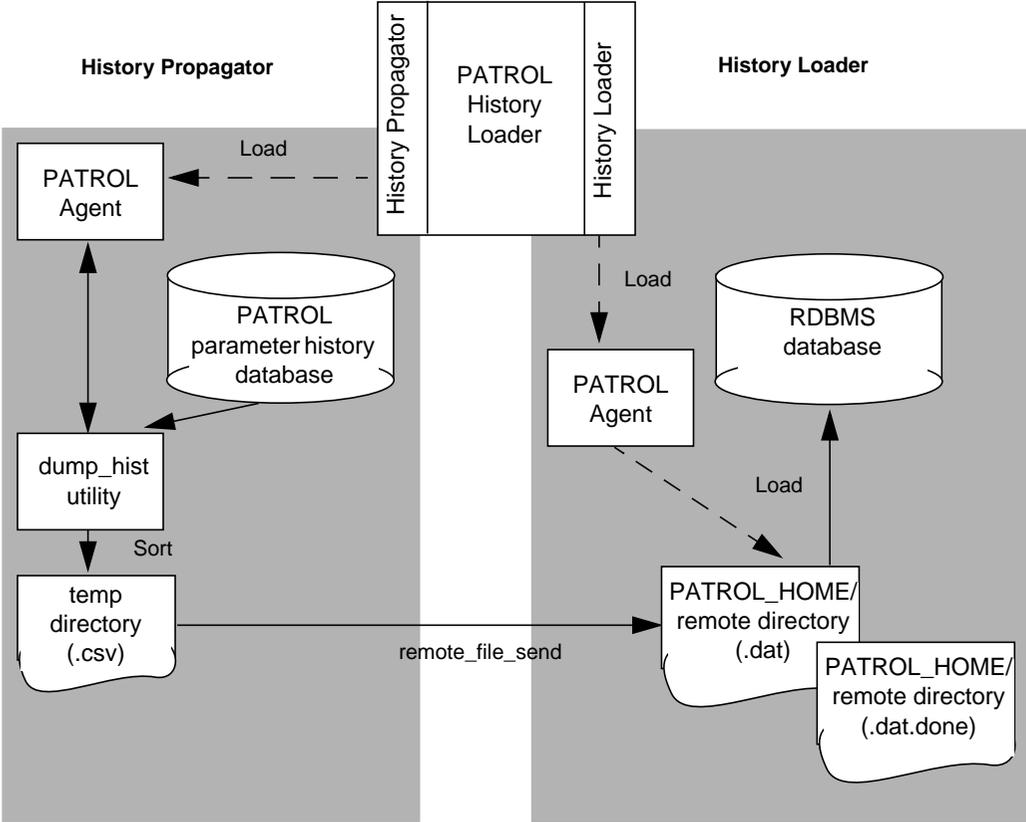
If you do not have or do not want to use one of the supported RDBMSs or applications, you can use the History Propagator component without using the History Loader component. You can create your own custom scripts to analyze the data, or you can input the data into a statistical analysis package or spreadsheet.

If you choose not to use the History Propagator component, you will not be able to change the predefined ASCII output file format of the History Propagator.

# PATROL History Loader Architecture

Figure 1-1 shows the relationships among the PATROL Agent, the History Propagator component, the History Loader component, and an RDBMS.

Figure 1-1 PATROL History Loader, PATROL Agent, and RDBMS



# PATROL History Loader Files

PATROL History Loader includes several knowledge module (application class or application) files. Table 1-1 briefly describes each PATROL History Loader file.

**Table 1-1 PATROL for History Loader Files**

<b>File Name</b>	<b>Description</b>
HISTORY.kml	This file is the base knowledge module (KM) file that contains a list of the history loader components for each supported database, as well as the history propagator component. When you load the base KM file, all of the application files are loaded.
HISTORY_Propagator.km	This file contains the History Propagator.
DB2UDB_History_Loader.km	This file contains the History Loader used for DB2 Universal Database.
INFORMIX_History_Loader.km	This file contains the History Loader used for Informix-OnLine and Informix Dynamic Server.
INGRES_History_Loader.km	This file contains the History Loader used for CA-Ingres and CA-OpenIngres.
MSSQLSERVER_History_Loader.km	This file contains the History Loader used for Microsoft SQL Server.
ORACLE_History_Loader.km	This file contains the History Loader used for Oracle Server.
SYBASE_History_Loader.km	This file contains the History Loader used for Sybase SQL Server.
Computer_Menu.km	This file contains a menu item to enable History Loader.  To access this menu command, from the Agent icon menu, select <b>Knowledge Module Admin =&gt; PATROL History</b> .

# Applications and Icons

PATROL History Loader includes the following functional application classes. Each functional application class has its own InfoBox, parameters, and application menu.

- History Propagator
- DB2 History Loader
- Informix History Loader
- CA-Ingres History Loader
- Microsoft SQL Server History Loader
- Oracle Server History Loader
- Sybase SQL Server History Loader

## Application Descriptions

Table 1-2 contains information about PATROL History Loader application icons.

**Table 1-2 Application Icons and Descriptions (Part 1 of 2)**

Icon	Icon Name	Definition
	HISTORY_Propagator	Represents the History Propagator application, which extracts and converts PATROL history data into an ASCII data file in a user-specified computer and directory. This file is then transferred to the target machine.
	DB2_History_Loader	Represents the DB2 History Loader application, which loads the ASCII data file into a DB2 Universal database table.

**Table 1-2 Application Icons and Descriptions (Part 2 of 2)**

Icon	Icon Name	Definition
	INFORMIX_History_Loader	Represents the Informix History Loader application, which loads the ASCII data file into an Informix-OnLine or Informix Dynamic Server database table.
	INGRES_History_Loader	Represents the CA-Ingres History Loader application, which loads the ASCII data file into a CA-Ingres or CA-Open Ingres database table.
	MSSQLSERVER_History_Loader	Represents the Microsoft SQL Server History Loader application, which loads the ASCII data file into a Microsoft SQL Server database table.
	ORACLE_History_Loader	Represents the Oracle Server History Loader application, which loads the ASCII data file into an Oracle Server database table.
	SYBASE_History_Loader	Represents the Sybase SQL Server History Loader application, which loads the ASCII data file into a Sybase SQL Server database table.

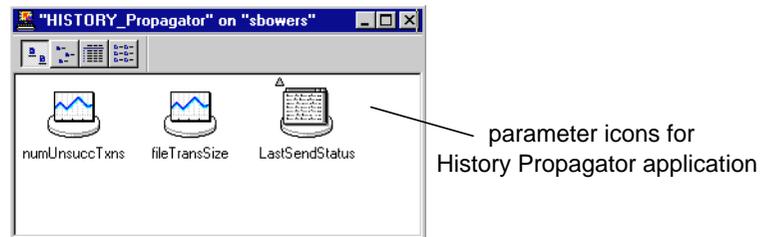
## Icon Hierarchy

PATROL History Loader application icons are displayed with the operating system application icons in the computer window.

Parameter icons are displayed in each PATROL History Loader application window.

For example, Figure 1-2 displays the History Propagator application window with parameter icons. Each History Loader application window contains its own parameter icons.

**Figure 1-2 History Propagator Application Window**



## Related Documentation

BMC Software products offer several types of documentation:

- online and printed books
- online Help
- release notes

## Online and Printed Books

The books that accompany BMC Software products are available in online format and printed format. You can view online books with Acrobat Reader from Adobe Systems. The reader is provided at no cost, as explained in “To Access Online Books.” You can also obtain additional printed books from BMC Software, as explained in “To Request Additional Printed Books.”

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You can access Help for a product through the product's Help menu. The online Help provides information about the product's graphical user interface (GUI) and provides instructions for completing tasks.

## Release Notes

Printed release notes accompany each BMC Software product. Release notes provide up-to-date information such as

- updates to the installation instructions
- last-minute product information

The latest versions of the release notes are also available on the Web at **<http://www.bmc.com/support.html>**.

# Where to Go from Here

The following table summarizes where to look for more information about using the PATROL History Loader.

<b>Topic</b>	<b>Where to Find the Topic</b>
How to install and load PATROL History Loader	Chapter 2, "Installing and Migrating PATROL History Loader"
How to configure the History Propagator	Chapter 3, "Configuring History Propagator"
How to load and configure the History Loader component	Chapter 4, "Configuring the History Loader Component"
How to complete PATROL History Loader setup	Chapter 5, "Completing PATROL History Loader Setup"

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# Installing and Migrating PATROL History Loader

This chapter provides the information that you need to install PATROL History Loader. For additional information about the PATROL installation process, see the *PATROL Installation Guide*. The following topics are discussed in this chapter:

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# Verifying Installation Requirements

Before installing PATROL History Loader, verify that your environment meets the following requirements:

- system
- license
- accounts
- port numbers

## System

The PATROL History Loader works with the following versions of the PATROL Console and PATROL Agent:

- PATROL Console for Unix version 3.3.00 or later
- PATROL Console for Windows version 3.3.00 or later
- PATROL Agent for Unix and for Windows Servers versions 3.3.00 or later

For detailed system requirements of a particular operating system, see the PATROL installation guide for that operating system.

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, see Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

Table 2-1 shows the operating systems for the RDBMSs that are supported by PATROL History Loader.

**Table 2-1 Supported Operating Systems and RDBMSs**

<b>Operating System</b>	<b>RDBMS</b>	<b>Versions</b>
Unix	CA-Ingres	6.4, 6.5
	CA-OpenIngres	1.1, 2.0
	DB2 Universal Database (AIX, Solaris, HP only)	5.0 through 7.1
	Informix-OnLine	4.0, 5.10.x
	Informix Dynamic Server	6.0, 7.30, 7.31, 9.2.x
	Oracle Server (with the PROCEDURAL option)	7.3.4 through 8.1.7
	Sybase SQL Server	11.5.2, 11.9.2
Windows NT and Windows 2000	DB2 Universal Database	5.0, 7.1
	Microsoft SQL Server	6.5, 7.0, 8.0
	Oracle Server	7.3.4 through 8.1.7

## License

Verify that you have a valid demonstration license (typically good for 30 days) or a permanent license to run your PATROL products. If you have not yet installed a permanent license, contact your BMC Software sales representative or the BMC Software Contract Administration department for licensing information.

## Accounts

This section describes how to set up a PATROL installation account for Windows and Unix platforms.

## Windows Environment

PATROL requires a dedicated user account, known as the PATROL default account, in the Windows environment. The PATROL default account must be created before you install PATROL. The PATROL default account can be either a local or a domain account.

Stand-alone workgroup servers must use a local user account as a PATROL default account. Servers that are trusted members of a domain may use either a local or domain account. In each case, the PATROL default account must be a member of the local Administrators group of the computer where the agent will reside.

PATROL default accounts on domain controllers should be only domain accounts. The account on a domain controller must be a member of the domain Administrators group.

Although you can use an existing Windows user account, BMC Software recommends that you create a separate Windows user account for PATROL.

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### Warning

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Do not use a built-in Windows domain or local Administrator account as the PATROL default account. Such account usage causes files created by PATROL to be owned by the Administrator, which could result in security or file access problems.

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## Unix Environments

BMC Software recommends that the Unix account that you create meet the following conditions:

- The account **.login**, **.profile**, **.cshrc**, and **.kshrc** files should contain as little user customization as possible. Specifically, there should be no aliases, the prompt should be set to the default, and there should be no command in these files to change the umask setting. The recommended umask setting for the installation account is 022.

- Do not use the root account to install PATROL products because this may create security risks.
- Ensure that the account has permission to create directories in the directory where you will install PATROL products.
- Ensure that the computers on which you want to install PATROL have ftp and telnet enabled.

PATROL configuration requires permissions usually reserved for the system administrator. These permissions include access to a root account on the computer where you want to install PATROL.

BMC Software recommends that you install PATROL on local partitions, not on NFS-mounted partitions. If you do install PATROL on NFS-mounted partitions, the root account must have been granted root access permissions on the NFS server.

The account that you use to install PATROL must have permission to write the installation logs to the **\$HOME** and **/tmp** directories on the computer where you are installing products.

## Port Numbers

Unless you are doing a KM-only installation, you will be asked to specify a port number for connecting to all of the agent machines and to the Knowledge Module Deployment Server (KMDS).

The default port numbers are 3181 for agents and 3182 for the PATROL KMDS.

# Preparing for Installation

BMC Software recommends that you first install PATROL History Loader on a limited number of development or test machines, then configure and test PATROL History Loader before installing it onto production machines.

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## Note

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If you want to install a KM into the PATROL KMDS, *do not launch the installation program from the installation CD*. See “Upgrade and Preserve Customizations” on page 2-17 for information about how to install into the PATROL KMDS.

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The installation program installs only to a local computer. The installation program cannot perform remote installations. You must install PATROL History Loader and a PATROL Agent locally on each computer that you want to monitor. You also must install PATROL History Loader and a PATROL Console locally on each computer from which you want to view results.

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## Note

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The installation program provides you with the ability to create an installation package of the products that you select during install. After you create the installation package, you can export it to a shared **BMC Software** directory to install the package on all computers that share the same **BMC Software** directory, PATROL default logon, PATROL Agent port number, PATROL 3.x product directory, and security option. For more information about creating and exporting installation packages, see “Creating and Installing Installation Images” on page 2-28.

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Before you install, you must

- understand target machines and their roles (page 2-8)
- (if you are using PATROL KMDS) learn how to install into the KMDS (page 2-17)
- choose among PATROL security options (page 2-9)

## Target Computers and Their Roles

The PATROL installation program prompts you to select the roles performed by the computer that you are installing BMC Software products on (the target computer). Before beginning the installation process, review the following definitions of the roles that are presented in the installation program and decide which of these roles is performed by each computer in your environment.

- **Console Systems** (also referred to as console computers) host user desktop applications such as consoles, user interfaces, viewers, and browsers. Select this option if the computer to which you are installing will perform any of the following roles:
  - monitor, manage, and develop KMs on Unix by using a PATROL Console for Unix
  - monitor, manage, and develop KMs on Windows by using a PATROL Console for Windows
- **Managed Systems** (also referred to as agent computers) host software that manages the resources on the computer, such as a PATROL Agent, PATROL Knowledge Modules, and Service Reporting Retrievers. Select this option if the computer to which you are installing will perform any of the following roles:
  - host a PATROL Agent, host KMs, and components that contain the knowledge that PATROL uses to monitor the resources on this computer

## Installing into the PATROL KMDS

If you want to install PATROL History Loader into the PATROL KMDS, you must launch the installation program from the command line as described in “Installing the New Version of PATROL History Loader If You Are Migrating Customizations Using the PATROL Migration Tools Version 3.5” on page 2-22.

## Installing into a PATROL 3.3.x or 3.4.x Environment

If you are installing PATROL History Loader into an environment that has PATROL 3.3.x or PATROL 3.4.x installed, you must launch the installation program from the command line using the `-releaseversion` option as described in “Upgrading from an Earlier Version” on page 2-12.

## PATROL Security Levels

You can secure the data passed between PATROL components and restrict unauthorized users from accessing your data by implementing PATROL security. PATROL now contains five *security policy* levels in a predefined set of security configurations that you can select from when you install PATROL.

Basic security (level 0) is a minimal level of security with no configuration requirements. At the highest level of advanced security (4), all communicating components must authenticate with each other and key databases must validate connection requests.

High security requires more configuration of the communicating components (the agent and the console) and is more difficult to use than lower levels of security. You can select the security level that best balances the ease of use with your need for security.

All components in a system, including agents and consoles, must operate at the same level of security in order to communicate with each other. This requirement is ensured when you install PATROL with basic security (the default level of 0).

Review the security level definitions in the *PATROL Security User Guide* before installing PATROL to determine the appropriate security level for your system needs. If you want to implement a new security level after having previously installed PATROL security, see the *PATROL Security User Guide* for instructions.

For more information about implementing and using PATROL security, see the following documentation:

- *PATROL Security User Guide*
- *PATROL Security Release Notes*

## How PATROL Security Affects KMs

PATROL security is installed as part of the agent and console. KMs inherit the security policy from the agent and console on which they are installed.

# Installing For the First Time

You first should install on a limited number of machines in the test environment, test the installation thoroughly, and then install in your production environment.

If you are installing into an environment that does not currently contain PATROL History Loader, use the following procedure:

1. From the installation CD or from an electronically downloaded installation image, run **setup.exe** (Windows) or **setup.sh** (Unix).
2. Click through the Welcome and License Agreement windows.
3. From the Select Type of Installation Window, select **Typical** and click **Next**.
4. In the Specify Installation Directory window, enter the base directory path to which you want to append the PATROL installation directory or accept the default directory and click **Next**.

For example, if you want to install PATROL History Loader in D:\Program Files\BMC Software\PATROL3-5, you should enter **D:\Program Files\BMC Software** as the base BMC products installation directory in this step.

The PATROL installation directory is appended to the path that you enter in this step. You will specify the PATROL installation directory (PATROL 3-5) in Step 9 on page 2-11.

5. From the Select System Roles window, select **Managed System**, **Console System**, or some combination of these, using the information provided in “Target Computers and Their Roles” on page 2-8 and click **Next**.
6. From the Select Products and Components to Install window, select the History Loader package and click **Next**.
7. Perform this step only if you are installing the PATROL Agent; otherwise, skip to Step 8. In the PATROL Default Account Properties window, enter the user name and password that you want to use for your default PATROL account and click **Next**. You should have created this account manually before you began to install PATROL.
8. Perform this step only if you are installing PATROL History Loader to a managed system (PATROL Agent computer); otherwise, skip to Step 9. From the Provide Information for the PATROL Agent window, select whether you want to start the PATROL Agent manually or automatically after the installation is complete and click **Next**.
9. In the Provide the PATROL 3.x Product Directory screen, enter the directory where you want to install PATROL History Loader. This directory is appended to the base directory path that you entered in Step 4 on page 2-10.

For example, if you want to install PATROL History Loader in D:\Program Files\BMC Software\PATROL3-5, you should have entered **D:\Program Files\BMC Software** as the base BMC products installation directory in Step 4 on page 2-10 and enter **PATROL 3-5** as the PATROL 3.x product directory in this step.

10. Complete the remaining windows. The number and content of the windows depend on your KM selections and your inputs to the windows. Click Help as needed to complete the windows.

---

**Note**

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If, after reviewing the installation selections, you want to export the installation package and use it to install on several computers or on the local computer at a later time, see “Creating and Installing Installation Images” on page 2-28.

---

## Upgrading from an Earlier Version

If you have a previous version of PATROL History Loader installed on the target computer, you have two options for upgrading to the new version of PATROL History Loader. Use Table 2-2 to help you choose an upgrade procedure.

**Table 2-2** Choosing an Upgrade Procedure

<b>Choose This Procedure</b>	<b>If You Have This Situation</b>
Upgrade Without Saving Customizations	<ul style="list-style-type: none"><li>• have not made any customizations to your previous version of PATROL History Loader</li><li>• want to overwrite your customizations with the default values of the new version of PATROL History Loader</li><li>• have a currently installed version of PATROL History Loader that cannot be migrated (See “Versions That You Can Migrate” on page 2-18)</li></ul>
Upgrade and Preserve Customizations	made customizations to your previously installed version of PATROL History Loader and want to save those customizations and migrate them to the new version of PATROL History Loader

Whether you choose to save and migrate your KM customizations or not, the customizations you have made to agents and consoles are preserved and incorporated into the new version automatically. Only customizations to Knowledge Modules can be migrated.

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**Note**

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Throughout this section, all references to *PATROL\_HOME* represent *\$PATROL\_HOME* in Unix and *%PATROL\_HOME%* in Windows; all references to *PATROL\_CACHE* represent *\$PATROL\_HOME/patrol* in Unix and *%PATROL\_CACHE%* in Windows.

---

## Prepare to Upgrade

Whether you are upgrading and migrating customizations or simply upgrading, you must first

- back up the current installation
- remove PATROL History Loader files from *PATROL\_CACHE*

### Back Up the Current Installation

Whether you are upgrading and migrating any customizations or simply upgrading, back up the current PATROL installation before starting to install. First, shut down any PATROL Agents, Consoles, and related services that are currently running. Ensure that no one is accessing any PATROL files or directories. Then, do a full backup of the two directories where PATROL executables and data are typically stored. These directories are listed in Table 2-3.

**Table 2-3 PATROL Installation Directories to Back Up**

Operating System	Directory
Windows	<i>%PATROL_HOME%</i> for agent and console installation directories <i>%PATROL_CACHE%</i> for the console working cache
Unix	<i>\$PATROL_HOME</i> for agent and console installation directories <i>\$PATROL_CACHE</i> for the console working cache
Linux	<i>\$PATROL_HOME</i> for agent and console installation directories <i>\$PATROL_CACHE</i> for the console working cache

## Remove PATROL History Loader Files from *PATROL\_CACHE*

You must remove the current PATROL History Loader files from the *PATROL\_CACHE* directory for the console. If you do not, old product files in *PATROL\_CACHE* might be loaded instead of the newly installed files from *PATROL\_HOME*.

Delete all PATROL History Loader files with the following naming patterns from *PATROL\_CACHE\knowledge* and *PATROL\_CACHE\psl*:

- H\*.km
- H\*.psl
- History-\*
- \*History\_Loader\*
- Hist\*
- COM\_DEB\_\*
- COM\_STAT\_\*

## Upgrade Without Saving Customizations

Use this procedure in the following circumstances:

- you have performed the procedures in “Prepare to Upgrade” on page 2-13
  - you want to upgrade PATROL History Loader, but do not want to migrate existing customizations to PATROL History Loader
1. If you are installing into a PATROL 3.3.x or 3.4.x environment, follow these steps to start the installation program. If you are installing into a PATROL 3.5 environment, skip to Step 2.
    - A. Open a command line prompt.
    - B. Change to the drive where the installation CD is located.
    - C. Enter the correct command for your operating system (Table 2-5 describes the command line options.):

- At the Windows command line prompt, enter **setup.exe -releaseversion v.r** where *v.r* is the version of the PATROL environment into which you are installing.
- At the Unix command line prompt, enter **setup.sh -releaseversion v.r** where *v.r* is the version of the PATROL environment into which you are installing.

D. Skip to Step 3.

2. If you have already installed PATROL 3.5, start the installation program by running **setup.exe** (Windows) or **setup.sh** (Unix) from the installation CD or from an electronically downloaded installation image.
3. Click through the Welcome and License Agreement windows.
4. From the Select Type of Installation Window, select **Custom** and click **Next**.
5. In the Specify Installation Directory window, enter the base directory path to which you want to append the PATROL installation directory or accept the default directory and click **Next**.

For example, if you previously installed PATROL in D:\Program Files\BMC Software\PATROL3-4, you should enter **D:\Program Files\BMC Software** as the base BMC products installation directory in this step.

The PATROL installation directory is appended to the path that you enter in this step. You will specify the PATROL installation directory (PATROL 3-4) in Step 9 on page 2-11.

6. From the Select System Roles window, select **Managed System**, **Console System**, or some combination of these, using the information provided in “Target Computers and Their Roles” on page 2-8, and click **Next**.

7. From the Select Products and Components to Install window, select the KMs that you want to install and click **Next**.
8. Perform this step only if you are installing a PATROL Agent; otherwise, skip to Step 8. In the PATROL Default Account Properties window, enter the user name and password that you want to use for your default PATROL account and click **Next**. You should have created this account manually before you began to install PATROL.
9. Perform this step only if you are installing to a managed system (PATROL Agent computer); otherwise, skip to Step 9. From the Provide Information for the PATROL Agent window, select whether you want to start the PATROL Agent manually or automatically after the installation is complete and click **Next**.
10. In the Provide the PATROL 3.x Product Directory screen, enter the directory where you want to install PATROL History Loader. This directory is appended to the base directory path that you entered in Step 4 on page 2-10.

For example, if you want to install PATROL History Loader in D:\Program Files\BMC Software\PATROL3-4, you should have entered **D:\Program Files\BMC Software** as the base BMC products installation directory in Step 4 on page 2-10 and enter **PATROL 3-4** as the PATROL 3.x product directory in this step.

11. Complete the remaining windows. The number and content of the windows depend on your KM selections and your inputs to the windows. Click **Help** as needed to complete the windows.

---

**Note**

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After reviewing the installation selections, if you want to create an installation image and use it to install on several computers or on the local computer at a later time, see “Creating and Installing Installation Images” on page 2-28.

---

# Upgrade and Preserve Customizations

Use the appropriate procedure in this section if you want to upgrade to the new version of PATROL History Loader and you want to preserve any customizations you have made to the previous version of PATROL History Loader

After you have finished this procedure, see “Migrate Your Customizations” on page 2-24 for instructions about incorporating your customizations into the new version. You should complete this process on a limited number of machines in the test environment first, test the merged KMs thoroughly, and then deploy them to your production environment.

---

## Note

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To upgrade and preserve customizations, you must either migrate your customizations manually or use the PATROL Migration Tools version 3.5 (no KMDS required), or have the latest version of KMDS installed as well as any available patches.

---

## Determine Whether You Can Migrate

Before migrating customizations, you must determine whether or not the customizations to the previous version of PATROL History Loader that you have installed can be migrated to the new version of PATROL History Loader. See Table 2-4 to determine whether migration is supported for your current version of PATROL History Loader. If migration is supported, choose one of the following installation procedures to migrate your customizations:

- migrating customizations manually (page 2-18)
- migrating customizations using the PATROL Migration Tools version 3.5 (page 2-22)
- migrating customizations using the PATROL Migration Tools version 3.4.11 and the PATROL KMDS (page 2-22)

**Table 2-4 Versions That You Can Migrate**

<b>Component</b>	<b>Version</b>
PATROL History Loader	1.3.01
PATROL History Loader	1.4.00
PATROL History Loader	1.4.01
PATROL History Loader	1.4.02
PATROL History Loader	1.4.03
PATROL History Loader	1.4.04

### **Installing the New Version of PATROL History Loader If You Are Migrating Customizations Manually**

After you have performed the procedures in “Prepare to Upgrade” on page 2-13 and reviewed the information in “Determine Whether You Can Migrate” on page 2-17, use this installation procedure *if you do not want to use the PATROL Migration Tools version 3.5 or the PATROL KMDS* to migrate the customizations that you have made to the currently installed version of PATROL History Loader.

---

**Note**

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Do *not* install the new version of the KM to your existing PATROL 3.3.x or 3.4.x directory. Use another target directory for your installation.

---

1. If you are installing into a PATROL 3.3.x or 3.4.x environment, follow these steps to start the installation program. If you are installing into a PATROL 3.5 environment, skip to Step 2.
  - A. Open a command line prompt.
  - B. Change to the drive where the installation CD is located.

C. Enter the correct command for your operating system (Table 2-5 describes the command line options.):

- At the Windows command line prompt, enter **setup.exe -releaseversion v.r** where *v.r* is the version of the PATROL environment into which you are installing.
- At the Unix command line prompt, enter **setup.sh -releaseversion v.r** where *v.r* is the version of the PATROL environment into which you are installing.

D. Skip to Step 3.

2. If you have already installed PATROL 3.5, start the installation program by running **setup.exe** (Windows) or **setup.sh** (Unix) from the installation CD or from an electronically downloaded installation image.
3. Click through the Welcome and License Agreement windows.
4. From the Select Type of Installation Window, select **Custom** and click **Next**.
5. In the Specify Installation Directory window, enter the base directory path to which you want to append the PATROL installation directory or accept the default directory and click **Next**.

For example, if you previously installed PATROL in D:\Program Files\BMC Software\PATROL3-4, you should enter **D:\Program Files\BMC Software** as the base BMC products installation directory in this step.

The PATROL installation directory is appended to the path that you enter in this step. You will specify the PATROL installation directory in Step 9 on page 2-11.

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**Note**

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If you have previously installed PATROL in a root directory, you must enter the full path of the directory in the Specify Installation Directory window instead of the base path. For example, if you previously installed PATROL in D:\PATROL3-4, you should enter D:\PATROL3-4 in the Specify Installation Directory screen and leave the PATROL installation directory in Step 9 on page 2-11 blank.

---

6. From the Select System Roles window, select **Managed System**, **Console System**, or some combination of these, using the information provided in “Target Computers and Their Roles” on page 2-8, and click **Next**.
7. From the Select Products and Components to Install window, select the KMs that you want to install and click **Next**.
8. Perform this step only if you are installing a PATROL Agent; otherwise, skip to Step 8. In the PATROL Default Account Properties window, enter the user name and password that you want to use for your default PATROL account and click **Next**. You should have created this account manually before you began to install PATROL.
9. Perform this step only if you are installing to a managed system (PATROL Agent computer); otherwise, skip to Step 9. From the Provide Information for the PATROL Agent window, select whether you want to start the PATROL Agent manually or automatically after the installation is complete and click **Next**.

10. In the Provide the PATROL 3.x Product Directory screen, enter the directory where you want to install PATROL History Loader, unless PATROL is installed to a root directory. If PATROL is installed to a root directory, leave the directory field on this screen blank. This directory is appended to the base directory path that you entered in Step 4 on page 2-10. Click **Next**.

For example, if you previously installed PATROL History Loader in D:\Program Files\BMC Software\PATROL3-4, you should have entered **D:\Program Files\BMC Software** as the base BMC products installation directory in Step 4 on page 2-10 and enter **PATROL 3-5** (or some other directory name) as the PATROL 3.x product directory in this step.

11. Complete the remaining windows. The number and content of the windows depend on your KM selections and your inputs to the windows. Click Help as needed to complete the windows.

---

**Note**

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After reviewing the installation selections, if you want to export the installation package and use it to install on several computers or on the local computer at a later time, see “Creating and Installing Installation Images” on page 2-28.

---

12. Proceed to “Migrate Your Customizations” on page 2-24.

## Installing the New Version of PATROL History Loader If You Are Migrating Customizations Using the PATROL Migration Tools Version 3.5

The process of migrating KM customizations from a PATROL 3.x environment to PATROL 3.5 no longer depends on the PATROL KMDS. Because the PATROL Migration Tools version 3.5 copies the new product files directly from the product CD rather than from KMDS, you do not have to install the new version of PATROL History Loader. Just ensure that the product CD is accessible when you are running the migration tools.

For specific instructions and detailed information about using the PATROL Migration Tools version 3.5, see the *PATROL Migration Tools User Guide*.

## Installing the New Version of PATROL History Loader If You Are Migrating Customizations Using the KMDS

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### Note

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Ensure that you have installed the latest version of PATROL KMDS, including any available patches.

---

If you want to install PATROL History Loader into the KMDS so that you can migrate the customizations that you have made to the currently installed version of PATROL History Loader to the new version of PATROL History Loader, then you must follow these steps to run the installation program in KMDS mode:

1. Open a command line prompt.
2. Change to the drive where the installation CD is located.

3. Enter the correct command for your operating system (Table 2-5 describes the command line options.):
  - At the Windows command line prompt, enter `setup.exe -kmds [-kmdsportnum portnum] [-releaseversion v.r]`
  - At the Unix command line prompt, enter `setup.sh -kmds [-kmdsportnum portnum] [-releaseversion v.r]`

**Table 2-5 Command Line Options for Installing in a KMDS Environment**

<b>KMDS Installation Options</b>	<b>Description</b>
<code>-kmdsportnum <i>portnum</i></code>	optional; use only if you are not using the default KMDS port number 3182
<code>-releaseversion <i>v.r</i></code>	optional; use only if you are installing to a PATROL 3.3.x or PATROL 3.4.x environment. <i>v.r</i> designates the version number of the PATROL environment into which you are installing (for example, <code>-releaseversion 3.4</code> ).

The installation program opens in KMDS mode.

4. Click through the Welcome and License Agreement windows.
5. In the Specify KMDS directory window, enter the full path to the directory in which the KMDS is installed and click **Next**.
6. From the Select Products and Components to Install window, select the KMs that you want to install and click **Next**.
7. Verify your selections in the Review Selections and Install window. If they are correct, click through the rest of the screens in the installation program to install PATROL History Loader into the KMDS.

## Migrate Your Customizations

Customizations made to PATROL History Loader may include changes to the parameter alarm ranges, recovery actions, states, or other parameter properties.

You can migrate customizations manually or through the KMDS. Migration of **.km** files through the KMDS is automated, with the following exceptions:

- modified PSL code, whether it is embedded in **.km** files or in **.psl** files
- parameter overrides done with a PATROL Operator Console (3.3.00 and later)
- new Knowledge Modules that you created

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### Note

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Even if you are not using the PATROL KMDS, you can use the PATROL migration tools to help you migrate customizations. For more information about the PATROL migration tools, see the *PATROL Migration Tools User Guide*.

---

## Preparing to Migrate

Before you migrate the customizations from the previously installed version of PATROL History Loader to the newly installed version of PATROL History Loader, you must remove any obsolete KMs from the list of preloaded KMs on each PATROL Agent. See the *PATROL Agent Reference Manual* for instructions on removing KMs from the preload list.

## To Migrate Using the PATROL Migration Tools Version 3.5

The following procedure is a general workflow for using the PATROL Migration Tools version 3.5 to migrate your customizations to the new version of PATROL History Loader. For detailed explanation and instruction on using the migration tools, see the *PATROL Migration Tools User Guide*.

Follow this migration procedure only after you have met the following criteria:

- completed the procedures in “Prepare to Upgrade” on page 2-13.
  - installed version 3.5 of the PATROL migration tools, including the KM archive
1. Run the migration probe to locate the base version of PATROL History Loader from the KM archive and the new version of PATROL History Loader from the product CD.
  2. Run the merge tool to merge the base and customized versions of PATROL History Loader with the new version of PATROL History Loader.
  3. Choose one of the following methods to transfer merged KMs to your test environment:
    - Copy the contents of the results directory to the /lib directory where the new version of PATROL History Loader is installed.
    - Copy the contents of the packaged results to a CD image then install.
    - Deploy the contents of the merged results directory using a third-party deployment system.
  4. Perform any additional optional migration tasks as described in the PATROL Migration Tools User Guide.

## **To Migrate Using the PATROL Migration Tools Version 3.4.11 and the KMDS**

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### **Note**

Before beginning this procedure, ensure that you use the PATROL KMDS version 3.4.11 and apply any available patches.

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After you have checked your customizations to the previous version of PATROL History Loader into the KMDS, use the following steps to migrate your customizations to the new version of PATROL History Loader. For detailed instructions about migrating customizations using the KMDS, see the *PATROL Migration Tools User Guide*.

1. Use the Probe and Merge tools to identify, preserve, and merge customizations from the prior version of PATROL History Loader into the newly installed version of PATROL History Loader. See the *PATROL Migration Tools User Guide* to run the Probe and Merge tools.
2. When prompted during the merge phase of the migration, enter the following map file name:

**histakm\_1\_4\_05.map**

---

**Warning**

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Make sure that you use the merge map file that was shipped with the *new* version of PATROL History Loader. The default location is ***PATROL\_HOME*\lib\migration\new\lib\kmmergemap**.

---

3. Use KMDS to merge.
4. After you have completed the migration of your changes, load the new version and save the configuration. For more information about configuring PATROL History Loader, see “Configuration Tasks” on page 3-9.

## To Migrate Customizations Manually

If you do not want to use the KMDS to migrate customizations, use the following steps to migrate your customizations manually:

1. Move the old PATROL History Loader to a new directory that is different from **PATROL\_HOME**.
2. Identify the customizations in PATROL History Loader by comparing the content of the text file of the KM in the current PATROL History Loader version with the content of the text file for the customized KM that is saved in the PATROL Console cache backup directory.
3. Incorporate your customizations to the new PATROL History Loader by performing the following steps:
  - A. Restart the PATROL Console.
  - B. Load the newly installed PATROL History Loader.
  - C. Using a PATROL Developer Console, enter the customizations that you identified in Step 2, one by one.

## To Migrate Customized PATROL Script Language Code

Customizations made to PATROL Script Language (PSL) code are not automatically migrated. These customizations may be embedded in **.km** files or stored in separate **.psl** files. Migrate these customizations manually, using the following guidelines:

- If you modified **.psl** files that were shipped by BMC Software, you must manually re-edit the PSL code in the new KM by using a PATROL Developer Console to reapply your changes.
- If you modified PSL code embedded in a KM, that code will be overwritten when you install a new version of the product. You must manually edit the **.km** files by using a PATROL Developer Console to reapply your changes.

- If you created a new PSL file (not shipped by BMC Software) outside of a **.km** file, or if you created new PSL code (not shipped by BMC Software) and embedded it in a KM that was shipped by BMC Software, use the `pslsearch` utility to search your KM for terms that you may have used that have since been adopted by BMC Software as PSL keywords. Reapply your changes by using a PATROL Developer Console. For instructions about using the `pslsearch` utility, see the *PATROL Migration Tools User Guide*.

---

**Note**

---

If you have a customized PSL library that was compiled with an earlier version of the PSL compiler than the version that was provided with PATROL 3.2.09, you must manually recompile the library by using the PATROL 3.4.11 compiler.

---

## Creating and Installing Installation Images

The PATROL installation utility installs only to a local computer. The installation program cannot perform remote installations. You must install a PATROL Agent and PATROL History Loader locally on each computer that you want to monitor. You also must install a PATROL Console and PATROL History Loader locally on each computer from which you want to view results.

The installation program does provide you with the ability to create an installation image from the products that you select during a regular local installation. If you place the installation image in a shared directory, you can use that installation image to install the selected BMC Software products on all computers that perform the same roles and have these identical requirements:

- same shared **BMC Software** directory
- same PATROL default logon
- same PATROL Agent port number
- same platform
- same security option

You can also use a distribution server to distribute the installation packages that you create.

## Create an Installable Image

If you want to share the installation image, execute it later, or execute it several times for computers that share the same roles and installation selections, perform the following procedure at the end of the installation process.

1. After reviewing your selections in the Review Selections and Install window, select the **Create an installable image** check box.
2. In the **Store the installable image at** box, enter the directory where you want PATROL to store the installation image that you are creating. The directory must meet the following requirements:
  - On Unix, the directory can be any local or mounted volume
  - On Windows, the directory can be any drive mapped to a drive letter

The installation utility creates an **install.ctf** file in the specified directory that includes all the configuration information needed to install the products that you selected in the Product Selection screen.

3. After PATROL finishes exporting the installation image, navigate to the installation image directory that you entered.
4. Follow the instructions for the appropriate method for running the installation image:

- If you want to run the installation package more than once from the same location, change the properties on the installation image file, **image.ctl**, to **Read-Only**.

---

**Warning**

---

The **install.ctl** file includes the encrypted password for the account that was used during the install process. If the properties for the **install.ctl** file is set to Read-Only, ensure that the **install.ctl** file is removed from all computers to which the installation image is copied.

---

- If you want to distribute the installation image from a central location to multiple machines, do *not* change the properties of the **install.ctl** file to **Read-Only**.

---

**Warning**

---

If you do not change the **install.ctl** file to Read-Only, it will be deleted after the first time you execute the installation image, and you will not be able to use the exported installation image more than once.

---

## Install the Created Installation Image

After you create the installation image, as described on page 2-29, you can then use it to install PATROL History Loader on a local computer of the same platform that performs the same roles and has the same shared **BMC Software** directory, PATROL default logon, PATROL Agent port number, and security options as the options in the installation package. Use the following steps:

1. Navigate to the directory where the installation image resides.
2. Run the installation program:
  - On Windows, double-click the **install.exe** file or type **install.exe** at a command prompt.
  - On Unix, type **./install.sh** at a command prompt.

The installation program executes and then prints an installation log that lists the products installed. The text at the end of the installation log indicates whether or not the installation was successful.

## Installing the Online Help

The online Help for PATROL History Loader is automatically installed into the PATROL Console for Microsoft Windows when you install the KM. If you plan to install the Unix version of PATROL History Loader on a PATROL for Unix console, you must install the Unix version of the Help browser separately if it is not already installed.

### Install the Unix Version of the Help Browser

The browser required for the Unix version of PATROL Help is Netscape Navigator version 3.01 through 4.78. However, if you are running a Red Hat Linux platform, you must run Netscape Navigator version 4.x to display the online Help. Currently, PATROL Help does not support Netscape Navigator 6.0.

You must install Netscape Navigator on the computer where the PATROL Console resides. You can install Netscape anywhere on your Unix computer as long as the binary is in the path.

Netscape Navigator is supplied by Netscape Communications Corp. You can locate the browser at <http://home.netscape.com/download>.

### Additional Considerations for Using Online Help for Unix

When you select Help from the PATROL Console on a Unix system, it may take a few seconds for the Help browser to launch. Two windows will be displayed. First the Netscape Navigator window is displayed as an icon, and then a browser window that contains the Help is displayed.

In addition, you must be aware of the following restrictions:

- Netscape Navigator displays warning messages when it is invoked multiple times within the same user account because of its file-locking mechanism. It will, however, continue functioning.
- By default, when Netscape Navigator starts, it uses a private color map. As a result, you might experience color flashing on your workstation. If so, you can set the value of `PATROL_BROWSER` so that the `colormap` option is not specified. However, some subsequent color requests might fail and the online Help will be improperly displayed.
- The eXceed for Windows NT X Window Server product by Hummingbird Communication Ltd. may not always display the Help files properly.

Consult your Netscape Navigator documentation for specific platform requirements and restrictions.

## Setting Environment Variables for the Browser

The `LANG`, `PATH`, and `PATROL_BROWSER` environment variables must be set for the Help browser to run properly. The following sections describe these variables.

### LANG Variable

On some platforms, the Unix `LANG` environment variable must be set to `C` so that Netscape Navigator will work properly. Otherwise, you might experience product failures.

Set your user or system **.profile** for Bourne or Korn shells as follows:

```
LANG=C
export LANG
```

For C shell users, issue the following command:

```
setenv LANG C
```

### **PATH Variable**

The PATROL user account PATH variable must contain the location of the directory containing the Netscape files. If the directory containing the Netscape files is not on the path, add the directory to the PATROL user account path.

This requirement applies only to the PATROL user account on the same computer as the PATROL Console.

### **PATROL\_BROWSER Variable**

When PATROL starts the Help browser, it uses the command in the PATROL\_BROWSER environment variable. As a default, the PATROL\_BROWSER environment variable contains the following command:

```
netscape -display $DISPLAY -install -iconic
```

To use different arguments, set the value of PATROL\_BROWSER to the appropriate string. For example:

```
export PATROL_BROWSER=/usr/local/bin/netscape -raise
```

# Uninstalling

For instructions about uninstalling PATROL products see the *PATROL Installation Guide*.

## Where to Go from Here

The following table lists other topics and where you can find them:

<b>Topic</b>	<b>Source of Information</b>
overview of PATROL History Loader and its features	Chapter 1, "Product Components and Capabilities," and PATROL History Loader online Help
setting up and configuring History Propagator component	Chapter 3, "Configuring History Propagator," and PATROL History Loader online Help
setting up and configuring History Loader component	Chapter 4, "Configuring the History Loader Component," and PATROL History Loader online Help
instructions about how to access the KM menu commands, InfoBoxes and online Help	Appendix B, "Accessing Menu Commands, InfoBoxes and Online Help"
step-by-step procedures and detailed descriptions of the applications, menu commands, parameters, and InfoBoxes	PATROL History Loader online Help

---

# Configuring History Propagator

You must configure the History Propagator and History Loader components before you can use them. This chapter provides you with information that you will need to configure the History Propagator component. To configure the History Loader component, see Chapter 4, “Configuring the History Loader Component.” This chapter presents the following topics:

History Propagator Configuration Summary . . . . .	3-3
Propagation Methods . . . . .	3-4
Propagation Filters . . . . .	3-5
Default History Data File Names and Directories . . . . .	3-5
Changing the Location of Propagated Data . . . . .	3-6
Configuration Information . . . . .	3-7
Configuration Diagram . . . . .	3-8
Configuration Tasks . . . . .	3-9
Enabling Parameter History Retention . . . . .	3-10
Configuring History Propagator . . . . .	3-12
Specifying Where History Data Originates . . . . .	3-24
Specifying Where Temporary History Data Files Are Stored . . . . .	3-25
Improving History Propagator Performance . . . . .	3-26
Parameter Polling Cycles . . . . .	3-26
Deactivating Parameters . . . . .	3-26
Manually Scheduled Propagation . . . . .	3-26
If You Are Not Running the History Loader Component . . . . .	3-26

If a Problem Occurs .....	3-27
Debug Menu Options .....	3-27
Incomplete or Missing Data Files.....	3-27
Propagation Fails .....	3-28
Stopping Propagation .....	3-28
Where to Go from Here .....	3-28

# History Propagator Configuration Summary

After installing PATROL History Loader, you must enable history and configure the History Propagator before you can use it. This section provides you with information you need to know before you begin configuration tasks.

History Propagator uses the PSL functions **remote\_file\_open** and **remote\_file\_send** to propagate history data to the target machine. History Propagator can use either UDP (the default) or TCP protocols. The PATROL Agent variable **/AgentSetup/localPortForRemoteOpen** specifies the port number used by **remote\_file\_open** and **remote\_file\_send**.

To use History Propagator across a firewall, you must configure your firewall to allow communication between the Propagator machine and the target machine. If you are using PATROL across a firewall, read the firewall section in the *PATROL Installation Guide* for your console before you change your protocol.

You can choose among the following propagation methods:

- automatically propagate data from the present into the future
- manually specify a period of time in the past to the present to propagate
- manually specify a period of time in the past and continue into the future to propagate

You can choose your own format files to match your needs and elect not to use the default data and tables format. If you choose your own format files, records will not load into the database according to the History Propagator and History Loader default formats.

# Propagation Methods

History Propagator provides three methods of propagation that determine the history collection period. You can change the history propagation period for a History Propagator machine at any time.

Table 3-1 describes each propagation method:

**Table 3-1 History Propagation Methods**

<b>Method</b>	<b>Description</b>
From the present time	Scheduled propagation; history is propagated at defined intervals starting now; history data is collected until you manually change the configuration.
From the past to the present	Manual propagation; history is propagated for a time period you set; the time period must begin prior to the current moment and end with the current moment; no future history data is collected unless you manually change the configuration.
From the past and from now on	Combination of scheduled and manual propagation; history is propagated for a time period you set; the time period must begin prior to the current moment and continues into the future; history data is collected until you manually change the configuration.

**Note**

If you select **From the past to the present** or **From the past and from now on**, you must also specify the time interval (start and end time periods). You cannot select a time period in the future, because history data has not yet been collected.

## Propagation Filters

During History Propagator configuration, you can filter the data that the History Propagator extracts during propagation to an RDBMS. The History Propagator provides two different filters:

- Summarization filters for comma separated values, which filters propagated parameter data point values. See Figure 3-3 on page 3-14 “History Propagator - Summarization Filters for Comma Separated Values” dialog box.
- Regular expression filters, which filters for application name, instance name, and parameter name. See Table 3-4, “Regular Expression Filter Examples,” on page 3-17.

---

### Note

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You can also reduce the amount of propagated data without using propagation filters. For more information see “Customizing PATROL Parameters” on page 5-4 and “Deleting Unused PATROL History Loader Applications” on page 5-6.

---

## Default History Data File Names and Directories

After loading PATROL History Loader and configuring the History Propagator, the product creates history data files in ASCII format. History Propagator creates a **\*.dat** file for each propagation file in the target machine and a **\*.dmp** in the host propagating machine.

When a history data file is successfully transferred to the target machine, the History Propagator creates a **\*.done** file to indicate the successful transfer.

By default, temporary **\*.dmp** dump\_hist data files and propagated **\*.dat** and **\*.done** files are displayed in the following format:

**hostname\_portnumber\_timestamp.dat**

The host (machine) from which the history data originates is included in the name. If you have more than one machine with the same host (machine) name, you can specify the domain name of each machine before you begin the propagation process. The domain name will be included in the data file name, for example:

**hostname.bmc.com\_portnumber\_timestamp.dat**

By default, temporary \*.dmp dump\_hist data files are placed in the /var/tmp directory, /tmp directory, or c:\winnt\temp directory (depending on your operating system) on the History Propagator machine; however, you can change the default directory through a History Propagator menu command (see “Specifying Where Temporary History Data Files Are Stored” on page 3-25).

By default, propagated history \*.dat and \*.done files are placed in the \$PATROL\_HOME/remote (or %PATROL\_HOME%\remote) directory on the History Loader target machine; however, you can change the default directory by changing the remote variable (see “Changing the Location of Propagated Data” on page 3-6).

---

**Note**

---

Keep in mind that the History Propagator data output does not include a first record of field names.

---

## Changing the Location of Propagated Data

You can change the target machine and the directory where propagated data (\*.dat and \*.done) files are placed. Change the target machine through a History Propagator configuration dialog box. See Figure 3-8 on page 3-21.

Change the directory on the target machine by setting the \$PATROL\_REMOTE (or %PATROL\_REMOTE%) environment variable before starting the PATROL Agent. To change the remote variable, the PATROL account must have write permission for the History Propagator machine. For more information about setting PATROL environment variables, see the *PATROL User Guide* for your console.

## Configuration Information

To configure History Propagator, you must also configure the History Propagator computer. During configuration, you must supply the following information:

- whether you want to summarize historical data and, if so, how to filter the summarized data
- filter expressions for the application name, instance name, and parameter name
- timestamp format
- time span for which you want to propagate data (and if the time span includes the past) and the start and end time periods
- Computer name, port number, port type (UDP or TCP), user name, and password for the target location where propagated history (\*.dat and \*.done) files are placed.

---

### Note

---

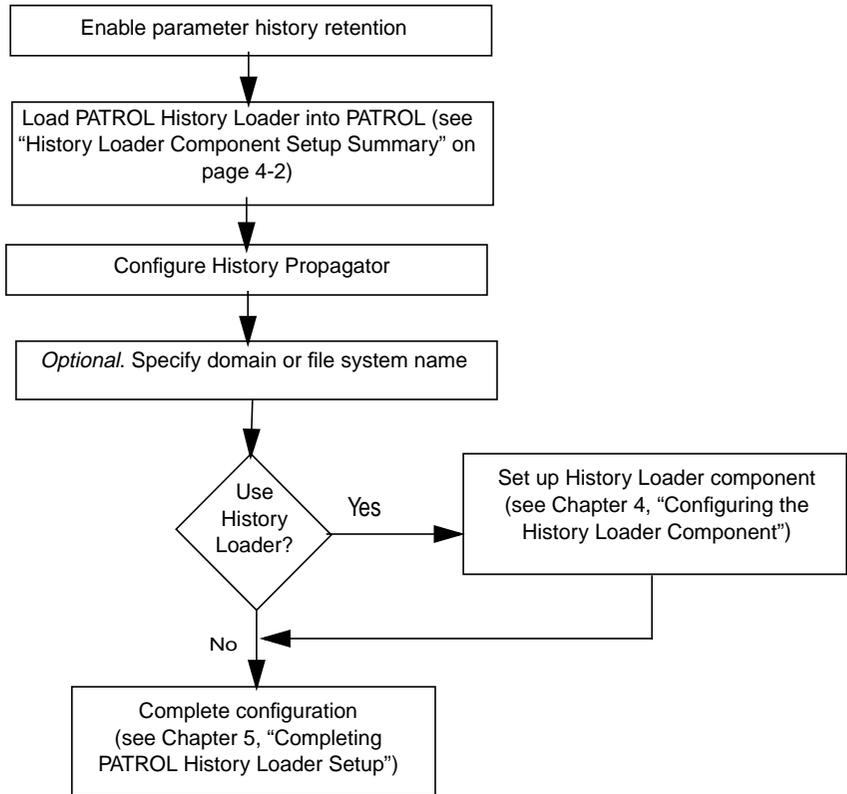
You do not need to specify the directory for temporary dump\_hist data files or the directory where propagated history data files are placed; however, you can change these default directories.

---

# Configuration Diagram

Figure 3-1 summarizes the History Propagator configuration steps.

**Figure 3-1 History Propagator Configuration Summary**



# Configuration Tasks

Perform the following tasks to configure History Propagator:

**Table 3-2 History Propagator Configuration Tasks**

<b>Task</b>	<b>Page</b>
1. Enabling Parameter History Retention	3-10
2. Configuring History Propagator	3-12
3. Specifying Where History Data Originates	3-24
4. Specifying Where Temporary History Data Files Are Stored	3-25

## Enabling Parameter History Retention

---

**Summary:** You must enable parameter history retention, so that the PATROL Agent will retain history data.

The steps to enable history retention depend on whether you are using a PATROL Console for Unix or a PATROL Console for Windows Servers.

---

You can set parameter history retention at the following levels:

- globally for all monitored computers
- for a particular monitored computer
- for all application instances of a particular application class
- for a particular instance of an application class
- for a particular parameter

This task describes how to set history retention at the global level for all monitored computers.

For more information about setting parameter history retention, refer to the *PATROL User Guide* for your PATROL Console.

### Before You Begin

- You must use a PATROL Developer Console for Unix or a PATROL Developer Console for Windows Servers to enable parameter history retention.
- The PATROL Agent must have already been started.

### To Enable History Retention with a PATROL Developer Console for Unix

---

**Note**

---

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

**Step 1** From the PATROL Console menu bar, choose **Options => Preferences**.

The User Preferences dialog box appears.

**Step 2** Click on the **Categories** button and select **History Retention Period**.

The User Preferences dialog box displays the current parameter history retention period.

**Step 3** Set the number of days you wish to retain parameter history using the slider.

**Step 4** Click **OK**.

### To Enable History Retention with a PATROL Developer Console for Windows Servers

**Step 1** From the PATROL Console menu bar, choose **Options => Preferences**.

The User Preferences dialog box appears.

**Step 2** Select the **Configuration** tab if it is not selected.

**Step 3** In the **History Retention** box, type the number of days you wish to retain parameter history, or click the arrows to increase or decrease the number of days.

**Step 4** Click **OK**.

### Where to Go from Here

Continue with “Configuring History Propagator” on page 3-12.

## Configuring History Propagator

---

**Summary:** You must configure the History Propagator by specifying certain information for each History Propagator computer.

---

### Before You Begin

- You must have performed “Enabling Parameter History Retention” on page 3-10
- You must decide which computers will be History Propagators.
- A PATROL Agent must be running on each History Propagator computer.
- You must know the port number used by the PATROL Agent running on the target machine where you run History Loader.
- You must know the user name and password of the account used by PATROL to access each History Propagator computer (usually the PATROL account created on the History Propagator computer).
- Make sure the correct time is set on each History Propagator computer.

### To Configure the History Propagator

---

**Note**

---

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

Perform these steps for each History Propagator computer.

**Step 1** From the PATROL Console, double-click the host computer icon; then locate the History Propagator application icon.

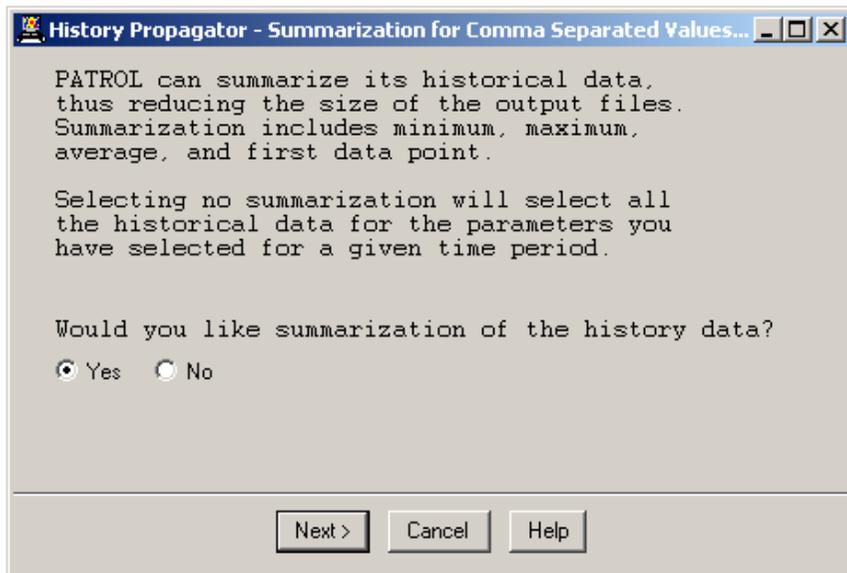
**Step 2** Choose **Configure** from KM Commands on the History Propagator pop-up menu.

The following buttons are available on the History Propagator configuration dialog box:

- **Next**—accepts current information and moves to the next configuration dialog box
- **Cancel**—does not save current information and exits from configuration
- **Help**—displays dialog box help

**Step 3** From the History Propagator - Summarization for Comma Separated Values dialog box, indicate whether you want to summarize historical data by clicking **Yes** or **No**.

**Figure 3-2 Summarization for Comma Separated Values Dialog Box**



If you choose **Yes** to summarize data, you must also specify how to filter the summarized data.

---

**Note**

---

If you choose **No**, all data points for selected application classes, instances, and parameters are extracted.

---

**Step 4** Click **Next**.

If you choose **No**, go to Step 7; otherwise continue to Step 5.

**Step 5** From the History Propagator - Summarization Filters for Comma Separated Values dialog box, choose a summarization filter.

**Figure 3-3 Summarization Filters for CSV Dialog Box**



Choose one of the following filters.

---

**Note**

---

The polling cycle refers to the propagation time interval for the GetHistoryData parameter. The polling cycle is not the propagation time interval for each individual parameter.

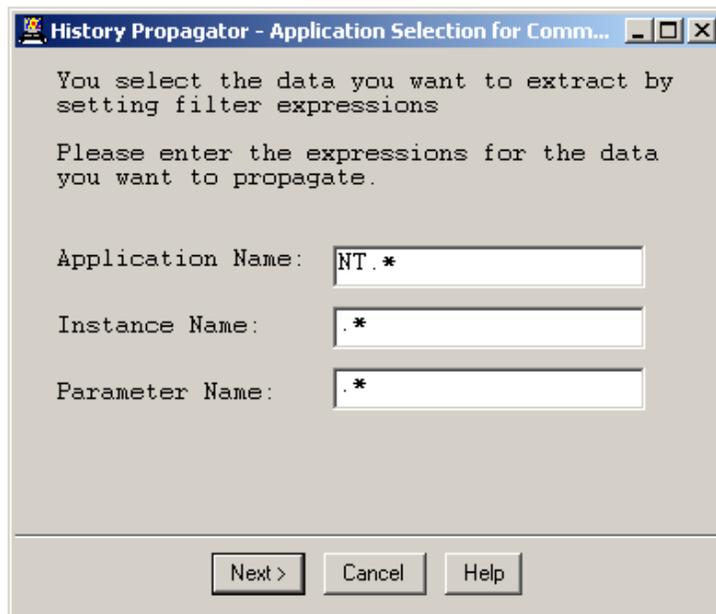
---

- **FIRST**—Selects only the first data point of the polling cycle. This selection results in the lowest overhead for the History Propagator but skips multiple data points during a parameter polling cycle.
- **MIN**—Selects only the minimum data point value of the polling cycle.
- **MAX**—Selects only the maximum data point value of the polling cycle.
- **AVG**—Selects the average value of the data points of the polling cycle.

**Step 6** Click **Next**.

**Step 7** From the History Propagator - Application Selection for Comma Separated Values dialog box, enter the filter expressions for the application name, instance name, and parameter name.

**Figure 3-4 Application Selection for Comma Separated Values Dialog Box**



**Application name**, **Instance name**, and **Parameter name** fields determine which data the History Propagator sends to the database. Enter one or more names or expressions. Separate multiple names by a vertical bar “|” in the appropriate field.

Do not leave the fields blank.

---

**Note**

---

When specifying regular expressions with both a PATROL Console for Unix and a PATROL Console for Windows Servers, use the Unix syntax for regular expressions, not the Windows or DOS syntax for wildcards.

---

Use the following syntax to leave a field unfiltered; that is, all application classes, instances, or parameters are selected.

.\*

Use the following syntax for negative filtering of a field; that is, all application classes, instances, or parameters are selected *except* the ones specified.

[^CacheHitRatio|FreeSpace]

Table 3-3 lists commonly used regular expressions that you can use for filtering history data.

**Table 3-3 Commonly Used Regular Expressions**

Symbol	Character	Description
*	asterisk	one or more characters
.	period	0 (zero) or more characters
	vertical bar	OR operator
^	circumflex	beginning of the token
\$	dollar sign	ending of the token
[ ]	brackets	specify position of characters

Table 3-4 displays regular expression filter examples.

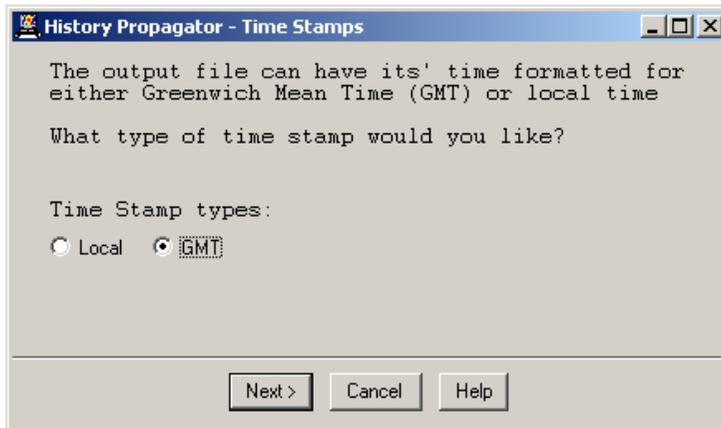
**Table 3-4 Regular Expression Filter Examples**

Example	Description
Application Name: <b>CPU MEMORY</b> Instance Name: .* Parameter Name: .*	All parameters for all instances of the CPU and the MEMORY applications.
Application Name: <b>FILESYSTEM</b> Instance Name: <b>var tmp</b> Parameter Name: .*	All parameters for the /var and the /tmp file system instances in the FILESYSTEM application.
Application Name: <b>ORACLE</b> Instance Name: .* Parameter Name: <b>CacheHitRatio FreeSpace</b>	CacheHitRatio parameter and all parameters that contain "FreeSpace" in the name for all instances of the ORACLE application. ArchiveFreeSpace, FreeSpace, and FreeSpaceDeficit parameters will be included.
Application Name: <b>ORACLE</b> Instance Name: .* Parameter Name: <b>CacheHitRatio ^FreeSpace\$</b>	The CacheHitRatio and FreeSpace parameters for all instances of the ORACLE application. ArchiveFreeSpace and FreeSpaceDeficit parameters will not be included.
Application Name: <b>ORACLE</b> Instance Name: .* Parameter Name: <b>[B].*</b>	All parameters whose names begin with the letter "B" for all instances of the ORACLE application.
Application Name: <b>CPU FILESYSTEM ORACLE</b> Instance Name: <b>CPU var tmp oradb1</b> Parameter Name: <b>[C][P][U].*^FreeSpace\$ FSCapacity</b>	All parameters for all instances of the CPU application. Only the FSCapacity parameter for the /var and the /tmp file system instances in the FILESYSTEM application. Only the FreeSpaceDeficit parameter for the oradb1 instance of the ORACLE application.

**Step 8** Click **Next**.

**Step 9** From the History Propagator - Time Stamps dialog box, click **Local** or **GMT** (Greenwich Mean Time) to select the timestamp format.

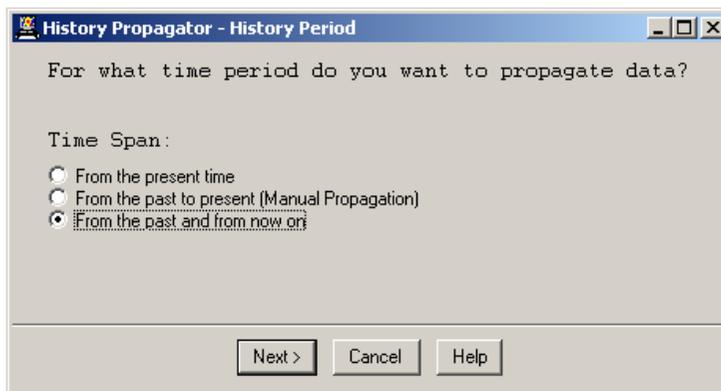
**Figure 3-5 Time Stamps Dialog Box**



**Step 10** Click **Next**.

**Step 11** From the History Propagator - History Period dialog box, select the time span for which you want to propagate data.

**Figure 3-6 History Period Dialog Box**



Choose one of the following time spans (propagation methods):

- **From the present time**—Scheduled propagation; history is propagated at defined intervals starting now; history data is collected until you manually change the configuration.
- **From the past to the present**—Manual propagation; history is propagated for a time period you set; the time period must begin prior to the current moment and end with the current moment; no future history data is collected unless you manually change the configuration.
- **From the past and from now on**—Combination of scheduled and manual propagation; history is propagated for a time period you set; the time period must begin prior to the current moment and continues into the future; history data is collected until you manually change the configuration.

---

**Note**

---

If you select **From the past to the present** or **From the past and from now on**, you must also specify the time interval (start and end time periods). You cannot select a time period in the future, because history data has not been collected.

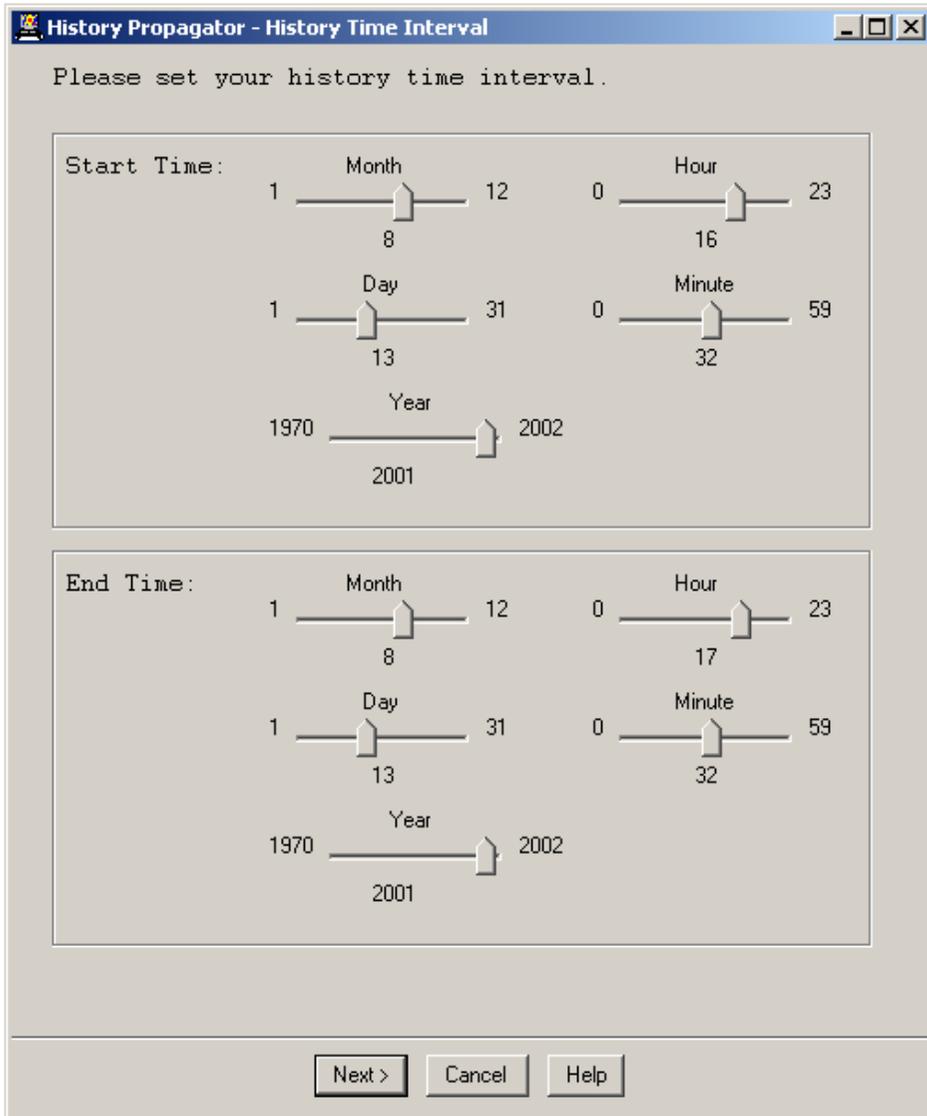
---

**Step 12**    Click **Next**.

If you chose the **From the present time** time span, go to Step 15; otherwise, continue to Step 13.

- Step 13** From the History Propagator - History Time Interval dialog box, set the start time and end time for the history interval. You cannot select a time period in the future, because history data has not yet been collected.

**Figure 3-7 History Time Interval Dialog Box**



**Step 14** Click **Next**.

**Step 15** From the History Propagator - Target Location dialog box, enter the computer name, port number, port type (UDP or TCP), user name, and password for the location where history output will be stored.

If you are using PATROL across a firewall, read the firewall section in the *PATROL Installation Guide* for your console before you change your protocol.

**Figure 3-8 Target Location Dialog Box**



History Propagator - Target Location

Where would you like the History Output file placed?

Computer Name: SCORPIUS

Port Number: 3181 UDP

User Name: patrol\_user

Password: \*\*\*\*\*

Verify Password: \*\*\*\*\*

Next > Cancel Help

This account information is used to connect to the PATROL Agent on the target machine, and the account is usually the PATROL default account. A PATROL Agent must be running on the specified port on the target machine. If the PATROL Agent is not running, or if the account information is incorrect, an error message will be displayed.

---

**Note**

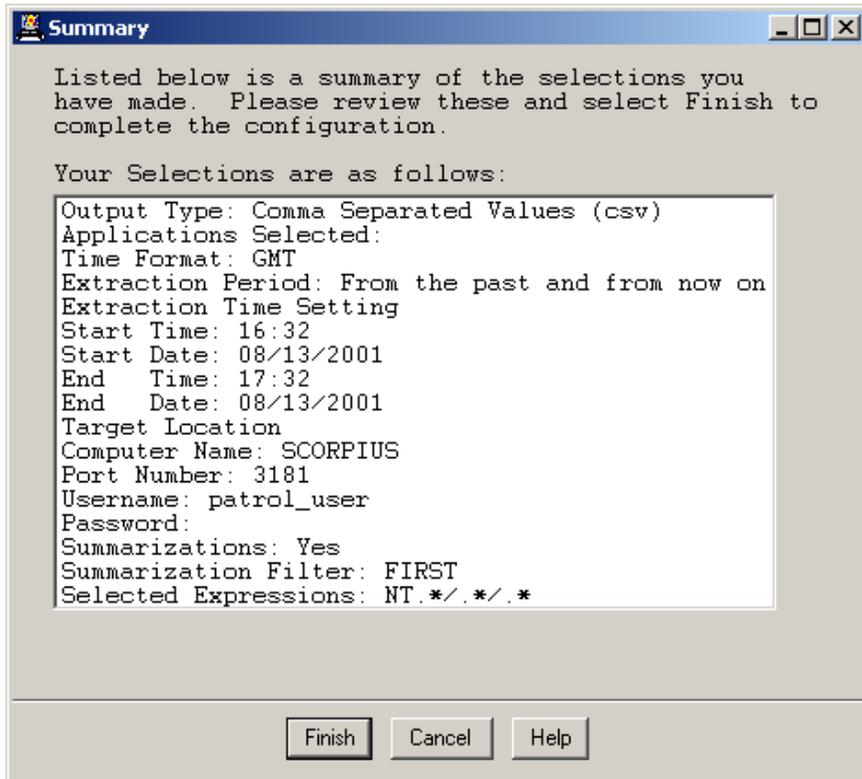
When entering the computer name, specify the host name rather than the IP address. If you specify an IP address, History Propagator performance may be degraded on some systems.

---

**Step 16** Click **Next**.

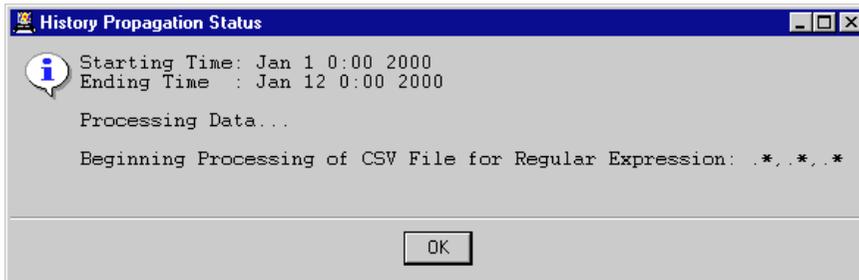
**Step 17** From the Summary dialog box, review the summary of selections you have made. Click **Finish** to accept the configuration; otherwise, click **Cancel** to exit without configuring.

**Figure 3-9 Propagator - Summary Dialog Box**



If you accepted the configuration, the history propagation status information dialog box appears.

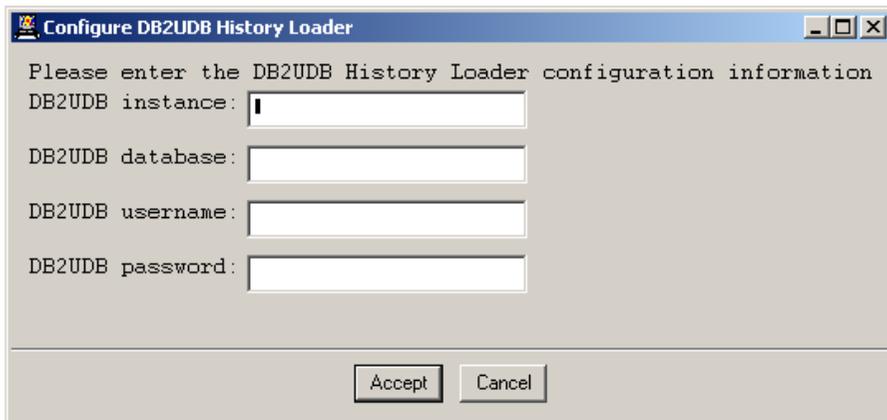
**Figure 3-10 History Propagation Status Dialog Box**



**Step 18** Click **OK** to exit configuration.

If history propagation is successfully completed, the history propagation complete dialog box appears.

**Figure 3-11 History Propagation Complete Dialog Box**



## Where to Go from Here

Continue with “Specifying Where History Data Originates” on page 3-24.

## Specifying Where History Data Originates

---

**Summary:** You can specify the domain name of the machine where history data originates. Specifying the domain name is useful when you have more than one machine in different domains with the same host (machine) name, so that the domain name is included in the data file name.

---

### To Specify a Domain Name

---

#### Note

---

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- Step 1** From the History Propagator pop-up menu, choose **Utilities => Set Domain Name**. The History Propagator Domain Name dialog box appears.
- Step 2** Enter the appropriate domain name, for example **bmc.com**.
- Step 3** Click **OK**.

### Where to Go from Here

Continue to “Improving History Propagator Performance” on page 3-26.

## Specifying Where Temporary History Data Files Are Stored

---

**Summary:** You can specify the file system (directory) name where temporary propagation dump\_hist data files are placed. Specifying the temporary working directory is useful when you need more space for the data.

---

### To Specify a File System Name

---

#### Note

---

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- Step 1** From the History Propagator pop-up menu, choose **Utilities => Specify Filesystem Name**. The History Propagator Temp Filesystem dialog box appears.
- Step 2** Enter the appropriate file system name.
- Step 3** Click **OK**.

### Where to Go from Here

Continue to “Improving History Propagator Performance” on page 3-26.

# Improving History Propagator Performance

This section provides tips to enhance the performance of history propagation.

## Parameter Polling Cycles

If the polling cycles of your PATROL parameters are set to less than one minute, the amount of propagated history data will be very large. You may want to review and change some parameter polling cycles before you run the History Propagator.

## Deactivating Parameters

If you are not using certain parameters to monitor and manage your systems, deactivate those parameters to stop their history data collection. This will reduce the amount of history data for propagation and loading.

## Manually Scheduled Propagation

You can use the **Refresh Parameters** from KM Commands on the History Propagator pop-up menu to initiate a manual propagation.

## If You Are Not Running the History Loader Component

If you will not use the History Loader component, you may want to manually delete **\*.done** files in the **\$PATROL\_HOME/remote** directory. The **\*.done** files tell History Loader that the file transfer of **\*.dat** files was successful.

# If a Problem Occurs

This section describes a few troubleshooting procedures.

## Debug Menu Options

If you have a problem propagating history data, turn on the debugging option from the History Propagator application instance menu.

Debugging options display additional information about propagation processes in the system output window.

When you have viewed debugging information and solved the problem, you can turn off debugging from the application instance menu.

---

### Note

---

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- » Turn on or turn off debugging by choosing **Utilities => Debug On** (or **Debug Off**) from KM Commands on the History Propagator pop-up menu.

## Incomplete or Missing Data Files

If your \*.dat files are incomplete and/or your \*.done files are missing on the target machine and you are using UDP port type, try changing the port type to TCP.

---

### Note

---

If you are using PATROL across a firewall, read the firewall section in the *PATROL Installation Guide* for your console before you change your protocol.

---

## Propagation Fails

History Propagator tries three times to send propagated data to the target machine. If, after three attempts, History Propagator is unable to send the data to the target machine, propagation will fail. Try manually propagating to another machine, see “Manually Scheduled Propagation” on page 3-26.

## Stopping Propagation

To stop history propagation, you must deactivate the GetHistoryData parameter. You must use a PATROL Developer Console to deactivate a parameter. The procedures for deactivating a parameter depend on whether you are using a PATROL Console for Unix or a PATROL Console for Windows Servers. See the *PATROL User Guide* for your console for instructions about how to deactivate a parameter.

## Where to Go from Here

The following table summarizes where to look for more information about using PATROL History Loader.

Topic	Where to Find the Topic
How to load and configure the History Loader component	Chapter 4, “Configuring the History Loader Component.”
How to complete PATROL History Loader setup	Chapter 5, “Completing PATROL History Loader Setup.”

---

# Configuring the History Loader Component

This chapter provides you with information that you will need to set up the History Loader component. Before you configure the History Loader component, you must have already set up History Propagator. Refer to Chapter 3, “Configuring History Propagator,” for setup instructions.

This chapter presents the following topics:

History Loader Component Setup Summary . . . . .	4-2
Configuration Information . . . . .	4-2
Setup Diagram . . . . .	4-3
Estimate RDBMS Storage Needs . . . . .	4-4
Create an Account and Database . . . . .	4-8
Choosing a History Loader Type . . . . .	4-9
Configure History Loader for Your RDBMS . . . . .	4-10
Configuring DB2 History Loaders . . . . .	4-11
Configuring CA-Ingres History Loaders . . . . .	4-13
Configuring Informix History Loaders . . . . .	4-15
Configuring Oracle Server History Loaders . . . . .	4-17
Selecting the Rollback Segment (Oracle Only) . . . . .	4-19
Configuring Microsoft SQL Server History Loaders . . . . .	4-20
Configuring Sybase SQL Server History Loaders . . . . .	4-22
Create Database Objects . . . . .	4-24
Debugging the History Loader Component . . . . .	4-25
Improving History Loader Performance . . . . .	4-26
Where to Go from Here . . . . .	4-27

# History Loader Component Setup Summary

After setting up the History Propagator, you must set up the History Loader component before you can use it. Then you should customize PATROL parameters, delete unused applications, and save your changes.

## Configuration Information

Setting up the History Loader component includes configuring the History Loader computer. Configuration includes creating the following items in your RDBMS:

- default PATROL account for history tables
- database for storing history data
- database objects

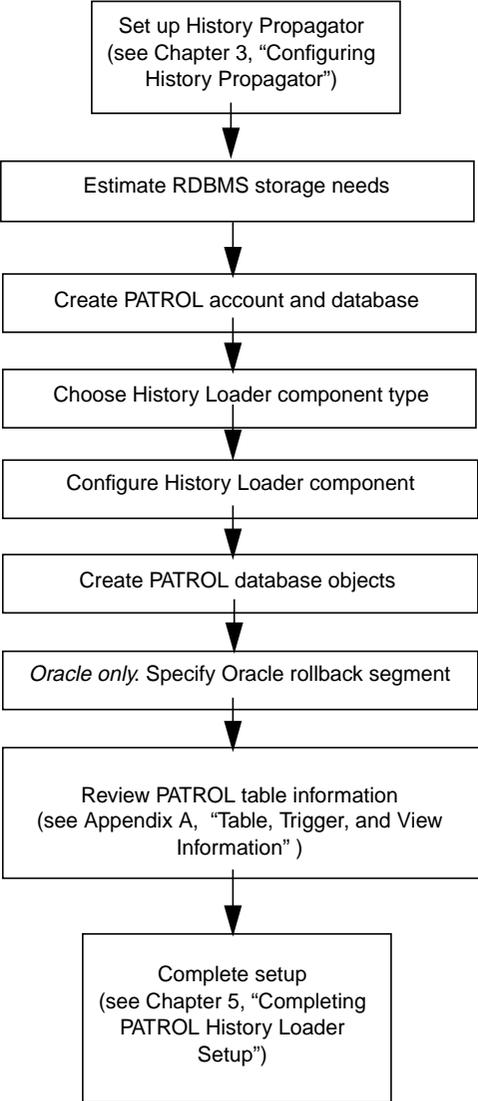
During configuration, you must supply PATROL History Loader with certain information about your RDBMS. The information that you are required to supply depends on the RDBMS. In many cases, you must supply the following information:

- default PATROL account for history tables
- database for storing history data
- RDBMS home directory
- RDBMS server name

# Setup Diagram

Figure 4-1 summarizes the History Loader component setup steps.

**Figure 4-1 History Loader Component Setup Summary**



# Estimate RDBMS Storage Needs

This task describes how to estimate your history data storage requirements. The storage requirements are

- the number of rows per permanent table
- the number of intervals by parameter
- object storage requirements per permanent and temporary table
- the total storage requirements

Use the storage requirements that you estimate to set up the PATROL database for storing history data.

## Estimating Storage Needs

---

**Summary:** Use this task to estimate your history data storage requirements.

---

To estimate your storage needs, complete the following steps:

- Step 1** Determine the number of data sample intervals P\_HISTORY\_DATA will generate by multiplying the interval in minutes by the number of days you want.

Suppose you want to load history data from two nodes and keep the following data online for a 2-week period:

**Table 4-1** Determinations of Intervals

Node	Application	Instance	Parameter	Interval (Minutes)	Intervals in 14 Days
icarus	CPU	CPU	CPUCpuUtil	1	20,160
icarus	DISK	c2016	DSKBps	4	5,040
icarus	FILESYSTEM	root	FSCapacity	2	10,080
icarus	SWAP	c201d6s0	SWPSwapUsedPercent	4	5,040
daedalus	CPU	CPU	CPUCpuUtil	1	20,160
daedalus	DISK	c0t60	DSKBps	4	5,040
daedalus	DISK	c1t50	DSKBps	4	5,040
daedalus	FILESYSTEM	root	FSCapacity	2	10,080
daedalus	FILESYSTEM	var	FSCapacity	2	10,080
daedalus	FILESYSTEM	usr	FSCapacity	2	10,080
daedalus	SWAP	c201d6s0	SWPSwapUsedPercent	4	5,040
Total number of intervals, which correlates to the number of rows for p_history_data					105,840

**Step 2** Determine the number of rows for each table.

This value will correlate to the following number of rows being inserted.

**Table 4-2 Rows Per Table**

<b>Table Name</b>	<b>Number of Rows</b>	<b>Description</b>
p_apps	8	count (distinct nodes and applications)
p_history	11	count (distinct nodes + applications + instances)
p_history_data	105,840	sum (parameters interval)
p_instances	8	count (distinct instances)
p_nodes	2	count (distinct nodes)
p_parameters	4	count (distinct parameters)

**Step 3** Determine the storage requirements for permanent objects.

The storage requirements will vary slightly for each RDBMS. In general, you can estimate that each row of the P\_HISTORY\_DATA table will require about 125 bytes. For a specific example, in CA-OpenIngres 1.1 the storage requirements are approximately as follows:

**Table 4-3 Permanent Object Storage Requirement**

<b>Object Name</b>	<b>Object Type</b>	<b>Kilobytes</b>
P_APPS	table	10
P_HISTORY	table	10
P_HISTORY_DATA	table	12,920
P_INSTANCES	table	10
P_NODES	table	10
P_PARAMETERS	table	10
XAK1P_INSTANCES	index	8
XAK1P_NODES	index	8
Total storage for permanent objects		12,976

**Step 4** Determine the storage requirements for temporary objects.

The space necessary for the temporary table (P\_TMP\_HISTORY\_DATA) used to initially load history data for each transaction varies with the transaction sizes. The minimum amount of space that you should plan for is 520 bytes per row. The suggested amount of space that you should plan for is 1,000 bytes per row.

For a transaction size of 1,000 rows in CA-OpenIngres 1.1, the suggested requirements are as follows:

**Table 4-4 Temporary Object Storage Requirements**

<b>Object Name</b>	<b>Object Type</b>	<b>Kilobytes</b>
P_TMP_HISTORY_DATA	table	1,000
Total storage for temporary objects		1,000

**Step 5** Determine the total storage requirements.

Add the storage requirements for permanent and temporary objects to estimate the total space required for creating the database during installation.

**Table 4-5 Total Required Space**

<b>Object Name</b>	<b>Kilobytes</b>
Total storage for permanent objects	12,976
Total storage for temporary objects	1,000
<b>Total Required Space</b>	<b>13,976</b>

# Create an Account and Database

Use Table 4-6 to determine the type of account you need to set up to use the History Loader component with your RDBMS. For more information about setting up these accounts, see the documentation for your RDBMS.

**Table 4-6 Necessary RDBMS Accounts**

<b>RDBMS</b>	<b>Account</b>
DB2	account for the DB2 computer instance that will own the history tables Must have DB2SYSADM authorization.
CA-Ingres	user account with the ability to create tables, indexes, and constraints
Informix*	user account with the ability to create tables, indexes, and constraints
Oracle Server	Oracle user account with a unique default tablespace Must have the ability to create tables, indexes, triggers, sequences, and views. Must have an unlimited quota on the default tablespace.
Microsoft SQL Server	login account with the ability to create and remove database objects
Sybase SQL Server	login account must be a system administrator with system security officer (SSO) role

\*For Informix, you must also set the following three Informix environment variables:

- INFORMIXDIR
- ONCONFIG
- INFORMIXSERVER

After you have set these environment variables, you must restart the PATROL Agent. Refer to your Informix documentation for instructions about how to set environment variables.

---

### **Note**

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You must specify a password for the RDBMS account; the password cannot be blank.

---

Once you have set up the appropriate account for your RDBMS, you must create a database owned by that account. This database will be used to store history data.

## Choosing a History Loader Type

---

**Summary:** After setting up the proper account and database, you must select the History Loader component type that corresponds to your RDBMS.

---

### Before you begin

You must have performed “Estimating Storage Needs” on page 4-5.

**To choose a History Loader type for your RDBMS, complete the following steps:**

---

#### Note

---

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

**Step 1** Choose **Knowledge Module Admin => Patrol History** from KM Commands on the pop-up menu.

The Enable/Disable History Loader dialog box appears as shown in Figure 4-2.

**Figure 4-2** Enable/Disable History Loader Dialog Box



**Step 2** Make sure the Enable History Loader box is checked.

**Step 3** From the Type list, select the name of your RDBMS.

The Type list contains all of the supported RDBMSs on the History Loader computer.

**Step 4** Click **Accept**.

**Step 5** Verify that the appropriate History Loader icon for your RDBMS appears with the operating system application icons in the computer window. For a list of History Loader icons, see “Applications and Icons” on page 1-7. It may take a few moments for PATROL to discover the instance that you selected. The instance will be in an offline state until it is configured.

## Configure History Loader for Your RDBMS

Now you must configure the History Loader component for your RDBMS. History Loader configuration is different for each RDBMS, so read the appropriate section for your RDBMS.

<b>RDBMS</b>	<b>Configuration Section</b>
DB2	page 4-11
CA-Ingres	page 4-13
Informix	page 4-15
Oracle Server	page 4-17
Microsoft SQL Server	page 4-20
Sybase SQL Server	page 4-22

## Configuring DB2 History Loaders

---

**Summary:** You must configure each History Loader to receive PATROL history data. This task must be performed on each DB2 History Loader computer.

---

### Before You Begin

You must have performed “Choosing a History Loader Type” on page 4-9.

**To Configure DB2 History Loader, complete the following steps:**

---

#### **Note**

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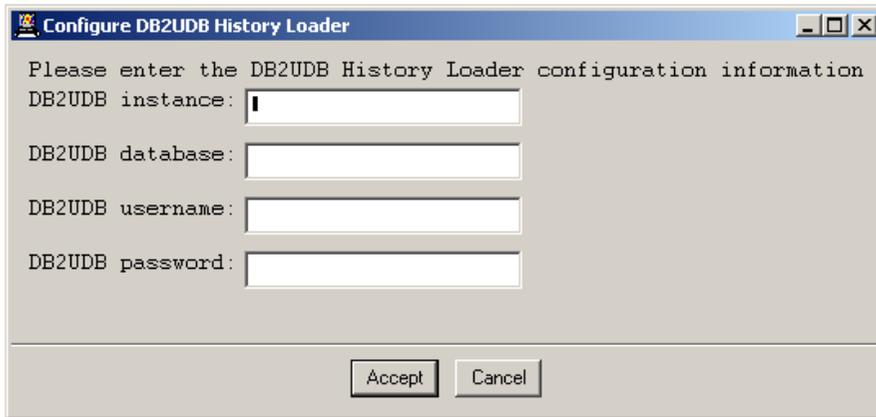
For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

**Step 1** Choose **Configure** from the KM commands on the History Loader pop-up menu.

The Configure DB2 History Loader dialog box appears as shown in Figure 4-3.

**Figure 4-3 Configure DB2 History Loader Dialog Box**



Configure DB2UDB History Loader

Please enter the DB2UDB History Loader configuration information

DB2UDB instance:

DB2UDB database:

DB2UDB username:

DB2UDB password:

Accept Cancel

**Step 2** Enter the following information:

- DB2 computer instance name
- DB2 database name
- user name of the default account
- password of the default account

**Step 3** Click **Accept**.

### Where to Go from Here

To review the tables that were created in the PATROL database account, go to Appendix A, “Table, Trigger, and View Information.” Otherwise, continue to “Create Database Objects” on page 4-24.

## Configuring CA-Ingres History Loaders

---

**Summary:** You must configure each History Loader to receive PATROL history data. This task must be performed on each CA-Ingres History Loader computer.

---

### Before You Begin

You must have performed “Choosing a History Loader Type” on page 4-9.

**To Configure CA-Ingres History Loader, complete the following steps:**

---

#### Note

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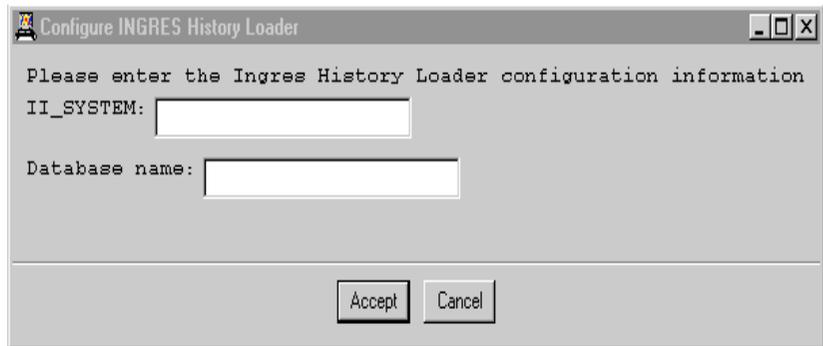
For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- Step 1** From the PATROL Console, customize the History Loader’s PATROL user name.
- With a PATROL Console for Unix: Choose **Customize => UserName/Password** from the History Loader pop-up menu.
  - With a PATROL Console for Windows: Choose **Properties** from the History Loader pop-up menu; then select the Security tab.
- Step 2** At the UserName/Password dialog box, type the user name of the history data owner in the appropriate field. The password is not used.
- Step 3** Click **OK**.
- Step 4** From the PATROL Console, choose **Configure** from KM Commands on the History Loader pop-up menu.

The Configure Ingres History Loader dialog box appears as shown in Figure 4-4.

**Figure 4-4 Configure Ingres History Loader Dialog Box**



**Step 5** Enter the following information:

- II\_SYSTEM
- database name

**Step 6** Click **Accept**.

### Where to Go from Here

To review the tables that were created in the PATROL database account, go to Appendix A, “Table, Trigger, and View Information.” Otherwise, continue to “Create Database Objects” on page 4-24.

## Configuring Informix History Loaders

---

**Summary:** You must configure each History Loader to receive PATROL history data. This task must be performed for each Informix History Loader computer.

---

### Before You Begin

You must have performed “Choosing a History Loader Type” on page 4-9.

**To Configure Informix History Loader, complete the following steps:**

---

#### Note

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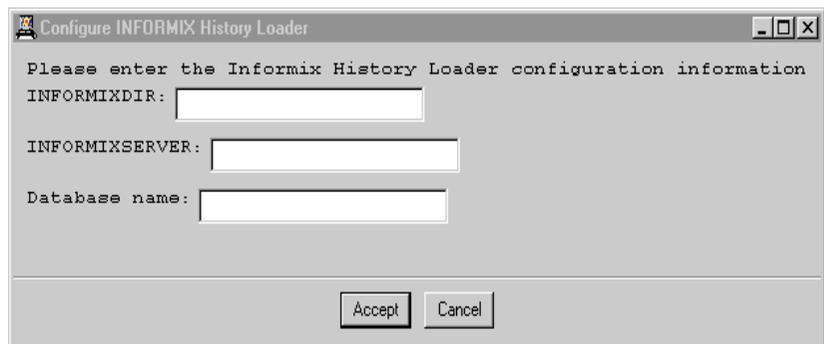
For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

**Step 1** From the PATROL Console, choose **Configure** from KM Commands on the History Loader pop-up menu.

The Configure Informix History Loader dialog box appears as shown in Figure 4-5.

**Figure 4-5 Configure Informix History Loader Dialog Box**



Configure INFORMIX History Loader

Please enter the Informix History Loader configuration information

INFORMIXDIR:

INFORMIXSERVER:

Database name:

Accept Cancel

**Step 2** Enter the following information:

- INFORMIXDIR
- INFORMIXSERVER
- Database name

**Step 3** Click **Accept**.

### **Where to Go from Here**

To review the tables that were created in the PATROL database account, go to Appendix A, “Table, Trigger, and View Information.” Otherwise, continue to “Create Database Objects” on page 4-24.

## Configuring Oracle Server History Loaders

---

**Summary:** You must configure each History Loader to receive PATROL history data. This task must be performed for each Oracle Server History Loader computer.

---

### Before You Begin

You must have performed “Choosing a History Loader Type” on page 4-9.

**To Configure Oracle History Loader, complete the following steps:**

---

#### Note

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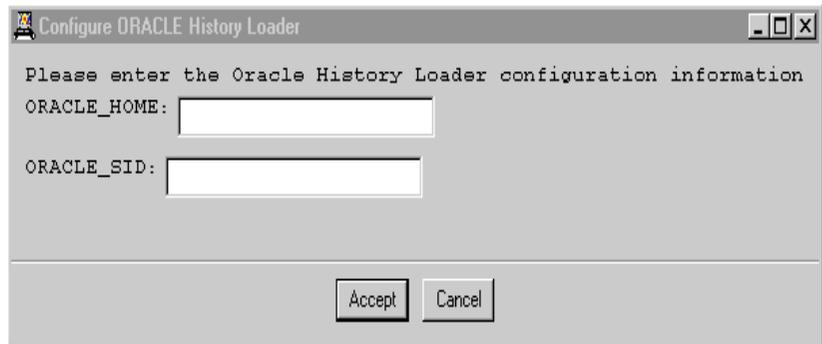
For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- Step 1** From the PATROL Console, customize the History Loader’s PATROL user name and password.
- With a PATROL Console for Unix: Choose **Customize => UserName/Password** from the History Loader icon’s pop-up menu.
  - With a PATROL Console for Windows: Choose **Properties** from the History Loader icon’s pop-up menu; then select the Security tab.
- Step 2** At the UserName/Password dialog box, type the user name and password of the history data owner in the appropriate fields.
- Step 3** Click **OK**.
- Step 4** From the PATROL Console, choose **Configure** from KM Commands on the History Loader pop-up menu.

The Configure Oracle History Loader dialog box appears as shown in Figure 4-6.

**Figure 4-6 Configure Oracle History Loader Dialog Box**



**Step 5** Enter the following information:

- ORACLE\_HOME
- ORACLE\_SID

**Step 6** Click **Accept**.

### **Where to Go from Here**

After configuring Oracle Server History Loaders, continue with “Selecting the Rollback Segment (Oracle Only)” on page 4-19.

## Selecting the Rollback Segment (Oracle Only)

---

**Summary:** You can specify the rollback segment for the Oracle History Loader database. Specifying the rollback segment is useful when you need more space for loading history data. This task is optional.

---

### Before you begin

You must have performed “Configuring Oracle Server History Loaders” on page 4-17.

### To Select the Rollback Segment, complete the following steps:

---

#### Note

---

For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- Step 1** From the Oracle History Loader pop-up menu, choose **Utilities => Rollback Segment**. The Rollback Selection dialog box appears.
- Step 2** Enter the rollback segment name.
- Step 3** Click **OK**.

### Where to Go from Here

To review the tables that were created in the PATROL database account, see “Oracle Server Tables” on page A-16. Otherwise, continue to “Create Database Objects” on page 4-24.

## Configuring Microsoft SQL Server History Loaders

---

**Summary:** You must configure each History Loader to receive PATROL history data. This task must be performed for each Microsoft SQL Server History Loader computer.

---

### Before You Begin

You must have performed “Choosing a History Loader Type” on page 4-9.

### To Configure MS SQL Server History Loader, complete the following steps

---

#### Note

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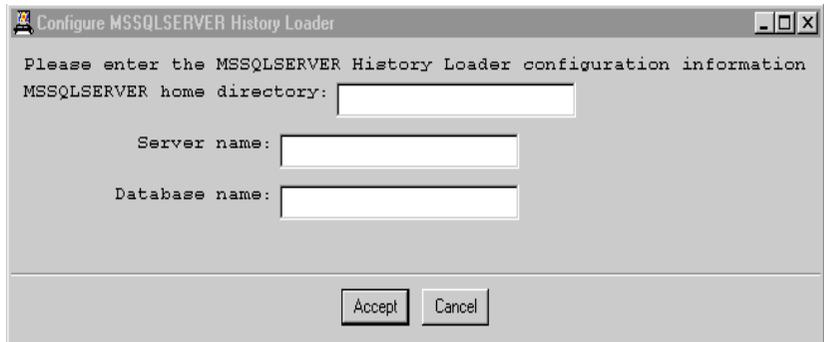
For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- Step 1** From the PATROL Console, customize the History Loader’s PATROL user name and password.
- With a PATROL Console for Unix: Choose **Customize => UserName/Password** from the History Loader icon’s pop-up menu.
  - With a PATROL Console for Windows: Choose **Properties** from the History Loader icon’s pop-up menu; then select the Security tab.
- Step 2** At the UserName/Password dialog box, type the user name and password of the history data owner in the appropriate fields.
- Step 3** Click **OK**.
- Step 4** From the PATROL Console, choose **Configure** from KM Commands on the History Loader pop-up menu.

The Configure MSSQL History Loader dialog box appears as shown in Figure 4-7.

**Figure 4-7 Configure MSSQL History Loader Dialog Box**



**Step 5** Enter the following information:

- MSSQLSERVER home directory
- Server name
- Database name

**Step 6** Click **Accept**.

### **Where to Go from Here**

To review the tables that were created in the PATROL database account, go to Appendix A, “Table, Trigger, and View Information.” Otherwise, continue to “Create Database Objects” on page 4-24.

## Configuring Sybase SQL Server History Loaders

---

**Summary:** You must configure each History Loader to receive PATROL history data. This task must be performed for each Sybase SQL Server History Loader computer.

---

### Before You Begin

You must have performed “Choosing a History Loader Type” on page 4-9.

**To Configure Sybase History Loader, complete the following steps:**

---

#### Note

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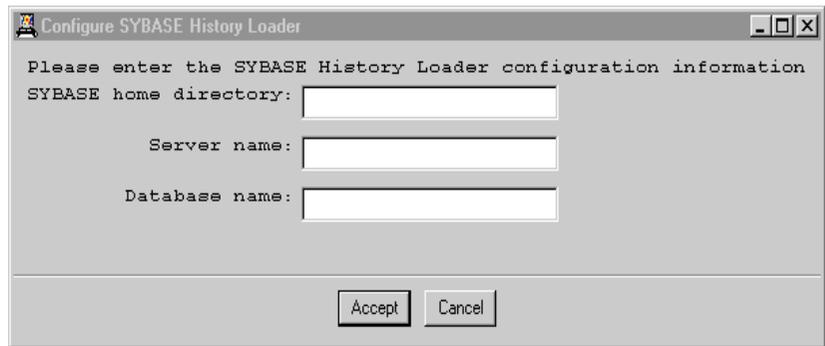
For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- Step 1** From the PATROL Console, customize the History Loader’s PATROL user name and password.
- With a PATROL Console for Unix: Choose **Customize => UserName/Password** from the History Loader icon’s pop-up menu.
  - With a PATROL Console for Windows: Choose **Properties** from the History Loader icon’s pop-up menu; then select the Security tab.
- Step 2** At the UserName/Password dialog box, type the user name and password of the history data owner in the appropriate fields.
- Step 3** Click **OK**.
- Step 4** From the PATROL Console, choose **Configure** from KM Commands on the History Loader pop-up menu.

The Configure Sybase History Loader dialog box appears as shown in Figure 4-8.

**Figure 4-8 Configure Sybase History Loader Dialog Box**



**Step 5** Enter the following information:

- Sybase home directory
- Server name
- Database name

**Step 6** Click **Accept**.

### Where to Go from Here

To review the tables that were created in the PATROL database account, go to Appendix A, “Table, Trigger, and View Information.” Otherwise, continue to “Create Database Objects” on page 4-24.

# Create Database Objects

After you have configured the History Loader component for your RDBMS, you must create database objects for each RDBMS History Loader computer.

---

## Note

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If you are upgrading from PATROL History Loader version 1.3.00 or version 1.3.01, you should have already dropped the previously created database objects owned by the history data login. See “Upgrading from an Earlier Version” on page 2-12 for more information.

---

**To Create Database Objects, complete the following steps:**

---

## Note

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For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

---

- » Create database objects by choosing **Create Database Objects** from KM Commands on the History Loader pop-up menu.

## Where to Go from Here

Review the information presented in “Debugging the History Loader Component” on page 4-25.

# Debugging the History Loader Component

After configuring the History Loader component, PATROL History Loader creates history data files. History data (\*.dat) files are created for each History Loader component that you configured.

## If a Problem Occurs

If you have a problem propagating history data, turn on the debugging option from the History Loader application instance menu. Debugging options display additional information about PATROL History Loader processes in the system output window.

When you have viewed debugging information and solved the problem, you can turn off debugging from the application instance menu.

---

### Note

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For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

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- » Turn on or turn off debugging by choosing **Utilities => Debug On** (or **Debug Off**) from KM Commands on the History Loader pop-up menu.

# Improving History Loader Performance

The P\_HISTORY table is created for each database supported by PATROL History Loader. The P\_HISTORY table contains the accumulation of all the history data collected. If the amount of data collected in P\_HISTORY grows too large, it can slow the performance of PATROL History Loader. You can improve the performance of PATROL History Loader by following these suggestions to keep the P\_HISTORY table size manageable:

- Reduce the number of days of history that are stored in P\_HISTORY.
- Reduce the number of parameters that store history data in P\_HISTORY.
- Periodically archive some of the data in P\_HISTORY.
- Recreate the index for P\_HISTORY. The necessary SQL statements to accomplish this are listed in Table 4-7.

**Table 4-7 SQL Statements for Recreating P\_HISTORY Index**

<b>RDBMS</b>	<b>File</b>
DB2	HDB2UDBCommCreateTables.psl
Informix	HINFCommCreateTables.psl
Ingres	HINGCommCreateTables.psl
Oracle	HORACommCreateTables.psl
Microsoft SQL Server	HSYBCommCreateTables.psl
Sybase SQL Server	HSYBCommCreateTables.psl

# Where to Go from Here

The following table summarizes where to look for more information about using the PATROL History Loader.

<b>Topic</b>	<b>Where to Find the Topic</b>
How to complete PATROL History Loader setup	Chapter 5, "Completing PATROL History Loader Setup"



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# Completing PATROL History Loader Setup

This chapter provides you with information that you will need to complete the setup of PATROL History Loader.

This chapter presents the following topics:

Setup Completion Diagram . . . . .	5-2
Setup Completion Tasks . . . . .	5-3
Customizing PATROL Parameters . . . . .	5-4
Customizing PATROL Parameters . . . . .	5-4
Deleting Unused PATROL History Loader Applications . . . . .	5-6
Saving PATROL History Loader Changes . . . . .	5-7
Where to Go from Here . . . . .	5-7

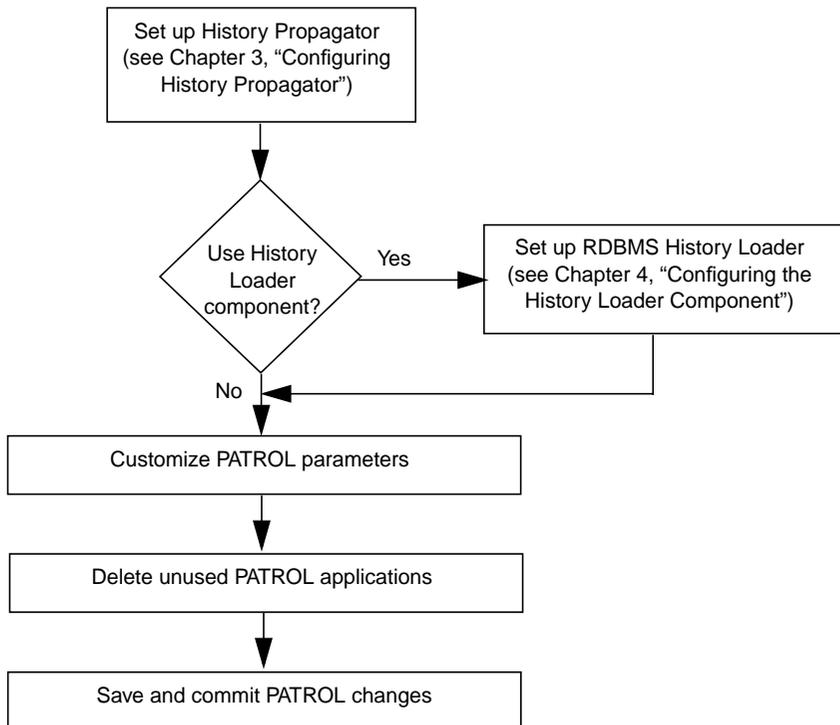
# Setup Completion Diagram

After setting up the History Propagator component and the History Loader component, you should perform setup completion tasks before you start using PATROL History Loader.

If you are upgrading from a previous version of PATROL History Loader in a PATROL 3.3.x environment, you have already migrated your customizations with PATROL migration tools.

Figure 5-1 summarizes the steps to complete PATROL History Loader setup.

**Figure 5-1 History Loader Setup Completion Summary**



# Setup Completion Tasks

Perform the following tasks to complete setup of PATROL History Loader:

**Table 5-1 PATROL History Loader Setup Completion Tasks**

<b>Task</b>	<b>Page</b>
1. <i>Optional, but recommended.</i> Customizing PATROL Parameters	5-4
2. <i>Optional, but recommended.</i> Deleting Unused PATROL History Loader Applications	5-6
3. Saving PATROL History Loader Changes	5-7

## Customizing PATROL Parameters

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**Summary:** *This task is optional, but it is recommended.* To reduce network traffic and CPU usage, customize certain History Propagator and History Loader parameters.

You must use a PATROL Developer Console to perform this task.

---

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### Note

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For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

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### About History Propagator GetHistoryData Parameter

If you use the default polling cycle of every 60 minutes for History Propagator’s GetHistoryData parameter, this parameter will create a large amount of network traffic to each target computer at about the same time. To reduce network traffic, create a local (customized) parameter on each target computer and set the polling cycle of each local parameter to run at different intervals.

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### Example

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One polling cycle every 90 minutes, another polling cycle every 12 hours, etc. Try to make each polling cycle less than or equal to 24 hours.

---

Consider the following factors when setting GetHistoryData polling cycles:

- If you will use the History Loader component to load data to the target computer, consider the History Loader’s LoadHistoryData parameter polling cycle.
- Consider each target computer’s or each site’s computing requirements.

## About History Loader LoadHistoryData Parameter

If you use the default polling cycle of every Saturday for History Loader's LoadHistoryData parameter, this parameter will use a large amount of CPU on each target computer. To reduce CPU usage, change the parameter polling cycle to run more frequently.

Change LoadHistoryData parameter polling cycle to run more frequently, for example, once a day or twice a day.

## To Create a Customized PATROL Parameter

The steps to create a local parameter depend on whether you are using a PATROL Console for Unix or a PATROL Console for Windows. Refer to the *PATROL User Guide* for your operating system for instructions on how to create a local (customized) parameter.

## Where to Go from Here

Continue to “Deleting Unused PATROL History Loader Applications” on page 5-6.

## Deleting Unused PATROL History Loader Applications

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**Summary:** *This task is optional, but it is recommended.* When you load the PATROL History Loader **HISTORY.kml** file, applications for all supported RDBMS types are automatically loaded. If you are not using all of these RDBMS types, you can delete the unused applications to save memory and other resources.

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You can delete the following application classes:

- HISTORY\_Propagator
- DB2UDB\_History\_Loader
- INFORMIX\_History\_Loader
- INGRES\_History\_Loader
- MSSQLSERVER\_History\_Loader
- ORACLE\_History\_Loader
- SYBASE\_History\_Loader

For detailed instructions on how to delete applications, refer to the *PATROL User Guide* for your console.

### Where to Go from Here

Continue to “Saving PATROL History Loader Changes” on page 5-7.

## Saving PATROL History Loader Changes

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**Summary:** The PATROL History Loader configuration process adds a significant amount of knowledge to the PATROL Console library. To ensure that this added knowledge is not lost, you must save it. To distribute the added knowledge, commit your changes.

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To save PATROL History Loader changes, complete the following steps:

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### Note

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For detailed instructions on how to access KM Commands, InfoBoxes, and Online Help, Appendix B, “Accessing Menu Commands, InfoBoxes and Online Help.”

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- Step 1** From the PATROL Console menu bar, choose **File => Save KM**.
- Step 2** Commit your changes to PATROL Agent machines. For information about committing changes, refer to the *PATROL User Guide* for your Console

## Where to Go from Here

You are ready to use PATROL History Loader.



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# Table, Trigger, and View Information

This section describes PATROL History Loader tables, views, and triggers (triggers apply to DB2 only) created in the PATROL database account during configuration of the History Loader. Tables are created in the database that you specified in “Configure History Loader for Your RDBMS” on page 4-10.

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**Note**

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The following information is presented as an aid; this information does not imply a commitment to support these objects in the future.

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Table, trigger, and view information is different for each RDBMS, so read the appropriate section for your RDBMS.

<b>RDBMS</b>	<b>Table Information</b>
DB2	page A-2
CA-Ingres	page A-7
Informix	page A-11
Oracle Server	page A-15
Microsoft SQL Server	page A-18
Sybase SQL Server	page A-21

# Table, Trigger, and View Information for DB2

This section describes the table, trigger, and view information for DB2.

## DB2 Table Sizes

When determining the sizing and administration procedures for these tables, take their growth characteristics into consideration.

### DB2 Tables That Are Stable in Size

Once all of their names (node\_name, app\_name, instance\_name, and parameter\_name) have been inserted once, the following tables do not grow; thus, these tables reach a stable size quickly:

- P\_NODES
- P\_APPS
- P\_INSTANCES
- P\_PARAMETERS

### DB2 Tables That Continuously Grow

These tables incur inserts after every PATROL parameter polling interval.

- P\_HISTORY
- P\_HISTORY\_DATA

For information about keeping the P\_HISTORY table size manageable, see “Improving History Loader Performance” on page 4-26.

## DB2 Tables That Are Purged After Each Transaction

The following tables are purged of data after each transaction; so they only need to be large enough to support the largest transaction.

- P\_TMP\_HISTORY\_DATA
- P\_APPS\_TEMP
- P\_HISTORY\_TEMP
- P\_INSTANCES\_TEMP
- P\_NODES\_TEMP
- P\_PARAMETERS\_TEMP

## DB2 Tables Populated by PATROL History Loader

The PATROL History Loader populates the following DB2 tables:

- P\_NODES
- P\_NODES\_TMP
- P\_APPS
- P\_APPS\_TEMP
- P\_INSTANCES
- P\_INSTANCES\_TEMP
- P\_HISTORY
- P\_HISTORY\_DATA
- P\_HISTORY\_TEMP
- P\_PARAMETERS
- P\_PARAMETERS\_TEMP
- P\_TMP\_HISTORY\_DATA

**Table A-1 DB2 P\_NODES\_TMP Table**

Field Name	Data Type	Null?	Definition
node_name	VARCHAR(32)	NOT NULL	node name

**Table A-2 DB2 P\_APPS Table**

Field Name	Data Type	Null?	Definition
app_id	INTEGER	NOT NULL	application identifier; primary key
node_id	INTEGER	NOT NULL	node identifier; foreign key to P_NODES
app_name	VARCHAR(32)	NOT NULL	PATROL application name

**Table A-3 DB2 P\_APPS\_TEMP Table**

Field Name	Data Type	Null?	Definition
node_id	INTEGER	NOT NULL	node identifier; foreign key to P_NODES
app_name	VARCHAR(32)	NOT NULL	PATROL application name

**Table A-4 DB2 P\_INSTANCES Table**

Field Name	Data Type	Null?	Definition
instance_id	INTEGER	NOT NULL	instance identifier; primary key
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name

**Table A-5 DB2 P\_INSTANCES\_TEMP Table**

Field Name	Data Type	Null?	Definition
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name

**Table A-6 DB2 P\_HISTORY Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
history_id	INTEGER	NOT NULL	history identifier; primary key
app_id	INTEGER	NOT NULL	application identifier; foreign key to P_APPS
instance_id	INTEGER	NOT NULL	instance identifier; foreign key to P_INSTANCES

**Table A-7 DB2 P\_HISTORY\_TEMP Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
app_id	INTEGER	NOT NULL	application identifier
instance_id	INTEGER	NOT NULL	instance identifier

**Table A-8 DB2 P\_PARAMETERS\_TEMP Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
parameter_name	VARCHAR(32)	NULLABLE	PATROL parameter name

**Table A-9 DB2 P\_TMP\_HISTORY\_DATA Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
history_id	INTEGER	NULLABLE	history identifier; foreign key to P_HISTORY
parameter_id	INTEGER	NULLABLE	parameter identifier; foreign key to P_PARAMETERS
tmp_node_name	VARCHAR(32)	NULLABLE	node name
tmp_app_name	VARCHAR(32)	NULLABLE	PATROL application name
tmp_value	VARCHAR(255)	NULLABLE	PATROL instance name
tmp_instance_name	VARCHAR(32)	NULLABLE	PATROL parameter name
tmp_parameter_name	VARCHAR(32)	NULLABLE	date and time of occurrence of tmp_value
tmp_time_stamp	VARCHAR(32)	NULLABLE	value of the parameter

## DB2 Triggers

PATROL History Loader creates the following DB2 triggers:

- P\_APPS\_TRIG1
- P\_APPS\_TRIG2
- P\_HISTORY\_TRIG1
- P\_HISTORY\_TRIG2
- P\_INSTANCES\_TRIG1
- P\_INSTANCES\_TRIG2
- P\_NODES\_TRIG1
- P\_NODES\_TRIG2
- P\_PARAMETERS\_TRIG1
- P\_PARAMETERS\_TRIG2

## DB2 Views

PATROL History Loader populates the following DB2 view:

**Table A-10 DB2 P\_VIEW**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
node_name	VARCHAR(32)	NOT NULL	node name
app_name	VARCHAR(32)	NOT NULL	PATROL application name
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name
parameter_name	VARCHAR(32)	NULLABLE	PATROL parameter name
time_stamp	TIMESTAMP	NOT NULL	date and time of occurrence of value
value	DOUBLE	NULLABLE	value of the PATROL parameter

# Table and View Information for CA-Ingres

This section describes the table and view information for CA-Ingres.

## CA-Ingres Table Sizes

When determining the sizing and administration procedures for these tables, take their growth characteristics into consideration.

### CA-Ingres Tables That Are Stable in Size

Once all of their names (node\_name, app\_name, instance\_name, and parameter\_name) have been inserted once, the following tables do not grow; thus, these tables reach a stable size quickly:

- P\_NODES
- P\_APPS
- P\_INSTANCES
- P\_PARAMETERS

### CA-Ingres Tables That Continuously Grow

These tables incur inserts after every PATROL parameter polling interval.

- P\_HISTORY
- P\_HISTORY\_DATA

For information about keeping the P\_HISTORY table size manageable, see “Improving History Loader Performance” on page 4-26.

### CA-Ingres Tables That Are Purged After Each Transaction

The P\_TMP\_HISTORY\_DATA table is purged of data after each transaction, so it only needs to be large enough to support the largest transaction.

## CA-Ingres Tables Populated by PATROL History Loader

PATROL History Loader populates the following CA-Ingres tables:

- P\_NODES
- P\_APPS
- P\_INSTANCES
- P\_HISTORY
- P\_PARAMETERS
- P\_HISTORY\_DATA
- P\_TMP\_HISTORY\_DATA

**Table A-11 CA-Ingres P\_NODES Table**

Field Name	Data Type	Null?	Definition
node_id	TABLE_KEY	—	node identifier
node_name	VARCHAR(32)	NOT NULL	node name

**Table A-12 CA-Ingres P\_APPS Table**

Field Name	Data Type	Null?	Definition
app_id	TABLE_KEY	NOT NULL	application identifier; primary key
node_id	TABLE_KEY	NOT NULL	node identifier; foreign key to p_nodes
app_name	VARCHAR(32)	NOT NULL	PATROL application name

**Table A-13 CA-Ingres P\_INSTANCES Table**

Field Name	Data Type	Null?	Definition
instance_id	TABLE_KEY	NOT NULL	instance identifier; primary key
instance_name	VARCHAR(32)	NOT NULL	PATROL instance name

**Table A-14 CA-Ingres P\_HISTORY Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
history_id	TABLE_KEY	NOT NULL	history identifier; primary key
parameter_id	TABLE_KEY	NOT NULL	application identifier; foreign key to p_apps
instance_id	TABLE_KEY	NOT NULL	instance identifier; foreign key to p_instances
instance_name	VARCHAR(32)	NOT NULL	PATROL instance name

**Table A-15 CA-Ingres P\_PARAMETERS Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
parameter_id	TABLE_KEY	NULL	parameter identifier
parameter_name	VARCHAR(32)	—	PATROL parameter name

**Table A-16 CA-Ingres P\_TMP\_HISTORY\_DATA Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
history_id	TABLE_KEY NOT SYSTEM MAINTAINED	NULL	history identifier; foreign key to p_history
parameter_id	TABLE_KEY NOT SYSTEM MAINTAINED	NULL	parameter identifier; foreign key to p_parameters
time_stamp	DATE	NOT NULL	date and time of occurrence of tmp_value
value	FLOAT	—	value of the PATROL parameter

## CA-Ingres Views

PATROL History Loader populates the following CA-Ingres view:

**Table A-17 CA-Ingres P\_VIEW**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
node_name	VARCHAR(32)	NOT NULL	node name
app_name	VARCHAR(32)	NOT NULL	PATROL application name
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name
parameter_name	VARCHAR(32)	NULLABLE	PATROL parameter name
time_stamp	TIMESTAMP	NOT NULL	date and time of occurrence of value
value	DOUBLE	NULLABLE	value of the PATROL parameter

# Table and View Information for Informix

This section describes the table and view information for Informix.

## Informix Table Sizes

When determining the sizing and administration procedures for these tables, take their growth characteristics into consideration.

### Informix Tables That Are Stable in Size

Once all of their names (node\_name, app\_name, instance\_name, and parameter\_name) have been inserted once, the following tables do not grow; thus, these tables reach a stable size quickly:

- P\_NODES
- P\_APPS
- P\_INSTANCES
- P\_PARAMETERS

### Informix Tables That Continuously Grow

These tables incur inserts after every PATROL parameter polling interval.

- P\_HISTORY
- P\_HISTORY\_DATA

For information about keeping the P\_HISTORY table size manageable, see “Improving History Loader Performance” on page 4-26.

### Informix Tables That Are Purged After Each Transaction

The P\_TMP\_HISTORY\_DATA table is purged of data after each transaction; so it only needs to be large enough to support the largest transaction.

# Informix Tables Populated by PATROL History Loader

PATROL History Loader populates the following Informix tables:

- P\_NODES
- P\_APPS
- P\_INSTANCES
- P\_HISTORY
- P\_PARAMETERS
- P\_HISTORY\_DATA
- P\_TMP\_HISTORY\_DATA

**Table A-18 Informix P\_NODES Table**

Field Name	Data Type	Null?	Definition
node_id	SERIAL	NOT NULL	node identifier
node_name	VARCHAR(32)	NOT NULL	node name

**Table A-19 Informix P\_APPS Table**

Field Name	Data Type	Null?	Definition
app_id	SERIAL	NOT NULL	application identifier; primary key
node_id	INTEGER	NOT NULL	node identifier; foreign key to p_nodes
app_name	VARCHAR(32)	NOT NULL	PATROL application name

**Table A-20 Informix P\_INSTANCES Table**

Field Name	Data Type	Null?	Definition
instance_id	SERIAL	NOT NULL	instance identifier; primary key
instance_name	VARCHAR(32)	NOT NULL	PATROL instance name

**Table A-21 Informix P\_HISTORY Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
history_id	SERIAL	NOT NULL	history identifier; primary key
app_id	INTEGER	NOT NULL	application identifier; foreign key to p_apps
instance_id	INTEGER	NOT NULL	instance identifier; foreign key to p_instances

**Table A-22 Informix P\_PARAMETERSTable**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
parameter_id	SERIAL	NOT NULL	parameter identifier
parameter_name	VARCHAR(32)	—	parameter name

**Table A-23 Informix P\_HISTORY\_DATA Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
history_id	INTEGER	NOT NULL	history identifier
parameter_name	INTEGER	NOT NULL	parameter name
time_stamp	DATE	NOT NULL	date time year to second
value	FLOAT	—	value of PATROL parameter

**Table A-24 Informix P\_TMP\_HISTORY\_DATA Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
history_id	INTEGER	—	history identifier; foreign key to p_history
parameter_id	INTEGER	—	parameter identifier; foreign key to p_parameters
tmp_node_name	VARCHAR(32)	NULL	node name
tmp_app_name	VARCHAR(32)	NULL	PATROL application name
tmp_instance_name	VARCHAR(32)	NULL	PATROL instance name
tmp_parameter_name	VARCHAR(32)	NULL	PATROL parameter name
tmp_time_stamp	VARCHAR(32)	NULL	date and time of occurrence of tmp_value
tmp_value	VARCHAR(255)	NULL	value of the parameter

## Informix Views

PATROL History Loader populates the following Informix view:

**Table A-25 Informix P\_VIEW**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
node_name	VARCHAR(32)	NOT NULL	node name
app_name	VARCHAR(32)	NOT NULL	PATROL application name
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name
parameter_name	VARCHAR(32)	NULLABLE	PATROL parameter name
time_stamp	TIMESTAMP	NOT NULL	date and time of occurrence of value
value	DOUBLE	NULLABLE	value of the PATROL parameter

# Table and View Information for Oracle

This section describes the table and view information for Oracle Server.

## Oracle Table Sizes

When determining the sizing and administration procedures for these tables, take their growth characteristics into consideration.

### Oracle Tables That Are Stable in Size

Once their names (`app_name` and `instance_name`) have been inserted once, the following tables do not grow; thus, these tables reach a stable size quickly:

- `P_APPS`
- `P_INSTANCES`

### Oracle Tables That Continuously Grow

The `P_HISTORY` table incurs inserts after every `PATROL` parameter polling interval.

For information about keeping the `P_HISTORY` table size manageable, see “Improving History Loader Performance” on page 4-26.

### Oracle Tables That Are Purged After Each Transaction

The `P_TMP_HISTORY_DATA` table is purged of data after each transaction; so it only needs to be large enough to support the largest transaction.

### Oracle Server With Archive Mode On

If you are running Oracle Server with `ARCHIVELOG` mode on, History Loader transaction processing will require more space.

## Oracle Server Tables

PATROL History Loader populates the following Oracle Server tables:

- P\_APPS
- P\_INSTANCES
- P\_HISTORY
- P\_TMP\_HISTORY\_DATA

**Table A-26 Oracle Server P\_APPS Table**

Field Name	Data Type	Null?	Definition
app_id	NUMBER	NULL	application identifier; primary key
node_name	VARCHAR(32)	NOT NULL	node identifier; foreign key to p_nodes
app_name	VARCHAR(32)	NOT NULL	PATROL application name
parameter_name	VARCHAR(32)	—	PATROL parameter name

**Table A-27 Oracle Server P\_INSTANCES Table**

Field Name	Data Type	Null?	Definition
instance_id	NUMBER	NULL	instance identifier; primary key
instance_name	VARCHAR(32)	NOT NULL	PATROL instance name

**Table A-28 Oracle Server P\_HISTORY Table**

Field Name	Data Type	Null?	Definition
history_id	NUMBER	NOT NULL	history identifier; primary key
app_id	NUMBER	NOT NULL	application identifier; foreign key to p_apps
instance_id	NUMBER	NOT NULL	instance identifier; foreign key to p_instances
timestamp	DATE	NOT NULL	date and time of occurrence of value
value	NUMBER	NOT NULL	value of the PATROL parameter

**Table A-29 Oracle Server P\_TMP\_HISTORY\_DATA Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
app_id	NUMBER	NULL	application identifier; foreign key to p_apps
instance_id	NUMBER	NULL	instance identifier; foreign key to p_instances
tmp_node_name	VARCHAR(32)	NULL	node identifier; foreign key to p_nodes
tmp_app_name	VARCHAR(32)	NULL	PATROL application name
tmp_instance_name	VARCHAR(32)	NULL	PATROL instance name
tmp_parameter_name	VARCHAR(32)	NULL	PATROL parameter name
tmp_time_stamp	VARCHAR(32)	NULL	date and time of occurrence of value
tmp_value	VARCHAR(255)	NULL	value of the PATROL parameter

## Oracle Server Views

PATROL History Loader populates the following Oracle Server view:

**Table A-30 Oracle Server P\_VIEW**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
node_name	VARCHAR(32)	NOT NULL	node name
app_name	VARCHAR(32)	NOT NULL	PATROL application name
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name
parameter_name	VARCHAR(32)	NULLABLE	PATROL parameter name
time_stamp	TIMESTAMP	NOT NULL	date and time of occurrence of value
value	DOUBLE	NULLABLE	value of the PATROL parameter

# Table and View Information for Microsoft SQL Server

This section describes the table and view information for Microsoft SQL Server.

## Microsoft SQL Server Table Sizes

When determining the sizing and administration procedures for these tables, take their growth characteristics into consideration.

### Microsoft SQL Server Tables That Are Stable in Size

Once their names (app\_name and instance\_name) have been inserted once, the following tables do not grow; thus, these tables reach a stable size quickly:

- P\_APPS
- P\_INSTANCES

### Microsoft SQL Server Tables That Continuously Grow

The P\_HISTORY table incurs inserts after every PATROL parameter polling interval.

For information about keeping the P\_HISTORY table size manageable, see “Improving History Loader Performance” on page 4-26.

### Microsoft SQL Server Tables That Are Purged After Each Transaction

The P\_TMP\_HISTORY\_DATA table is purged of data after each transaction; so it only needs to be large enough to support the largest transaction.

# Microsoft SQL Server Tables

PATROL History Loader populates the following Microsoft SQL Server tables:

- P\_APPS
- P\_INSTANCES
- P\_HISTORY
- P\_TMP\_HISTORY\_DATA

**Table A-31 MS SQL Server P\_APPS Table**

Field Name	Data Type	Null?	Definition
app_id	INT	NULL	application identifier; primary key
node_name	VARCHAR(32)	NOT NULL	node identifier; foreign key to p_nodes
app_name	VARCHAR(32)	NOT NULL	PATROL application name
parameter_name	VARCHAR(32)	NULL	PATROL parameter name

**Table A-32 MS SQL Server P\_INSTANCES Table**

Field Name	Data Type	Null?	Definition
instance_id	NUMBER	NULL	instance identifier; primary key
instance_name	VARCHAR(32)	NOT NULL	PATROL instance name

**Table A-33 MS SQL Server P\_HISTORY Table**

Field Name	Data Type	Null?	Definition
history_id	INT	NOT NULL	history identifier; primary key
app_id	INT	NOT NULL	application identifier; foreign key to p_apps
instance_id	INT	NOT NULL	instance identifier; foreign key to p_instances
timestamp	DATE	NOT NULL	date and time of occurrence of value
value	NUMBER	NOT NULL	value of the PATROL parameter

**Table A-34 MS SQL Server P\_TMP\_HISTORY\_DATA Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
app_id	NUMBER	NULL	application identifier; foreign key to p_apps
instance_id	NUMBER	NULL	instance identifier; foreign key to p_instances
tmp_node_name	VARCHAR(32)	NULL	node identifier; foreign key to p_nodes
tmp_app_name	VARCHAR(32)	NULL	PATROL application name
tmp_instance_name	VARCHAR(32)	NULL	PATROL instance name
tmp_parameter_name	VARCHAR(32)	NULL	PATROL parameter name
tmp_time_stamp	VARCHAR(32)	NULL	date and time of occurrence of value
tmp_value	VARCHAR(255)	NULL	value of the PATROL parameter

## MS SQL Server Views

PATROL History Loader populates the following Microsoft SQL Server view:

**Table A-35 MS SQL Server P\_VIEW**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
node_name	VARCHAR(32)	NOT NULL	node name
app_name	VARCHAR(32)	NOT NULL	PATROL application name
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name
parameter_name	VARCHAR(32)	NULLABLE	PATROL parameter name
time_stamp	TIMESTMP	NOT NULL	date and time of occurrence of value
value	DOUBLE	NULLABLE	value of the PATROL parameter

# Table and View Information for Sybase SQL Server

This section describes the table and view information for Sybase SQL Server.

## Sybase SQL Server Table Sizes

When determining the sizing and administration procedures for these tables, take their growth characteristics into consideration.

### Sybase SQL Server Tables That Are Stable in Size

Once their names (`app_name` and `instance_name`) have been inserted once, the following tables do not grow; thus, these tables reach a stable size quickly:

- `P_APPS`
- `P_INSTANCES`

### Sybase SQL Server Tables That Continuously Grow

The `P_HISTORY` table incurs inserts after every `PATROL` parameter polling interval.

For information about keeping the `P_HISTORY` table size manageable, see “Improving History Loader Performance” on page 4-26.

### Sybase SQL Server Tables That Are Purged After Each Transaction

The `P_TMP_HISTORY_DATA` table is purged of data after each transaction; so it only needs to be large enough to support the largest transaction.

## Sybase SQL Server Tables

PATROL History Loader populates the following Sybase SQL Server tables:

- P\_APPS
- P\_INSTANCES
- P\_HISTORY
- P\_TMP\_HISTORY\_DATA

**Table A-36 SYB SQL Server P\_APPS Table**

Field Name	Data Type	Null?	Definition
app_id	INT	NULL	application identifier; primary key
node_name	VARCHAR(32)	NOT NULL	node identifier; foreign key to p_nodes
app_name	VARCHAR(32)	NOT NULL	PATROL application name
parameter_name	VARCHAR(32)	NULL	PATROL parameter name

**Table A-37 SYB SQL Server P\_INSTANCES Table**

Field Name	Data Type	Null?	Definition
instance_id	NUMBER	NULL	instance identifier; primary key
instance_name	VARCHAR(32)	NOT NULL	PATROL instance name

**Table A-38 SYB SQL Server P\_HISTORY Table**

Field Name	Data Type	Null?	Definition
history_id	INT	NOT NULL	history identifier; primary key
app_id	INT	NOT NULL	application identifier; foreign key to p_apps
instance_id	INT	NOT NULL	instance identifier; foreign key to p_instances
timestamp	DATE	NOT NULL	date and time of occurrence of value
value	NUMBER	NOT NULL	value of the PATROL parameter

**Table A-39 SYB SQL Server P\_TMP\_HISTORY\_DATA Table**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
app_id	NUMBER	NULL	application identifier; foreign key to p_apps
instance_id	NUMBER	NULL	instance identifier; foreign key to p_instances
tmp_node_name	VARCHAR(32)	NULL	node identifier; foreign key to p_nodes
tmp_app_name	VARCHAR(32)	NULL	PATROL application name
tmp_instance_name	VARCHAR(32)	NULL	PATROL instance name
tmp_parameter_name	VARCHAR(32)	NULL	PATROL parameter name
tmp_time_stamp	VARCHAR(32)	NULL	date and time of occurrence of value
tmp_value	VARCHAR(255)	NULL	value of the PATROL parameter

## Sybase SQL Server Views

PATROL History Loader populates the following Sybase SQL Server view:

**Table A-40 Sybase SQL Server P\_VIEW**

<b>Field Name</b>	<b>Data Type</b>	<b>Null?</b>	<b>Definition</b>
node_name	VARCHAR(32)	NOT NULL	node name
app_name	VARCHAR(32)	NOT NULL	PATROL application name
instance_name	VARCHAR(32)	NULLABLE	PATROL instance name
parameter_name	VARCHAR(32)	NULLABLE	PATROL parameter name
time_stamp	TIMESTMP	NOT NULL	date and time of occurrence of value
value	DOUBLE	NULLABLE	value of the PATROL parameter



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# Accessing Menu Commands, InfoBoxes and Online Help

BMC Software, Inc. offers several PATROL consoles from which you can view a PATROL Knowledge Module (KM). Due to the environments in which these consoles run, each one uses different methods to display and access information in the KM. This appendix provides instructions on how to access the KM menu commands and InfoBoxes, and how to access the online Help for the KM using each of the PATROL consoles.

Accessing KM Commands and InfoBoxes. . . . .	B-2
Accessing Online Help. . . . .	B-2

# Accessing KM Commands and InfoBoxes

Table B-1 provides information about how to access KM commands and InfoBoxes in the various PATROL consoles.

**Table B-1 Accessing KM Commands and InfoBoxes**

<b>Console</b>	<b>To access menu commands</b>	<b>To access InfoBoxes</b>
PATROL Console for Windows	Right-click the application icon and choose <b>KM Commands</b> .	Right-click the application icon to display its pop-up menu and then choose <b>InfoBox</b> .
PATROL Console for Unix	Right-click the application icon.	Click <b>MB2</b> on the instance icon.

## Accessing Online Help

Table B-2, “Accessing Online Help,” on page B-3 provides information about how to access Help on each console.

---

**Note**

If you are trying to access Help from a Unix console, you may want to refer to the PATROL Installation Guide for specific instructions on how to install and setup a browser in the Unix environment.

---

**Table B-2 Accessing Online Help**

<b>Console</b>	<b>To access product help</b>	<b>To access application class help</b>	<b>To access parameter help</b>
PATROL Console for Windows	Right-click the <i>PATROL History Loader</i> application icon and choose <b>KM Commands =&gt; Product Help</b> . From the console menu bar, choose <b>Help =&gt; Help Topics =&gt; PATROL Knowledge Modules</b> .	Double-click the application class in the KM tab of the console. Then click the Help tab and <b>Show Help</b> in the Application Properties dialog box.	Right-click the parameter icon, and choose <b>Help On</b> from the pop-up menu. Double-click the parameter icon; then click the ? icon or <b>Help</b> button in the parameter display window. Double-click the parameter in the KM tab of the console; then click the Help tab and <b>Show Help</b> in the properties dialog box.
PATROL Console for Unix	<ul style="list-style-type: none"> <li>• Right-click the <i>PATROL History Loader</i> application icon and choose <b>KM Commands =&gt; Product Help</b>.</li> <li>• From the console menu bar, choose <b>Help On =&gt; Knowledge Modules</b>.</li> </ul>	Choose <b>Attributes =&gt; Application Classes</b> and double-click the application name. Then click <b>Show Help</b> in the Application Definition dialog box.	Right-click the parameter icon, and click <b>Help On</b> .



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# STOP!

## IMPORTANT INFORMATION - DO NOT INSTALL THIS PRODUCT UNLESS YOU HAVE READ ALL OF THE FOLLOWING MATERIAL

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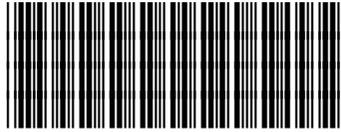
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