

*InCharge*TM

Network Protocol Management Suite Release Notes

Version 1.1

OL-7720-01



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Network Protocol Management Suite Version 1.1

InCharge Network Protocol Manager, working with InCharge IP Availability Manager, discovers and monitors network devices running Border Gateway Protocol (BGP) or Open Shortest Path First (OSPF) services, diagnoses BGP- or OSPF-related failures, and reports the results of its analysis to InCharge Service Assurance Manager. Network Protocol Manager also detects common configuration problems that occur when deploying and maintaining the routing infrastructure.

Network Protocol Management Suite version 1.1 delivers enhancements and improvements to the InCharge Network Protocol Manager.

Note: When indicated, 6.2 refers to the InCharge software platform version. The InCharge Network Protocol Management Suite version 1.1 described in this document is based on the 6.2 version of the InCharge software platform. InCharge product versions vary and do not always match the software platform version number.

Application Name Change

The Network Protocol Manager version 1.1 incorporates features that were previously distributed in Routing Protocol Services Manager version 1.0.

Enhancements

Enhancements to Network Protocol Manager

The InCharge Network Protocol Management Suite version 1.1 provides these enhancements and improvements:

- **New, User-friendly Multi-platform Installation** – An easy-to-use InstallShield Wizard streamlines installation on all platforms for the Network Protocol Management Suite.
- **Improved Performance** – The Network Protocol Manager analysis model takes advantage of correlation performance improvements; and consumes fewer memory resources, which results in faster correlation of problems and fewer transient conclusions.
- **Customized Discovery Processing** – Network Protocol Manager now includes the ability to customize discovery processing with ASL scripts. In addition to the post-processing steps performed automatically during discovery process, you can specify additional post-processing steps to occur at various stages of post-processing. For example, you could use a post-processing script to recognize a BGP route reflector and tag it as one.
- **System Redundancy Group Creation** – Network Protocol Manager now permits you to create system redundancy groups. For example, you can select two route reflectors and add them to a system redundancy group.
- **Improved Identification of OSPF Configuration Problems** – OSPF configuration problems that were previously reported at the OSPF NeighborRelationship level are now propagated to the OSPF Network level. This groups the elements affected by configuration problem into the Containment View for the OSPF Network Configuration problem, and allows you to easily identify the misconfiguration.

Enhancements to Other InCharge Applications

The following enhancements were made to other InCharge applications to support the InCharge Network Protocol Management Suite.

- Enhancements to Map Console – New maps were added to support monitoring and management of BGP and OSPF networks, including the Autonomous System, BGP Service, BGP Session, OSPF Area, OSPF Service, OSPF Network, and OSPF Neighbor Relationship maps. In addition, labels were added to indicate OSPF and BGP device roles on these maps. SmartPack 1 must be applied to InCharge Service Assurance Management Suite version 6.2 to provide these capabilities to the Global Console.
- Enhancements to Availability Manager – Discovery is enhanced to allow Availability Manager to provide BGP and OSPF topology to Network Protocol Manager. SmartPack 1 must be applied to IP Management Suite version 6.2 to provide these capabilities.

Release Notes for All Products

This chapter describes issues and resolutions pertinent to all InCharge products.

Installation Issues

The following issues relate to the installation process.

Removing In-Use SMARTS Files After an Uninstall

PR 11479

Issue:

If the user does not stop all SMARTS processes (except *sm_serviced*, which is required for uninstall) before uninstalling an InCharge product suite, the uninstaller program will not be able to remove the SMARTS files in use.

Resolution:

Stop all SMARTS processes (except *sm_serviced*) before uninstalling an InCharge product suite. Or, after exiting the uninstaller program, remove all directories from the **BASEDIR**/*smarts* directory except **BASEDIR**/*smarts/local* and **BASEDIR**/*smarts/setup*.

CLI Mode Sensitivity to a Terminal Window's Configuration

PR 11298

Issue:

The InCharge Command Line Interface (CLI) mode of installation is sensitive to the terminal window's configuration. Depending on how the user's *stty* settings are configured for the terminal window, the installation program may interrupt or generate input/output errors if a special key (for example, Backspace or Delete) is pressed during the installation.

Resolution:

You can resolve this issue in one of two ways:

- 1 Change the *stty* settings to a more "traditional" configuration and restart the installation.
- 2 Restart the installation and do not press any special characters during the installation.

Inability To Write to the `var/logs` Directory

PR 11562

Issue:

When installing InCharge with non-*root* privileges (Global Console or InCharge Software Development Kit) on the UNIX operating system, or installing InCharge using the Command Line Interface (CLI) mode of installation, the user sees messages concerning the inability to write to the `/var/logs` directory.

Resolution:

Install InCharge with *root* privileges or ask the system administrator to perform the installation.

InCharge Broker Might Be Inadvertently Uninstalled

PR 10397

Issue:

For deployments with multiple suites on the same host, the InCharge Broker might be automatically uninstalled during the uninstallation of a suite that did not originally install the Broker.

For example, suppose that the Service Assurance Management Suite and the IP Management Suite are installed on the same machine and that the IP Management Suite is running the Broker. After upgrading both suites to SmartPack 1, the uninstallation code becomes misconfigured and, as a result, both suites assume ownership of the uninstallation of the Broker. If the user uninstalls the suite that did not originally install the Broker, the uninstaller program mistakenly uninstalls the Broker.

Resolution:

Manually re-install the InCharge Broker to services on Windows or to the *sm_serviced* database on UNIX. To do so, use the *sm_service install* command as described in the *InCharge System Administration Guide*.

Red Hat Linux and Solaris

The following issue is specific to running InCharge on the Red Hat Linux or Solaris platform.

sm_logerror Process

Issue:

Previous versions of InCharge created a process to run *pstack* each time a stack trace was requested—usually when a process was about to crash. In certain error states, it was sometimes impossible to create a process to print a stack trace; worse, attempting to do so would sometimes cause a deadlock and a hung server.

Resolution:

Starting with InCharge version 5.0, every running SMARTS program is accompanied by a child process running a SMARTS program named *sm_logerror*. This process does nothing except when asked to print a stack trace, at which time it prints the stack trace of its parent process; it exits automatically when its parent exits. Using the *sm_logerror* process avoids the stack trace printing problem for InCharge applications running on Red Hat Linux and Solaris operating systems.

On Red Hat Linux systems, SMARTS uses a patched copy of *pstack* installed in the **BASEDIR**/*smarts/bin* directory rather than the system-supplied *pstack* program. The system-supplied *pstack* may not work correctly on multithreaded programs.

HP-UX

The following issue is specific to running InCharge on the HP-UX platform.

Change to HP-UX 11.11 Patch Requirements

Issue:

Installation of InCharge on an HP-UX 11.11 system calls for the application of patch PHSS_28436. The installation enforces this requirement. However, HP has associated severe warnings with this patch, and installing it can cause failures on some systems.

Resolution:

If you have already installed PHSS_28436 and have not experienced any problems, you do not need to do anything.

Should you be unable to install PHSS_28436, HP recommends that you install PHSS_30049. HP lists this patch as "Recommended." This patch level should be sufficient to allow the InCharge software to run.

Windows

The following issues are specific to running InCharge on the Windows platforms.

Recovery Options Prohibited for Failover

Issue/Limit:

For the Windows 2000 platform (Server or Advanced Server), users should not set recovery options for any InCharge services. Recovery options are set in the Recovery Tab under *Administrative Tools > Services*. The options, First Failure, Second Failure, and Subsequent Failure, must not be changed.

InCharge services must use the default setting, *Take No Action*, for all these options.

Running Multiple Brokers or Domain Managers

Issue:

On the Windows 2000 platform (Server or Advanced Server), starting several InCharge Brokers or InCharge Domain Managers that listen on the same port is possible due to an incompatibility between the UNIX and 2000 implementations of the Internet Protocol stacks. Running more than one copy of the Broker or the Domain Manager may cause unpredictable results.

Resolution:

Terminate all InCharge Broker and Domain Manager processes that are listening on the same port and start only one InCharge process listening on that port.

Directory Naming Convention

Issue:

On the Windows 2000 platform (Server or Advanced Server) and the Windows 2003 platform, InCharge does not install properly or InCharge services do not start up properly.

Resolution:

The directory names used in **BASEDIR** cannot contain spaces (for example, *Program Files*). Do not install InCharge in directories that have names containing spaces.

Windows Diagnostic Tool Recommendation

Issue/Limitation:

If you are running InCharge on the Windows 2000 platform (Server or Advanced Server), SMARTS recommends that you use the Dr. Watson diagnostic tool as your debugger. Dr. Watson gathers information about your computer when a problem occurs with a program, and is typically the default tool on computers running Windows operating systems. If Dr. Watson is not currently set as your computer's diagnostic tool, you can set it with the command:

```
c:\>drwtsn32 -i
```

If you are using a different diagnostic tool, SMARTS Technical Support might not be able to acquire as much diagnostic information when problems occur. For more information about Dr. Watson, refer to your Microsoft documentation.

SMARTS Client Program Issues

The following issues are applicable if you are using SMARTS client programs from the terminal. For example, these issues apply to the execution of the *dmctl* program from an xterm Window.

Client Connection Attempts Timeout After 60 Seconds

PR 6325

Issue:

When <PROMPT> is specified for the InCharge username field of the *clientConnect.conf* file, a user must type a username, and possibly a password, when invoking a client program. If the username and password (if required) are not entered within 60 seconds, the operation will time out and report an input/output error. This timeout only affects clients started from the command line; it does not affect the Global Console.

Resolution:

Type the username and password before 60 seconds elapse. If the operation cannot be completed before the timeout, you can re-invoke the command. If 60 seconds elapse, you will also have to restore the terminal's echo state (see the discussion that follows).

Unexpected Exit by Client Disables Terminal Echo (UNIX)

PR 6328

Issue:

When the *clientConnect.conf* file is configured to prompt the user for a password, the terminal echo is disabled so that the typed password is not displayed. If the client program exits during the password prompt, the terminal's echo state remains disabled.

Resolution:

To restore the terminal's echo state, type the following command:

```
% stty echo icanon
```

Because the terminal echo is disabled, you will not be able to see the command as you type it.

The sm_plist Utility

The following pertains to administering services.

Detecting SMARTS Programs

The sm_plist utility identifies all SMARTS programs that are running for any product suite on your machine. The utility is available after you apply SmartPack 1 or you can download it from the SMARTS Technical Support web site, <https://websupport.smarts.com>.

You can use the sm_plist utility whenever you need to identify SMARTS programs that are running (for example, before an installation, an upgrade, an uninstallation, or applying another SmartPack).

To use the utility, issue *sm_plist.sh* for UNIX and *sm_plist.vbs* for Windows from the **BASEDIR**/smarts/script directory. The utility displays active programs in a window.

In the following command, **BASEDIR2** represents the location of any InCharge product suite.

UNIX

```
# BASEDIR/smarts/script/sm_plist.sh BASEDIR2
```

Windows

```
cscript BASEDIR\smarts\script\sm_plist.vbs BASEDIR2
```

For example on UNIX, to identify programs running for a Service Assurance Management Suite, issue:

```
# /opt/InCharge6/IP/smarts/script/sm_plist.sh /opt/InCharge6/SAM
```

For example on Windows, to identify programs running for a SAM Suite, issue:

```
▼ cscript C:\InCharge6\IP\smarts\script\sm_plist.vbs  
C:\InCharge6\SAM ▲
```

▼▲ Indicates the command must be typed as one line.

Note: If you use the sm_plist utility and are stopping services before an uninstallation, do not stop sm_serviced. See the Installation Guide that accompanied your product suite for information about uninstalling software.

InCharge Documentation Changes

Certain documents, including the *InCharge ASL Reference Guide* and the *InCharge ICIM Reference* (in HTML format), that were previously only available with the Software Development Kit are now provided with all InCharge products.

Accessing InCharge ICIM Documentation

Documentation for the ICIM models is provided in HTML format. To access this information, use your web browser to navigate to the document's location and open the file *index.html*. ICIM documentation is located in **BASEDIR**/*smarts/doc/html/icim*.

Documentation Errata

The following issues describe corrections to InCharge user documents.

Correction for Mention of AIX

Some InCharge documentation may erroneously mention AIX as a supported operating system. This information is incorrect. AIX is not supported for this release.

Correction for Product Version Numbers

Not all InCharge documentation required revision for this release. Therefore, some documents do not display the latest product version number on their cover. However, the information contained in these guides remains valid.

Correction for Location of HTML Documents

HTML documents are not accessible from the CD-ROM, but they are installed on the host machine and are available from the **BASEDIR**/*smarts/doc/html* directory. The *InCharge Documentation Roadmap* erroneously states that the HTML documents can be accessed from the CD-ROM.

Workaround for index.html

InCharge documentation and the `--help` option of an InCharge command refer the user to the **BASEDIR**/smarts/doc/html/usage/index.html file for additional information. This file does not exist. As a workaround, please refer to **BASEDIR**/smarts/doc/html/usage/MainSMARTSPrograms.html for additional information on InCharge commands.

Syntax for the --pattern Option

PR 12220

Issue:

Table 11, on page 41 of the *InCharge System Administration Guide*, describes the `--pattern` option of the `sm_service start` action. The description is incorrect.

Resolution:

The correct description should read:

OPTIONS	DESCRIPTION
<code>--pattern=</code>	Start all processes with absolute paths that match the wildcard pattern.

Issue:

Table 12, on page 41 of the *InCharge System Administration Guide*, describes the `--pattern` option of the `sm_service stop` action. The description is incorrect.

Resolution:

The correct description should read:

OPTIONS	DESCRIPTION
<code>--pattern=</code>	Stop all processes with absolute paths that match the wildcard pattern.

Issue:

Table 13, on page 42 of the *InCharge System Administration Guide*, describes the `--pattern` option of the `sm_service isstop` action. The description is incorrect.

Resolution:

The correct description should read:

OPTIONS	DESCRIPTION
--pattern=	Return the status of all processes with absolute paths that match the wildcard pattern.

Issue:

Page 42 of the *InCharge System Administration Guide*, describes examples of the `sm_service isstopped` action. The examples are incorrect.

Resolution:

The examples should read:

This checks to see whether all of the services started from the `/opt/InCharge6` directory are stopped:

UNIX

```
sm_service isstopped --pattern='/opt/InCharge6/*'
```

Windows

```
sm_service isstopped "--pattern=c:\InCharge6\*"
```

This example checks whether all InCharge servers are stopped:

UNIX

```
sm_service isstopped --pattern='*sm_server*'
```

Windows

```
sm_service isstopped "--pattern=*sm_server*"
```

Release Notes for Network Protocol Management Suite

This chapter describes issues and resolutions for products of the InCharge Network Protocol Management Suite.

Network Protocol Manager

The following issues apply to the Network Protocol Manager application.

Two Unstable Root Causes Displayed at Global Console

12534

Issue:

In the Global Console connected to the Global Manager, two Unstable root causes are displayed for BGP or OSPF devices: one from Availability Manager and the other from Network Protocol Manager. Only one root cause should be displayed, and all Network Protocol Manager and Availability Manager symptoms/entities should appear in the impact tab for the Notification at the Global Console connected to the Global Manager.

Availability Manager generates Interface Unstable root cause on the instrumentation object, which is not imported into Network Protocol Manager. Network Protocol Manager generates an Interface Unstable root cause on the interface object itself and sends the impacted session information to the Global Manager. The Global Manager cannot combine the Interface Unstable root causes that were received from the Network Protocol Manager and Availability Manager since they are on different objects.

Resolution:

The ICIM model in the Availability Manager must be revised. This will be done during the next major InCharge IP Management Suite release.

Network Protocol Manager May Hang After Availability Manager is Restarted with Empty Repository

PR12576, PR12709, PR12722

Issue:

Network Protocol Manager will hang if the underlying Availability Manager is stopped and restarted without restoring the topology or after restoring the topology but with all the BGP- or OSPF-related devices removed. If all the BGP- or OSPF- related devices are removed, then Network Protocol Manager for BGP or OSPF has nothing to monitor.

Resolution:

Stop the Network Protocol Manager for BGP or OSPF by using the appropriate method of killing a hung process for the particular operating system. If you wish to restart the Network Protocol Manager for BGP or OSPF, then restart without restoring the topology.

Network Protocol Manager Writes Exception Errors to Log File

PR12604

Issue:

In log file for Network Protocol Manager, messages similar to the following appear occasionally:

```
[02-Sep-2004 03:10:19 PM+378ms EDT] t@17426  
accessor_observer's shared #1 CI-E-ESRVTHEXCEPTION-Service  
thread closure for queue accessor_observer's shared #1 threw  
exception
```

```
MR-ATTR_NOT_FOUND-Attribute 'AdminStatus' not found on object  
Interface:Deleted Interface
```

Resolution:

The user does not need to take any action. These messages occur under these conditions:

- A device is removed from the topology in an underlying domain manager that Network Protocol Manager uses to obtain topology information.
- The topology in Network Protocol Manager is temporarily unsynchronized with the topology in the underlying domain due to the change.
- Network Protocol Manager continues to query the underlying domain manager for the status of the removed device because the device still exists in the Network Protocol Manager's topology.

The Network Protocol Manager automatically synchronizes the topology with the underlying domain manager on a periodic basis. When the topology is synchronized, Network Protocol Manager removes the device from its topology and no longer queries the underlying domain manager about the device status.

