

TEAM Core

Release Notes, Version 4.2.0

058R957-V420, Issue 1 - January 2002

Warranty

General DataComm warrants that its equipment is free from defects in materials and workmanship. The warranty period is one year from the date of shipment. GDC's sole obligation under its warranty is limited to the repair or replacement of the defective equipment provided it is returned to GDC, transportation prepaid, within a reasonable period. This warranty will not extend to equipment subjected to accident, misuse, or alterations or repair not made by GDC or authorized by GDC in writing. *The foregoing warranty is exclusive and in lieu of all other warranties, express or implied, including but not limited to, warranties of merchantability and fitness for purpose.*

Trademarks and Patents

General DataComm, the General DataComm logo and the following are trademarks of General DataComm, Inc in the United States and other countries: ACCULINE, ANALOOP, AUTOFRAME, BERT 901, DATACOMM SECURE-PAK, DATALOOP, DIGIDIAL, ENmacs, FASTPRO, FIRST RESPONSE, GDC, GDC APEX, GENERAL DATACOMM X-PRESS, GEN*NET, GEN*PAC, IMAGE*TMS, KILOMUX, LAN*TMS, MEGA*BRIDGE, MEGAMUX, MEGAMUX TMS, MEGANET, MEGASPLIT, MEGASWITCH, MEGAVIEW, NETCON, NETSWITCH, NMC, QUIKSHIPPER, SERVI-CHECK, SERVI-SNAP, WINmacs.

ANALOOP and DATALOOP respectively are protected by U.S. patents 3,655,915 and 3,769,454. All other products or services mentioned in this document are identified by the trademarks, service marks, or product names as designated by the companies who market those products. Inquiries concerning such trademarks should be made directly to those companies.

Copyright

© 2002 General DataComm, Inc. All rights reserved.
6 Rubber Avenue, Naugatuck, Connecticut 06770 U.S.A.

This publication and the software it describes contain proprietary and confidential information. No part of this document may be copied, photocopied, reproduced, translated or reduced to any electronic or machine-readable format without prior written permission of General DataComm, Inc.

The information in this document is subject to change without notice. General DataComm assumes no responsibility for any damages arising from the use of this document, including but not limited to, lost revenue, lost data, claims by third parties, or other damages. If you have comments or suggestions concerning this manual, please write to Technical Publication Services or call 1-203-729-0271.

TABLE OF CONTENTS

Section 1 - Installing Solaris and HP OpenView.....	5
1.0 Overview	5
1.1 Software Requirements.....	5
1.2 Hardware Requirements for HP OpenView - Solaris.....	6
2.0 Solaris Installation	6
3.0 HP OpenView 6.1 Installation	7
3.1 Upgrading from Previous Versions of HP OpenView.....	8
4.0 Post-Installation Procedures	8
4.1 Solaris Patch Installation	8
4.2 HPOV Patch Installation.....	9
4.3 Upgrade Adjustments	10
5.0 De-Installing HP OpenView 6.1	10
6.0 HP OpenView Permanent License Installation	10
7.0 Known Issues	11
Section 2 - TEAM Core for Solaris	13
1.0 Overview	13
1.1 Software Reference.....	13
1.2 Improvements Since Last Release	14
2.0 Hardware Requirements for HP OpenView - Solaris.....	15
3.0 Software Requirements.....	15
4.0 TEAM Core Installation in Solaris Environments.....	16
4.1 CDE and Sun OpenWindows Installation	16
4.2 Installing in a Solaris Distributed Environment	18
5.0 Post-Installation Procedure For All Solaris Environments.....	25
6.0 TEAM Core De-Installation in Solaris	25
6.1 CDE and Sun OpenWindows De-Installation	25
6.2 De-Installing a Distributed Environment.....	27
7.0 Known Issues	29
8.0 Operating Guidelines	29

Section 3 - TEAM Core for HPUX..... 33

1.0	Overview	33
2.0	Software Reference.....	33
2.1	Improvements Since Last Release	34
3.0	Hardware Requirements on HP OpenView - HPUX.....	35
3.1	Determining Hard Disk Space	35
4.0	Software Requirements.....	35
5.0	TEAM Core Installation in HPUX Environments.....	36
5.1	TEAM Core Installation in CDE and VUE	36
5.2	Adding/Updating User Accounts in CDE and VUE.....	38
5.3	Installing in an HPUX Distributed Environment.....	40
6.0	TEAM Core De-Installation in HPUX Environments.....	48
6.1	Distributed Environment De-Installation.....	49
7.0	Known Issues	53
8.0	Operating Guidelines	53

**Section 4 - TEAM Applications and HP OpenView NNM
Scalable and Distributed Environments..... 57**

1.0	Overview.....	57
1.1	Features and Advantages	57
1.2	Theory of Operation.....	58
1.3	The Distribution of Processes and Applications.....	60
2.0	Integrating the TEAM Application in a Distributed Environment.....	62
2.1	TEAM Software Product Dependency	62
2.2	Discovery in an HP OpenView Distributed Environment.....	63
2.3	Event Handling	63

Section 1 - Installing Solaris and HP OpenView

1.0 Overview

GDC TEAM software requires the Solaris 2.7 or Solaris 2.8 operating system, and the HP OpenView 6.1 presentation manager software and their patches. This section provides the installation instructions and release notes for these components. Complete instructions for installing TEAM Core are provided in later sections. For questions on any of the information provided here, contact your GDC field representative.

1.1 Software Requirements

The following table provides detailed information for all software modules relevant to Solaris/HPOV installation. Throughout this manual, short forms of the software product names will be used. Although the minimum requirements are for Solaris 2.7, Solaris 2.8 and HP OpenView 6.1, this version of TEAM Core can also function with Solaris 2.51 and HP OV 4.1.1 or HPOV 5.01.

Table 1: Software Reference for Solaris/HPOV

Item	Part Number	Version / Release
Solaris Software Product	S-058U019-C01	Ver 2.7 / Nov 1999
	S-058U020-001	Ver 2.8 / Feb 2000 (Ver A)
HPOV for Solaris Software Product	Enterprise (Full) 058U157-C01	Ver 6.1
	250-node (Entry) 058U157-C02	Ver 6.1
Solaris/HPOV Patch Clusters	Ref: Sun / HPOV websites	

Note: ***Important:** It is highly recommended that you download and install the latest SOLARIS PATCH CLUSTER from the following website: <http://sunsolve.sun.com>. This will ensure that you have updated the Operating System along with any current fixes to reported problems.*

Note: ***Important:** It is highly recommended that you download and install the latest HP OPENVIEW CUMULATIVE CONSOLIDATED PATCH from the following web site: <http://ovweb.external.hp.com/cpe/patches>. This will ensure that you have updated HP Open View along with any current fixes to reported problems.*

1.2 Hardware Requirements for HP OpenView - Solaris

- SUN ULTRA 5 or greater with a minimum of 96 megabytes of RAM
- 2 GB of hard disk space with 350 MB of free disk space and 192 MB of swap space
- Minimum disk space requirements:
 - /opt 150 megabytes
- The graphics card should support a resolution of 1152x900.
- CD ROM drive

2.0 Solaris Installation

The following installation instructions apply to networked stand-alone system type configurations only.

1. Login as **root**.
2. Insert Solaris CD into the CDROM drive.
3. Shut down the workstation by typing the following commands:
 - sync**
 - halt**
4. At the "**OK**" prompt type:
 - boot cdrom**
5. In the Solaris Installation Program dialog box, click **Continue**.
6. In the Identify this System dialog box, click **Continue**.
7. Enter the following information as prompted:
 - Hostname aurora**
 - Networked Yes**
 - IP Address 200.200.200.5**
8. Click **Continue** to confirm entries.
9. In the Name Service dialog box, select **None**, then click **Continue**.
10. In the Subnets dialog box, select **Yes** or **No**, depending on your network configuration.
11. Enter the netmask in the Netmask dialog box, then click **Continue**.
12. Specify the time zone in the Time Zone dialog box, then click **Set**.
 Otherwise, use Geographic Region dialog box to specify the region and time zone, then click **Continue**.
13. Set Date and Time in the Date and Time dialog box, then click **Continue**.
14. Click **Continue** to confirm the entries.
15. In the Solaris Interactive Installation window, select **initial** or **upgrade**, then click **Continue**.
16. In the Allocate Client Services? window, click **Continue**.
17. In the Language dialog box, select the desired language, then click **Continue**.

18. In the Software dialog box, select **End User System Support**, then click **Continue**.
19. In the Disk dialog box, select **Disks**, then click **Continue**.
20. In the Preserve Data dialog box, click **Continue** to overwrite.
21. In the Automatically Layout File Systems? dialog box, select **Auto Layout**
22. Select **/** and **swap (ONLY)** and then click **Continue**.
23. To change layout, press **Customize** in the File System and Disk Layout dialog box.
24. Depending on disk size, enter the size for **/** in the Customize Disks dialog box. Check the free space and then enter the remaining space for swap.
For example, for 2GB disks, delete every entry in the Customize Disks dialog box except for:

 /set to 1540 MB
 swapset to remaining MB
25. Select **OK**, then click **Continue**.
26. In the Mount Remote File System? dialog box, click **Continue**.
27. In the Profile dialog box, click **Begin Installation** and ignore warning.
28. Select **Reboot** to set the system for an automatic reboot after installation.
29. When the installation is complete, a prompt appears, indicating the system is ready.

3.0 HP OpenView 6.1 Installation

The following instructions are for installing HP OpenView on a workstation that has *not* had OpenView installed previously. If your workstation already has a previous version of HP OpenView, refer to HP OpenView Upgrade procedures later in this section.

1. At a shell prompt become super-user.
2. Insert the HPOV NNM CD into the CD ROM drive.
3. Edit the file `/etc/system` using your favorite editor and add the following lines:

```
forceload:sys/shmsys
forceload:sys/semsys
set semsys:seminfo_semaem=16384
set semsys:seminfo_semmap=66
set semsys:seminfo_semmni=70
set semsys:seminfo_semmns=200
set semsys:seminfo_semmnu=30
set semsys:seminfo_semume=10
set semsys:seminfo_semvmx=32767
set semsys:seminfo_semmsl=30
```

4. Save the file.
5. Reboot the workstation by typing `reboot -- -r`

6. Login as **root**.
7. At the prompt, type
`cd /cdrom/cdrom0`
8. Type `./install`
9. When prompted for language choice, type **1** for English
10. Type **1** or **2** for the type of Network Node Manager Product you have.
11. Type **y** to install man pages or n otherwise.
12. Type **y** to continue installation.
13. Type `cd /`
14. Type `eject`
15. Remove the CD from the drive.

3.1 Upgrading from Previous Versions of HP OpenView

Do not remove previous versions of HP OpenView which are already installed on your workstation. Perform the following steps and then proceed to the HP OpenView 6.1 Installation procedure described above.

1. Log in as **root** to the workstation on which you intend to install OpenView 6.1.
2. To make sure no one is running an HP OpenView product on the system in which you intend to install OpenView 6.1, enter the command
`ovstatus`
3. If Openview is not running, the system will respond with `ovstatus:ovspmd not running`. Proceed to the HP OpenView 6.1 Installation procedure described above.
4. If OpenView is running, select **Exit** from Map menu to stop OpenView. Execute the `ovstop` command to stop any OpenView processes that are running. Proceed to the HP OpenView 6.1 Installation procedure described above.

4.0 Post-Installation Procedures

4.1 Solaris Patch Installation

The following procedure updates the Operating System along with any current fixes to reported problems.

1. Download the latest SOLARIS PATCH CLUSTER along with any associated instructions from the following website:
`http://sunsolve.sun.com`
2. Install the patch cluster according to the website instructions.
3. Reboot the system to complete the installation.

4.2 HPOV Patch Installation

The following instructions are for a basic installation of the cumulative consolidated patches for HP OpenView 6.1. Refer to any detailed HP OpenView text files (*.text) for each patch, which may be on the HP website.

Note: *IMPORTANT: It is highly recommended that the customer download and install the latest HP OPENVIEW CUMULATIVE CONSOLIDATED PATCH from the following HP OpenView web site: <http://ovweb.external.hp.com/cpe/patches>. Installing this Cumulative patch will ensure that you have updated HP Open View along with any current fixes to reported problems.*

1. Back up your system before installing the patch.
2. Have all users exit ovw sessions.
3. To start installation login as **root**.
4. Source the universal environment:

Borne shell:

```
. /opt/OV/bin/ov.envvars.sh
```

Note: *There must be a space between the initial period and the first slash.*

Cshell:

```
source /opt/OV/bin/ov.envvars.csh
$OV_BIN/ovstop
```

5. Access the drive where the patch software resides, then extract and install the patches.
6. When the cumulative consolidated patch installation is complete, restart the OpenView daemons as follows:

```
$OV_BIN/ovstart
```

7. If the OpenView License Manager does not start, preventing other HP OpenView applications from starting, make sure you are at super-user and then start HP OpenView and its license manager as follows:

```
cd $OV_LRF
/opt/OV/bin/ovaddobj OVLICENSEMgr.lrf
cd /opt/OV/bin
./ovstop
./ovstart -v
```

4.3 Upgrade Adjustments

When you upgrade from a previous version of HPOV to HPOV 6.1, the `oid_to_sym` file is moved from `$OV_CONF/C` to `$OV_CONF`. Depending on what TEAM software is installed on your system, that move requires the user to make the following adjustments:

For TEAM Core:

Copy the contents of `$OV_CONF/C/oid_to_sym.SHELFBASE`
into `oid_to_sym`

For TEAM 6000:

Copy the contents of `$OV_CONF/C/oid_to_sym.SHELF6000BASE`
into `oid-to_sym`

For TEAM 540:

Copy the contents of `$OV_CONF/C/oid to sym.540`
into `oid_to_sym`

For TEAM 553:

Copy the contents of `$OV_CONF/C/oid_to_sym.553`
into `oid_to_sym`

5.0 De-Installing HP OpenView 6.1

1. At a shell prompt become super-user.
2. Insert the HPOV NNM CD into the CDROM drive.
3. At the prompt type `cd /cdrom/cdrom0`
4. Type `./remove`
5. Answer `y` when asked to remove bundles.
6. Type `cd /`
7. Type `eject`
8. Remove the CD from the drive.

6.0 HP OpenView Permanent License Installation

A Permanent Password Certificate is provided with the HP OpenView software, specifying the server on which the software is to be installed (License Server Target ID) and the password that activates the license. This nodelock-type license activates the software locally, rather than via communication with a license server. To activate the license on your workstation, perform the following steps:

1. To access the directory that contains the nodelock file, type
Type `cd /var/netls`
2. Make a backup of the nodelock file by entering the command:
`cp nodelock nodelock.backup`

3. Invoke the editor of your choice to append the password from the Permanent Password Certificate to the nodelock file. Do not press the Enter key until you have typed all characters of the password (indicated by <return> on the certificate).

Note: *Although its length causes it to wrap around when printed on the certificate or displayed on-screen, the password must be entered as a single line.*

4. You can check to make sure that you haven't accidentally entered any non-displaying characters into the nodelock file by entering the command:

```
cat -vet nodelock
```

5. The license takes effect when you save your changes to the file.

7.0 Known Issues

- HP OpenView pops up a warning message indicating a corrupt line in the trapd.log file. To prevent this, edit the trapd.log file and remove the line.

Section 2 - TEAM Core for Solaris

1.0 Overview

These installation and release notes provide new information relevant to this version of the TEAM CORE software product operating on the Sun Solaris platform. They update the information supplied by the **TEAM Core Operation Manual**. If you require additional details please refer to that manual. For questions on any of the information provided here, please contact your GDC field representative.

1.1 Software Reference

The following table provides the detailed information for all software modules relevant to TEAM Core for Solaris installation. Throughout this manual, short forms of the software product names will be used.

Table 2: Software Reference for Solaris

Item	Part Number /Description	Version
TEAM Core Software Product	058U739-C01	Ver 4.2.0
TEAM Core Operation Manual	058R720-V420	Latest Version/Issue
Solaris Software Product	S-058U019-C01	Ver 2.7 / Nov 1999
	S-058U020-001	Ver 2.8 / Feb 2000 (Ver A)
HPOV for Solaris Software Product	Enterprise (Full) 058U157-C01	Ver 6.1
	250-node (Entry) 058U157-C02	Ver 6.1
Solaris/HPOV Patch Clusters	Ref: Sun / HPOV websites	
HPOV Network Node Manager Installation Guide	HP J1136-9000	
SCM for SpectraComm and V.34 Products	Firmware Version 5.3.0 or greater	MIB Ver 3.10F
SCM for UAS and V.34 products	Firmware Version 7.2.0 or greater	MIB Ver 3.10F

The TEAM Core software is comprised of the following packages on the TEAM Core CD. After installation, these packages should be present on the workstation at the versions shown or greater. To verify the version of a package currently installed, type the following command:

```
/usr/bin/pkginfo -l <Package Name>
```

Package Name	Description	Version
GDCTeam	GDC TEAM Utilities	Ver 4.2.0
GDCShelf5	GDC Shelf 5000	Ver 4.2.0

1.2 Improvements Since Last Release

TEAM Core software has been tested to be Year 2000 Compliant in accordance to GDC ENG-STD-003. TEAM Core 4.2.0 differs from the preceding release as follows:

- Supports the SC 5516 DS0-DP product.

Preceding Versions	Description of Change
TEAM Core 4.1.0	Supports the SC 521A/S product. Supports remote SCM IP address configuration in SC/UAS systems. Supports the SC 521A and the SC 521A/S as remotes to the SC 5520 through the TEAM 5520 Version 4.0.0 or higher
TEAM Core 4.0.0	Supports the SC 7723-MR and GT 1033 Multi-Rate products. Approved for operation on Solaris 2.7, Solaris 2.8, HP Openview 6.1 and HPUX 11.0 upgrades
TEAM Core 3.1.0	Supports the SC 800 T3 product.
TEAM Core 3.0.5	Supports long host ID names, up to 50 characters (previously limited to 16), minor fixes, product compatibility additions.
TEAM Core 3.0.4	Minor fixes, product compatibility additions.
TEAM Core 3.0.3	Minor fixes, product compatibility additions.
TEAM Core 3.0.2	Addition of the Group Configuration feature, minor fixes.

2.0 Hardware Requirements for HP OpenView - Solaris

- SUN ULTRA 5 or greater with a minimum of 96 megabytes of RAM
- 2 gigabytes of hard disk space with 350 megabytes free disk space and 192 megabytes of swap space
- Minimum disk space requirements:
 - `/opt` 40 megabytes
- The graphics card should support a resolution of 1152x900.
- SCM (SpectraComm Manager) card
- CD ROM drive

Note: *96 megabytes of RAM is sufficient to support 1 or 2 users logged into the workstation, running individual OpenView Windows sessions. Reduced performance can occur with additional users accessing the workstation for remote login. To avoid problems, increase RAM based on the expected number of simultaneous users and on the number of TEAM applications in use. Allow 25 megabytes of RAM for each additional user, and 3 megabytes for each TEAM application. You should also adjust swap space to be approximately twice the size of the RAM.*

Note: *For hardware requirements of HP OpenView Network Node Manager products, refer to the HP OpenView Network Node Manager Products Installation Guide.*

3.0 Software Requirements

The following Solaris and HP OpenView software must be installed and operational before installing this version of TEAM Core. Refer to Table 1 for detailed identification of all software products discussed below. Although the minimum requirements are for Solaris 2.7, Solaris 2.8 and HP OpenView 6.1, this version of TEAM Core can also function with Solaris 2.51 and HP OV 4.1.1 or HPOV 5.01.

- Solaris
- HP OpenView for Solaris (250-Node or Enterprise)
- Solaris and HPOV patches

Note: **Important:** *It is highly recommended that you download and install the latest SOLARIS PATCH CLUSTER from the following website: <http://sunsolve.sun.com>. This will ensure that you have updated the Operating System along with any current fixes to reported problems.*

Note: **Important:** *It is highly recommended that you download and install the latest HP OPENVIEW CUMULATIVE CONSOLIDATED PATCH from the following web site: <http://ovweb.external.hp.com/cpe/patches>. This will ensure that you have updated HP Open View along with any current fixes to reported problems.*

4.0 TEAM Core Installation in Solaris Environments

TEAM Core software can be installed in one of three Solaris environments:

- Common Desktop Environment (referred to as CDE or DT)
- Sun OpenWindows
- Distributed Environment

Installation includes loading TEAM software and updating user environments. The procedures vary depending on the type of environment. Some environment updating procedures will require the use of *vi* or your favorite editor to change environment scripts. All procedures for each environment are provided below. Additional information about distributed environments is provided in Section 4.

Note: *After an installation of TEAM software, the user must enable **Discover New IP Nodes** from the shelf map options menu for IP discovery to occur. This is described in the Post-Installation Procedure For All Solaris Environments on page 25.*

Note: *Some TEAM applications running on Solaris 2.7 or Solaris 2.8 may display meaningless characters in the application window headings. This is due to a font conflict which can be resolved by typing the following on the command line before running **ovw**:*

```
xrdb -merge /opt/OV/bin/gdc_load_resources
```

4.1 CDE and Sun OpenWindows Installation

6. Make sure all users exit HP OpenView for Solaris.
7. Insert the TEAM Core Compact Disk into the CD ROM drive.
8. At the shell prompt, become super user by typing

```
su root
```
9. Check / to make sure there is a /**cdrom** directory already present. If not, create it.
10. Stop HP OpenView processes by typing

```
/opt/OV/bin/ovstop
```
11. Start the installation process by typing:

```
cd /cdrom/cdrom0/solaris
```
12. If a version of the TEAM Core is already resident on the workstation, or if you are not sure if it is resident, enter the following command before attempting to install the new version:

```
./remove.sh
```

Ignore any error messages that may appear on the monitor and answer **y** for the questions.
13. Continue the installation process by entering the following command:

```
./install.sh
```
14. Answer **Y** to the questions.

15. When installation is complete, start HP OpenView processes by typing:

```
    /opt/OV/bin/ovstart
```
16. Type **cd /**
17. Type **eject**
18. Exit super user by typing **exit**. Remove the CD from the CD ROM drive.
19. Proceed to the appropriate paragraphs below to update each user account for your environment.

4.1.1 Updating Common Desktop Environments

1. Open the **\$HOME/.dtprofile** file with your editor and read the lengthy comments that are included in it. The comments provide information on:
 - A. how to use the C (csh), Bourne (sh), and Korn (ksh) shells in the CDE
 - B. which terminal commands should not be used because they can prevent login. When using the csh shell, the commands are generally present in **.login** and **.cshrc** files. When using the sh or ksh shells, they are in **.login** and **.profile** files.
2. After reviewing the comments, edit the **\$HOME/.dtprofile** file to remove the leading pound sign(s) in the line that contains

```
### DTSOURCEPROFILE=true
```
3. If you are using C (csh) Shell you must add the following lines to **\$HOME/.cshrc**:

```
source /opt/OV/bin/ov.envvars.csh
set path=( $path $OV_BIN)
```
4. If you are using Bourne(sh) shell or Korn(ksh) shell you must add the following lines to **\$HOME/.profile**:

```
./opt/OV/bin/ov.envvars.sh
PATH=$PATH:$OV_BIN; export PATH
```
5. Add the following line to **\$HOME/.xdefaults**:

```
#include "/opt/OV/bin/gdc_load_resources"
```
6. The Common Desktop Environment is now updated for all users. Complete the installation by typing:

```
ovw &
```
7. For the changes to take effect, you must now logout and login.

4.1.2 Updating Sun OpenWindows Environments

1. If you are using C (csh) Shell you must add the following lines to `$HOME/.cshrc`:

```
source /opt/OV/bin/ov.envvars.csh
set path=($path $OV_BIN)
```
2. If you are using Bourne(sh) shell or Korn(ksh) shell you must add the following lines to `$HOME/.profile`:

```
./opt/OV/bin/ov.envvars.sh
PATH=$PATH:$OV_BIN; export PATH
```
3. The Sun OpenWindows environment is now updated for all users. Complete the installation by typing:

```
ovw &
```
4. You must now logout and login in order for the changes to take effect.

4.2 Installing in a Solaris Distributed Environment

A distributed environment consists of three types of workstations. Not all workstations require installation of all software, but the workstations must be set up in the following order:

- A. Collection Station
- B. Management Station
- C. Management Console

The procedures for TEAM Core and product software installation vary depending on the type of workstation. Perform the installation and set up procedures for each workstation in your distributed environment.

4.2.1 Setting up Collection Stations

On workstations that serve as collection stations, you must install the TEAM software as described in the previous paragraphs, and then configure events so that traps are forwarded to the management station. Refer to the event data in the table below during this installation process.

Table 3: Event Forwarding Data

Enterprise Name (Enterprise ID)	Event Name (Enterprise Identifier)
gdc_cmnAlarm(.1.3.6.1.4.1.498.1.4)	dmscmnAlarmTrap(.1.3.6.1.4.1.498.1.4.0.1)
gdc_scm(.1.3.6.1.4.1.498.3.6)	dmsSCMPowerSupplyTrap(.1.3.6.1.4.1.498.3.6.0.3)
gdc_scm(.1.3.6.1.4.1.498.3.6)	dmsSCMAliveTrap(.1.3.6.1.4.1.498.3.6.0.4)
gdc_scm(.1.3.6.1.4.1.498.3.6)	dmsSCMcoldStart(.1.3.6.1.6.3.1.1.5.1)
gdc_scm(.1.3.6.1.4.1.498.3.6)	dmsSCMwarmStart(.1.3.6.1.6.3.1.1.5.2)
gdc_scm(.1.3.6.1.4.1.498.3.6)	dmsSCMAuthentication(.1.3.6.1.6.3.1.1.5.5)

Note: Refer to Section 4 for detailed information on TEAM Applications in HPOV NNM Scalable and Distributed Environments. For detailed information on Event Forwarding, refer to the HP OpenView Guide to Scalability and Distribution for Network Node Manager, page 138.

1. Become a super user by typing **su** and supplying the super user password.
2. Perform the procedures for a Basic Installation as described above.
3. Set up environment variables by typing:

```
/usr/bin/sh  
. /opt/OV/bin/ov.envvars.sh
```
4. Create a directory named **/cdrom** if one doesn't already exist in **/**.
5. Insert the TEAM Core CD into the CDROM drive.
6. Register GDC Trap format by typing:

```
$OV_BIN/xnmevents -merge  
/cdrom/cdrom0/solaris/shelftrapd.conf
```
7. Start the Event system configurator GUI by typing:

```
$OV_BIN/xnmtrap
```
8. From the Enterprise Identification pane, select an Enterprise Name
for example: gdc_cmAlarm
9. From the Event Identification pane, select an Event Name
for example: dmScmnAlarmTrap
10. From the Event Configuration window menu bar, select **Edit->Modify Event**. The Event Configurator/Modify Event dialog box appears.
11. Click on the Forward Event check box to expand the dialog box. The Forwarded Event Destinations pane displays.
12. Type the hostname or IP Address for destination. Destinations are the managements stations to which events will be forwarded.
13. Repeat steps 5 through 9 for each of the events listed in Table 3.
14. When all events are forwarded, click **OK** in the Event Configurator/Modify Event dialog box.
15. At the Event Configuration window, click **File->Save** to save the changes.
16. To cause Openview processes to re-read the trapd.conf file, generate Event by typing:

```
$OV_BIN/xnmtrap -event
```

4.2.2 Installing TEAM Applications on the Management Station

To install TEAM Core software and TEAM product software on the Management Station, perform the following steps:

1. Make sure all users exit HP OpenView for Solaris.
2. To install TEAM Core software, insert the TEAM Core CD into the CD ROM drive.
3. At the shell prompt, become super user by typing

```
su root
```

4. Check / to make sure there is a /**cdrom** directory already present. If not, create it.
5. Stop HP OpenView processes by typing

```
/opt/OV/bin/ovstop
```

6. Start the installation process by typing:

```
cd /cdrom/cdrom0/solaris
```

7. If a version of the TEAM Core is already resident on the workstation, or if you are not sure if it is resident, enter the following command before attempting to install the new version:

```
./remove.sh
```

Ignore any error messages that may appear on the monitor and answer **y** for the questions.

8. Continue the installation process by entering the following command:

```
./install.sh
```

9. Answer **Y** to the questions.
10. When installation is complete, start HP OpenView processes by typing:

```
/opt/OV/bin/ovstart
```

11. Type **cd /**
12. Type **eject**
13. Exit super user by typing **exit**. Remove the CD from the CD ROM drive.
14. You must now install all card products of interest, (TEAMSC521, TEAMSC553, etc.) on the Management Station. Use the product's media and accompanying release notes for installation and any subsequent firmware downloads.

4.2.3 Setting Up the Management Station

1. At the shell prompt, become super user by typing


```
su root
```
2. Type the following commands:


```
/opt/OV/bin/ovstop
/etc/init.d/nfs.client stop
/etc/init.d/nfs.server start
```
3. To ensure the NFS server daemon process **nfsd** is running, type the following command and verify the results:


```
ps -ef | grep nfsd
```
4. To add all Management Consoles to the management station, edit the **/etc/hosts** file by typing each Console's specific IP address and Hostname on a separate line, as shown in the example:


```
###.###.###.### Console_Hostname
###.###.###.### Console_Hostname
```
5. Save and close the **/etc/hosts** file.

Note: *If using vi editor, use **wq!** to save and close the file.*

6. For the Management Console system to share the management station directories over NFS, edit **/etc/dfs/dfstab** file as follows:


```
share -F nfs -o root=Console_Hostname /etc/opt/OV/share
share -F nfs -o root=Console_Hostname /var/opt/OV/share
share -F nfs -o root=Console_Hostname /usr/tmp
```
7. Save and close the **/etc/dfs/dfstab** file.
8. To share the Management Station directories with the Consoles over NFS, type:


```
share -F nfs -o root=Console_Hostname /etc/opt/OV/share
share -F nfs -o root=Console_Hostname /var/opt/OV/share
share -F nfs -o root=Console_Hostname /usr/tmp
```
9. Edit the **/etc/opt/OV/share/conf/ovwdb.auth** file as shown below to add an entry for the Console, as shown in the example:


```
Console_Hostname +
```
10. Edit the **/etc/opt/OV/share/conf/ovw.auth** file as shown below to add an entry for the Console, as shown in the example:


```
Console_Hostname +
```

Note: *Repeat step 6 through step10 using the specific hostname for each additional Management Console in the system.*

11. To start HP Openview processes, type:


```
/opt/OV/bin/ovstart
```

12. Exit super user by typing **exit**.
13. Complete the setup by typing:

```
ovw &
```

4.2.4 Installing TEAM Applications on Management Consoles

To install TEAM Core software and TEAM product software on Management Consoles, perform the following steps:

1. Make sure all users exit HP OpenView for Solaris.
2. Insert the TEAM Core Compact Disk into the CD ROM drive.
3. On the Management Console, become a super user by typing:

```
su root
```

If the Solaris distributed environment has been set up, perform steps 4- 8. Otherwise, skip to step 9.

4. Disconnect as a HP OpenView client by running:

```
/opt/OV/bin/ovwsetupclient -u
```
5. Open the file `/etc/vfstab` and type a # in the beginning of each line to comment them out. Save and close the file.
6. On the Management Station, become a super user and open the `/etc/dfs/dfstab` file. Comment out each line which contains the Console hostname by typing a # in the beginning of each line.
7. Save and close the `/etc/dfs/dfstab` file.
8. On the Management Console become a super user and enter the following commands:

```
/etc/umount Station_Hostname:/etc/opt/OV/share  
/etc/umount Station_Hostname:/var/opt/OV/share  
/etc/umount Station_Hostname:/usr/tmp
```
9. Check `/` to make sure there is a `/cdrom` directory already present. If not, create it.
10. Stop HP OpenView processes by typing

```
/opt/OV/bin/ovstop
```
11. Start the installation process by typing:

```
cd /cdrom/cdrom0/solaris
```
12. If a version of the TEAM Core is already resident on the workstation, or if you are not sure if it is resident, enter the following command before attempting to install the new version:

```
./remove.sh
```

Ignore any error messages that may appear on the monitor and answer **y** for the questions.
13. Continue the installation process by entering the following command:

```
./install.sh
```
14. Answer **Y** to the questions.

15. When installation is complete, start HP OpenView processes by typing:

```
    /opt/OV/bin/ovstart
```
16. Type **cd /**
17. Type **eject**
18. Exit super user by typing **exit**. Remove the CD from the CD ROM drive.
19. You must now install all card products of interest (TEAMSC521, TEAMSC553, etc.) on the management station. Use the product's media and accompanying release notes for installation and any subsequent firmware downloads.

Perform steps 20 - 26 only if the Solaris distributed environment has been set up. Otherwise, skip to step 27.

20. On the Management Station become a super user by typing:

```
    su root
```
21. Open the `/etc/dfs/dfstab` file. Remove the **#** in the beginning of each line which contains the Console hostname.
22. Type the following commands:

```
    share -F nfs -o root=Console_Host_Name /etc/opt/OV/share
    share -F nfs -o root=Console_Host_Name /var/opt/OV/share
    share -F nfs -o root=Console_Host_Name /usr/tmp
```

Note: *You will now mount /usr/tmp on the client from the server over nfs, since the TEAM Shelf Discovery process stores the discovered shelf GUI images (gif files) in /usr/tmp.*

23. On the Management Console become a super user by typing

```
    su root
```
24. Open the file `/etc/vfstab` and restore each line by deleting the **#** in the beginning of each line.
25. Save and close the file.
26. Type the following commands:

```
    /etc/mount Station_Hostname:/etc/opt/OV/share
    /etc/mount Station_Hostname:/var/opt/OV/share
    /etc/mount Station_Hostname:/usr/tmp
    /opt/OV/bin/ovsetupclient /opt/OV/nfs/Station_Hostname
```

Note: *The path may be different if automounter was used.*

27. Exit super user and become a normal user. On the management console, bring up the OpenView windows using the server database by typing:

```
    ovw &
```

4.2.5 Setting Up the Management Console

1. At the shell prompt, become super user by typing

```
su root
```
2. Type the following commands

```
/opt/OV/bin/ovstop
/etc/init.d/nfs.server stop
/etc/init.d/nfs.client start
```
3. To ensure that the NFS client daemon processes (statd and lockd) are running, type the following command and verify its results:

```
ps -ef | grep statd
ps -ef | grep lockd
```
4. To add the Management Station to the Management Console, edit the `/etc/hosts` file by typing the Management Station's specific IP address and Hostname, as shown in the example:

```
###.###.###.###    Station_Hostname
```
5. Save and close the `/etc/hosts` file.
6. Type the following commands:

```
mkdir -p /opt/OV/nfs/Station_Hostname/etc/opt/OV/share
mkdir -p /opt/OV/nfs/Station_Hostname/var/opt/OV/share
rm /usr/tmp
mkdir -p /usr/tmp
chmod 777 /usr/tmp
```
7. To mount the Management Station directories on this Console over NFS, edit the `/etc/vfstab` file as shown in the example:

```
Station_Hostname:/etc/opt/OV/share - /opt/OV/nfs/Station_Hostname/etc/opt/OV/share/ nfs - yes rw
Station_Hostname:/var/opt/OV/share - /opt/OV/nfs/Station_Hostname/var/opt/OV/share/ nfs - yes rw
Station_Hostname:/usr/tmp - /usr/tmp nfs - yes rw
```
8. Save and close the `/etc/vfstab` file.
9. To mount the Management Station directories on this Console over NFS, type the following commands:

```
/etc/mount Station_Hostname:/etc/opt/OV/share
/etc/mount Station_Hostname:/var/opt/OV/share
/etc/mount Station_Hostname:/usr/tmp
```
10. Set up the Management Console by typing:

```
/opt/OV/bin/ovwsetupclient /opt/OV/nfs/Station_Hostname
```
11. Exit Super User by typing `exit`.
12. Complete the setup by typing:

```
ovw &
```

Note: *It is not necessary to start HP OpenView daemons using /opt/OV/bin/ovstart on the Management Console because the Console shares the same HP OpenView database present on the Management Station over NFS.*

Note: *If the Console OpenView windows does not start up properly, reboot the Management Station and wait until it is UP completely. Then, reboot the Console.*

5.0 Post-Installation Procedure For All Solaris Environments

Once the TEAM Core software has been installed in the desired environment, the following procedure must be performed to enable IP Discovery.

1. After completing installation and environment setup, open the root map.
2. At the Options menu, select **Network Polling Configuration: IP**.
3. At the Configuration Area, select **IP Discovery**.
4. Enable the **Discover New IP Nodes** option by selecting its checkbox.
5. Click **OK**. Discovery will begin at once and the Universe map will start to show the discovered shelves.

6.0 TEAM Core De-Installation in Solaris

Procedures vary, depending on the type of environment. Refer to the appropriate procedures below. Additional information about distributed environments is provided in Section 4.

Note: *TEAM Core shares the common utilities application package, GDCTeam, with other TEAM controllers. Do not remove it unless you are certain no controllers requiring GDCTeam are installed on the workstation*

6.1 CDE and Sun OpenWindows De-Installation

1. In the OpenView Root map, click on the TEAM universe icon.
2. From the Edit menu of the Root map menu bar, select **Delete**, then select **From All Submaps** to remove the TEAM icon from the Root map.
3. Make sure that all users exit HP OpenView for Solaris.
4. Insert the TEAM Core CD into the CD ROM drive.
5. At the shell prompt, become super user by typing:

```
su root
```
6. Stop the HP OpenView processes by typing:

```
/opt/OV/bin/ovstop
```
7. Begin the removal process by entering the following command:

```
cd /cdrom/cdrom0/solaris
```

- ```
./remove.sh
```
8. Restart all HP OpenView processes by typing:  

```
/opt/OV/bin/ovstart
```
9. Type `cd /`
10. Type `eject`
11. Remove the CD from the CD ROM drive.
12. Set up environment variables by typing:  

```
/usr/bin/sh
```

```
./opt/OV/bin/ov.envvars.sh
```
13. Start the Event system configurator GUI by typing:  

```
$OV_BIN/xnmtrap
```
14. Select an event and delete it by selecting **Edit->Delete->Event**.  
Refer to Table 1-2 for a listing of all events to be deleted.
15. Delete the enterprise by selecting:  
**Edit->Delete->Enterprise Identifier**
16. From the Event Configuration window, click **File->Save** to save the changes.
17. Exit super user by typing `exit`.

## 6.2 De-Installing a Distributed Environment

De-installation of TEAM software in a distributed Solaris environment should be performed in the following order:

- A. Management Console
- B. Management Station
- C. Collection Station

### 6.2.1 De-Installing the Management Console

To remove TEAM Core software or any other TEAM product software from a management console, perform the following steps:

---

**Note:** *If the Solaris distributed environment has been set up, it must be disabled temporarily to avoid sharing conflicts with the server. Additional steps for this are provided below.*

---

1. Make sure that all users exit HP OpenView for Solaris.
2. Insert the TEAM Core (or other TEAM software) CD into the CD ROM drive.
3. At the shell prompt, become super user by typing:  

```
su root
```
4. Disconnect as a HP OpenView client by running:  

```
/opt/OV/bin/ovwsetupclient -u
```
5. Stop the HP OpenView processes by typing:  

```
opt/OV/bin/ovstop
```
6. Open the file `/etc/vfstab` and type a `#` in the beginning of each line.
7. Save and close the `/etc/vfstab` file.
8. On the Management Station, become a super user and open the `/etc/dfs/dfstab` file. Comment out each line which contains this Console by typing a `#` in the beginning of that line.
9. Save and close the `/etc/dfs/dfstab` file.
10. On the Management Console, become a super user and enter the following commands:  

```
/etc/umount Station_Hostname:/etc/opt/OV/share
/etc/umount Station_Hostname:/var/opt/OV/share
/etc/umount Station_Hostname:/usr/tmp
```
11. Begin the removal process by entering the following command:  

```
cd /cdrom/cdrom0/solaris
./remove.sh
```
12. Restart all HP OpenView processes by typing:  

```
opt/OV/bin/ovstart
```
13. Type `cd /`
14. Type `eject`

15. Remove the CD from the CD ROM drive.
16. Use the media for the card product of interest (for example, TEAMSC521, TEAMSC533, etc., to de-install its software. Procedures are provided in each product's accompanying release notes.
17. Open the `/etc/vfstab` file and remove the `#` from the beginning of each line that contains a Console hostname.
18. On the Management Station, become a super user by typing:  

```
su root
```
19. Open the `/etc/dfs/dfstab` file and remove the `#` from any lines which contain this Console's name.
20. Type the following commands:  

```
share -F nfs -o root=Console_Hostname /etc/opt/OV/share
share -F nfs -o root=Console_Hostname /var/opt/OV/share
share -F nfs -o root=Console_Hostname /usr/tmp
```
21. Exit super user by typing `exit`.
22. On the Management Console, become a super user by typing `su` and supplying the super user password.
23. Attach the NFS mounts to the management console, execute the following commands, using the management station's host name:  

```
/etc/mount Station_Hostname:/var/opt/OV/share
/etc/mount Station_Hostname:/etc/opt/OV/share
/etc/mount Station_Hostname:/usr/tmp
```
24. Exit super user login.

## 6.2.2 De-Installing the Management and Collection Stations

1. In the OpenView Root map, click on the TEAM universe icon.
2. From the Edit menu of the Root map menu bar, select **Delete**, then select **From All Submaps** to remove the TEAM icon from the Root map.
3. Make sure that all users exit HP OpenView for Solaris.
4. Insert the TEAM Core CD into the CD ROM drive.
5. At the shell prompt, become super user by typing:  

```
su root
```
6. Stop the HP OpenView processes by typing:  

```
opt/OV/bin/ovstop
```
7. Begin the removal process by entering the following command:  

```
cd /cdrom/cdrom0/solaris
./remove.sh
```
8. Restart all HP OpenView processes by typing:  

```
opt/OV/bin/ovstart
```

9. Type **cd /**
10. Type **eject**
11. Exit super user by typing **exit**.
12. Remove the CD from the CD ROM drive.

## 7.0 Known Issues

- Some TEAM applications may display meaningless characters in the application window headings. This is due to a font conflict which can be resolved by typing the following on the command line *before* running **ovw**:  

```
xrdb -merge /opt/OV/bin/gdc_load_resources
```
- In some TEAM applications, the following display anomalies may occur which do not affect system or application operation:
  - On an Alarm application display, LED labels may appear off-center over their associated LED.
  - In a Report application display, the content window may overlap the last character of Y-axis labels for the window.

## 8.0 Operating Guidelines

- Pressing the keyboard “Num Lock” or “Caps Lock” key ON will make the mouse buttons and scroll bars inoperable.
- Due to the loading of shared libraries, TEAM applications may take up to one minute to start up after an install of TEAM software or a reboot of the system.
- When a new SpectraComm card is added to the shelf and if an X-TERMINAL is being run on a server, the shelf map will not be automatically updated because the map is read-only. To update the map, select **Map->Refresh Map** from the shelf map menu bar. The shelf map updates and submaps will close.
- A Line Terminating Unit (LTU) that is operating in CSU mode should not be selected as the Shelf Timing source for other devices in its shelf.
- Circuit submap creation is not applicable for a DSU or DSE that has an associated remote.
- Deleting a shelf from the TEAM Universe map does not delete associated remotes linked to the shelf. The recommended procedure, rather than deleting the shelf itself, is to select the SCM for the shelf and delete it from all submaps.
- OpenView cannot Discover the SCM by means of a PPP or Ethernet connection if the SCM contains any entries in its **/etc/hosts** table.
- Although the TEAM Core application is itself Year 2000 compliant, the License Key provided with the OpenView operating software may limit the range of dates that the system can recognize.

- When installing TEAM Core software with HPOV Network Node Manager, disregard the following error messages as they occur. Installation will complete successfully despite these messages:
  - `ovstart: ovspmd failed to start and no managers are running`
  - `ovw: Cannot open object database: Cannot connect to database`
  - `The ovwdb daemon is not running on the server <HostName>.`
  - `Ask the administrator of this server to run "ovstart ovwdb".`
  - `ovstop: ovspmd is not running`
- Some hardware devices controlled by TEAM applications occupy two SpectraComm shelf slots. Removing a two-slot device from its shelf and shifting it over one slot results in a corrupted display with a double image of the device's slot icon. To correct that condition delete the slot icon that is in error (red). When that is done the shelf map redisplay with its device population shown in the correct slots.
- If the Event Log stops logging alarms coming in via the SCM, you must stop and then start the **shelf\_discovery** daemon, as follows:
  - A. Log in as super user and then type:
    - `/opt/OV/bin/ovstop shelf_discovery`
  - B. Then type:
    - `/opt/OV/bin/ovstart shelf_discovery`
- Performance of the workstation CPU may be impaired following the discovery or removal of TEAM shelves. The condition can be corrected by editing the **\$OV\_LRF/ovwdb.lrf** file to limit the maximum number of objects in the **ovwdb** cache. Use the following procedure to edit the file:
  - A. If HP OpenView Windows (ovw) is running, exit it by selecting the **Map:Exit** menu item.
  - B. Stop background processes by typing **ovstop**.
  - C. Make a backup copy of the **\$OV\_LRF/ovwdb.lrf** file. If the file does not exist, create it by copying from:
    - `$OV_NEW_CONF/OVWIN/ovwdb.lrf` to `$OV_LRF/ovwdb.lrf`
  - D. Load **ovwdb.lrf** into a text editor. The default **ovwdb.lrf** file consists of:
    - `ovwdb:`
    - `ovwdb:OVs_YES_START::-0 -n5000:OVs_WELL_BEHAVED:15:`
  - E. Modify **-n <number of objects>**
    - The value depends on the number of nodes to be managed and the amount of memory resources on the system. With sufficient memory, performance is optimized when the **-n** option is not used. Use the **-n** option when memory capacity is limited.
  - F. Save the edited **ovwdb.lrf** file under the name **\$OV\_LRF/ovwdb.lrf**

G. The `ovaddobj` tells the start-up processes what to start. Update the `ovsuf` configuration file by typing:

```
ovaddobj $OV_LRF/ovwdb.lrf
```

H. Restart the background processes by typing:

```
ovstart
```

- The TEAM Core application will cancel a firmware download if it detects incompatibility between the firmware and the circuit card that will run it. An error message will display.
- When using TEAM Core to download the SC 800 T3 firmware at the TEAM SpectraComm Firmware Download window, do not use the **Select All** option if master and remote units appear together in the Target Equipment List. Doing so will erase the standby firmware in the remote units. Make sure to deselect any remote units before performing a broadcast download to master units. Then, select each remote unit and download the firmware individually.
- When using TEAM Core to download the SC 800 T3 firmware to a remote unit, it may be necessary to adjust the timing to avoid a timeout.
- After an installation of TEAM software, the user must enable **Discover New IP Nodes** from the root map Options menu in order for shelf discovery to occur.





## Section 3 - TEAM Core for HPUX

### 1.0 Overview

These installation and release notes provide new information relevant to the TEAM Core software product operating on the HPUX platform. They update the information supplied by the **TEAM Core Operation Manual**. If you require additional details please refer to that manual. For questions on information provided here, please contact your GDC field representative.

### 2.0 Software Reference

The following table provides the detailed information for all software modules relevant to TEAM Core for HPUX installation. Throughout this manual, short forms of the software product names will be used.

**Table 4: Software Reference for HPUX**

| Item                                         | Part Number/Detail                | Version / Description  |
|----------------------------------------------|-----------------------------------|------------------------|
| TEAM Core Software Product                   | 058U739-C01                       | Ver 4.2.0              |
| TEAM Core Operation Manual                   | 058R720-V420                      | Latest Version/Issue   |
| HPOV NNM Software Product                    |                                   | Release 6.1            |
| HPUX                                         |                                   | Ver 11.0 November 1999 |
| HPUX and HPOV Patches                        | Ref: HP website                   |                        |
| HPOV Network Node Manager Installation Guide | HP J1136-9000                     | Latest Release         |
| SCM for SpectraComm and V.34 Products        | Firmware Version 5.3.0 or greater | MIB Ver 3.10F          |
| SCM for UAS products                         | Firmware Version 7.2.0 or greater | MIB Ver 3.10F          |

The TEAM Core software is comprised of the following packages on the TEAM Core CD. After installation these packages should be present on the workstation at the versions shown or greater. To verify the version of a package currently installed, type the following command:

```
/usr/bin/pkginfo -l <Package Name>
```

| Package Name | Description        | Version   |
|--------------|--------------------|-----------|
| GDCTeam      | GDC TEAM Utilities | Ver 4.2.0 |
| GDCShelf5    | GDC Shelf 5000     | Ver 4.2.0 |

## 2.1 Improvements Since Last Release

TEAM Core software has been tested to be Year 2000 Compliant in accordance to GDC ENG-STD-003. TEAM Core 4.1.0 differs from the preceding release as follows:

- Supports the SC 5516 DS0-DP product.

| Preceding Versions | Description of Change                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| TEAM Core 4.1.0    | Supports the SC 521A/S product.<br>Supports remote SCM IP address configuration in SC/UAS systems.<br>Supports the SC 521A as a remote to the SC 5520  |
| TEAM Core 4.0.0    | Supports the SC 7723-MR and GT 1033 Multi-Rate products.<br>Approved for operation on Solaris 2.7, Solaris 2.8, HP Openview 6.1 and HPUX 11.0 upgrades |
| TEAM Core 3.1.0    | Supports the SC 800 T3 product.                                                                                                                        |
| TEAM Core 3.0.5    | Supports long host ID names, up to 50 characters (previously limited to 16), minor fixes, product compatibility additions.                             |
| TEAM Core 3.0.4    | Minor fixes, product compatibility additions.                                                                                                          |
| TEAM Core 3.0.3    | Minor fixes, product compatibility additions.                                                                                                          |
| TEAM Core 3.0.2    | Addition of the Group Configuration feature, minor fixes.                                                                                              |

### 3.0 Hardware Requirements on HP OpenView - HPUX

- HP 9000 series model 700 or greater
- Minimum of 96 Megabytes of RAM and 2 Gigabytes of hard disk space with 350 megabytes free disk space and 500 megabytes of swap space
- Minimum disk space requirements:

|         |                      |
|---------|----------------------|
| /opt    | 35 megabytes         |
| /system | less than 1 megabyte |
- SCM card
- CD ROM drive

### 3.1 Determining Hard Disk Space

1. Login as **root**
2. Type **sam**
3. Select **Disk & Filesystems**
4. Select **Filesystems**
5. Type / and select **Actions ->View More Information .**

---

**Note:** *For information on memory, swap space, and hard disk requirements for OpenView on HPUX, refer to the HP OpenView Network Node Manager Products Installation Guide.*

---

### 4.0 Software Requirements

The following HPUX and HP OpenView software must be installed and operational before installing this version of TEAM Core. Refer to Table 4 for detailed identification of all software products discussed below.

- HP OpenView for HPUX NNM Release
- HP 9000 S700/S800 HPUX OpenView version
- The most recent HPUX and HP OpenView patches for these versions

---

**Note:** **IMPORTANT:** *It is highly recommended that the customer download and install the latest HP OPENVIEW CUMULATIVE CONSOLIDATED PATCH from the following HP OpenView web site: <http://ovweb.external.hp.com/cpe/patches>. This will ensure that you have updated HP Open View along with any current fixes to reported problems. Refer to the HPUX web site for HPUX 11.0 Operating System updates.*

---

---

**Note:** *It is the customer's responsibility to install the listed HP software and patches, and ensure they are fully operational before loading the General DataComm TEAM applications.*

---

---

## 5.0 TEAM Core Installation in HPUX Environments

TEAM Core software can be installed in one of three HPUX environments.

- Common Desktop Environment (referred to as CDE or DT)
- HP Visual User Environment (VUE)
- Distributed Environment

Installation includes loading TEAM software and updating user environments. The procedures vary depending on the type of environment. Some environment updating procedures require you to use *vi* or your favorite editor to change your environment scripts. All procedures for each environment are provided below. Additional information about distributed environments is provided in Section 4.

---

**Note:** *TEAM Core shares the common utilities application package, GDCTeam, with other TEAM controllers. If a more recent version than the one being installed is already present on the workstation, the installation will be stopped and an error message will be displayed. If that occurs consult the first entry in the Log File to confirm the problem. Click Cancel in the Install Analysis window. From the SD Install window menu bar select **Options -> Change Options**. In the Options window, scroll to "Enforce dependency analysis errors in agent" and de-select it (click the selection box so that it goes dark), then click on OK. The new option setting permits you to install software packages selectively. Resume the installation from step 9, selecting only GDCShelf5. Dismiss the resulting Dependency Message window by clicking OK.*

---

---

**Note:** *For detailed information on Event Forwarding, refer to the HP OpenView Guide to Scalability and Distribution for Network Node Manager, page 138.*

---

---

**Note:** *You can access the Logfile display by clicking the Logfile button in the SD Install window. This displays the version number of GDC\_APPS as OV3.0.0, which is also the version number for every individual package installed.*

---

## 5.1 TEAM Core Installation in CDE and VUE

1. Make sure all users exit HP OpenView for HPUX.
2. Close all HP OpenView and TEAM application windows (if applicable).
3. Insert the TEAM Core CD into the CD ROM drive.
4. At a shell prompt become super user by entering the following command:  

```
su root
```
5. Check / to make sure there is a /**cdrom** directory already present. If not, create it.

6. Start the installation process by entering the following commands:

```
 csh
 mount /dev/dsk/c0t2d0 /cdrom
 cd /cdrom/HPUX
 ./INSTALL*
```
7. The install script will first run `/opt/OV/bin/ovstop` to stop HP OpenView background processes. Then, the SD Install - Software Selection window appears, indicating `swinstall` has begun.
8. Select **GDC\_APPS** from the scroll box and double click on it. A list of the individual TEAM applications appears.
9. Highlight one or both of the TEAM Core applications to be installed:

```
 GDCTeam
 GDCShelf5
```
10. Select **Actions ->Mark for Install**.
11. Select **Actions ->Install (analysis)**.
12. In the Install Analysis dialog box, click **OK** to proceed.
13. In the Confirmation window, click **Yes** to continue with the installation.
14. The following error message will appear:

```
 $HOME..sw/sessions/swinstall.last
```
15. Click **OK**. TEAM Core software installation will now begin.
16. When the process is complete, the **Done** button in the Install Window dialog box becomes “un-grayed”. Click **Done**.
17. From the main SD Install window, select **File->Exit**.
18. The install script then starts HP OpenView background processes by running:

```
 /opt/OV/bin/ovstart
```
19. Confirm that the correct versions of software have been installed by typing:

```
 /usr/sbin/swlist GDC_APPS
```
20. All GDC software packages installed on the workstation will be displayed along with their version numbers.
21. Unmount the CD ROM by typing:

```
 cd /
 umount /cdrom
 exit
```
22. Remove the CD from the CD ROM drive.
23. Confirm HP OpenView and TEAM Core processes are running by typing:

```
 /opt/OV/bin/ovstatus
```

### 5.1.1 TEAM Core Installation in HP-UX 10.20 and Higher

To allow the Notepad application under the HP OpenView window menu **Misc->Notepad** to work properly, enter the following commands:

```
cd /usr/vue/bin
su root
ln -s /usr/bin/X11/hpterm hpterm
```

### 5.2 Adding/Updating User Accounts in CDE and VUE

1. Type **sam**
2. Select **Users and Groups**.
3. Select **Users**.
4. Under the Actions menu, select **Add**.
5. Enter Login name and select the shell you desire (prefer cshell)
6. Enter Password if desired
7. Exit **sam**
8. Log off and log back in under a user account.

#### 5.2.1 Common Desktop Environment Only

Following the TEAM Core installation, update each user account in a Common Desktop Environment as described below.

1. Open the **\$HOME/.dtprofile** file with your editor and read the lengthy comments that are included in it. The comments provide information on:
  - A. how to use the C (csh), Bourne (sh), and Korn (ksh) shells in the CDE
  - B. terminal commands which should not be used because they can prevent login. When using the csh shell, the commands are generally present in **.login** and **.cshrc** files. When using the sh or ksh shells, they are in **.login** and **.profile** files.
2. After reviewing the comments, edit the **\$HOME/.dtprofile** file to remove the leading pound sign(s) in the line that contains

```
###DTSOURCEPROFILE=true
```
3. If you are using C (csh) Shell you must add the following lines to **\$HOME/.cshrc**:

```
source /opt/OV/bin/ov.envvars.csh
set path=($path $OV_BIN)
xhost +HostName
```
4. If you are using Bourne(sh) shell or Korn(ksh) shell you must add the following lines to **\$HOME/.profile**:

```
./opt/OV/bin/ov.envvars.sh
PATH=$PATH:$OV_BIN; export PATH
```
5. Add the following line to **\$HOME/.xdefaults**:

```
#include "/opt/OV/bin/gdc_load_resources"
```

6. The Common Desktop Environment is now updated for all users. Complete the installation by typing:

```
ovw &
```

7. You must now logout and login in order for the changes to take effect.

### 5.2.2 HP Visual User Environment Only

Following TEAM Core installation, update each user account in an HP Visual User Environment as described below:

1. Open the `$HOME/.vueprofile` file to remove the leading pound sign(s) in the line that contains

```
###VUESOURCEPROFILE="true"
```

2. If you are using C (csh) Shell you must add the following lines to `$HOME/.cshrc`:

```
source /opt/OV/bin/ov.envvars.csh
set path=($path $OV_BIN)
xhost +HostName
```

3. If you are using Bourne(sh) shell or Korn(ksh) shell you must add the following lines to `$HOME/.profile`:

```
. /opt/OV/bin/ov.envvars.sh
PATH=$PATH:$OV_BIN; export PATH
```

4. At the command line, type:

```
xrdb -merge /opt/OV/bin/gdc_load_resources
```

5. To verify the success of the previous command, type:

```
xrdb - query | grep "OI*FontSet"
```

6. The following response should appear:

```
*OI*FontSet: -misc-fixed-medium-r-semicondensed--13-
120-75-75-c-60-iso8859-1
```

7. The HP Usual User Environment is now updated for all users. Complete the installation by typing:

```
ovw &
```

8. You must now logout and login in order for the changes to take effect.

---

**Note:** *Changes made to the window manager may cause this X resource to get lost. If that happens, repeat the steps in this procedure. Refer to the HP Visual User Environment (VUE) User's Guide for more information on setting up resources.*

---

## 5.3 Installing in an HPUX Distributed Environment

A distributed environment consists of three types of workstations. Not all workstations require installation of all software, but the workstations must be set up in the following order:

- A. Collection Station
- B. Management Station
- C. Management Console

The procedures for TEAM Core and product software installation vary depending on the type of workstation. Perform the installation and set up procedures for each workstation in your distributed environment.

### 5.3.1 Setting Up Collection Stations

On workstations that serve as collection stations, you must install the TEAM software and then configure events so that traps are forwarded to the management station. Refer to the event data in Table 5 during this installation process.

**Table 5: Event Forwarding Data**

| Enterprise Name (Enterprise ID)    | Event Name (Enterprise Identifier)              |
|------------------------------------|-------------------------------------------------|
| gdc_cmnAlarm(.1.3.6.1.4.1.498.1.4) | dmscmnAlarmTrap(.1.3.6.1.4.1.498.1.4.0.1)       |
| gdc_scm(.1.3.6.1.4.1.498.3.6)      | dmsSCMPowerSupplyTrap(.1.3.6.1.4.1.498.3.6.0.3) |
| gdc_scm(.1.3.6.1.4.1.498.3.6)      | dmsSCMAliveTrap(.1.3.6.1.4.1.498.3.6.0.4)       |
| gdc_scm(.1.3.6.1.4.1.498.3.6)      | dmsSCMcoldStart(.1.3.6.1.6.3.1.1.5.1)           |
| gdc_scm(.1.3.6.1.4.1.498.3.6)      | dmsSCMwarmStart(.1.3.6.1.6.3.1.1.5.2)           |
| gdc_scm(.1.3.6.1.4.1.498.3.6)      | dmsSCMAuthentication(.1.3.6.1.6.3.1.1.5.5)      |

1. Become a super user by typing **su** and supplying the super user password.
2. Set up environment variables by typing:  

```
/usr/bin/sh
./opt/OV/bin/ov.envvars.sh
```
3. Insert the TEAM Core CD into the CDROM drive.
4. Create a directory named **/cdrom** if one doesn't already exist in **/**.
5. Mount the CD by typing:  

```
mount/dev/dsk/c0t2d0 /cdrom
```
6. Register GDC Trap format by typing:  

```
cd /cdrom/HPUX
$OV_BIN/xnmevents -merge `./SHELFTRAPD.CONF;1`
```
7. Start the Event system configurator GUI by typing:  

```
$OV_BIN/xnmtrap
```



8. From the Enterprise Identification pane, select an Enterprise Name  
*for example:* `gdc_cmnAlarm`
9. From the Event Identification pane, select an Event Name  
*for example:* `dmscmnAlarmTrap`
10. From the Event Configuration window menu bar, select **Edit->Modify Event**. The Event Configurator/Modify Event dialog box appears.
11. Click on the Forward Event check box to expand the dialog box. The Forwarded Event Destinations pane displays.
12. Type the hostname or IP Address for destination. Click **Add**, then click **OK**. Destinations are the managements stations to which events will be forwarded.
13. Repeat steps 9 through 12 for each of the events listed in Table 5. When all events are forwarded, click **OK** in the Event Configurator/Modify Event dialog box.
14. At the Event Configuration window, click **File->Save** to save the changes.
15. To cause Openview processes to re-read the trapd.conf file, generate Event by typing:  
`$OV_BIN/xnmtrap -event`
16. Unmount the cdrom by typing:  
`umount /cdrom`

### 5.3.2 Installing TEAM Applications on the Management Station

To install TEAM Core software and TEAM product software on the Management Station, perform the following steps:

1. Make sure all users exit HP OpenView for HPUX.
2. Close all HP OpenView and TEAM application windows (if applicable).
3. Insert the TEAM Core CD into the CD ROM drive.
4. At a shell prompt become super user by entering the following command:  
`su root`
5. Check / to make sure there is a `/cdrom` directory already present. If not, create it.
6. Start the installation process by entering the following commands:  
`cd /cdrom/HPUX`  
`./INSTALL*`
7. The install script will first run `/opt/OV/bin/ovstop` to stop HP OpenView background processes. Then, the SD Install - Software Selection window appears, indicating `swinstall` has begun.
8. Select `GDC_APPS` from the scroll box and double click on it. A list of the individual TEAM applications appears.

9. Highlight one or both of the TEAM Core applications to be installed:  
`GDCTeam`  
`GDCShelf5`
10. Select **Actions ->Mark for Install**.
11. Select **Actions ->Install (analysis)**.
12. In the Install Analysis dialog box, click **OK** to proceed.
13. In the Confirmation window, click **Yes** to continue with the installation.
14. The following error message will appear:  
`$HOME..sw/sessions/swinstall.last`
15. Click **OK**. TEAM Core software installation will now begin.
16. When the process is complete, the **Done** button in the Install Window dialog box becomes “un-grayed”. Click **Done**.
17. From the main SD Install window, select **File->Exit**.
18. The install script then starts HP OpenView background processes by running `/opt/OV/bin/ovstart`.
19. Confirm that the correct versions of software have been installed by typing:  
`/usr/sbin/swlist GDC_APPS`
20. All GDC software packages installed on the workstation will be displayed along with their version numbers.
21. Unmount the CD ROM by typing:  
`cd /`  
`umount /cdrom`  
`exit`
22. Remove the CD from the CD ROM drive.
23. Confirm HP OpenView and TEAM Core processes are running by typing:  
`/opt/OV/bin/ovstatus`

### 5.3.3 Setting Up the Management Station

1. At the shell prompt, become a super user by typing:  
`su root`
2. Type the following commands:  
`/opt/OV/bin/ovstop`  
`/sbin/init.d/nfs.client stop`  
`/sbin/init.d/nfs.server start`
3. To ensure the NFS server daemon process `nfsd` is running, type the following command and verify the results:  
`ps -ef | grep nfsd`

---

**Note:** *If the `nsf` is not running, edit the `etc/rc.config.d/nfsconf` file and change `NFS_SERVER=0` to `NFS_SERVER=1`. Save the file, then repeat steps 1 through 3.*

---

4. To add all Management Consoles to the Management Station, edit the `/etc/hosts` file by typing each Console's specific IP address and Hostname on a separate line, as shown in the example:

```
###.###.###.### Console_Hostname
###.###.###.### Console_Hostname
```

5. Save and close the `/etc/hosts` file.

---

**Note:** *If using `vi` editor, use `wq!` to save and close the file.*

---

6. To allow a single Management Console to share the Management Station directories over NFS, edit the `/etc/exports` file as follows:

```
/etc/opt/OV/share -root=Console_Hostname
/var/opt/OV/share -root=Console_Hostname
/usr/tmp -root=Console_Hostname
```

7. Save and close the `/etc/exports` file.
8. To share the Management Station directories with the Consoles over NFS, type:

```
usr/sbin/exportfs -au
usr/sbin/exportfs -av
```

9. Edit the file `/etc/opt/OV/share/conf/ovwdb.auth` file as shown below to add an entry for the Console, as shown in the example:

```
Console_Hostname +
```

10. Edit the file `/etc/opt/OV/share/conf/ovw.auth` file as shown below to add an entry for the Console, as shown in the example:

```
Console_Hostname +
```

11. To start HP Openview processes, type:

```
/opt/OV/bin/ovstart
```

12. Exit super user by typing `exit`.

13. Complete the setup by typing:

```
ovw &
```

---

### 5.3.4 Installing TEAM Applications on the Management Console

---

**Note:** *If the HPUX distributed environment has been set up, it must be disabled temporarily before loading any TEAM software to avoid sharing conflicts with the server. Additional steps for this are provided below.*

---

1. Make sure all users exit HP OpenView for HPUX.
2. Close all HP OpenView and TEAM application windows (if applicable).
3. On the Management Console, become super user by typing:

```
su root
```

*If the HPUX distributed environment has been set up, perform steps 4 - 9. Otherwise, skip to step 10.*

4. Disconnect as a HP OpenView client by typing:

```
/opt/OV/bin/ovwsetupclient -u
```
5. Open the file `/etc/fstab` and type a # in the beginning of each line to comment out each line with a Console hostname.
6. Save and close the file.
7. On the Management Station, become a super user and open the file `/etc/exports`. Comment out each line with a Console hostname by typing a # in the beginning of each line.
8. Save and close the file.
9. On the Management Console, become a super user and enter the following commands:

```
/etc/umount Station_Hostname:/etc/opt/OV/share
/etc/umount Station_Hostname:/var/opt/OV/share
/etc/umount Station_Hostname:/usr/tmp
```

10. Insert the TEAM application CD of interest (TEAM521A, TEAM800T3, etc.) into the CD ROM drive.
11. At a shell prompt become super user by entering the following command:

```
su root
```

12. Check `/` to make sure there is a `/cdrom` directory already present. If not, create it.
13. Start the installation process by entering the following commands:

```
csch
mount /dev/dsk/c0t2d0 /cdrom
cd /cdrom/HPUX
./INSTALL*
```

14. The install script will first run `/opt/OV/bin/ovstop` to stop HP OpenView background processes. Then, the SD Install - Software Selection window appears, indicating `swinstall` has begun.

15. Select **GDC\_APPS** from the scroll box and double click on it. A list of the individual TEAM applications appears.
16. Highlight one or both of the TEAM Core applications to be installed:  
**GDCTeam**  
**GDCShelf5**
17. Select **Actions ->Mark for Install**.
18. Select **Actions ->Install (analysis)**.
19. In the Install Analysis dialog box, click **OK** to proceed.
20. In the Confirmation window, click **Yes** to continue with the installation.
21. The following error message will appear:  
**\$HOME..sw/sessions/swinstall.last**
22. Click **OK**. TEAM Core software installation will now begin.
23. When the process is complete, the **Done** button in the Install Window dialog box becomes "un-grayed". Click **Done**.
24. From the main SD Install window, select **File->Exit**.
25. The install script then starts HP OpenView background processes by running **/opt/OV/bin/ovstart**.
26. Confirm that the correct versions of software have been installed by typing:  
**/usr/sbin/swlist GDC\_APPS**
27. All GDC software packages installed on the workstation will be displayed along with their version numbers.
28. Unmount the CD ROM by typing:  
**cd /**  
**umount /cdrom**  
**exit**
29. Remove the CD from the CD ROM drive.
30. Confirm that HP OpenView and TEAM Core processes are running by typing:  
**/opt/OV/bin/ovstatus**

*Perform steps 31 - 38 only if the HPUX distributed environment has been set up. Otherwise, skip to step 39.*

31. On the Management Station, become a super user by typing:  
**su root**
32. Open the file **/etc/exports**. Restore the Console hostnames by removing the **#** from the beginning of each line containing the Console hostname.
33. Save and close the file **/etc/exports**.
34. Type the following commands:  
**/usr/sbin/exportfs -au**  
**/usr/sbin/exportfs -av**

35. On the Management Console, become a super user by typing:  

```
su root
```
36. Open the file `/etc/fstab` and restore each line by deleting the `#` in the beginning of each line.
37. Save and close the file.
38. Type the following commands:  

```
/etc/mount Station_Hostname:/etc/opt/OV/share
/etc/mount Station_Hostname:/var/opt/OV/share
/etc/mount Station_Hostname:/usr/tmp
/opt/OV/bin/ovsetupclient /opt/OV/nfs/Station_Hostname
```

---

**Note:** *The path may be different if automounter was used.*

---

39. Exit super user and become a normal user. On the Management Console, bring up the OpenView windows using the server database by typing:  

```
ovw &
```

### 5.3.5 Setting Up the Management Console

1. At the shell prompt, become a super user by typing:  

```
su root
```
2. Type the following commands:  

```
/opt/OV/bin/ovstop
/sbin/init.d/nfs.server stop
/sbin/init.d/nfs.client start
```
3. To ensure the NFS client daemon process `biod` is running, type the following command and verify the results:  

```
ps -ef | grep biod
```

---

**Note:** *If the `biod` is not running, edit the `/etc/rc.config.d/nfsconf` file and change `NFS_CLIENT=0` to `NFS_CLIENT=1`. Save the file, then repeat steps 2 and 3.*

---

4. To add the Management Station to the Management Console, edit the `/etc/hosts` file by typing the specific Management Station IP address and Hostname, as shown in the example:  

```
###.###.###.### Station_Hostname
###.###.###.### Station_Hostname
```
5. Save and close the `/etc/hosts` file.

---

**Note:** *If using `vi` editor, use `wq!` to save and close the file.*

---

- Type the following commands:

```
mkdir -p /opt/OV/nfs/Station_Hostname/etc/opt/OV/share
mkdir -p /opt/OV/nfs/Station_Hostname/var/opt/OV/share
rm /usr/tmp
mkdir -p /usr/tmp
chmod 777 /usr/tmp
```

- To mount the Management Station directories on this Console over NFS, edit the `/etc/fstab` file as shown in the example:

```
Station_Hostname:/etc/opt/OV/share /opt/OV/nfs/Station_Hostname/etc/opt/OV/share nfs rw 0 0
Station_Hostname:/var/opt/OV/share /opt/OV/nfs/Station_Hostname/var/opt/OV/share nfs rw 0 0
Station_Hostname:/usr/tmp /usr/tmp nfs rw 0 0
```

- Save and close the `/etc/fstab` file.

---

**Note:** *If using vi editor, use **wq!** to save and close the file.*

---

- To mount the Management Station directories on this Console over NFS, type the following commands:

```
/etc/mount Station_Hostname:/etc/opt/OV/share
/etc/mount Station_Hostname:/var/opt/OV/share
/etc/mount Station_Hostname:/usr/tmp
```

- Set up the Management Console by typing:

```
/opt/OV/bin/ovwsetupclient /opt/OV/nfs/Station_Hostname
```

- Exit Super User by typing `exit`.

- Complete the setup by typing:

```
ovw &
```

---

**Note:** *It is not necessary to start HP OpenView daemons using `/opt/OV/bin/ovstart` on the Management Console because the Console shares the same HP OpenView database present on the Management Station over NFS.*

---



---

**Note:** *If the Console OpenView windows does not start up properly, reboot the Management Station and wait until it is UP completely. Then, reboot the Console.*

---

### 5.3.6 Adding/Updating User Accounts in Distributed Environments

- Type `sam`
- Select **Users and Groups**.
- Select **Users**.
- Under the Actions menu, select **Add**.
- Enter Login name and select the shell you desire (prefer cshell)

6. Enter Password if desired
7. Exit **sam**
8. Log off and log back in under a user account.

## 6.0 TEAM Core De-Installation in HPUX Environments

1. In the OpenView Root map, click on the TEAM universe icon.
2. From the Edit menu of the Root map menu bar, select **Delete**, then select **From All Submaps** to remove the TEAM icon from the Root map.
3. Make sure that all users exit HP OpenView for HPUX.
4. Insert the TEAM Core CD into the CD ROM drive.
5. At the shell prompt, become super user by typing:  

```
su root
```
6. Start the removal process by entering the following commands:  

```
csch
mount /dev/dsk/c0t2d0 /cdrom
cd /cdrom/HPUX
./REMOVE*
```
7. The remove script will first run `/opt/OV/bin/ovstop` to stop HP OpenView background processes. Then, the SD Remove - Software Selection window appears, indicating **swremove** has begun.
8. Select **GDC\_APPS** from the scroll box and double click on it. A list of the individual TEAM applications appears.
9. Highlight one or both of the TEAM Core applications to be removed:  

```
GDCTeam
GDCShelf5
```
10. Select **Actions->Mark for Remove**.
11. Select **Actions ->Remove (analysis)**.
12. In the Remove Analysis dialog box, click **OK** to proceed.
13. In the Confirmation window, click **Yes** to continue with the removal. The following error message will appear:  

```
$HOME..sw/sessions/swremove.last
```
14. Click **OK**. TEAM Core software removal will now begin.
15. When the process is complete, the **Done** button in the Remove Window dialog box becomes “un-grayed”. Click **Done**.
16. From the main SD Remove window, select **File->Exit**.
17. The remove script then starts HP OpenView background processes by typing:  

```
/opt/OV/bin/ovstart
```



18. Unmount the CD ROM by typing:  

```
cd /
umount /cdrom
exit
```
19. Remove the CD from the CD ROM drive.
20. Confirm HP OpenView processes are running by typing the command:  

```
/opt/OV/bin/ovstatus
```

## 6.1 Distributed Environment De-Installation

De-installation of TEAM software in a distributed HPUX environment should be performed in the following order:

- A. Collection Station
- B. Management Station
- C. Management Console

Procedures vary, depending on the type of environment. Refer to the appropriate procedures below. Additional information about distributed environments is provided in Section 4.

---

**Note:** *TEAM Core shares the common utilities application package, GDCTeam, with other TEAM controllers. Do not remove it unless you are certain no controllers requiring GDCTeam are installed on the workstation*

---

### 6.1.1 De-Installing TEAM Core from the Collection Stations

1. Become a super user by typing **su** and then supplying the super user password.
2. Setting up environment variables by typing:  

```
/usr/bin/sh
. /opt/OV/bin/ov.envvars.sh
```
3. Start the Event system configurator GUI by typing:  

```
$OV_BIN/xnmtrap
```
4. Select an event and delete it by selecting **Edit->Delete->Event**. Refer to Table 5 for a listing of all events to be deleted.
5. Delete the enterprise by selecting:  

```
Edit->Delete->Enterprise Identifier
```
6. From the Event Configuration window, click **File->Save** to save the changes.

### 6.1.2 De-Installing TEAM Applications from the Management Station

1. In the OpenView Root map, click on the TEAM universe icon.
2. From the Edit menu of the Root map menu bar, select **Delete**, then select **From All Submaps** to remove the TEAM icon from the Root map.
3. Make sure that all users exit HP OpenView for HPUX.

4. Insert the TEAM Core CD into the CD ROM drive.
5. At the shell prompt, become super user by typing:  

```
su root
```
6. Start the removal process by entering the following commands:  

```
csch
mount /dev/dsk/c0t2d0 /cdrom
cd /cdrom/HPUX
./REMOVE*
```
7. The remove script will first run `/opt/OV/bin/ovstop` to stop HP OpenView background processes. Then, the SD Remove - Software Selection window appears, indicating `swremove` has begun.
8. Select `GDC_APPS` from the scroll box and double click on it. A list of the individual TEAM applications appears.
9. Highlight one or both of the TEAM Core applications to be removed:  

```
GDCTeam
GDCShelf5
```
10. Select `Actions->Mark for Remove`.
11. Select `Actions ->Remove (analysis)`.
12. In the Remove Analysis dialog box, click `OK` to proceed.
13. In the Confirmation window, click `Yes` to continue with the removal. The following error message will appear: `$HOME..sw/sessions/swremove.last`
14. Click `OK`. TEAM Core software removal will now begin.
15. When the process is complete, the `Done` button in the Remove Window dialog box becomes "un-grayed". Click `Done`.
16. From the main SD Remove window, select `File->Exit`.
17. The remove script then starts HP OpenView background processes by typing  

```
/opt/OV/bin/ovstart
```
18. Unmount the CD ROM by typing:  

```
cd /
umount /cdrom
exit
```
19. Remove the CD from the CD ROM drive.
20. Confirm HP OpenView processes are running by typing the command:  

```
/opt/OV/bin/ovstatus
```

---

### 6.1.3 De-Installing TEAM Applications from the Management Consoles

---

**Note:** *If the HPUX distributed environment has been set up, it must be disabled temporarily to avoid sharing conflicts with the server. Additional steps for this are provided below.*

---

1. Make sure all users exit HP OpenView for HPUX.
2. Close all HP OpenView and TEAM application windows (if applicable).
3. On the Management Console, become super user by entering:

```
su root
```

*If the HPUX distributed environment has been set up, perform steps 4 - 8. Otherwise, skip to step 9.*

4. Disconnect as a HP OpenView client by running:

```
/opt/OV/bin/ovwsetupclient -u
```
5. Open the `/etc/fstab` file and type a `#` in the beginning of each line which contains the Console hostname. Save and close the `/etc/fstab` file.
6. On the Management Station, become a super user and open the file `/etc/exports`. Type a `#` in the beginning of each line which contains this Console hostname.
7. Save and close the `/etc/exports` file.
8. On the Management Console, become a super user and type the following commands:

```
/etc/umount Station_Hostname:/etc/opt/OV/share
/etc/umount Station_Hostname:/var/opt/OV/share
/etc/umount Station_Hostname:/usr/tmp
```

9. Insert the TEAM Core or TEAM product software CD into the CD ROM drive.
10. Start the removal process by entering the following commands:

```
csch
mount /dev/dsk/c0t2d0 /cdrom
cd /cdrom/HPUX
./REMOVE*
```

11. The remove script will first run `/opt/OV/bin/ovstop` to stop HP OpenView background processes. Then, the SD Remove - Software Selection window appears, indicating `swremove` has begun.
12. Select `GDC_APPS` from the scroll box and double click on it. A list of the individual TEAM applications appears.
13. Highlight one or both of the TEAM Core applications to be removed:

```
GDCTeam
GDCShelf5
```

14. Select `Actions ->Mark for Remove`.
15. Select `Actions ->Remove (analysis)`.

16. In the Remove Analysis dialog box, click **OK** to proceed.
17. In the Confirmation window, click **Yes** to continue with the removal.
18. The following error message will appear:  

```
$HOME..sw/sessions/swremove.last
```
19. Click **OK**. TEAM Core software removal will now begin.
20. When the process is complete, the **Done** button in the Remove Window dialog box becomes “un-grayed”. Click **Done**.
21. From the main SD Remove window, select **File->Exit** .
22. The remove script then starts HP OpenView background processes by running  

```
/opt/OV/bin/ovstart
```
23. Unmount the CD ROM by typing:  

```
cd /
umount /cdrom
exit
```
24. Remove the CD from the CD ROM drive.

***Perform steps 25 - 31 only if the HPUX distributed environment has been set up. Otherwise, skip to step 32.***

25. On the Management Station, become a super user by typing  

```
su root
```
26. Open the file `/etc/exports`. Remove the **#** from the beginning of each line which contains the Console hostname. The file should contain the following lines:  

```
/etc/opt/OV/share -root=First_System:Console_Hostname
/var/opt/OV/share -root=First_System:Console_Hostname
/usr/tmp -root=First_System:Console_Hostname
```
27. Save and close the file `/etc/exports`.
28. Run the following commands:  

```
/usr/sbin/exportfs -au
/usr/sbin/exportfs -av
```
29. On the Management Console, become a super user by typing:  

```
su root
```
30. Open the file `/etc/fstab` and restore each line by deleting the **#** in the beginning of each line. Save and close the file.
31. Type the following commands:  

```
/etc/mount Station_Hostname:/etc/opt/OV/share
/etc/mount Station_Hostname:/var/opt/OV/share
/etc/mount Station_Hostname:/usr/tmp
/opt/OV/bin/ovwsetupclient /opt/OV/nfs/Station_Hostname
```

**Note:** *The path may be different if automounter was used.*

---

32. Exit super user and become a normal user. On the Management Console, bring up the OpenView windows using the server database by typing:

```
ovw &
```

## 7.0 Known Issues

- Some TEAM applications may display meaningless characters in the application window headings. This is due to a font conflict which can be resolved by typing the following on the command line *before* running `ovw`:

```
xrdb -merge /opt/OV/bin/gdc_load_resources
```

- In some TEAM applications, the following display anomalies may occur which do not affect system or application operation:

On an Alarm application display, LED labels may appear off-center over their associated LED.

In a Report application display, the content window may overlap the last character of Y-axis labels for the window.

## 8.0 Operating Guidelines

- When a new SpectraComm card is added to the shelf and if an X-TERMINAL is being run on a server, the shelf map will not be automatically updated because the map is read-only. To update the map, select **Map->Refresh Map** from the shelf map menu bar. The shelf map updates and submaps will close.
- A Line Terminating Unit (LTU) that is operating in CSU mode should not be selected as the Shelf Timing source for other devices in its shelf.
- Due to the loading of shared libraries, TEAM applications may take up to one minute to start up after an install of TEAM software or a reboot of the system.
- Circuit submap creation is not applicable for a DSU or DSE that has an associated remote.
- Deleting a shelf from the TEAM Universe map does not delete associated remotes linked to the shelf. The recommended procedure, rather than deleting the shelf itself, is to select the SCM for the shelf and delete it from all submaps.
- When installing TEAM Core software with HPOV Network Node Manager Release 05.0.1, disregard the following error messages as they occur. Installation will complete successfully despite these messages:

```
ovstart: ovspmd failed to start and no managers are running
ovw: Cannot open object database: Cannot connect to database
The ovwdb daemon is not running on the server <Hostname>.
Ask the administrator of this server to run "ovstart ovwdb".
ovstop: ovspmd is not running
```

- Some hardware devices controlled by TEAM applications occupy two SpectraComm shelf slots. Removing a two-slot device from its shelf and shifting it over one slot results in a corrupted display with a double image of the device's slot icon. To correct that condition delete the slot icon that is in error (red). When that is done the shelf map redisplay with its device population shown in the correct slots.
- Although the TEAM Core application is itself Year 2000 compliant, the License Key provided with the OpenView operating software may limit the range of dates that the system can recognize.
- If the default for font size is set too large, the text in an application window's title bar will not fit. To correct this, change the font size.
- With the SNMP 540 only, you may experience a delay of up to 30 seconds when invoking application windows from its Front Panel display. To avoid delays, invoke application windows from the main window.
- If the Event Log stops logging alarms coming in via the SCM, you must stop and then start the **shelf\_discovery** daemon, as follows:
  - A. Log in as super user and then type:  

```
/opt/OV/bin/ovstop shelf_discovery
```
  - B. Then type:  

```
/opt/OV/bin/ovstart shelf_discovery
```
- Performance of the workstation CPU may be impaired following the discovery or removal of TEAM shelves. The condition can be corrected by editing the **\$OV\_LRF/ovwdb.lrf** file to limit the maximum number of objects in the **ovwdb** cache. Use the following procedure to edit the file:
  - A. If HP OpenView Windows (ovw) is running, exit it by selecting the **Map:Exit** menu item.
  - B. Stop background processes by typing **ovstop**.
  - C. Make a backup copy of the **\$OV\_LRF/ovwdb.lrf** file. If the file does not exist, create it by copying from:  

```
$OV_NEW_CONF/OVWIN/ovwdb.lrf to $OV_LRF/ovwdb.lrf
```
  - D. Load **ovwdb.lrf** into a text editor. The default **ovwdb.lrf** file consists of:  

```
ovwdb:
ovwdb:OVs_YES_START::-0 -n5000:OVs_WELL_BEHAVED:15:
```
  - E. Modify **-n <number of objects>**  

The value depends on the number of nodes to be managed and the amount of memory resources on the system. With sufficient memory, performance is optimized when the **-n** option is not used. Use the **-n** option when memory capacity is limited.
  - F. Save the edited **ovwdb.lrf** file under the name **\$OV\_LRF/ovwdb.lrf**
  - G. The **ovaddobj** tells the start-up processes what to start. Update the **ovsuf** configuration file by typing:  

```
ovaddobj $OV_LRF/ovwdb.lrf
```
  - H. Restart the background processes by typing **ovstart**

- The TEAM Core application will cancel a firmware download if it detects incompatibility between the firmware and the circuit card that will run it. An error message will display.
- When using TEAM Core to download the SC 800 T3 firmware at the TEAM SpectraComm Firmware Download window, do not use the **select All** option if master and remote units appear together in the Target Equipment List. Doing so will erase the standby firmware in the remote units. Make sure to deselect any remote units before performing a broadcast download to master units. Then, select each remote unit and download the firmware individually.
- When using TEAM Core to download the SC 800 T3 firmware to a remote unit, it may be necessary to adjust the timing to avoid a timeout.
- After an installation of TEAM software, the user must enable **Discover New IP Nodes** from the shelf map Options menu in order for IP discovery to occur.
- In some TEAM applications, the text label associated with the Help link does not display. This does not affect the operation of the Help link.
- During installation of the TEAM software, the following error pop-up may appear: **The xterm environment has not been set.** This error will prevent any windows from launching. To correct this, add the following the following command should be added to the **\$HOME/.cshrc** file:

**xhost +HostName**





---

## Section 4 - TEAM Applications and HP OpenView NNM Scalable and Distributed Environments

### 1.0 Overview

This section briefly discusses the Scalability and Distribution features in NNM and how to integrate/install TEAM applications in a Scalable and Distributed environment. Refer to the HP OpenView Manual, "A Guide to Scalability and Distribution for NNM" for more detailed understanding and concepts.

### 1.1 Features and Advantages

The Scalable and Distribution features of the HP OpenView NNM provide robust performance over a wide range of network sizes and degrees of complexity.

The Scalable feature gives NNM the potential for handling networks of different sizes in both LAN and WAN environments. To make NNM scalable, the network management work load must be distributed to multiple systems. Then, the Distribution feature improves performance of NNM in large networks by reducing the amount of management traffic over network resources.

Advantages of these NNM features:

- The Scalable feature of NNM makes it easier to adapt network management for handling new networking landscapes.
- The Distribution feature minimizes the amount of network management traffic. Without this capability, it would be impractical to monitor thousands of nodes from a single workstation.
- Faster response times and better performance as work load is distributed to multiple workstations.
- Shared responsibilities reduces the risk of losing network management data in the event of an unexpected shutdown of the management station.
- One Common network management database (in most cases) for all users, so that modifications of managed nodes would be reflected across the board.

Drawbacks/Trade-offs of these NNM features:

- Distribution of tasks requires an increased number of computing resources.
- Scalable and distributed environment requires added complexity in setup.

---

## 1.2 Theory of Operation

In a Stand-alone environment, all network management tasks are done on a single workstation. In a Distributed environment tasks are handled by multiple workstations: Collection Station (CS), Management Station (MS), Management Console (MC). Depending on network size, structure, geography and trends, one of four deployment models should be chosen: Fully centralized, Centralized hierarchical, Hierarchical, or Co-operative independent.

- Figure 1 demonstrates a Centralized hierarchical model. Refer to the HP OpenView manual for examples of other models and for choosing the model for your needs.
- Figure 2 demonstrates the HP OpenView and TEAM processes and applications that run on the collection station, the management station, and the management console.

### 1.2.1 The Collection Station

A collection station discovers nodes and forwards this information to the management station. The collection station also monitors (the netmon process) the nodes in its domain and forwards any traps it receives from the managed node (IP device) to the management station. Depending on the number of managed nodes and network structure, there could be more than one collection station. The collection and management stations periodically synchronize node and topology information. Figure 1 shows two collection stations feeding node and topology information to the management station.

### 1.2.2 The Management Station

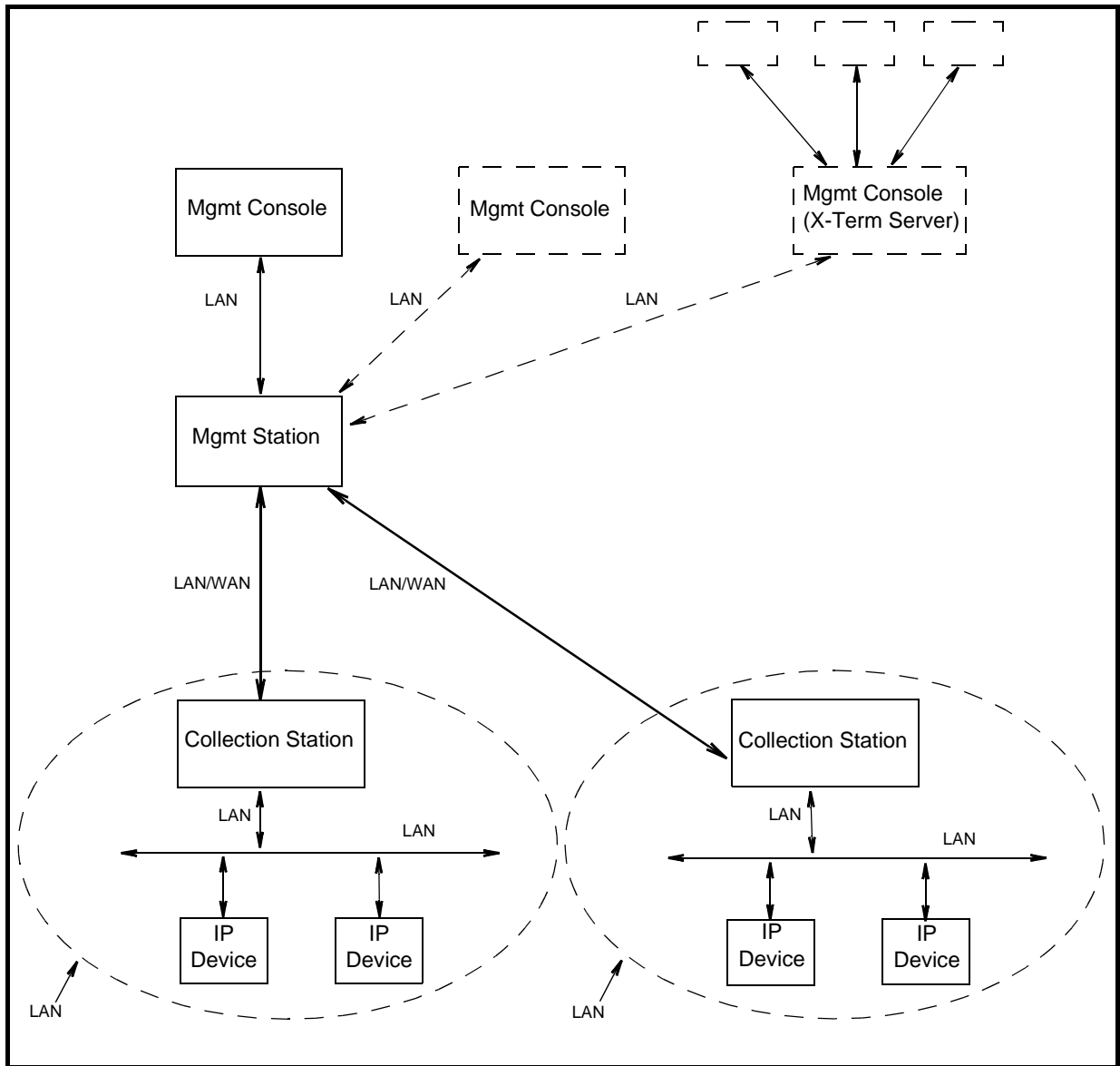
The management station processes the node and topology information it receives from the collection stations and stores the information (via ovwdb) in a database. The management station also receives from collection stations the trap information for various managed nodes (ovtrapd process) and stores it. There should only be one management station in a distributed setup so that the node information can be shared by all the users on various management consoles.

### 1.2.3 The Management Console

The management console is where all the user processes are executed. User interface (application) processes like ovw, xnmevents, xnmsnmpconf are executed here in order to manage the nodes in the management station's database. The Management Consoles should be connected to the Management Station using an Ethernet LAN or a high speed network matching the speeds of LAN. Management Station and the Management Consoles will share the same database by mounting the database over the Network Filing System (NFS).

### 1.2.4 Permissions

The first network operator to run ovw and launch OpenView screens will have read/write permissions to the database. The rest of the operators will get read-only permissions. Note that read-only screens do not synchronize automatically with changes in network topology or with the addition or deletion of devices to the database. To resynchronize the entire network map, network operators on the management console must manually perform a **Map -> Refresh Map** command. All network operators will be able to perform other TEAM Network Management operations, such as Configuration, Provisioning, Diagnostics. Operators must manage a unit in the shelf from only one workstation at a time.



**Figure 1: Example of the Centralized Hierarchical Model**

---

## 1.3 The Distribution of Processes and Applications

The sequence of events that occur end-to-end from the IP node to the management console (Figures 1 and 2) is as follows:

### Collection Station(s)

1. **netmon** process begins IP discovery, and populates the local topology database(**ovtopmdb**) with the help of **ovtopmd** process.
2. After the completion of discovery, the topology information is accessible by the management station.

### Management Station

3. The management station requests the collection station(s) for topology information via **ovrepld** process.
4. Upon obtaining the topology information (from all collection stations), the management station merges the data into its topology database.
5. Using the data in the topology database, the processes in the management station communicate with each node to update other information necessary to manage the node.
6. Periodically, the **ovrepld** processes on the collection station(s) and management station synchronize the topology data. Once synchronization is complete, only changes in status and topology get sent to the management station.

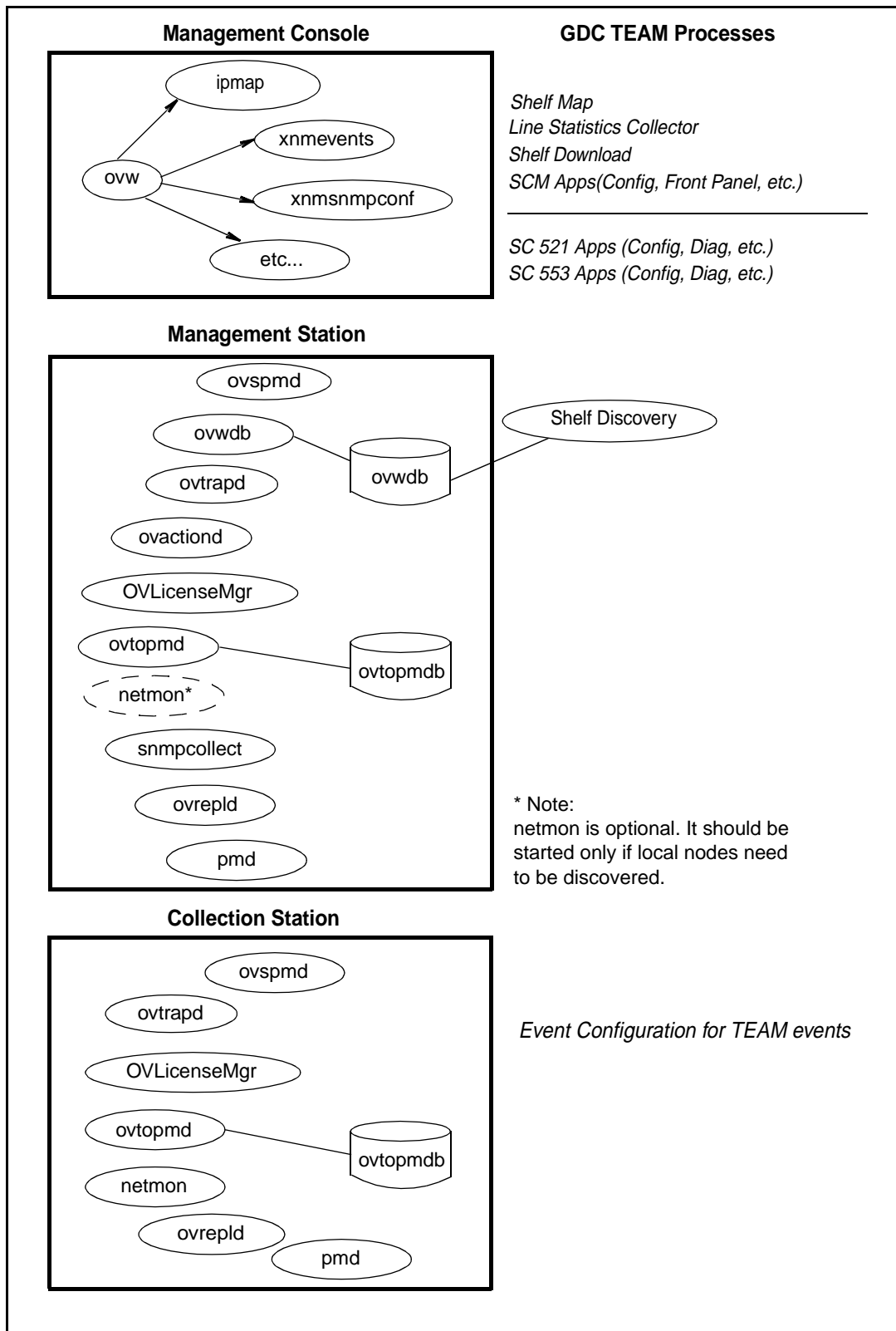
### Management Console and Management Console X Term Server

7. After the management station is ready with node information, the **ovw** process can be run.
8. Once **ovw** is up and running, network management on various nodes can be done.

---

**Note:** *When one of the management consoles is also designated as a X-Term Server, X-Terminals (such as Tektronics Graphics terminal) could be setup to display **ovw** sessions on these terminals. The **ovw** sessions are actually executed on the management console but displayed on the X-Terminals.*

---



**Figure 2: HP OpenView and Team Processes and Applications**

## 2.0 Integrating the TEAM Application in a Distributed Environment

Due to distribution of tasks in a distributed environment, TEAM software products must be installed on the collection station, the management station and the management console in the precise order as described in Sections 2 and 3 of these TEAM Core Release Notes. The following sections describe the dependency tree, discovery, and event handling of GDC devices for TEAM software products.

### 2.1 TEAM Software Product Dependency

To manage any GDC product using TEAM software, multiple software products are required. Figure 3 shows the dependencies among various products. In the example, the SC521 and SC553 cards along with their associated packages are being managed by TEAM521 and TEAM553. Both TEAM products are dependent upon TEAM Core. Because of this product dependency, TEAM Core must be installed on the workstation *before* installing TEAMSC521, etc.

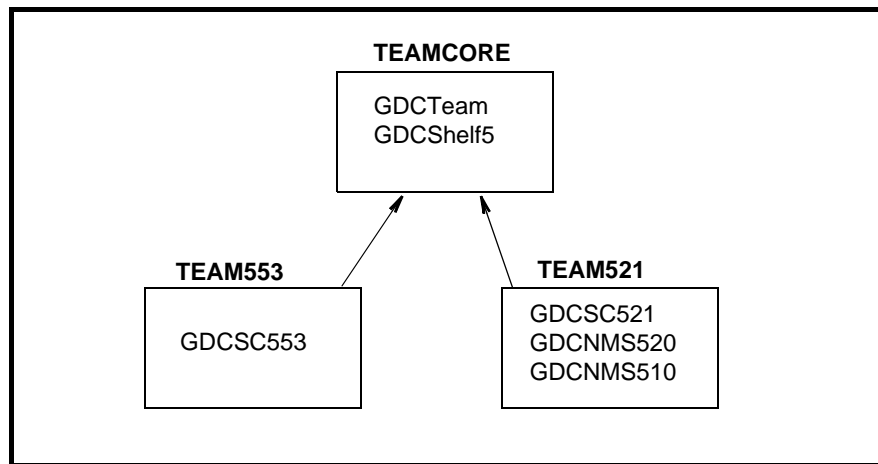


Figure 3: TEAM Software Product Dependencies

## 2.2 Discovery in an HP OpenView Distributed Environment

Once TEAM software is installed and configured in an HP OpenView NNM distributed environment, the system is ready for network management of GDC devices. This begins with the discovery of a GDC device on the management console where it is managed. Some of the typical applications that are executed on the management console are shown in Figure 2. The sequence of events that occur end-to-end is as follows:

1. A GDC device is discovered by a collection station and gets stored in its topology database.
2. This discovery information is requested by the management station in a synchronization cycle of **ovrepld** process.
3. The management station adds the device into its database as a new node.
4. Once a new node gets added on the management station, the **shelf\_discovery** gets notified of the change.
5. The **shelf\_discovery** process communicates with the SCM to get the shelf contents and other relevant information and stores the information.
6. After a GDC shelf is discovered, a new shelf gets added to the TEAM universe submap.
7. From this submap various GDC devices can be managed.

## 2.3 Event Handling

A trap generated from a GDC device arrives at the management console where it is updated. The sequence of events that occur end-to-end is as follows:

- A. When SCM is set up to do so, a GDC device sends a trap to the collection station.
- B. The collection station then forwards the trap to the management station, where it gets processed by **shelf\_discovery** process and notifies the shelfmap process on the management console.
- C. The shelfmap process updates the status of the device associated with the event. Note that one process runs for every ovw session.







