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## guide to interoperability of hp hardware and hardware management tools: hp Tootools 5.6 with ProLiant servers and Insight Manager 7 with hp Netserver systems

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## **abstract**

This document is written primarily for HP customers who have deployed HP NetServer systems and are using HP Tootools to manage distributed networks. As HP transitions all its industry standard server products to the HP ProLiant product line, HP management software will transition from Tootools to Insight Manager 7. HP is committed to protecting customer investments in legacy HP hardware and Tootools and to simplifying product transitions for customers. To eliminate the need for an immediate transition and to assist customers as they begin a transition, HP has enhanced both Tootools and Insight Manager 7 to provide simpler, better device management for Netserver and ProLiant products on a network.

This document describes enhanced capabilities of Tootools Version 5.6 and of Insight Manager 7, Service Pack 2 (SP2) and provides information about where to access more useful information and files for download.

## **introduction**

Today corporations find themselves responsible for managing a complex array of networks, clients, servers, operations systems, and applications. This task is complex, especially in an era of shrinking budgets. Long before the two companies merged in early 2002, both HP and Compaq recognized the inherent challenges in managing distributed enterprise systems; and each had developed web-based tools for monitoring and controlling the operation of distributed networks.

As HP transitions all of its industry standard server products to the ProLiant product line, HP management software will transition from Tootools to Insight Manager 7. However, HP is committed to protecting customer investments in legacy HP hardware and management software and to simplifying product transitions for customers. To assist customers in the transition process from Netserver to ProLiant servers, HP has updated both Insight Manager 7 and Tootools to provide enhanced management of Netserver and ProLiant server products.

This document describes enhanced capabilities of Tootools Version 5.6 and of Insight Manager 7 SP 2. It also provides information about the following:

- where to access Insight Manager 7 and Tootools 5.6 for download
- how to use Insight Manager 7 SP 2 to manage legacy HP Netserver systems
- how to use Tootools 5.6 to manage ProLiant servers
- tips for planning a migration from Tootools to Insight Manager 7 for server management
- information about existing enterprise management integration modules for Tootools and Insight Manager 7

## **using Insight Manager 7 SP2 to manage hp Netserver systems**

Insight Manager 7, the core of the ProLiant Essentials Foundation Pack, is a comprehensive management tool designed specifically to monitor and control the operation of Compaq servers and clients. Insight Manager 7 consists of two components:

- management agents that monitor the health of ProLiant servers and Compaq Evo desktops and portables
- a management server that provides functionality such as a device and event database, inventory reporting, and system software version control.

The management server and the management agents for Microsoft® Windows®, NetWare, and Linux operating systems are all remotely accessible through a web browser.

Management agents monitor more than 1,000 management parameters. Key subsystems are instrumented to make health, configuration, and performance data available to the agent software. The agents act upon that data by initiating alarms in the event of faults and by

providing updated management information, such as network interface or storage subsystem performance statistics.

For best results in using Insight Manager 7 to manage Netserver systems, HP recommends that customers update to Insight Manager 7 SP2, which is available in the ProLiant Essentials Foundation Pack or on the web at:

<http://h18000.www1.hp.com/products/servers/management/cim7-description.html>.

HP also recommends that customers install version 5.50 or greater of the Netserver management agents on their Netserver systems.

## management capabilities

Insight Manager 7 SP2 provides the following management capabilities for Netserver systems:

- **device discovery:** Discovers IP/IPX devices, including HP Netserver systems (Figure 1). Discovery filters can be enabled to discover only ProLiant and HP Netserver devices.
- **device identification:** Properly identifies (by product model) HP Netserver systems running Netserver agents. For best results, Netserver systems should be running version 5.50 agents or greater.
- **Tootools Remote Control Card and HP Server Remote Management Card:** Discovers these cards as "Management Processors." These cards will be automatically associated with their host servers. The Tootools Remote Control Card and HP Server Remote Management Card provide remote administration capabilities, such as power on/power off for HP Netserver systems.

figure 1. discovery of HP Netserver

Insight Manager 7 - Microsoft Internet Explorer

Address: <https://localhost:50000/ui/jsp/appFrame2.jsp>

Insight Manager 7 SP2

device status: 41 Critical, 31 Major, 9 Minor, 103 Normal, 26 Unknown

uncleared events: 108

support | logout

Home Devices Tools Settings

Overview  
Tasks  
Reports  
Queries  
Event  
Cluster  
My Favorites

Query Results: All Devices

HW	MP	SW	Device Name	Device Type	Device Address	Product Name
			16.101.169.60	Switch	16.101.169.60	HP ProLiant BL e-Class C...
			16.101.169.49	Switch	16.101.169.49	HP ProLiant BL e-Class C...
			13tc	Server	170.50.1.29	HP NetServer TC 4100
			tc4100	Server	16.101.169.189	HP NetServer TC 4100
			wbem13tc.wbem.com	Server	16.101.169.89	HP NetServer LH Series
			lownc479	Server	15.244.34.193	HP NetServer
			lownc479	Server	15.244.34.192	HP NetServer
			133r	Server	170.50.1.124	Deskpro
			133r	Server	170.50.1.63	Deskpro
			143p	Server	170.50.1.36	Deskpro
			hobpro	Other	16.101.169.65	(Unknown SNMP Device)
			bddrill	Other	170.50.1.143	(Unknown SNMP Device)
			bdfuel	Other	170.50.1.154	(Unknown SNMP Device)
			r1006 in Server r921	Other	170.50.1.44	(Unknown SNMP Device)
			bdprodigy	Other	170.50.1.177	(Unknown SNMP Device)
			rib0008021949ea	Other	16.101.169.132	(Unknown SNMP Device)
			PST-RDPMMASTER	Other	16.101.169.32	(Unknown SNMP Device)
			bdtrush	Other	170.50.1.107	(Unknown SNMP Device)
			lv	Other	170.50.1.10	(Unknown SNMP Device)
			lasonsw2k	Other	170.50.1.131	(Unknown SNMP Device)
			google	Other	170.50.1.52	(Unknown SNMP Device)
			lmp5470 in Server 170.50.1.9	Other	170.50.1.183	(Unknown SNMP Device)
			galaxy	Other	170.50.1.133	(Unknown SNMP Device)
			lcom	Other	170.50.1.237	(Unknown SNMP Device)

Devices in table: 41 Critical, 31 Major, 9 Minor, 103 Normal, 26 Unknown Total: 210

Applet started.

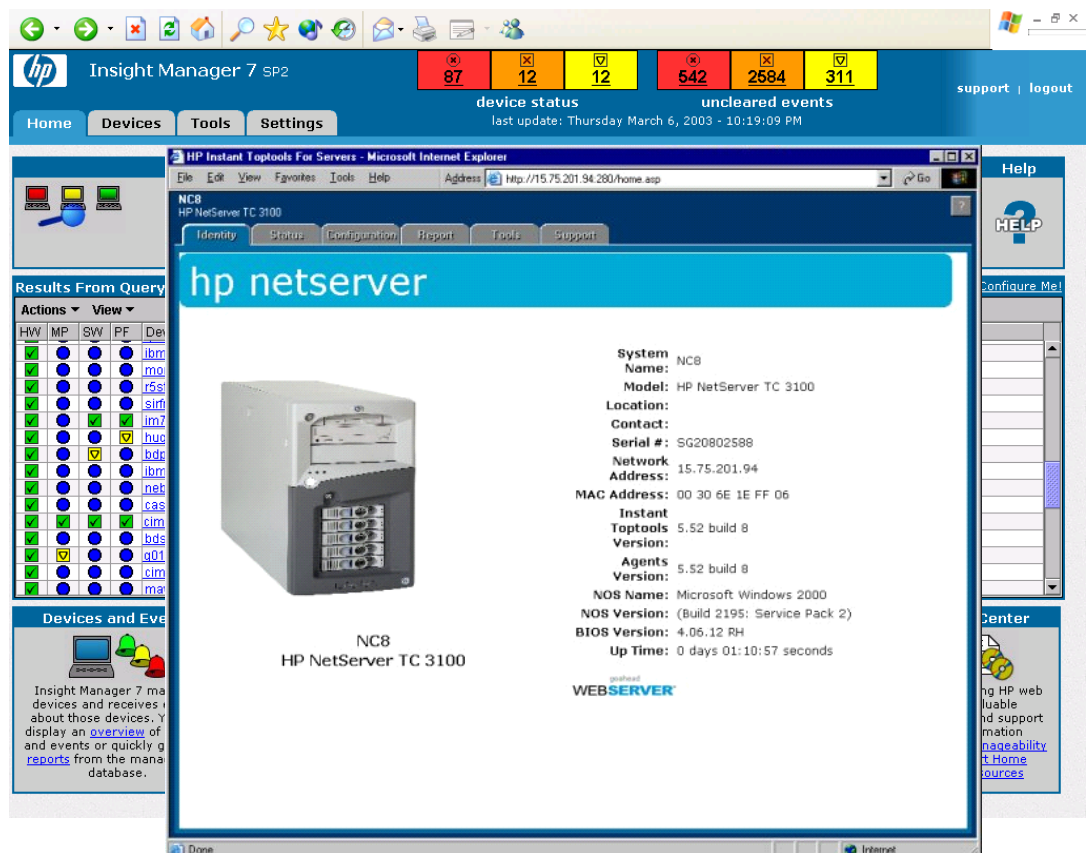
Local intranet

- **detailed device configuration and health:** Discovers Instant Tootools running on port 280 under the latest versions of Windows, NetWare, and Linux operating systems. Insight Manager 7 will launch instant Tootools, allowing customers to view the configuration and status of key server subsystems.
- **detailed inventory information:** Executes detailed data collection for both ProLiant and HP Netserver systems. Key inventory information for these servers is accessible through the inventory reporting tool.
- **SNMP traps:** Netserver MIBS are pre-compiled into the management server, allowing end users to receive and correctly interpret Netserver SNMP events.
- **DMI indications:** Insight Manager 7 receives and logs Netserver DMI indications in its event database.
- **Web-enabled devices:** Discovers Web-enabled devices that are running on port 80. This capability enables management of devices with built-in web servers (such as printers and hubs).
- **version control:** Insight Manager 7 version control **cannot** be used to update Netserver system software.

## web-enabled device discovery

HP recommends installing Instant Tootools (see Figure 2) when managing Netserver systems with Insight Manager 7. Instant Tootools is a web-enabled management agent that allows system administrators to remotely view the health and configuration of their HP Netserver systems. Insight Manager 7 SP1.1 or greater can launch the Insight Tootools user interface from server device lists and from the server device page.

figure 2. link to Insight Tootools from Insight Manager 7 device list



Instant Tootools is available for free download. To download Instant Tootools over the Internet, follow these steps:

1. From the HP website at [www.hp.com](http://www.hp.com), select **Support & Drivers**.
2. Select **HP software & drivers**.
3. Enter the Netserver model name, and click on the adjacent search arrow.
4. On the Smart Driver Download screen, scroll down to the **Utility – HP Instant Tootools** section.
5. Click on the download link provided for the operating system running on the Netserver system.

### discovering other web server applications

Insight Manager 7 discovers web servers running on common ports. For example, devices with a built-in web server running on port 80 are discovered with a link to the built-in web server. This link launches to the default web server, allowing device management. Some printers and networking equipment ship with embedded web servers for their management interface.

### adding Web Jetadmin

Insight Manager 7 also enables systems administrators to add web-enabled applications and to assign a different or new port number for a web-enabled device by simply adding or updating entries in the additionalWsDisc.props file located in the INSTALLDIR\config\directory.

For example, Insight Manager 7 can discover the Web Jetadmin utility. Since the port for Web Jetadmin is configurable, an entry must be added to the additionalWsDisc.props file to tell Insight Manager 7 where to discover Web Jetadmin (that is, on which port it is running). The format for adding additional entries is described in the file. Below are two sample entries:

8008=Default Home Page, ,true,false, ,http

8000=Web JetAdmin, ,true,false, ,http

### discovery of Tootools remote control card

Insight Manager 7 SP2 will correctly identify the Tootools Remote Control Card and the HP Server Remote Management Card as a Management Processor and associate them with the proper host server (Figure 4). To link to the Remote Control Card, click the Management Processor status icon from any Insight Manager 7 query showing an HP server, or browse to the specific device page of the server in question.

figure 4. link to Tootools Remote Control from Insight Manager 7 device list



## Netserver event management

The NetServer MIBs listed in Table 1 have been compiled into Insight Manager 7 SP2 by default, and the trap definitions in the MIBs are loaded into the database. This provides event translation and extra event information from NetServer systems. Systems administrators can receive e-mail or pager notifications based on Netserver events using Insight Manager 7 e-mail and pager notification tasks.

table 1. NetServer MIBs compiled into Insight Manager 7 SP2

adaptec.mib	cageagt.mib	hpeccmib.mib	hpn.mib
hpnetctz.mib	hpnr.mib	hprfmib.mib	hpswa.mib
hptat.mib	mlxraid.mib	nsaasr.mib	nsadimm.mib
nsaevent.mib	nsainfo.mib	nsapci.mib	nsarps.mib
nsascsi.mib	nsatrcfg.mib	nsatrmgr.mib	nsavolcp.mib
nsnicmib.mib	parselog.mib	symtrap.mib	hptrap.mib

### Notes:

- Hptrap.mib is shipped only with Insight Manager 7 SP1.1 and SP2. It provides event support for traps defined in MIBs or other files that are no longer distributed or that are incompatible with Insight Manager 7. For best event support, ensure that the SP2 update is applied and that hptrap.mib is compiled.
- Insight Manager 7 places all traps defined by the MIBs listed in Table 1 into the NETSERVER category. To find one of these events to configure a query by event type, look for it in the NETSERVER category (Figure 5).

- Systems administrators can compile additional MIBs to manage events on other HP devices. The Insight Manager 7 compiler only supports SNMP v1, so this may limit the number of other MIBs that can be compiled.

Insight Manager 7 does not support the import and compilation of Trap Definition files from OpenView or similar management platforms (trapd.conf).

figure 5. HP Server Alarm in Insight Manager 7 SP2

The screenshot displays the HP Insight Manager 7 SP2 web interface. The top navigation bar includes 'Home', 'Devices', 'Tools', and 'Settings'. A status bar at the top right shows 'device status' with counts: 0 (red), 0 (yellow), 0 (green), 1 (red), 0 (yellow), 0 (green), and 'uncleared events'. The main content area is titled 'Event: symSCSI1' and shows the following information:

The following information is known about this event:

**Event Identification and Details**

- Event Severity: Informational
- Cleared Status: Not Cleared ([Clear this event](#))
- Event Source: 13tc
- Associated Device: 13tc
- Associated Device Status: ☒ NORMAL
- Received: 12-Feb-2003, 11:27:37 CST
- Description: Symbios SCSI Agent is up.
- Select/Enter Assignee:  Add...
- Enter Comments:
- Apply

**Trap Details**

Variable	Description	Value
Mib Information:	The associated MIB File Name for this trap is SYMTRAP.MIB and the MIB identifier SYMTRAP-MIB	

Insight Manager 7 can receive DMI indications from systems, if the DMI indications function is enabled. Follow these steps to determine if the function is enabled:

1. Browse to **Settings** in Insight Manager 7.
2. Click on **Server**.
3. Select **Protocols**.
4. Verify that the **Receive DMI Indications** box is checked

To do additional DMI configuration on the Insight Manager 7 server, go to the Control Panel and select **Compaq DMI Indications**. From this point, for example, systems administrators can modify the DMI subscription refresh interval.

## compiling new HP MIBs

To enhance Insight Manager 7 event capabilities for other HP devices, system administrators can compile new MIBs into the system using the graphical interface or the command line.

To compile new MIBs using the graphical interface, complete the following steps:

1. In Insight Manager 7, browse to **Tools**.
2. Click on **Tools**.
3. Select the **MIB Manager**.
4. Upload the new MIB if it is not already present on the Insight Manager 7 server.
5. After uploading, register the MIB to receive new events.

The MIB Manager command line interface offers comparable features.

## installing Insight Manager 7 SP2 on a Netserver system

To install Insight Manager 7 SP2 on a Netserver system running a Windows operation system, one must be logged into Windows as a user with administrator rights. HP recommends installing Insight Manager 7 on a Windows NT® File System (NTFS) partition. For installing Insight Manager 7 on a Netserver system, HP recommends installation on a clean operating system image. Table 2 lists system requirements for proper operation of Insight Manager 7 on an HP Netserver system.

**table 2. system requirements for installing Insight Manager 7 SP 2**

<b>system</b>	ProLiant server, Deskpro, EVO and IPAQ Desktops, and Professional & EVO Workstation, Netserver LX Pro, LC3, LC4 and Vectra XA6/200
<b>processor</b>	400-MHz Pentium® III Processor or faster
<b>memory</b>	<ul style="list-style-type: none"> <li>• base requirement: 192 MB of RAM with Microsoft SQL Server or MSDE installed on the same server</li> <li>• 256 MB of RAM with Version Control Repository Manager installed and Microsoft SQL Server or MSDE installed on the same server with Insight Manager 7</li> </ul> <p><b>Note:</b> Performance will vary based on the number of devices being managed.</p>
<b>operating system</b>	<ul style="list-style-type: none"> <li>• Microsoft Windows NT Server 4.0 or Enterprise Edition, SP6a or later</li> <li>• Microsoft Windows 2000 Professional, Server, or Advanced Server, SP2 or later</li> <li>• Microsoft Windows XP Professional, SP1 or later</li> <li>• Microsoft Windows .NET Standard or Enterprise Server</li> </ul>
<b>other requirements</b>	<ul style="list-style-type: none"> <li>• Microsoft Desktop Engine (MSDE) 2000 with SP2 or later (local database only)</li> <li>• Microsoft SQL Server 7 Standard or Enterprise Edition with SP4 or later (local or remote database supported)</li> <li>• SQL Server 2000 Standard, Personal, or Enterprise Edition, SP4 or later (local or remote database supported)</li> <li>• TCP/IP and SNMP Services installed and active</li> <li>• Microsoft Internet Explorer 5.5 with SP2 or later</li> </ul>



Before installing Insight Manager 7 SP2 on a Netserver system, system administrators should do the following:

- Using the **Add/Remove Programs** function, uninstall any version of the Java 2 Runtime Environment that is not version 1.3.1\_02. This will eliminate having multiple or unsupported copies of the plug-in on the system.
- When upgrading from a version of Insight Manager 7 prior to SP1.1, first uninstall any Netserver or Itanium2-based server MIBs that may have been added manually.

Insight Manager 7 is not supported on a Netserver system already running legacy HP management agents. Conflicts occur when Netserver DMI agents and Instant Tootools run on the same system as Insight Manager 7.

For Insight Manager 7 to properly identify Netserver systems, HP Blades or HP Remote Control Cards, HP Netserver Agent 5.50 or greater must be installed on the managed devices to ensure best integration.

Insight Manager 7 SP2 will run on a Netserver system with no loss of functionality—with the following caveats:

- The Netserver system running the Insight Manager 7 service will be discovered as an “Unknown HP SNMP device.” The Insight Manager 7 installation process will automatically install the HP Insight Management agents; however, these agents cannot retrieve instrumentation from Netserver hardware.
- When a systems administrator drills down on the device page for a Netserver system, the link “Subsystem Status Information (using SNMP)” may be present. Depending on the instrumentation present on the system and the level of agents installed, the information displayed when clicking this link may be minimal. To view detailed information, users should select the HP Instant Tootools for Servers link (if present) or the Data Collection Report.

For more information about installing and using Insight Manager 7, see the “Insight Manager 7 Technical Reference Guide” and other documents available at this website: <http://h18013.www1.hp.com/products/servers/management/cim7-documentation.html>

## migrating from Tootools to Insight Manager 7

To plan a migration from Tootools to Insight Manager 7, systems administrators should refer to the Management CD for Insight Manager 7 documentation. The Management CD is a component of the ProLiant Essentials Foundation Pack. It is available as part of a SmartStart subscription (see the following link):

<http://h18013.www1.hp.com/products/servers/management/smartstart/subscription.html>

Downloadables on the CD are also available online from the HP software and drivers website: <http://h18007.www1.hp.com/support/files/server/us/index.html>

Table 3 identifies basic items that systems administrators should consider when migrating from Tootools to Insight Manager 7.

**table 3. considerations for migrating from Tootools to Insight Manager 7**

	<b>Tootools</b>	<b>Insight Manager 7 SP2</b>	<b>migration</b>	<b>notes</b>
<b>user accounts</b>	Windows login accounts. Groups are used for access rights.	Windows login accounts.	Migrate Windows accounts from Tootools system to Insight Manager system.	Additional configuration in Insight Manager 7 Setup Accounts page for access rights.
<b>discovery parameters</b>			Copy settings from Tootools setup into Insight Manager 7 setup.	
<b>web-enabled management</b>	Instant Tootools runs on port 280.	ProLiant web-enabled agents run on ports 2301 and 2381.		
<b>reports</b>	Provides predefined reports.	Provides predefined and customizable reports for ProLiant and Netserver systems.	Based on the Tootools report list, create new Insight Manager 7 reports.	See Table 4 for a list of pre-defined reports.
<b>receiving SNMP traps</b>	SNMP trap destinations are configured for Tootools.		Add SNMP trap destination for Insight Manager 7.	

Both Insight Manager 7 SP2 and Tootools 5.6 come with a variety of default, pre-defined reports and allow systems administrators to create customized reports. Table 4 identifies the default, pre-configured reports each tool provides.

Insight Manager 7 reporting capabilities are built on an SQL-compatible repository containing information for discovered devices, alarms, assets, and status reporting. In addition to the predefined reports, Insight Manager 7 contains a standard data collection report that is accessible from the Device Information page. This report provides the default information that Insight Manager 7 has on a particular device.

Insight Manager 7 SP2 capabilities for customizing reports are quite extensive. A detailed guide for producing customized reports is available in the white paper "Creating Custom Reports from the Insight Manager 7 Database," Document Number 5981-4755ENA1, at <ftp://ftp.compaq.com/pub/products/servers/management/cim7/Reports.pdf>. Review Table 4 to determine which Tootools reports you will need to create in Insight Manager 7.

**table 4. predefined reports provided by Insight Manager 7 SP2 and Tootools 5.6**

Insight Manager 7 reports	Tootools reports
Array controllers – all servers	Advanced PC hardware
Community strings – all servers	Class issues checker
ProLiant BL server rack – all servers	HP9000 server hardware and OS
CPU – all clients	Hubs
CPU – all servers	HP server hardware and OS
DIMM slots – all servers	PC asset location
ILO license information – all servers	PC companions
Installed controllers – all clients	PC drivers
Installed controllers – all servers	PC hardware and OS
Inventory – all servers	PC system passwords
Logical disk drives – all servers	Printers
Network interface – all servers	Racked systems
Operating system information – all clients	Remote control cards
Operating system information – all servers	Routers
Physical disk drives – all servers	Servers
Power supply – all servers	Server drivers
System software – all servers	Server firmware
	Switches
	UNIX workstations
	Windows 2000 migration
	Windows 2000 supported PCs
	Windows XP migration
	Windows XP supported PCs

**user accounts**

Both Tootools and Insight Manager 7 use Windows Domain/Machine accounts for access to the management application. If the system on which Insight Manager 7 is installed is in the same domain as the Tootools system, then the accounts used for Tootools are available to Insight Manager 7.

Insight Manager 7 and Tootools have roughly equivalent concepts of user groups. When migrating from Tootools to Insight Manager 7, map the Tootools user groups to the equivalent Insight Manager user groups as identified in Table 5.

**table 5. equivalent user groups in Tiptools and Insight Manager 7**

Tiptools		Insight Manager 7
user group	access rights	user group
Tiptools (users)	Members can view HP Tiptools device information.	users
Tiptools admins	Members have full access to all functions in HP Tiptool	administrators
Tiptools operators	Members can manage any device via Tiptools, but cannot configure Tiptools itself.	operators
		paging only

**Note:** Paging-only user accounts in Insight Manager 7 are set up to allow notification to a specific user, but not to allow the user to log in. Tiptools does not have an equivalent user group.

### setting up Tiptools accounts for use in Insight Manager 7

In Tiptools, the user rights are determined by the Tiptools user group in which the account is a member. In Insight Manager 7, the user rights are configured on the Settings – Accounts page, not through group membership.

On the Accounts page of Insight Manager 7, systems administrators need to configure each Tiptools account to have the appropriate access rights and permissions. Administrators can also configure security and paging information for each user.

If Insight Manager 7 is installed on a system that is not in the same domain as the Tiptools system, then systems administrators must add the accounts from the Tiptools machine/domain to the machine/domain where Insight Manager 7 is installed (that is, they must create new user accounts). After creating the accounts accessible to the Insight Manager 7 server, administrators should configure the access rights for each user.

### using Tiptools 5.6 to manage ProLiant servers

HP Tiptools is a collection of applications and agents designed to provide inventory, fault, asset, performance, and security management of HP devices from anywhere on a network through a web browser. For customers who do not wish to transition immediately from Tiptools to Insight Manager 7, HP released Tiptools Version 5.6 in June 2002. It is available for free download at <http://www.hp.com/toptools/>.

### management capabilities

Into Tiptools 5.6, HP compiled (that is, preloaded) ProLiant MIBs (Management Information Bases) to provide the following management capabilities for ProLiant hardware with no user intervention:

- **discovery:** Through use of various agents, discovers the device name, type, and supported protocols for IP/IPX devices, including ProLiant servers.
- **SNMP discovery:** Classifies ProLiant servers as “server, hp ProLiant” in the Type field (Figure 6).
- **DMI discovery:** Classifies Evo systems as “pc, hp Evo” in the Type field. (ProLiant servers do not have DMI.)
- **Web-enabled devices:** Discovers and can launch Web-enabled Insight Manager agents.

- **RILOE discovery:** Discovers a Remote Insight Lights-Out Edition (RILOE) card as another device on the network. The device is not classified as a RILOE card; it may be classified as a server.
- **RILOE-II card discovery:** Discovers RILOE-II card as “management device, RILOE-II card” in the Type field.
- **status information:** Monitors status by alert reception and up/down polling.
- **detailed SNMP and DMI information:** Provides drill-down functionality via the web-enabled agents. Some information is provided in the native Tootools device information pages.
- **SNMP traps:** Receives raw SNMP traps from ProLiant servers.
- **DMI indications:** Receives DMI indications.
- **predefined reports:** Built-in reports show basic asset information.
- **software revision management:** This function is not available on ProLiant servers.

figure 6. ProLiant devices discovered by Tootools 5.6

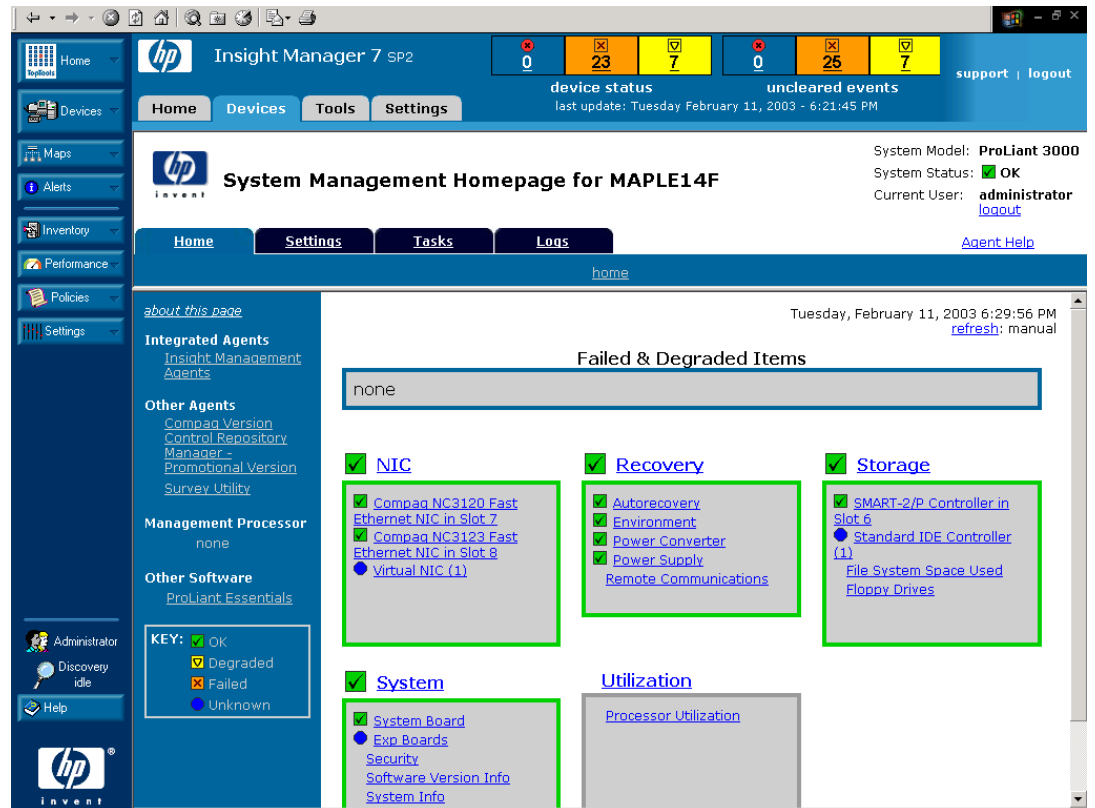
Name	Type	Polling	Alerts	SNMP	DMI	WBEM	Web
ovwpc427.cup.hp.com	server, hp ProLiant	●	●	✓	v2.0	//	🔗
ovwpc421.cup.hp.com	server, hp ProLiant	●	●	✓	v2.0		🔗
stinger.cup.hp.com	server, hp netserver	●	▲	✓	v2.0s	//	🔗
puffer.cup.hp.com	server, hp netserver	●	●	✓	v2.0s	//	🔗
ovwpc550.cup.hp.com	server, hp netserver	●	●	✓	v2.0s	//	🔗
ovwpc545.cup.hp.com	server, hp netserver	▲	●	✓	v2.0s		🔗
ovwpc483.cup.hp.com	server, hp netserver	●	●	✓		//	🔗
ovwpc480.cup.hp.com	server, hp netserver	●	●	✓	v2.0s	//	🔗
ovwpc475.cup.hp.com	server, hp netserver	▲	●	✓	v2.0s		🔗
ovwpc435.cup.hp.com	server, hp netserver	▲	●	✓	v2.0s	//	🔗
ovwpc428.cup.hp.com	server, hp netserver	●	●	✓			🔗
ovwpc424.cup.hp.com	server, hp netserver	●	●	✓			🔗
ovwpc175.cup.hp.com	server, hp netserver	▲	●	✓			🔗
ovwpc132.cup.hp.com	server, hp netserver	▲	●	✓	v2.0s	//	🔗
ovwpc106.cup.hp.com	server, hp netserver	▲	●	✓	v2.0s	/	🔗

If a device supports a web agent technology plus another technology such as WMI (Windows Management Instrument), Tootools creates a link to the management home page (webagent) and generates a generic Tootools property page. Tootools automatically discovers webagents (or web servers) listening on port 80 (Device Home Page) or on ports 280, 411, 2301, or 6500 (Management Home Page). Device Communication Settings are used to configure polling parameters and set alternate Management URL addresses for managed devices. Systems administrators can manually set the management URL for a specific device using Device Communication settings

If the system discovered is a ProLiant server running the HP Insight Management Agents, Tootools provides the ability to launch directly to the web-enabled management agents that provide information about the hardware status of the ProLiant system (Figure 7). This provides extensive hardware information about the device and access to the other web-based management components that may be running on the system. Other tools, such as the

Version Control Agents<sup>1</sup> or the Survey Utility,<sup>2</sup> may also be running on the system.

**figure 7. launching ProLiant Management Agents from Tootools**



If the system discovered is a Compaq Evo, Armada, or Deskpro PC running the desktop management agents, Tootools provides the ability to launch directly to the web-enabled management agents. The desktop agents provide extensive hardware information about the device, as well as access to other web-based components such as remote diagnostics.

## event management

Tootools can provide alerting services (Figure 8) for the following management protocols:

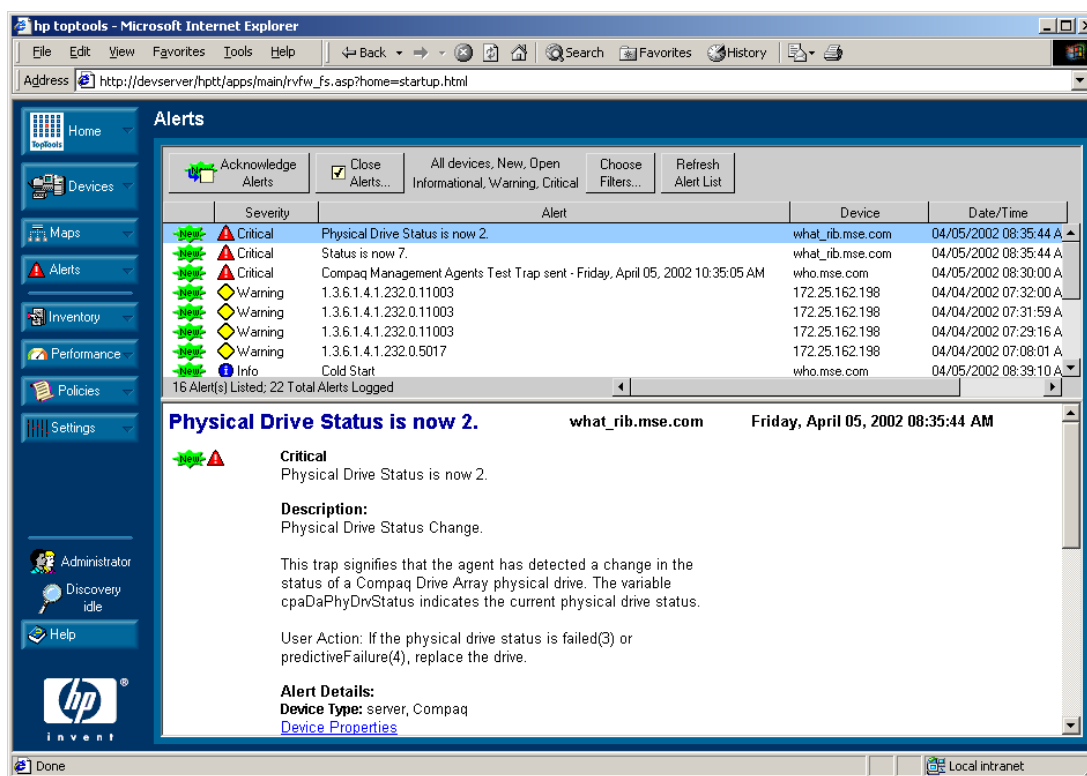
- SNMP MIB-II
- DMI 2.0
- WMI

Tootools uses the standard DMI 2.0 mechanism to “subscribe” for DMI alerts. If a PC or server has a DMI agent using DMI to send alerts, Tootools discovers the DMI agent and sets an alert destination to be the Tootools server. DMI alerts targeted to the Tootools server are automatically received, processed, and added to the Alerts list.

<sup>1</sup> Insight Manager 7 works in concert with the Version Control Repository Manager and the Version Control Agents to provide comprehensive system software maintenance of ProLiant servers running Microsoft Windows 2000 or Microsoft Windows NT. Version Control Agents point out systems running out-of-date software.

<sup>2</sup> The Survey Utility is an information-gathering agent that runs on ProLiant and Prosignia servers. The Survey Utility helps maximize server availability by streamlining the configuration analysis and troubleshooting processes. It gathers both critical hardware and operating system information. The Survey Utility is available for Windows NT, Windows 2000, NetWare, and Linux Intel environments.

figure 8. translated ProLiant SNMP trap in Toptools 5.6



## status polling

The Toptools Configure Polling page allows system administrators to select networks or devices to poll, to set the frequency of polling, and to toggle polling on or off. The settings for Timeouts and Retries are used for all device communications, regardless of protocol: SNMP, DMI, WMI, or HTTP (hypertext transport protocol). By default, Polling is set to ON only for servers, personal computers running server software, and networking devices. For other device types, administrators must manually set Polling to ON to enable polling of the device.

To determine if devices are connected and operational, the Polling function sends periodic requests to devices asking them to respond. When a device responds to a poll, Toptools displays a green icon in the Polling column. If a polling has not occurred for a particular device, Toptools displays an unknown icon in the Polling column to indicate that polling for the device is turned on but the first poll has not yet occurred. The polling process may have been delayed by a discovery process.

If a device responds to a poll, it is considered up; if it does not respond, it is considered down. In the latter case, the device may be not connected or not operating. When a device fails to respond to a poll, Toptools places a red critical icon in the Polling column of the Devices Informational page for the device and a yellow warning alert in the Alert Log.

## configuring a device for status polling

To set Tootools polling parameters, complete the following steps:

1. From the Tootools Navigation frame, click **Settings** and then **Device Communication**.
2. In the Devices list, select the device(s) for which you wish to configure polling
3. Set the State for the selected device(s):
  - To retain the previous setting, make no change.
  - To turn polling on for the selected devices, click **On**.
  - To turn polling Off, click **Off**.
4. Set Retries to the desired threshold. This threshold value determines the number of times Tootools polls a non-responding device before registering an alert.
5. Set the Interval to the desired value in seconds. This value determines the time interval between polls.
6. Set Timeout to the number of milliseconds you want Tootools to wait for a response before retrying. The Timeout period is a multi-purpose value used for polling and also for the device Discovery cycle. Adjust this value to conform with varied networking needs (slow link or fast link).
7. Click **Save Settings**.

## suspending and resuming polling

The button that controls polling is a toggle:

- To stop the polling of all devices, click **Suspend All Polling**. The button label will change to Resume Polling.
- To begin polling all devices, click **Resume Polling**. The button label will change to Suspend All Polling.

## configuring the management URL field

Defining the management URL determines which URL Tootools will use to communicate with the selected managed device(s). The check box allows systems administrators to review which management port Tootools has detected for the device or to associate a management home page or application with the device. The format of the Management URL field is:

`http://<IP Address>:<port>/`

Here is an example of a Management URL:

`http://20.123.123.33:411/`

Configuring the Management URL field is important if:

- a managed device allows a systems administrator to configure a port that Tootools does not automatically detect.
- a managed device uses a port that Tootools does not detect, and it cannot be changed to one that Tootools does detect.
- a systems administrator wants to specify a web application or management tool to be used with the device. For example, an administrator may enter the address of an Insight Manager 7 station for a ProLiant server or a Web Jetadmin server for a LaserJet printer.

**Note:** Tootools will overwrite the management URL field if, in subsequent discovery cycles, Tootools detects a new or different management URL based on discovered ports. Table 6 lists ports that Tootools 5.6 detects automatically.



**table 6. ports detected automatically by Tiptools 5.6**

port number	port definition
80	standard web server application
280	primarily HP networking management port
411	IBM NetFinity agents
2301	ProLiant web agents
6500	IBM UMS agents

## conclusion

As a result of the HP/Compaq merger, HP is transitioning all its industry-standard servers to the ProLiant product line and its management software from Tiptools to Insight Manager 7. HP is committed to protecting customer investments in legacy HP hardware and software and to making necessary product transitions as convenient and cost-effective as possible for customers.

To assist Netserver customers in making this transition gradually, HP has enhanced both Tiptools and Insight Manager 7 to provide simpler, better device management for customers deploying both Netserver and ProLiant products on a network. For best results, HP recommends the following:

- All customers now using Tiptools to manage industry-standard servers should update to Tiptools Version 5.6, which is available for free download at <http://www.hp.com/toptools/>.
- All customers using Insight Manager 7 to manage Netserver systems should update to Insight Manager 7 SP2, which is available free for downloading from this URL: <http://h18000.www1.hp.com/products/servers/management/cim7-description.html>. Customers should also check this URL periodically for updates to Insight Manager 7.

## feedback

Please direct comments regarding this communication to this Internet address:  
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