

Installation Guide

for

Intel[®] Server Control v1.9

Order Number: 750901-001

This guide explains how to install and launch the Intel[®] Server Control (ISC) software. ISC is a server management tool that provides real time monitoring and alerting for server hardware. It is implemented using a client-server architecture.

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System Requirements

It contains two parts:

- ISC Console Software
- ISC Server Instrumentation Software

ISC Console Software allows interaction with the managed server. It can be installed on these system configurations:

- Windows NT[†] 4.0 server or workstation Enterprise Edition
- Windows[†] 95/98 workstation

ISC Server Instrumentation Software, when installed, creates a managed server that can be managed from the system running ISC Console Software. It can be installed on these systems:

- NetWare[†] server
- Windows NT 4.0 server
- UnixWare[†] server

Both the managing console(s) and the managed server(s) must meet the minimum system requirements listed below.

Managed Server Requirements

ISC supports several Intel[®] motherboards. For a complete list of supported server motherboards and qualified BIOS revision levels, see the ISC release note files (README.TXT and ERRATA.TXT). The following requirements must be met for the NetWare, Windows NT, or UnixWare managed server.

NetWare Requirements

If you intend to manage a NetWare server, you must have an account with supervisor- or administrator-equivalent rights available to you. The server must also meet the following minimum requirements:

- NetWare 4.11 or 5.0 symmetric multiprocessing (SMP)
- One of the Intel motherboards specified in the release notes
- At least 24 MB of RAM
- At least 60 MB of available disk space
- NetWare SNMP NLM installed (required only for connectivity to an SNMP management console)
- TIRPC (Transport Independent Remote Procedure Call) needs to be installed and configured before an ISC console can communicate with NetWare servers.

Windows NT Requirements

If you intend to manage a Windows NT server, you must have an account with administrative rights available to you. The server must also meet the following minimum requirements:

- Windows NT Server 4.0 (SP 4), or Enterprise Edition
- One of the Intel motherboards as specified in the release notes
- 32 MB of RAM
- 60 MB of available disk space
- Windows NT SNMP or SNMP service installed (required only for connectivity to an SNMP management console)

SCO[†] UnixWare Requirements

If you intend to manage a UnixWare file server, you must have an account with root privileges available to you. The server must also meet the following minimum requirements:

- SCO UnixWare 7.01
- One of the Intel motherboards supported under UNIX[†] as specified in the release notes
- 32 MB of RAM
- 60 MB of available disk space
- UNIX SNMP and ONC RPC installed

Additional Requirements for DMI-SNMP Translation

SNMP support must be installed if you want to integrate ISC with an SNMP-based management framework. For SNMP installation information, see your Windows NT, NetWare, or UnixWare documentation.

On the managed server, you should consider the following issues when configuring SNMP:

- Community string names for SNMP Get and Set operations and for sending traps
- The destination address for the management console receiving the traps

On the management console, you should consider the following issues when configuring SNMP:

- Compiling the MIBs into the SNMP management consoles
- Integration of ISC traps into SNMP management consoles

Console Requirements

The ISC Console software integrates into HP Network Node Manager, Intel[®] LANDesk[®] Server Manager, or CA Unicenter-TNG consoles. See ISC release notes for supported versions of these software packages. ISC also runs in a stand-alone environment. You can choose to install the stand-alone environment during Setup. If you do not choose the stand-alone environment and no management console is present, the ISC GUI software will not install.

Windows 95

- Intel® Pentium® microprocessor or higher
- At least 32 MB of RAM
- At least 10 MB of available disk space
- Remote Registry service installed*
- Internet Explorer 4.0 SP2 or greater
- DCOM95 installed*
- Winsocket 2.0 installed*

Windows 98

- Intel Pentium microprocessor or higher
- At least 32 MB of RAM
- At least 10 MB of available disk space
- Remote Registry service installed*
- DCOM98 installed*

Windows NT

- Windows NT Server or Workstation 4.0 (SP4)
- Intel Pentium microprocessor or higher
- At least 64 MB of RAM
- At least 10 MB of available disk space

* For step by step installation, see the ISC release note files (README.TXT).

Installing ISC

Managed Server Preparation

ISC uses the event-logging feature of the BIOS for system management status and information. To enable this feature for each server to be managed with ISC, you must boot the server(s) using the System Configuration Utility (SCU) or System Setup Utility (SSU) and set the appropriate options under System Management Options. For motherboard-specific settings and values, see the ISC release note files (README.TXT and ERRATA.TXT).

⇒ NOTE

It is possible to configure temperature and voltage thresholds on the server system using the SCU or SSU. However, the thresholds set with the SCU or SSU are in effect only for a short time during the system boot process. ISC overwrites these thresholds when the OS loads. We therefore recommend that all threshold changes be made using ISC.

Compatibility and Upgrade Issues

If you have earlier versions of LSC or LDSM on your network, be aware of the following:

- Versions of LSC integrated with LDSM (e.g., LDSM with LSC55 are not supported under ISC.
- The ISC-managed server installation will not upgrade the DMI service provider or any DMI database that is already installed on the managed server. However, if a service provider is not found, ISC installs a DMI 2.0 service provider.
- The ISC server installation process installs the remote procedure call (RPC) transports (DCE and ONC) if they are not available on the managed server.

Beginning with version 1.8, ISC ships with the DMI 2.0s Service Provider for Windows NT. The 2.0s version is an extension of the Service Provider that supports security. ISC does not use those features, but they are available under Windows NT for possible use by other DMI 2.0s-compliant software.

The Setup Program

The Setup program installs the ISC software, the stand-alone ISC Console, and the ISC Server Instrumentation software for Windows NT and NetWare servers. To install the instrumentation software for UnixWare servers, please refer to the section “Installing to a UnixWare Server.”

⇒ NOTE

Before running Setup, verify that you have administrative rights for all servers and consoles on which you will be installing ISC.

To start Setup:

1. Close all applications except the Windows Program Manager.
2. Run ISCSETUP.EXE. If ISC was downloaded via the World Wide Web, run INSTALL.BAT to rebuild and launch ISCSETUP.EXE.
3. Follow the Setup prompts.

The ISC Setup program configures both the Local Console and the Managed Server(s), through four installation options:

- **Local Console**—Installs and sets up the ISC console components on the local system; detects whether any supported enterprise management consoles are installed; and configures the ISC console components to launch from these management console applications. This option may be selected only on a Windows NT server or workstation, or on a Windows 95 or a Windows 98 workstation.
- **Stand-alone environment**—Installs and sets up the stand-alone ISC environment on the local server; and configures the ISC console components to launch from this application. This option may be selected only on a Windows NT server or workstation, or on a Windows 95 or a Windows 98 workstation.
- **Local Server Instrumentation**—Installs and sets up the ISC server components on the local server. This option may be chosen only on a Windows NT server.
- **Remote Server Instrumentation**—Installs and sets up the ISC server components on the selected remote servers. ISC supports a remote concurrent installation process (from a Windows NT system) by allowing you to configure drive mappings to multiple remote servers during Setup. This allows you to install ISC onto multiple remote servers at the same time. This option may be selected for either a Windows NT or a NetWare server.

Local Console Overview

Setup does the following:

- Creates necessary directories.
- Copies installation files to the Local Console.
- Registers the ActiveX controls.
- Configures the system, including registry changes.
- Configures ISC to run under HP NNM, Intel LANDesk Server Manager (LDSM) , or CA Unicenter-TNG, if these management consoles are installed.
- Configures ISC to run in a stand-alone environment if the stand-alone environment is installed.
- The ISC Console software runs under Windows NT 4.0, Windows 95, and Windows 98.

When the ISC Console is installed on a Windows NT 4.0 server, the server can act both as a Local Console and as a Managed Server if the server contains an ISC-supported motherboard and you install the instrumentation software and the Local Console software.

The ISC Console software is launched from enterprise management consoles that are detected during Setup and configured to run ISC. ISC supports these consoles during Setup (see the ISC release notes for supported versions of these software packages):

- HP Network Node Manager: Windows NT only
- LANDesk Server Manager: Windows NT, Windows 95, and Windows 98
- CA Unicenter-TNG: Windows NT only

⇒ NOTE

ISC also installs the DMI Explorer browser under HP-NNM, CA Unicenter-TNG, and the ISC Stand-alone environment.

Setup will automatically configure each detected enterprise management console to launch ISC. If more enterprise management consoles are installed later, you must rerun the ISC Setup program to configure the ISC Console software to run under the additional management console. If Setup does not detect any of the enterprise management consoles on the local machine or you have not chosen to install the ISC stand-alone environment, the ISC console components will not be installed.

Stand-alone ISC Console Overview

Setup does the following:

- Creates necessary directories
- Copies installation files to the Local Console
- Registers the ActiveX controls
- Configures the system, including registry changes
- Configures ISC to run in the stand-alone environment

Use the ISC stand-alone environment to manage your servers without having an enterprise management console installed on your local server. The stand-alone ISC Console runs under Windows NT 4.0, Windows 95, or Windows 98, either as an executable program, an ActiveX control inside of a 32-bit Internet browser, or inside of the Microsoft Management Console (MMC). Using the stand-alone environment, you can discover ISC-managed servers and run the ISC Console software for those managed servers.

Managed Server Configuration

Setup does the following:

- Creates necessary directories
- Verifies software dependencies and configuration
- Installs DMI 2.0 service provider if no DMI environment is detected
- Detects the motherboard and chassis type
- Copies installation files to the server

- Edits system startup files
- Sets up and configures the system, including registry changes
- Reboots the server

On NetWare servers, you must manually reboot the server to complete the ISC installation.

Local Server Instrumentation

Select this option so that Setup will install the ISC Instrumentation software directly on the server from which Setup is initiated. The option is valid for a local server running Windows NT 4.0.

With this option, Setup:

- WILL upgrade the motherboard instrumentation if a previous version is found. The old instrumentation is saved in a BACKUP directory.
- WILL install the DCE RPC transport if it is not available on the local server.
- WILL NOT install any ISC server instrumentation if Setup determines that the local machine does not have a supported motherboard.

It is possible to configure both the Local Server Instrumentation and the ISC Console software on the same Windows NT server. Windows NT 4.0 servers can act both as managed servers and as ISC Consoles.

Setup checks for DMI services on the local server. Setup will not upgrade a DMI service provider or a DMI database that is already installed on the local server. If a DMI service provider is not found, ISC installs a Win32[†]-based DMI 2.0 service provider on the local server.

Remote Server Instrumentation

Select this option to install the ISC Instrumentation software at one or more remote Windows NT servers, one or more NetWare servers, or a combination of Windows NT and NetWare servers.

Remote install is supported from a system running Windows NT. For UnixWare servers, refer to the corresponding section for installation instructions. With this option, Setup:

- WILL upgrade the motherboard instrumentation. If a previous version is found, the old instrumentation is saved in a BACKUP directory.
- WILL install the RPC transports (DCE or ONC) if they are not available on the remote server.
- WILL NOT install the ISC server instrumentation if Setup determines that the remote machine does not have a supported motherboard.

In order to install ISC Instrumentation on a remote server, you must configure remote drive mappings to servers on which you want to install the ISC server instrumentation. Requirements:

- You must have administrator or equivalent rights for each server on which you will be installing the software.
- You may have to create a network share on the remote server depending on which drive or directory you want to install ISC onto.
- You can use your own named network share, or use the default share for the drive.

After you manually configure the remote drive mappings to your installation directory, Setup will simultaneously install the ISC server instrumentation to each server. Setup creates a long-term connection to the remote machine when you configure the remote drive mappings. The mapping continues once the ISC installation is complete. You must manually delete unwanted drive mappings.

Setup checks for DMI services on the remote server. Setup will not upgrade a DMI 2.0-based service provider or DMI database if one is already installed on the remote server. If no DMI service provider is found, ISC will install a Win32 or NetWare-based DMI 2.0 service provider on the remote server.

Installing on a Windows NT Server

The Setup program automatically creates directories, copies files, updates registry entries, and configures services. Setup will reboot the server to complete installation.

Installing on a NetWare Server

Setup updates NetWare servers in two parts:

1. Files are copied to the NetWare server from the computer from which Setup is initiated.
2. After Setup has finished copying files to the NetWare server, you must reboot the NetWare server to complete the ISC installation. Following the reboot, a configuration and setup program runs at the NetWare server. The ISC configuration and setup program detects the motherboard type and installs the ISC software.

If an ISC-supported motherboard is not detected during the ISC configuration and setup process, all ISC-related files are deleted from the NetWare server. A warning message is displayed on the NetWare console indicating that ISC did not install correctly.

The ISC configuration and Setup program adds a call, `ISC_ON.NCF`, to NetWare's `AUTOEXEC.NCF`. This allows the ISC server instrumentation NLMs to automatically load with the NetWare OS. To start the ISC server instrumentation, you can manually start `ISC_ON.NCF`, or reboot the server to start the ISC server instrumentation automatically with the NetWare OS.

NetWare Server Customization After Running Setup

While installing ISC, the configuration and Setup program installs Adaptec and LSI (Symbios) SCSI, and Intel LAN Adapter instrumentation on the NetWare server but does not enable the instrumentation support.

To enable support for any or all instrumentation, you must edit the `ISC_ON.NCF` file in the `SYS:SYSTEM` directory.

To enable the Adaptec SCSI instrumentation, remove the word REM from these lines in the ISC_ON.NCF file:

```
REM load iomgr
REM load cio20
REM load ciodmi
```

To enable the Intel LAN Adapter instrumentation, remove the word REM from these lines in the ISC_ON.NCF file:

```
REM load intelndm
REM load intel_ni
```

To enable the LSI (Symbios) SCSI instrumentation, remove the word REM from these lines in the ISC_ON.NCF file:

```
REM load syncinw
```

Installing on a UnixWare Server

Installation for UnixWare servers must be done on individual servers locally, not by using ISC Setup.

You must be logged on as root.

The UNIX package will be installed by default in /isc directory. If you want to install it in a different directory, edit the file /var/sadm/install/admin/default, and change the value of basedir parameter to “ask” rather than “default.” In this case, pkgadd will prompt for the base directory—it will create the directory isc inside that.

Mount the CD-ROM in read-only mode. To mount the CD-ROM, run “mount -rF cdfs /dev/cdrom/* /install” or, if more than one CD-ROM driver is present in the system, note the name of the driver from directory /dev/cdrom, and replace * with the driver name in the mount command.

To install the UNIX package:

1. Run “pkgadd -d /install/ISC/UNIXWARE/ISCUW.PKG”. Commands are case-sensitive.
2. If the system motherboard is S450NX and if the board supports ICMB, set execute permission to the files isc/eif and isc/asyncpoller.
3. Change directory to "isc." The default path is /isc. Use the command "chmod +x eif asyncpoller."

Once the installation is complete, reboot the system. All the ISC daemons will be up and running minutes after the system is up. The daemons are dmispd, oncsp, basebrd, lra, sdlink, and sdtrap. On ICMB enabled servers, the eif and asyncpoller are optional modules as explained above.

Installing the Console on a Workstation

The Setup program installs the Local Console and the stand-alone ISC Console on a workstation. The program automatically creates the directories, copies files, updates registry entries, and configures services. Setup will reboot the server to complete installation.

You must have Administrator or equivalent rights on the workstation in order for the ISC Console programs to install properly.

Uninstalling ISC

The uninstall process differs between Windows NT, NetWare, and UnixWare.

Windows 95, Windows 98, and Windows NT 4.0

To delete the ISC components, run the Add/Remove Program function from the Control Panel on the local server, and select the following programs:

- **Intel Server Control Console**—deletes the ISC console, including the enhanced GUI and 2.8-based applet, DMI browser, and enterprise management console files.
- **Intel Server Control Instrumentation**—deletes the ISC server platform instrumentation.
- **Intel DMI 2.x Service Provider**—deletes the DMI 2.0 service provider, DMI database, and RPC transport files. **Do NOT delete this component if other DMI applications are installed on the server.**

It is recommend that you reboot the server after uninstall.

NetWare

To delete the ISC server instrumentation component, log on to the local server as a user with administrative rights, and run the following two scripts from the SYS: SYSTEM directory:

- **ISC_RM.NCF**—deletes the ISC server platform instrumentation.
- **DMI_RM.NCF**—deletes the DMI 2.0 service provider, DMI database, and RPC transport files. **Do NOT run this if other DMI applications are installed on the server.**

It is recommend that you reboot the server after uninstall.

SCO UnixWare

To delete the server instrumentation, login as root. Run “pkgrm” and follow the instructions. Afterwards, reboot the machine.

Launching ISC

ISC can be launched from and can manage your server from one of these enterprise management environments:

- LANDesk Server Manager (LDSM)
- HP Network Node Manager
- CA-Unicenter TNG

Once the ISC GUI application is launched from an enterprise management console, the management console application can terminate, and ISC will continue to operate normally.

ISC can be launched from and can manage your server from a stand-alone ISC Console. The ISC Console can run as an executable program, as an ActiveX control within an Internet browser, or within Microsoft Management Console.

LANDesk® Server Manager

The LDSM console dynamically builds its feature set when communication is established with a managed server. If the managed server is running the ISC Component Instrumentation software, the LDSM console adds an option for “Intel Server Control” as a launch point in the Tools branch of the LDSM navigation tree. Select this option to launch the ISC applet.

HP Network Node Manager

The HP Network Node Manager Console autodetects servers running the ISC Component Instrumentation software. The Console updates the server bitmap with an ISC server icon for those servers.

To launch the ISC applet, select an ISC-enabled server on the HP Console network map, and then select the "Intel Server Control Applet" option from the Tools Menu. Alternatively, you can launch the ISC applet by selecting an ISC-enabled server on the HP console network map, clicking the right mouse button, and then selecting the "Intel Server Control" option from the popup menu.

CA-Unicenter TNG

The CA-Unicenter TNG Console autodetects servers running the ISC Component Instrumentation software if you have enabled the ISC to CA discovery service. To enable discovery, you must start the "Intel Tng-ISC AutoDiscovery" service. You can start this service from either the TNG Unicenter "Auto Discovery" dialog or from the Windows NT "Services" applet.

The "Intel Tng-ISC AutoDiscovery" service creates a new "Intel Server Control" TNG object for each server having the ISC Component Instrumentation software. That TNG object displays on the map as a child of the "ISC World View" and as a child of the ISC-enabled server. You can view all ISC-enabled servers under the "ISC World View."

To launch the ISC applet, right-click on a "Intel Server Control" icon, and select the "Launch ISC" option from the popup menu.

Stand-alone ISC Console

Use the stand-alone ISC Console to manage ISC-enabled servers without installing an enterprise management console application. The environment is implemented as an executable program; as an application within Microsoft Management Console; or as an ActiveX control that runs within a "container" application, such as Microsoft Internet Explorer, versions 3.0 or 4.0, or Netscape Navigator, version 3.0 or 4.0.

Refer to Appendix A for details about the features supported by the stand-alone ISC Console.

Launching the ISC Console

To launch the stand-alone ISC Console in its own container, do the following:

1. From the Start Menu in Windows, select Start->Programs->Intel Server Control Tools->Intel Server Control.

Launching the ISC Console with Internet Browsers

To launch the stand-alone ISC Console within a Web browser, do the following:

1. Run the Internet Browser to be used as a "container" for the ISC Console.
2. Within the browser, choose File->Open.
3. Enter the ISC Console filename, specifying the full path to the file:
%ISCPATH%\MI\EMC\IC\ISC.HTM

The stand-alone ISC Console will be started as the active application within the default Web browser.

Once the ISC Console is loaded, the location can be saved as a "Bookmark" (Netscape) or a "Favorite" (Internet Explorer) for easy access in later sessions.

You may also:

1. Locate the file using Windows Explorer, specifying the path:
%ISCPATH%\MI\EMC\IC\ISC.HTM
2. Double-click on the filename to launch the control within the default Web browser.

⇒ NOTE

Netscape Navigator requires a plug-in for viewing ActiveX applications. One that is known to work is ScriptActive[†], which is available from Ncompass Labs, Inc. (see <http://www.ncompasslabs.com>).

Launching the ISC Console with Microsoft Management Console

To launch the stand-alone ISC Console within Microsoft Management Console (MMC), do the following:

1. From a Start Menu in Windows or from the Start→Run selection, run MMC.
2. Within MMC, choose File→Open.
3. Enter the ISC Console filename, specifying the full path to the file:
%ISCPATH%\MI\EMC\IC\ISC.MSC

The ISC stand-alone application will be started as the active application within MMC. You may also:

1. Locate the file using Windows Explorer, specifying the path:
%ISCPATH%\MI\EMC\IC\ISC.MSC
2. Double-click on the filename to launch the control within MMC.

⇒ NOTE

If you have not installed MMC on your console system, you can obtain it from Microsoft at <http://www.microsoft.com/management/mmc/>.

