

# **HP OpenView Event Correlation Services Installation Guide**

**HP-UX, Solaris, Windows NT®, Windows® 2000 and Windows® XP**



**i n v e n t**

**Manufacturing Part Number: J1095-90311**

**January 2003**

© Copyright 2001 Hewlett-Packard Company.

---

## Legal Notices

*Hewlett-Packard makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.*

**Warranty.** A copy of the specific warranty terms applicable to your Hewlett-Packard product and replacement parts can be obtained from your local Sales and Service Office.

**Restricted Rights Legend.** All rights are reserved. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of Hewlett-Packard Company. The information contained in this document is subject to change without notice.

Use, duplication or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 for DOD agencies, and subparagraphs (c) (1) and (c) (2) of the Commercial Computer Software Restricted Rights clause at FAR 52.227-19 for other agencies.

HEWLETT-PACKARD COMPANY

3404 E. Harmony Road

Fort Collins, CO 80528 U.S.A.

Use of this manual and flexible disk(s), tape cartridge(s), or CD-ROM(s) supplied for this pack is restricted to this product only. Additional copies of the programs may be made for security and back-up purposes only. Resale of the programs in their present form or with alterations, is expressly prohibited.

**Copyright Notices.** © Copyright 1983-2001 Hewlett-Packard Company, all rights reserved.

Reproduction, adaptation, or translation of this document without prior written permission is prohibited, except as allowed under the copyright laws.

Contains software from AirMedia, Inc.

© Copyright 1996 AirMedia, Inc.

**Trademark Notices**

Java™ is a U.S. trademark of Sun Microsystems, Inc.

Microsoft® is a U.S. registered trademark of Microsoft Corporation.

Windows NT® is a U.S. registered trademark of Microsoft Corporation.

Windows® 2000 is a U.S. registered trademark of Microsoft Corporation.

Windows® and MS Windows® are U.S. registered trademarks of Microsoft Corporation.

Netscape™ and Netscape Navigator™ are U.S. trademarks of Netscape Communications Corporation.

Oracle® is a registered U.S. trademark of Oracle Corporation, Redwood City, California.

Oracle7™ is a trademark of Oracle Corporation, Redwood City, California.

OSF/Motif® and Open Software Foundation® are trademarks of Open Software Foundation in the U.S. and other countries.

Pentium® is a U.S. registered trademark of Intel Corporation.

UNIX® is a registered trademark of The Open Group.



---

# Contents

## 1. Introduction

Scope . . . . .	12
Audience . . . . .	13
On-line documentation . . . . .	14
On-line Help . . . . .	14

## 2. Getting Started

Installation . . . . .	17
Installation Mechanism . . . . .	17
HP-UX and Solaris Operating System . . . . .	17
Windows NT Operating System . . . . .	17
Universal Pathnames . . . . .	18
Installation Overview . . . . .	24
Hardware and Software Prerequisites . . . . .	25
Hardware . . . . .	25
Software . . . . .	25
Memory Requirements . . . . .	26
Disk Space Requirements . . . . .	26
Video Resolution . . . . .	26
Security Privileges . . . . .	27
Support for the ECS Designer . . . . .	28
Where to Go Next . . . . .	29

## 3. Installing ECS on HP-UX or Solaris

Installation Process Overview . . . . .	33
Before You Start . . . . .	34
Installing ECS on Solaris . . . . .	35
Prerequisites . . . . .	35
Procedure . . . . .	35
If Errors Occurred . . . . .	36
Where to Go Next . . . . .	36
Installing ECS on HP-UX . . . . .	37

---

# Contents

Prerequisites . . . . .	37
Procedure. . . . .	37
If Errors Occurred. . . . .	40
Where to Go Next . . . . .	40
Preliminary Configuration. . . . .	41
Set Up the User's Environment . . . . .	41
<b>4. Installing ECS on Windows NT</b>	
Installation Process Overview. . . . .	45
Before You Start. . . . .	46
Installing ECS on Windows. . . . .	47
Prerequisites . . . . .	47
Procedure. . . . .	47
If Errors Occurred. . . . .	48
Where to Go Next . . . . .	48
Preliminary Configuration. . . . .	49
Setting Up Environment Variables and Paths . . . . .	49
<b>5. Configuring and Starting ECS</b>	
Configuring Multiple Endecoders . . . . .	53
Editing the Endecoder Configuration File. . . . .	54
Starting ECS . . . . .	55
Starting the ECS Designer. . . . .	55
HP-UX and Solaris Operating System . . . . .	55
Windows Operating System . . . . .	55
Starting the ECS Engine . . . . .	55
HP-UX and Solaris Operating System . . . . .	55
Windows NT Operating System . . . . .	56
Verifying an Installation . . . . .	57
<b>A. Installation Error Messages</b>	
Unix Installation Error Messages. . . . .	61

---

# Contents

Windows NT Installation Error Messages . . . . .65

## Glossary

---

# Contents



---

## Contact Information

### Contacts

Please visit our HP OpenView web site at:

<http://openview.hp.com/>

There you will find contact information as well as details about the products and services HP OpenView has to offer.

### Support

The “hp OpenView support” area of the HP OpenView web site includes:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training Information
- Support program information



---

# **1 Introduction**

## **Scope**

This document contains information you require to efficiently install and configure the:

- ECS Designer
- ECS Development

## **Audience**

This manual is intended for product installers. It assumes that the installer has at least administrator-level knowledge of HP-UX and Solaris. For the installation of the ECS Designer on Windows, ability to use Windows is also assumed.

## **On-line documentation**

Product documentation is available in both hardcopy and browsable on-line format.

On-line documentation in Adobe Acrobat and/or postscript formats can be installed from the documentation CD-ROM.

To view documents from the external website, goto

[http://ovweb.external.hp.com/lpe/doc\\_serv/](http://ovweb.external.hp.com/lpe/doc_serv/)

## **On-line Help**

The HP OpenView ECS Designer has an on-line help system that provides help on the functionality of the Designer.

To invoke the Table Of Contents, click Help->Table of Contents in the Designer's Main window.



## Getting Started

Read this chapter before you install HP OpenView ECS. It contains essential background information including:

- “Installation” on page 17
- “Universal Pathnames” on page 18
- “Installation Overview” on page 24
- “Hardware and Software Prerequisites” on page 25
- “Where to Go Next” on page 29



## **Installation**

This release of HP OpenView Event Correlation Services (ECS) has the installation requirements as described below.

### **Installation Mechanism**

#### **HP-UX and Solaris Operating System**

You use the following mechanisms for installing ECS on HP-UX and Solaris:

HP-UX:           HP Software Distributor (SD) or `install` script.

Solaris:           `install` script

#### **Windows NT Operating System**

You install ECS on Windows NT using the setup program provided on the ECS CD-ROM.

## Universal Pathnames

ECS supports multiple operating system platforms, with differing directory structures.

To simplify use of the product and make the documentation more readable, the ECS products include an optional script that defines environment variables common to *all* operating system platforms. These environment variables create *universal* path and file names that apply to HP OV directories and files regardless of the structure of the underlying file system.

---

### NOTE

All of the documentation for ECS is written with the assumption that you have activated the universal pathnames.

---

After installing ECS, you:

- Run a script to activate these variables on HP-UX or Solaris (see “Preliminary Configuration” on page 41).
- Run a batch file to activate these variables on Windows. (see “Preliminary Configuration” on page 41).

You can then use the variables as universal names. For example, to go to the local directory containing temporary files created by HP OV, enter the following command:

HP-UX, Solaris                    `cd $OV_TMP`

Windows                         `cd %OV_TMP%`

If you need to know the actual pathname, enter the following command:

HP-UX, Solaris                   `echo $OV_TMP`

Windows                         `echo %OV_TMP%`

This command displays the local pathname according to the following:

HP-UX                             `/var/opt/OV/tmp`

Solaris                           `/var/opt/OV/share/tmp`

Windows                         `C:\OpenView\tmp`  
(assuming ECS has been installed in

the C:\OpenView directory)

Table 2-1 details universal pathnames for HP-UX and Solaris; Table 2-2 on page 21 details universal pathnames for Windows.

**Table 2-1 HP-UX and Solaris Universal Pathnames for HP OpenView**

Universal Name	HP-UX	Solaris
\$APP_DEFS	/usr/lib/X11/app-defaults	/usr/openwin/lib/app-defaults
\$NCS_BIN	/usr/sbin/ncs	/opt/ncs/install/bin
\$NCS_CONF	/etc/ncs	/var/ncs
\$NCS_DB	/var/ncs	/var/ncs
\$NETFMT	/usr/sbin/netfmt	/opt/OV/bin/netfmt
\$NETFMT_LOG_FILE	/var/adm/nettl.LOG00	/var/opt/OV/log/nettl.LOG00
\$OV_BACKGROUNDS	/etc/opt/OV/share/backgrounds	/etc/opt/OV/share/backgrounds
\$OV_BIN	/opt/OV/bin	/opt/OV/bin
\$OV_BITMAPS	/etc/opt/OV/share/bitmaps	/etc/opt/OV/share/bitmaps
\$OV_CONF	/etc/opt/OV/share/conf	/etc/opt/OV/share/conf
\$OV_CONTRIB	/opt/OV/contrib	/opt/OV/contrib
\$OV_DB	/var/opt/OV/share/databases	/var/opt/OV/share/databases
\$OV_DOC	/opt/OV/doc	/opt/OV/doc
\$OV_FIELDS	/etc/opt/OV/share/fields	/etc/opt/OV/share/fields
\$OV_GDMO_MIBS	/opt/OV/gdmo_mibs	/opt/OV/gdmo_mibs
\$OV_HEADER	/opt/OV/include	/opt/OV/include
\$OV_HELP	/etc/opt/OV/share/help	/etc/opt/OV/share/help
\$OV_HPSMI_MIBS	/opt/OV/hpsmi_mibs	/opt/OV/hpsmi_mibs

Getting Started  
**Universal Pathnames**

**Table 2-1 HP-UX and Solaris Universal Pathnames for HP OpenView**

Universal Name	HP-UX	Solaris
\$OV_INSTALL	/opt/OV/install	/opt/OV/install
\$OV_LIB	/opt/OV/lib	/opt/OV/lib
\$OV_LOG	/var/opt/OV/share/log	/var/opt/OV/share/log
\$OV_LRF	/etc/opt/OV/share/lrf	/etc/opt/OV/share/lrf
\$OV_MAN	/opt/OV/man	/opt/OV/man
\$OV_MAIN_PATH	/opt/OV	/opt/OV
\$OV_NEW_CONF	/opt/OV/newconfig	/opt/OV/newconfig
\$OV-NLS	/opt/OV/lib/nls	/opt/OV/lib/nls
\$OV_NODELOCK	/var/opt/ifor	/opt/netls/conf
\$OV_PIDS	/var/opt/OV/pids	/var/opt/OV/pids
\$OV_PRIV_CONF	/etc/opt/OV/conf	/etc/opt/OV/conf
\$OV_PRIV_LOG	/var/opt/OV/share/log	/var/opt/OV/share/log
\$OV_PRODUCTS	/opt/OV/products	/opt/OV/products
\$OV_PROG_SAMPLES	/opt/OV/prg_samples	/opt/OV/prg_samples
\$OV_REGISTRATION	/etc/opt/OV/share/ registration	/etc/opt/OV/share/ registration
\$OV_RELNOTES	/opt/OV/ReleaseNotes	/opt/OV/ReleaseNotes
\$OV_SHARE_LOG	/var/opt/OV/share/log	/var/opt/OV/share/log
\$OV_SNMP_MIBS	/etc/opt/OV/share/ snmp_mibs	/etc/opt/OV/share/ snmp_mibs
\$OV_SOCKETS	/var/opt/OV/sockets	/var/opt/OV/sockets
\$OV_STACKS	/ect/opt/OV/stacks	/ect/opt/OV/stacks
\$OV_SYMBOLS	/etc/opt/OV/share/symbols	/etc/opt/OV/share/symbols
\$OV_TMP	/var/opt/OV/tmp	/var/opt/OV/share/tmp

**Table 2-1 HP-UX and Solaris Universal Pathnames for HP OpenView**

Universal Name	HP-UX	Solaris
\$OV_TOOLS	/opt/OV/tools	/opt/OV/tools
\$OV_WWW	/opt/OV/www	/opt/OV/www

**NOTE**

The Windows universal pathnames are relative to the directory into which ECS has been installed. The pathnames shown in Table 2-2 assume that ECS has been installed in C:\OpenView, meaning that %OV\_MAIN\_PATH% is C:\OpenView.

**Table 2-2 Windows Universal Pathnames for HP OpenView**

Universal Name	Actual Pathname
%APP_DEFS%	C:\OpenView\doc\app-defaults
%NCS_BIN%	–
%NCS_CONF%	–
%NCS_DB%	–
%NETFMT%	–
%NETFMT_LOG_FILE%	–
%OV_BACKGROUNDS%	C:\OpenView\backgrounds
%OV_BIN%	C:\OpenView\bin
%OV_BITMAPS%	C:\OpenView\bitmaps
%OV_CONF%	C:\OpenView\conf
%OV_CONTRIB%	C:\OpenView\contrib
%OV_DB%	C:\OpenView\databases
%OV_DOC%	C:\OpenView\doc
%OV_FIELDS%	C:\OpenView\fields

**Table 2-2 Windows Universal Pathnames for HP OpenView**

Universal Name	Actual Pathname
%OV_GDMO_MIBS%	–
%OV_HEADER%	C:\OpenView\include
%OV_HELP%	C:\OpenView\help
%OV_HPSMI_MIBS%	C:\OpenView\hpsmi_mibs
%OV_INSTALL%	–
%OV_LIB%	C:\OpenView\lib
%OV_LOG%	C:\OpenView\log
%OV_LRF%	C:\OpenView\lrf
%OV_MAN%	C:\OpenView\help\C
%OV_MAIN_PATH%	Installation directory (C:\OpenView by default)
%OV_NEW_CONF%	–
%OV_NLS%	C:\OpenView\lib\nls
%OV_NODELOCK%	C:\OpenView\ifor\ls\conf
%OV_PIDS%	–
%OV_PRIV_CONF%	C:\OpenView\conf
%OV_PRIV_LOG%	C:\OpenView\log
%OV_PRODUCTS%	–
%OV_PROG_SAMPLES%	C:\OpenView\prg_samples
%OV_REGISTRATION%	C:\OpenView\registration
%OV_RELNOTES%	C:\OpenView\ReleaseNotes
%OV_SHARE_LOG%	C:\OpenView\log
%OV_SNMP_MIBS%	C:\OpenView\snmp_mibs

**Table 2-2**                      **Windows Universal Pathnames for HP OpenView**

Universal Name	Actual Pathname
%OV_SOCKETS%	-
%OV_STACKS%	C:\OpenView\stacks
%OV_SYMBOLS%	C:\OpenView\symbols
%OV_TMP%	C:\OpenView\tmp
%OV_TOOLS%	-
%OV_WWW%	C:\OpenView\www

## Installation Overview

The five installation steps you must complete to successfully install ECS are listed below in order:

1. Check hardware and software prerequisites. See “Hardware and Software Prerequisites” on page 25.
2. Backup your system in case you experience problems in adding new products.
3. Install ECS. See Chapter 3, “Installing ECS on HP-UX or Solaris,” on page 31 or Chapter 4, “Installing ECS on Windows NT,” on page 43.
4. Perform post-installation steps and start ECS. See Chapter 5, “Configuring and Starting ECS,” on page 51



## Hardware and Software Prerequisites

You need the following hardware and software to install and run ECS. You can also consult the product data sheets for any additional software and hardware supported.

### Hardware

You need one of the following workstations:

- HP 9000 Series
- Sun SPARCstation
- Intel 80x86

### Software

You need to be running one of the following operating systems:

- HP-UX version 11.0, 11.11 and 11.22 PA
- Solaris 2.8, 2.9
- Windows NT, Windows 2000, Windows XP

---

**NOTE**

To configure and edit OVO correlation circuits, both OVO and the ECS Designer for NNM and OVO must be installed and running on the same system. See the OVO documentation for OVO management-server platform support.

---

## Memory Requirements

You need (at minimum) the following amount of memory to run ECS:

Physical memory	32 Mbytes
Virtual memory	128 Mbytes

## Disk Space Requirements

You need (at minimum) the following disk space:

**Table 2-3**      **Disk Space Requirements**

Product	Disk Space (HP-UX 10.X) (Mbytes)	Disk Space (HP-UX 11.X) (Mbytes)	Disk Space (Solaris) (Mbytes)	Disk Space (Windows NT) (Mbytes)
HP OV ECS Designer	33	34	28	14
HP OpenView ECS Dev. Kit	7	10	5	8

You also need an additional 5 Mbytes for the ECS Designer to allow your circuit files, log files and administration files.

The installation process verifies that sufficient disk space exists before installation and will abort if there is insufficient space.

## Video Resolution

The ECS Designer requires a minimum video resolution of 800x600 on all platforms.

## **Security Privileges**

To install or remove ECS and to configure licensing you must have:

- `root` access (superuser) on HP-UX or Solaris
- Administrator access on Windows

## **Support for the ECS Designer**

The ECS Designer comes with the standard phone-in support. For this level the support is limited to:

- Right to get license updates.
- Support for installation and licensing related issues.

For assistance with designing and developing event correlation circuits, you need to purchase Partner Care Extended support services. Goto <http://www.hp.com/go/partnercare> for information about Partner Care Extended or contact your local sales representative.

---

## Where to Go Next

Where to go next depends on the task you need to perform, as shown in Table 2-4.

**Table 2-4**                      **Where to Go Next**

Task	See
Installing ECS from scratch	Chapter 3, “Installing ECS on HP-UX or Solaris,” on page 31 or Chapter 4, “Installing ECS on Windows NT,” on page 43.
Using a further encode module with an existing ECS 3.1 installation	Refer “Configuring Multiple Encoders” on page 53, for information about configuring ECS for multiple encoders.

Getting Started  
**Where to Go Next**



This chapter describes how to install HP OV Event Correlation Services (ECS). It includes:

- “Installation Process Overview” on page 33
- “Before You Start” on page 34
- “Installing ECS on Solaris” on page 35
- “Installing ECS on HP-UX” on page 37
- “Preliminary Configuration” on page 41

Complete the steps in Chapter 2, “Getting Started,” on page 15 before you perform the steps in this chapter.



---

## Installation Process Overview

A single CD-ROM contains all the files you need to install ECS.

Table 3-1 describes the ECS products available for installation. The column titled Encode Module shows the encode/decode (encode) module initialized with each product.

**Table 3-1**      **ECS Product Descriptions for HP-UX and Solaris**

Name	Encode Module	Product Description	Product Number
ECS Designer	ASCII, SNMP, CMIP	The standalone designer.	J1091EA
ECS Development	N/A	The development kit for users who want to program with ECS APIs.	None

**Install Script**      If your system runs Solaris, use the Install script to install ECS. See “Installing ECS on Solaris” on page 35.

**Software Distributor**      If your system runs HP-UX, use HP Software Distributor (SD) to install ECS. See “Installing ECS on HP-UX” on page 37.

## **Before You Start**

You must know the following details before you start installing HP OV ECS:

1. If appropriate, the version of ECS that is already installed.

To find out which version of an ECS Engine is currently running, enter `ecsmgr -info`. To display version information in ECS Designer, select `Help:About` from the menu.

2. The version of the operating system installed on the machine on which ECS is to be installed.

To display the operating system details use the command `uname -a`.

## Installing ECS on Solaris

If your system runs Solaris, use the Install script to install ECS.

### Prerequisites

- You must have root access to run ECS installation.

### Procedure

To install ECS with the Install script:

1. Mount the CD-ROM drive.
2. Run the Install script by typing the following command:

```
path/install
```

where *path* is the path to the directory where the Install script is located (for example, /cdrom/SOLARIS).

The Install script displays a menu of products.

3. Select the product you want to install:

```
Select a product to be installed :-
```

- ```
1) ECS Designer  
2) ECS Development
```

```
Please enter the number (or 'q' to quit):
```

Note

The engine defaults to the endecoder configuration file (*ed.conf*). You can override this for the standalone engine by using the *-e* option on the *ecsd* command line. For more information, see the *ecsd(1M)* reference page.

4. Confirm your selection:

```
You have chosen to install:
```

```
ECS Designer
```

```
Continue? [y/n]:
```

When you enter **y** for yes, the installation begins the first of two phases: Analysis and Execution. These phases may take up to 15

## Installing ECS on Solaris

minutes.

If difficulties are encountered, the installation process displays status messages and writes these messages to a log file.

5. View the logfile `/var/adm/sw/swagent.log` to check any status or error messages that appeared during the installation.

Status messages for the latest installation appear at the end of the file. Each set of status messages includes the date and time the installation occurred. Look for the date and time corresponding to the most recent installation.

## If Errors Occurred

Several kinds of errors can occur during an installation. For example, some filesets may have been installed but not configured. These filesets appear in the log file next to the word `ERROR`.

The most common error messages and solutions are listed in the appendix.

Ignore messages that relate to components that are already installed. This means you should ignore messages similar to the following:

NOTE: The fileset "OVECS.OVECS-DM42" has a prerequisite dependency

```
on a software object which exists in another product:
"DMAgent.OVEMS-RUN,r=B.04.2?". This software was not
selected for packaging, and does not exist in the target
depot.
```

## Where to Go Next

Perform the following steps before final configuration and startup:

1. Set up environment variables and paths (see "Preliminary Configuration" on page 41) for the final configuration and startup.

## Installing ECS on HP-UX

If your system runs HP-UX, use HP Software Distributor (SD) to install ECS. SD is distributed with HP-UX.

### Prerequisites

- You must have `root` access to run ECS installation.

### Procedure

To install ECS with HP Software Distributor (SD):

1. Mount the CD-ROM drive. The following steps assume you have mounted it to `/cdrom/`.
2. Start Software Distributor by typing:

```
/usr/sbin/swinstall
```

The `Specify Source` window is displayed. If it isn't, select `Actions: Change Source` to display it.

Click on `[OK]`.

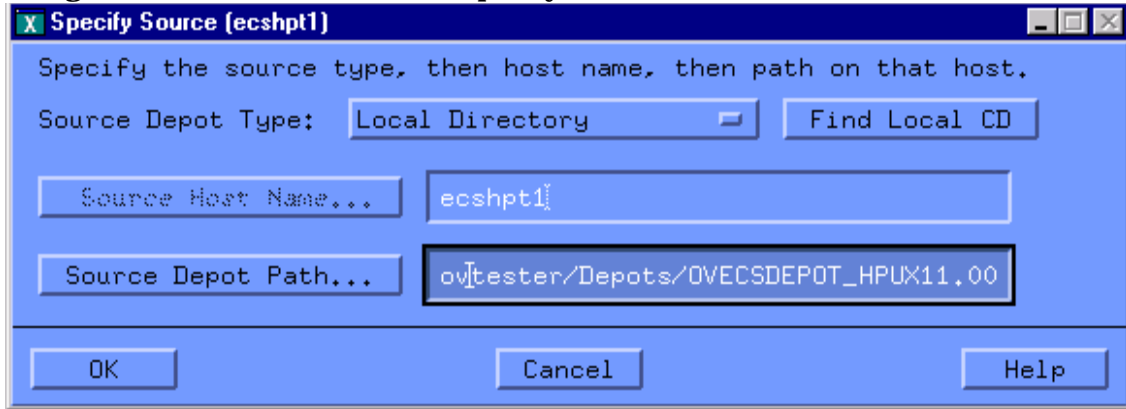
3. Complete the `Specify Source` window as shown in Figure 3-1 by entering the `Source Depot Path`. For example,

```
/cdrom/HPUX10/OVECSDEPOT)
```

SD displays the `SD Install - Software Selection` window.

Ensure that the `Software Selection` window displays `Top (Bundles and Products)`. If not, select `View: Change Software View -> Start with Top`.

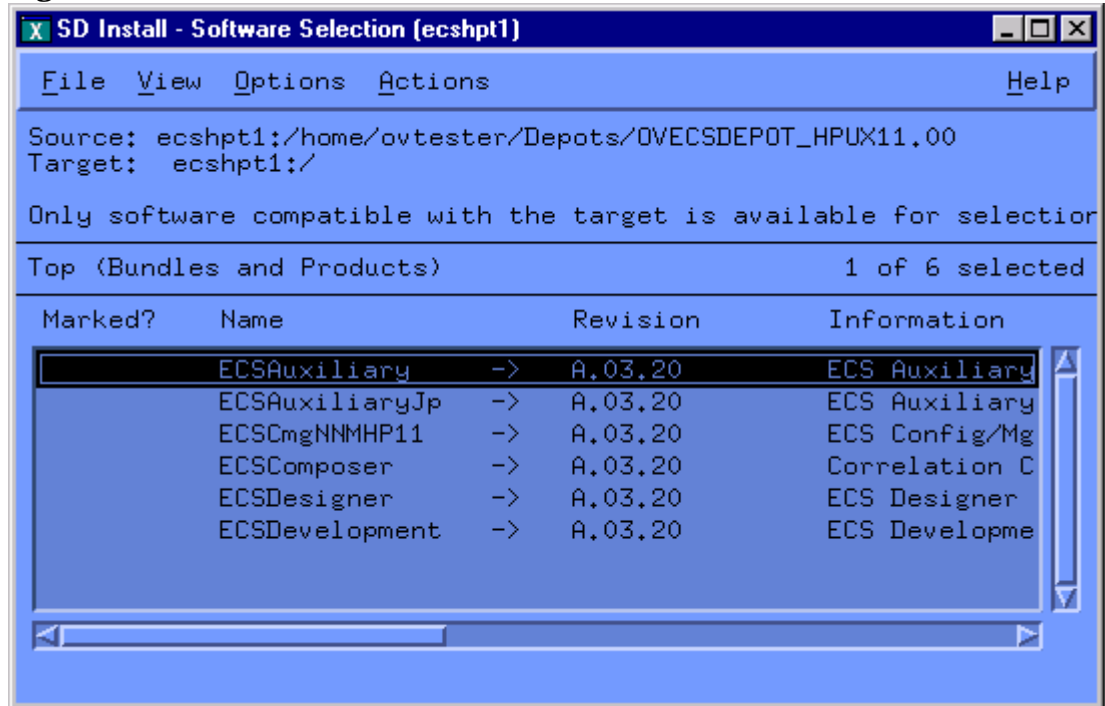
**Figure 3-1 The SD Install Specify Source Window**



4. Highlight each bundle you require, then select Actions:Mark for Install from the menu, as shown in Figure 3-2. The word Yes appears in the Marked column next to the bundles you have chosen to install.

See Table 3-1 on page 33 for information about each product.

**Figure 3-2 The SD Install Software Selection Window**



5. Select **Actions: Install (Analysis)** from the menu to start the analysis phase of the installation. This phase checks whether the system is suitable for the installation of the bundle you selected.  
View the logfile to check any error or status messages that appeared during the analysis phase of the installation. To do this, click on [Logfile].
6. When the analysis phase of the installation is complete, SD displays the status as **Ready**. Click on [OK] to install the selected software.  
If difficulties are encountered, the installation process displays status messages and writes these messages to the log file.
7. View the logfile again to verify that the execution phase was successful.
8. Select **File:Exit** from the menu to close Software Distributor.

## **If Errors Occurred**

Several kinds of errors can occur during an installation. For example, some filesets may have been installed but not configured. These filesets appear in the log file next to the word `ERROR`.

The most common error messages and solutions are listed in the appendix.

Ignore messages that relate to components that are already installed. This means you should ignore messages similar to the following:

```
NOTE: The fileset "OVECS.OVECS-DM42" has a prerequisite
dependency
    on a software object which exists in another product:
    "DMAgent.OVEMS-RUN,r=B.04.2?". This software was not
    selected for packaging, and does not exist in the target
    depot.
```

## **Where to Go Next**

Set up environment variables and paths for final configuration and startup. See “Preliminary Configuration” on page 41.



---

## Preliminary Configuration

Log in as `root` and perform the following configuration steps at the root directory before continuing with ECS configuration.

---

### NOTE

All subsequent instructions in this guide assume that this configuration has been done.

---

## Set Up the User's Environment

To set up each user's environment:

1. Load the universal pathname environment variables. Use one of the following commands, depending on which shell you are running.

| Shell     | Command                                        |
|-----------|------------------------------------------------|
| sh or ksh | <code>. /opt/OV/bin/ov.envvars.sh</code>       |
| csh       | <code>source /opt/OV/bin/ov.envvars.csh</code> |

---

### NOTE

Be sure to include a space between the `'.'` and the `'/'` in the sh or ksh commands.

---

Alternatively, you can add the appropriate line to each user's `.profile` or `.login` file so that the command takes effect each time that user logs in. If you don't do this, the environment variables created by the script only apply to the window in which they were created.

2. Set your `PATH` to include `$OV_BIN` and your `MANPATH` to include `$OV_MAN`.

Installing ECS on HP-UX or Solaris  
**Preliminary Configuration**

---

## **4** **Installing ECS on Windows NT**

This chapter describes how to install HP OV Event Correlation Services (ECS) on Windows. It includes:

- “Installation Process Overview” on page 45
- “Before You Start” on page 46
- “Installing ECS on Windows” on page 47
- “Preliminary Configuration” on page 49

Complete the steps in Chapter 2, “Getting Started,” on page 15 before you perform the steps in this chapter.

---

## Installation Process Overview

A single CD-ROM contains all the files you need to install ECS.

Table 4-1 describes the ECS products available for installation. The column titled Encode Module shows the encode/decode (encode) module initialized with each product.

**Table 4-1**      **ECS Product Descriptions for Windows**

| Name            | Encode Module           | Product Description                                                  | Product Number |
|-----------------|-------------------------|----------------------------------------------------------------------|----------------|
| ECS Designer    | ASCII,<br>SNMP,<br>CMIP | The standalone designer.                                             | J1091EA        |
| ECS Development | N/A                     | The development kit for users who want to program with the ECS APIs. | None           |

## **Before You Start**

Before you start installing HP OpenView ECS, make sure that the hardware and software prerequisites are met. For details of these prerequisites, see “Hardware and Software Prerequisites” on page 25.

## **Installing ECS on Windows**

To install ECS on Windows, use the setup program provided on the ECS CD-ROM.

### **Prerequisites**

You must have administrator access to run ECS installation.

Also, before installing ECS, make sure that no other HP OpenView services or programs are running.

### **Procedure**

To install ECS on Windows:

1. Insert the ECS CD-ROM in the CD-ROM drive you are using to install ECS and map the CD-ROM drive using Windows Explorer if the drive is not the computer on which you are installing ECS.
2. Click [Start] to display the Windows Start menu.
3. Select Run to display the Run dialog box.
4. In the Run dialog box, type:
  - *CD\_drive*: \RUNTIME\setup  
to install ECS Development.
  - *CD\_drive*: \DESIGNER\setup  
to install ECS Designer.

and then press Enter.

The ECS Setup program starts. This program leads you step by step through the process of installing ECS components.

*CD\_drive* is the drive to which the CD-ROM drive is mapped.

5. Follow the on-screen instructions provided in the ECS Setup program.

---

**NOTE**

If no existing HP OV products are detected during installation, the setup program asks you to specify the location in which to install ECS. This location becomes the `%OV_MAIN_PATH%` mentioned in “Universal Pathnames” on page 18.

If an existing HP OV product is detected during installation, ECS is automatically installed in a default directory. This is to avoid conflicts with other HP OpenView products.

---

### **If Errors Occurred**

Several kinds of errors can occur during an installation. The most common error messages and solutions are listed in the appendix.

### **Where to Go Next**

Set up environment variables and paths for final configuration and startup. See “Preliminary Configuration” on page 49



## Preliminary Configuration

Log in as administrator and perform the following steps before continuing with ECS licensing and configuration.

---

### NOTE

All subsequent instructions in this guide assume that this configuration procedure is complete.

---

## Setting Up Environment Variables and Paths

Perform the following steps:

1. Load the universal pathname environment variables by running the batch file `installation_folder\bin\ov.envvars.bat`, where `installation_folder` is the folder in which you have installed ECS.

---

### NOTE

The environment variables created by the batch file only apply to the Command Prompt window in which they were created. If you open another Command Prompt window, you will need to run the batch file again if you want to use the environment variables.

---

2. Set your PATH to include `%OV_BIN%`.

Installing ECS on Windows NT  
**Preliminary Configuration**

---

# **5** **Configuring and Starting ECS**

### **In this chapter**

This chapter describes how to setup and configure ECS for your environment. It includes:

- “Configuring Multiple Encoders” on page 53
- “Starting ECS” on page 55
- “Verifying an Installation” on page 57

## **Configuring Multiple Encoders**

If you installed more than one product then you need to manually update the ECS encoder configuration file. The automatic installation sets the configuration file for the *last* option that was installed *only*.

The ASCII encode module(s) is enabled by default for the ECS Designer.

---

### **NOTE**

Encoder module for OVO is not available with the ECS Designer package.

OVO provides its own encoder module and the appropriate entry is made in the ed.conf file.

---

Also, if you want to use an encode module that is not enabled by default (not shown in bold, above) then you must edit the configuration file manually.

## Editing the Encoder Configuration File

The activation of encoders in the ECS Engine and the ECS Designer is controlled through the relevant configuration file:

HP-UX, Solaris `$OV_CONF/ecs/ed/ed.conf`

Windows `%OV_CONF%\ecs\ed\ed.conf`

This is a very simple text file consisting of a line for each supported encoder module. For example, to support just ASCII events the configuration file should contain just one line:

```
MDL
```

Alternatively, to support both ASCII and SNMP encoders:

```
MDL
SNMP
```

The keywords you can use in the configuration file are listed in Table 5-1:

**Table 5-1 Configuration File Keywords**

| Keyword | Comments                                       |
|---------|------------------------------------------------|
| MDL     | ASCII events.                                  |
| SNMP    | ber-encoded SNMP v1 MIB-II Traps.              |
| CMIP    | ber-encoded CMIP event reports and SNMP Traps. |

Changes made to the configuration file take effect when the ECS Engine (or ECS Designer) is next started. For the `pmd`-linked engine, changes are read when the `pmd` is next started with the `ovstart` command.

See the *HP OpenView ECS Administrator's Guide* for further details.

---

## Starting ECS

### Starting the ECS Designer

#### HP-UX and Solaris Operating System

- To start the ECS Designer from HP OpenView Windows, select `ECS Designer` from the Tools menu.
- To start the standalone ECS Designer from a command line, type:  
`$OV_BIN/ecsd`
- To start the ECS Designer in NNM mode from a command line using NNM and ITO Designer license, type:  
`$OV_BIN/ecsd -nnm`

For information about the options you can use with the `ecsd` command, see the `ecsd(1M)` reference page.

#### Windows Operating System

To start the ECS Designer:

1. Click on the [Start] button, then point to Programs.
2. Select HP OpenView -> ECS Designer if you have selected the default program group for ECS during installation. If you selected a different program group, navigate to that program group and then select ECS Designer.

### Starting the ECS Engine

#### HP-UX and Solaris Operating System

NNM

The ECS Engine is started automatically when you start NNM. You can only run one ECS Engine for NNM and the instance number is 1 (one).

To verify that an ECS Engine is running use the `ecsmgr` command:

```
ecsmgr [-instance instance] -info
```

## Configuring and Starting ECS

### Starting ECS

For more information on the `ecsmgr` command, see the `ecsmgr(1m)` reference page. For information about other ECS commands, see the *HP OpenView Event Correlation Services Administrator's Guide*.

### Windows NT Operating System

NNM

The ECS Engine for NNM is started automatically when you start NNM. You can only run one ECS Engine for NNM and the instance number is 1 (one).

To verify that an ECS Engine is running use the `ecsmgr` command:

```
%OV_BIN%\ecsmgr [-instance instance] -info
```

For more information on the `ecsmgr` command, see the `ecsmgr` topic in `ecs.hlp`. For information about other ECS commands, see the *HP OpenView Event Correlation Services Administrator's Guide*.

OVO

The ECS engine startup is integrated into OVO correlation template configuration and distribution process.



---

## Verifying an Installation

To verify the installation process, you can run a confidence test at any time after the installation. The confidence test runs for approximately two minutes and reports on the status of the ECS installation. To run the test, execute the following:

### HP-UX, Solaris

```
$OV_BIN/ecskonftest
```

### Windows NT

```
%OV_BIN%\ekonftest
```

---

#### NOTE

On HP-UX and Solaris, you must be logged in as `root` (or have superuser access) to run the `ekonftest` command.

For information about the options you can use with this command, see:

### HP-UX, Solaris:

*ekonftest(1m)* reference page

### Windows NT:

`ekonftest` topic in `ecs.hlp`

pmd

If a `pmd`-linked version of ECS has been installed then the confidence test attempts to start the postmaster (`ovstart`) if it is not already running. The postmaster is left running after the confidence test has completed.

Configuring and Starting ECS  
**Verifying an Installation**

---

# **A** **Installation Error Messages**

**In this appendix** This appendix lists the most common installation error messages and solutions. It contains the following sections:

- “Unix Installation Error Messages” on page 61
- “Windows NT Installation Error Messages” on page 65

## Unix Installation Error Messages

---

**The target “/” does not exist and will be created.**

**Cause:** The root directory for this host has not been registered as a HP Software Distributor (SD) target and will be registered now.

**Action:** No action is necessary.

---

**ERROR: Commit of job status information failed. Interim status can not be retrieved using the “swjob” command.**

**Cause:** Progress information for the installation cannot be written to a status file. Therefore, you will not be able to retrieve any information about the installation progress.

**Action:** No action is necessary.

---

**\* Reading source for product information.**

**ERROR: The expected depot or root does not exist at “/car/spool/sw”.**

**\* Retry number 1 of 1 for product information.**

**ERROR: The expected depot or root does not exist at “/var/spool/sw”.**

**ERROR: Cannot open source. Check above for errors, as well as the daemon logfile on the source host (default location: /var/adm/sw/swagentd.log)**

**ERROR: Cannot continue the Analysis Phase until the previous errors are corrected.**

**Cause:** The depot containing the software to be installed was not found in the path /var/spool/sw. (The path in the error message may differ from machine to machine.) Verify the full path to the depot (OVECS-HPUX10, OVECS-HPUX11, OVECS-SOLARIS), then follow the instructions for this error message listed below.

---

## Unix Installation Error Messages

- Action:**
1. If you are using the Install script on the HP OpenView ECS CD-ROM with NO parameters, change directory to /cdrom/SOLARIS. Do an ls there and look for the directory OVECS-SOLARIS.  
  
If the CD-ROM drive is mounted locally, try the installation again. If it is remote to this machine, be sure that the source machine exported the CD-ROM directory with read-only root permission.
  2. If you are using the HP Software Distributor (SD) to install ECS, be sure to specify the full path to the CD-ROM depot including the operating system name (HPUX10 or HPUX11) in the Specify Source dialog box under the Source Depot Path field.
  3. If you are using the Install script on the CD-ROM with the -s parameter, make sure that you specify the full path to the depot including the operating system name (Solaris).

---

**\* Checking mounted file systems.**

**ERROR: Entry for file system “/dev/dsk/c201d2so” in “/etc/checklist” could not be mounted. If you do not want this file system mounted, comment it out of the “/etc/checklist” file, or set the “mount\_all\_filesystems” option to “false”/**

**ERROR: Cannot continue the Analysis Phase until the previous errors are corrected.**

**Cause:** On each platform where ECS is supported, there is a file that holds mount specifications. On HP-UX 10.X and 11.X systems it is /etc/fstab. On Solaris systems it is /etc/vfstab.

HP Software Distributor (SD) tries to do all of the mounts listed in the mount specification file before installing the software. If you get this error, it is because there is a mount listed in your mount specification file that is not able to be mounted.

**Action:** Either fix the problem to allow the mount or comment out the entry in the mount specification file and try the installation again, or run the `install` script and with the following options:

```
./install -x mount_all_filesystems = false
```

---

**\* Reading source for product information.**

**ERROR: Cannot lock “/cdrom/OVECS-HPUX10” because another command holds a conflicting lock. The process id of that command is 15912.**

**\* Retry number 1 of 1 for product information.**

**\* Reading source for file information.**

**\* Checking mounted file systems.**

**Cause:** Two installations are trying to access the same depot at the same time.

**Action:** Wait a few minutes and retry the installation.

---

**ERROR: RPC exception: “status 16c9a016 (dce / rpc)”**

**ERROR: Could not access remote file “/etc/snmpd” in software item “OVSNMPAgent.AGENT-RUN,1” due to RPC or network error**

**ERRR: Failed installation fileset  
“OVSNMPAgent.AGENT-RUN,r=A.04.00”/**

**Check the above output for details.**

**ERROR: RPC exception: “status 16c9a016 (dce / rpc)”**

**ERROR: Could not close remote soc**

**“/openview/mnt\_nb/images/T10/4.1SUNOS/NNMGR” due to RPC or network error.**

**\*Retry number 1 of 1 for loading files for fileset  
“OVSNMPAgent.AGENT-RUN,r=A.04.00”.**

## Installation Error Messages

### **Unix Installation Error Messages**

- Cause:** On remote installations, HP Software Distributor (SD) uses `rpc` to connect to the remote depot and pull the software. Sometimes, the network traffic is such that `rpc` does not get the software before timing out or reaching some other roadblock.
- Action:** Move the CD-ROM drive to the machine on which you are installing to avoid the network traffic. Alternatively, try waiting until the network is less busy and attempt the installation again.



## **Windows NT Installation Error Messages**

---

### **This program requires at least 64 Mb of extended memory**

**Cause:** The system on which you are installing ECS has insufficient memory for the installation to succeed.

**Action:** Install more memory on the system and try again, or install ECS on a different system that has the required memory.

---

### **This program requires VGA or better resolution**

**Cause:** The system on which you are installing ECS does not have the required video resolution (800 x 600).

**Action:** Upgrade the video resolution to the required level and try again, or install ECS on a different system that has the required video resolution.

---

### **No encoders are configured for this installation. Consult the Administrators guide for instructions on editing.**

**Cause:** The ECS Designer is the only ECS product that you have installed. No encoder has been installed as the installation program does not know the environment in which the circuits you develop will be used.

**Action:** Edit the `ed.conf` file as described in “Configuring Multiple Encoders” on page 53.

---

Installation Error Messages

**Windows NT Installation Error Messages**

---

# Glossary

**Abstract Syntax Notation 1 (ASN.1)** An OSI standard related to the Presentation Layer where the abstract representation of the data is independent of its physical encoding. It is specified in ISO/IEC 8824, X.208.

**agent** A program or process running on a remote device or computer system that responds to management requests, performs management operations, and/or sends event notifications.

**annotation API** A set of application program interface functions and data structures that supports the transfer of data between an external annotation server and one or more Annotate nodes in an ECS circuit.

**annotation server** A user supplied server that receives a request from an Annotation node within a correlation circuit, performs some action, and returns a response to the Annotate node. The action performed by the annotation server may involve information extracted from events in the circuit, and the information returned is typically obtained external to the ECS Engine and the annotation server.

**arrival time** The time an event arrives at the ECS engine in Universal Coordinated Time (UTC).

**ASCII** American Standard Code for Information Interchange. A standard used by computers for interpreting binary numbers as characters.

**ASN.1** Abstract Syntax Notation 1.

**attribute** An object characteristic or property that describes the current state of the object and which has a unique identifier by which it is accessed. In ECS, for example, the “eventTime” attribute of a CMIP event, or the “Rate” attribute of a Rate node. See event attribute; identifier; correlation node attribute.

**attribute-value pair** The combination of an attribute identifier and the value of that attribute for a specific object. In ECS, attribute-value pairs are represented as key-value pairs in an ECDL dictionary. See also key-value pair; dictionary.

---

**Basic Encoding Rules (BER)**

Defines how ASN.1 data types are encoded for transport on the network.

**breakpoint** A point in a program at which execution is halted so that the program's status, contents of variables and other factors can be examined. In the ECS Designer, in simulation mode, breakpoints are locations in a correlation circuit where event processing is halted to allow for manual intervention.

**canvas** The working area of the ECS Designer screen. This is where you place, connect, and configure correlation nodes to create your correlation circuit.

**CCITT** The International Telegraph and Telephone Consultative Committee, an international organization concerned with proposing recommendations for international communications. Replaced by the International Telecommunications Union, Telecommunications (ITU-T) in 1992. See International Telecommunications Union, Telecommunications (ITU-T).

**circuit** *See correlation circuit.*

**CMIP** *See Common Management Information Protocol (CMIP).*

**Common Management Information Protocol (CMIP)** A protocol for exchanging network management information in an OSI environment (ISO/ITU-T X.710). CMIP communicates management information between a manager and an agent. CMIP allows a manager to retrieve (get) management information from, or to alter (set) management information on an agent. CMIP also allows the manager to create and delete instances of an object managed by the agent, or perform an action on an object. An agent can also emit unsolicited messages, called notifications, to alert managers of noteworthy local conditions.

**component event** An event that is combined with other events to create a new event. In ECS, a composite event is composed of two or more component events. See composite event.

**composite event** In ECS, a composite event consists of a structured aggregation of addressible component events each of which may be a primitive event, a temporary event, or a composite

---

event. A composite event may only exist within a correlation circuit. See also component event; primitive event; temporary event.

**compound node** A graphical element that represents a container of lower level components. The lower level components will be displayed when the user opens the compound node. In ECS, a correlation circuit fragment may be encapsulated in a compound node, hence creating a new user-defined correlation node. Compound nodes may be added to libraries and re-used by reference or by copy. Compare with primitive node.

**condition (parameter)** In ECS, a condition is an ECDL expression specified for a correlation node parameter, usually involving attribute from an event, that returns a value used to modify the behavior of the correlation node.

**correlation** A procedure for evaluating the relationship between sets of data or objects to determine the degree to which changes in one are accompanied by changes in the other. In ECS, correlation is a process of analyzing a stream of events by filtering and detecting patterns

and replacing groups of events with single events that have (possibly) higher information content.

**correlation circuit** In ECS, a collection of interconnected primitive nodes and compound nodes, configured to perform a filtering or correlation activity. Each correlation node is configured appropriately to the correlation requirement. The configuration includes the specification of the event types, and the allowed transit delays for those events, to be accepted from the external event stream. A correlation circuit can be loaded into an ECS Engine.

**correlation circuit port** The logical connections between a correlation circuit and the containing infrastructure where events enter and leave the circuit. These ports may be configured to select a subset of events in the input event stream, based upon event encoding type and event syntax. A single port may be connected to multiple Source/Sink nodes, and a single Source/Sink node may be connected to multiple circuit ports.

---

**correlation engine** The ECS runtime component that reads an input event stream, decodes the input events, performs the event correlation, encodes the output events and returns the output events to the event stream. The event correlation is as specified by the one or more correlation circuits loaded into the correlation engine.

**correlation node** A processing element in a correlation circuit. See also compound node; primitive node.

**correlation node attribute** A property of a correlation node that can be read from another correlation node. The Count, Rate, and Table nodes have attributes (which may be exported by a containing compound node as attributes of the compound node). Attributes are addressed using a dot notation: "node\_name.attribute\_name".

**correlation node parameter** In the ECS Designer, a correlation node parameter is an ECDL expression used to configure a correlation node.

**correlation node port** One of possibly many connection points of a correlation node used to

interconnect correlation nodes. Events enter a correlation node through a port and leave a correlation node through a port. Port types include input, output, control, reset, and error ports. In the ECS Designer, ports visually indicate the sense of the associated event flow. Optional ports are not displayed by default.

**creation time** The time an event was created. Inside the ECS Engine creation time is represented in Universal Coordinated Time (UTC).

**daemon** A process that "serves" clients. Sometimes referred to as a server.

**data store** In ECS, a component of the ECS Engine which holds user-specified named data items of an ECDL data type. The entries in the data store may be referenced from the ECDL expressions configured into the correlation nodes. A correlation circuit may be associated with one of the possibly many data stores loaded into the correlation engine.

**data type** A particular kind of data; for example integer, alphanumeric, boolean, date. In ECS, data types are ECDL data

---

types which define the type and range of values to which an identifier may be assigned. Every value in ECDL has a data type, but the type need not be explicitly stated. The types range from simple types such as integers, to compound types such as dictionaries and lists, and special types such as functions and events.

**dictionary (data type)** In ECS, a dictionary is an ECDL data type comprised of an unordered list of key-value pairs. Any value is accessed via reference to the key. Within ECS, an event is treated as a dictionary with attribute names being the dictionary keys which provide access to the attribute values.

**Distributed Management Platform (DM)** HP OpenView Distributed Management Platform, the platform which provides the infrastructure for implementing OSI-based management solutions.

**DM** *See Distributed Management Platform (DM)*

**duration data type** In ECS, a duration is an ECDL data type used to represent relative or elapsed time values. Compare with time data type.

**dynamic parameter** A parameter whose value is determined during program execution. In ECS, an ECDL expression configured for a correlation node parameter which is evaluated each time an event enters the correlation node. Typically, the value returned by a dynamic parameter changes for each event processed.

**ECDL** *See Event Correlation Description Language (ECDL).*

**ECS** *See Event Correlation Services (ECS).*

**ECS circuit** *See correlation circuit.*

**ECS Designer** The ECS Designer is the ECS component which you use to create and test correlation circuits. The ECS Designer works in two modes: build mode where you create correlation circuits, and simulate mode where you test the circuits.

---

**ECS Engine** *See correlation engine.*

**ecsmgr** The command line program used to administer a running ECS Engine.

**endecode** In ECS, a term used to refer to a combined encoding or decoding function or capability. An endecode module is an architectural entity which provides encoding and decoding for a specific type of event.

**evaluation license** A license granted for a specific period of time for the purpose of evaluating ECS.

**event** An event is an unsolicited notification such as an SNMP trap, a CMIP notification, or a TL1 event, generated by an agent process in a managed object or by a user action. Events usually indicate a change in the state of a managed object or cause an action to occur. In ECS, an event is encoded as a primitive, compound, or temporary event. ECS events contain header attributes added to the input events to assist the processing of the events while they are in the ECS correlation circuit. The header attributes are stripped before the events are transmitted from the ECS circuit.

**event attribute** A characteristic property of an event. In ECS, event attributes are either part of the internally created event header common to all event types, or part of the event body that contains the input event.

**Event Correlation Description Language (ECDL)** The language used to specify correlation circuits (node relationships, parameter expressions, data and fact store values) for the ECS Engine.

**Event Correlation Services (ECS)** The HP OpenView Event Correlation Services product.

**event encoding type** The first and highest level in the three-tiered ECS event classification system. An event's encoding type determines the endecode module that will be used to translate the event to and from its native format. For example, CMIP notifications and SNMP traps both use the BER encoding type. ASCII events use the MDL encoding type, and ITO messages use the ITO encoding type. See also event syntax; event type

**event flow** An ECS circuit represented graphically as a circuit schematic consisting of



---

correlation nodes interconnected by lines (connections). See also correlation circuit.

**event body** The body of an event depends on the event class. The body of a primitive event is the original message, trap or event; the body of a temporary event may be empty; and the body of a composite event consists of other events.

**event header** Inside ECS and event is augmented with additional information such as the event encoding type, event syntax, event type, and event class. This information is carried in a header that is attached to the event body. See also event body.

**event I/O API** A set of application program interface functions and data structures that supports the input and output of events to and from the ECS Engine.

**event syntax** The rules governing the structure and content of an event. In ECS, the event syntax is the second level in the three-tiered ECS event classification system. An event's syntax determines how the event's attributes are read and written. For example, SNMP traps have an event syntax of Trap-PDU

and CMIP notifications have an event syntax that evaluates to an OID identifying the GDMO notification. ASCII events have a syntax determined by the MDL definition used to read and write them. See also event encoding type; event type.

**event type** A classification of an event into a particular category that further defines the nature of the event. In ECS, the event type is the third and lowest level in the three-tiered event classification system. The event type is represented by the ECS header attribute "event\_type". For SNMP traps the event type is the generic trap number (1-6). The CMIP event type is the OID of the notification. ASCII events have an event type determined by the MDL definition used to read and write them. See also event encoding type; event syntax.

**expiry time** Annotation requests are valid for a limited time, determined by the Annotate node's Time Limit parameter. The expiry time is the time at which the annotation request was generated plus the Time Limit. In other words, it is the time at which the request expires.

---

**expression** In general, a set of reserved words, symbols, variables, and functions that is evaluated to provide a result. In ECS, an expression is any collection of valid ECDL statements. Note that ECDL is a functional language that has no concept of variables.

**fact store** A component of the ECS Engine which stores relationships between objects. Any two objects which may be any ECDL data type, may be related using any user-defined relationship. The facts may be accessed at runtime by the ECDL expressions configured into the correlation node parameters.

**FLEXlm** A Licensing technology used in stand-alone and DM-integrated ECS products.

**floating license** A license where there is a single license server for all licensing clients on the network. Any licensing client on the network can access the license server to check out a license.

**function** A general term for a portion of a program that performs a specific task. In ECS, an ECDL function is one of the built-in functions or operators, or a user

defined function. ECDL functions can be named or anonymous, but must return an ECDL value.

**GDMO** See Guidelines for the Definition of Managed Objects (GDMO).

### **Greenwich Mean Time**

Standard time used throughout the world based on the mean solar time of the meridian of Greenwich. See Universal Coordinated Time (UTC).

### **Guidelines for the Definition of Managed Objects (GDMO)**

Describes a formal method for describing the important characteristics and operations of an object class. Specified in ISO 10165-4, X.722.

**HP OpenView** A family of network and system management products, and an architecture for those products. HP OpenView includes development environments and a wide variety of management applications.

**identifier** A name that within a given scope uniquely identifies the object with which it is associated.

---

**IEC** International  
Electrotechnical Commission.

**IEEE** Institute of Electronic and  
Electrical Engineers.

**International  
Telecommunications Union,  
Telecommunications (ITU-T)**

The ITU is a world-wide organization within which governments and industry coordinate the establishment and operation of telecommunications networks and services. It is responsible for the regulation, standardization, coordination and development of international telecommunications as well as the harmonization of national policies. The ITU is an agency of the United Nations. In 1992 it took over the functions of the CCITT.

**ISO** International Standards  
Organization.

**ITO** See *IT/Operations (ITO)*.

**IT/Operations (ITO)** HP  
OpenView IT/Operations, a  
distributed client/server software  
solution that helps system  
administrators detect, solve, and

prevent problems occurring in  
networks, systems, and  
applications.

**ITU-T** International  
Telecommunications Union,  
Telecommunications.

**key-value pair** A data storage  
item consisting of a search key  
paired with a value. In ECDL, a  
key-value pair is written as “key  
=> value”. See also dictionary.

**library** In ECS, a repository for  
compound nodes. Compound nodes  
in the library may be referenced  
from a circuit, or copied from the  
library and modified.

**license** The legal right to use a  
feature in a software program.

**license server** The server  
processes that manage access to  
ECS features by licensed users.

**list data type** a variable-length  
ordered set of values all of the  
same data type. In ECDL, a list  
data type may contain a set of  
values of any other ECDL data  
type including complex types such  
as lists and tuples.

---

**Management Information Base (MIB)** A logical collection of configuration and status values that can be accessed via a network management protocol.

**MDL** *See Message Description Language.*

**message description** Detailed information about an event or message. In ECS, a description of the attributes and formatting of a text-based event (message), that allows the MDL encode module to decode and encode events consistent with that syntax. Message descriptions which are written in Message Description Language (MDL) are translated into metadata before being used by the ECS engine encode module. See metadata.

**Message Description Language** A language used to describe a text event's attributes and formatting. Each text event syntax has its own message definition written in MDL. See also message definition; event syntax.

**metadata** Data about data. In ECS, message descriptions are translated into metadata which is a form which maximizes access performance by the MDL encode

module. See message description. CMIP and SNMP metadata is derived from MIBs.

**MIB** Management Information Base (MIB).

**Network Node Manager (NNM)** Definition to come from OVSD.

**NNM** *See Network Node Manager (NNM).*

**node** 1. A computer system or device (e.g., a printer, router, bridge) in a network. 2. A graphical element in a drawing that acts as a junction or connection point for other graphical elements. 3. In ECS, see correlation node.

**nodelock license** A license where the license server and license clients must be on the same machine, meaning that the licensed application is "locked" to running on the node that is the license server.

**object identifier (OID)** A unique sequence of numbers or string of characters used for specifying the identity of an object, that is obtained from an authorized

---

registration authority or an algorithm designed to generate universally unique values.

**OID** *See object identifier (IOD).*

**oid data type** In ECS, an oid is an ECDL data type which contains an Object Identifier in dot-separated notation (e.g., 1.2.3.4.5). Where the data item is dynamically interpreted, at least three elements (2 dots) are required to avoid interpretation as a real data type.

**Open Systems Interconnection (OSI)** A standardization model in which a manager process is responsible for executing specific management functions requested by the user through interactions with an agent process. The agent process represents the management services offered by the managed objects.

**OSI** *See Open Systems Interconnection (OSI).*

**parameter** *In ECS, see correlation node parameter.*

**pmd** HP OpenView postmaster daemon.

**port** 1. A location for passing information into and out of a network device. 2. In ECS, a location for passing events into and out of a correlation node or a correlation circuit. See correlation node port; correlation circuit port.

**primitive event** An ECS internal event which encapsulates an input event. Several header attributes are added as a header for correlation and control purposes, which are stripped before the primitive event leaves the ECS engine. See also event; temporary event; composite event.

**reserved word** Words that have special meaning in ECS and cannot be used for any other identifier.

**Simple Network Management Protocol (SNMP)** The ARPA network management protocol running above TCP/IP used to communicate network management information between a manager and an agent. SNMPv2 has extended functionality over the original protocol.

**simulate** *See simulation.*

---

**simulation** In general, the imitation by a program of a process or set of conditions affecting one or more objects such that the results of the program reflect the impact of the process or changes in conditions. In ECS, a simulation is the process of feeding events from an event log file through the correlation circuit to observe the behavior of the correlation circuit using aids such as breakpoints, tracing, and stepping.

**SNMP** See *Simple Network Management Protocol (SNMP)*.

**SNMP trap** An unconfirmed event, generated by an SNMP agent in response to some internal state change or fault condition, which conforms to the protocol specified in RFC-1155. See event.

**socket stack** An interface that supports interprocess communication based on the use of file handles. In ECS a socket stack is used to communicate with the ECS Engine for command, i/o and annotation purposes.

**Software Distributor (SD)** HP OpenView multi-platform software installation product.

**static parameters** In general, parameters whose values are determined prior to program execution. In ECS, a statically evaluated parameter is a correlation node parameter where the value is defined when the correlation circuit is loaded. The value does not change when an event enters the associated node/port. See dynamic parameters.

**syntax** In general, the rules governing the structure and content of a language or the description of an object. In ECS, see event syntax.

### **Telecommunications Management Network (TMN)**

The term used to identify a homogeneous approach to the management of heterogeneous networks. It is defined in the international standards referred to as ITU-TSS M3100. TMN recommendations incorporate OSI NM concepts, principles, protocols and application services.

**temporary event** In ECS, an event that is created transparently by particular correlation nodes, and which may exist only within a correlation circuit. Temporary

---

events may consist only of header attributes created by the correlation engine, or they may additionally contain user data. Temporary events cannot be transmitted outside the correlation engine. See also event; primitive event; composite event.

**time data type** An ECDL data type that includes time and date.

**TL1** Transaction Language One was developed by Bellcore and is a management system protocol that uses structured text messages to pass information about networks and network element states.

**TMN** See Telecommunications Management Network (TMN).

**transit delay** The difference between an event's arrival time and its creation time. Transit delays can be caused by external network delays or by deliberately introduced delays in an ECS circuit.

**trap** See *SNMP trap*; *event*.

**tuple data type** An ECDL data type. A data structure consisting of a fixed collection of elements,

where each element is a simple ECDL type or a complex ECDL data type.

**Universal Coordinated Time (UTC)** Standard time used throughout the world based on the mean solar time of the meridian of Greenwich. Formerly known as Greenwich Mean Time (GMT).

**universal pathname** A set of environment variables that describe standard pathnames. Universal pathnames hide variations between pathnames on different versions of Unix.

**UTC** See *Universal Coordinated Time (UTC)*.

**X/Open Management Protocol (XMP)** An API specified by the X/Open standards body that provides a common access mechanism to both CMIS and SNMP management protocol services.

**XMP** See *X/Open Management Protocol (XMP)*.

**Zulu** See *Universal Coordinated Time (UTC)*.





## B

bundles, software, 38

## C

CMIP encoder configuration, 54  
confidence test, 57  
configuration file, 54  
configuring ECS for HP OpenView DM, 53  
correlation engine  
  encoder configuration, 54

## D

DM pack  
  NT, 45  
  Unix, 33

## E

ECS  
  configuring (NT), 49  
  configuring (Unix), 41  
  configuring for HP OpenView DM, 53  
  starting, 55  
ECS Designer, configuration, 54  
ECS Engine  
  NNM, 55, 56  
ecsconfest, 57  
ecsdes, 55  
ecsmgr, 56  
ed.conf, 54  
encode module  
  installation default (NT), 45  
  installation default (Unix), 33  
encoders  
  configuration of, 54  
environment variables  
  defined, 18  
  setting up (NT), 49  
  setting up (Unix), 41

errors, installation, 40, 59

## G

getting started, 15

## H

hardware prerequisites, 25  
HP Software Distributor (SD), 17, 37  
HP-UX, 37

## I

install script, 17, 35  
installation  
  analysis phase, 35, 39  
  decode modules (NT), 45  
  decode modules (Unix), 33  
  errors, 40, 59  
  execution phase, 35, 39  
  HP Software Distributor (SD), 37, 47  
  HP-UX, 37  
  install script, 35  
  logfile, 36, 39  
  mechanism, 17  
  overview, 24  
  process (NT), 45  
  process (Unix), 33  
  security privileges (NT), 47  
  security privileges (Unix), 27  
  Solaris 2.X, 35  
  status messages, 36, 39  
  verifying, 57  
  Windows NT 4, 47  
installation and licensing features, 17

## L

logfile, view the, 36, 39

## M

MANPATH statement  
  setting, 41, 49  
MDL endecoder configuration, 54  
memory requirements, 26

## O

operating systems, 25  
ov.envvars, 18  
ov.envvars.bat, 49  
overview of installation, 24  
ovstart, 54, 57

## P

PATH statement  
  modifying (NT), 49  
  modifying (Unix), 41  
Postmaster, registering ECS with, 53  
prerequisites  
  disk space, 26  
  hardware and software, 25  
  memory requirements, 26  
product numbers  
  NT, 45  
  Unix, 33

## S

SNMP endecoder configuration, 54  
software prerequisites, 25  
Solaris 2.X, 35  
starting HP OpenView ECS, 55

## U

universal pathnames  
  defined, 18  
  HP-UX and Solaris, 19  
  setting up (NT), 49

  setting up (Unix), 41  
  Windows NT, 21  
user environment  
  setting up (NT), 49  
  setting up (Unix), 41

## V

verifying  
  installation, 57  
video resolution, 26

## W

Windows NT 4, 47