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CHAPTER 6

Using Shared Services

Shared Services are the foundation of every application based on CiscoWorks Common Services (CWCS). They are shared among all the applications installed on a single server, and include all of the essential components of Common Services.

The following topics explain Shared Services and their supporting components:

- [Understanding Shared Services](#)
- [About the Shared Services Components](#)

Understanding Shared Services

Shared Services form the foundation of the CiscoWorks family of network management products. By “foundation”, we mean the complete set of essential services sufficient to meet basic feature requirements of all CiscoWorks network management applications, regardless of application subject area. [Table 6-1](#) list these feature requirements and the Shared Services designed to meet them.

As the foundation of the CiscoWorks product family, Shared Services are part of every CiscoWorks application (for example, Resource Manager Essentials, Campus Manager) and application bundle (for example, LMS, VMS, ITEM, SNMS). All CWCS-supported applications installed on a single server share the same set of Shared Services.

Because they are shared in this way, you cannot choose which Shared Services to install with your application. You must install all of them. Your application installation must be intelligent enough to detect whether these Shared Services are already installed on a target server before your application is installed. If Shared Services do not yet exist on the target service, are your application install must stop and prompt the user to install CWCS first. If Shared Services are installed, your application installation must not attempt to install them again.

Shared Services are included in the standard CWCS release train distribution. Unlike Per-Product Services (see [Chapter 29, “Using Per-Product Services”](#)) they are not provided as part of the “open source” (CWCS-SRC) distribution.

CISCO CONFIDENTIAL**Table 6-1 Shared Services: Feature Requirements and Services Map**

Category	Requirement	Description	Shared Service
Devices	Management	Add, import, export, delete, and synchronize devices	Device List and Credentials Repository (DCR). See the “About the Device List and Credentials Repository (DCR) Components” section on page 6-9.
	Credentials	Store and share device credentials	Device List and Credentials Repository (DCR). See the “About the Device List and Credentials Repository (DCR) Components” section on page 6-9.
	Lists	Maintain and share device lists	Device List and Credentials Repository (DCR). See the “About the Device List and Credentials Repository (DCR) Components” section on page 6-9.
Security	AAA-ACS and AAA-Non-ACS	AAA-secure interaction using ACS or non-ACS servers	MICE/CAM components in the Security System. See the “About the Security System Components” section on page 6-7.
	HTML Login	Fast, lightweight, secure user login	HTML-based user login screen (replaces the CMF applet). See the “About the Security System Components” section on page 6-7.
	User Session	Pass user session inform across Tomcat engine sessions.	MICE component from Core supports session management across different servlet engines. See the “About the Security System Components” section on page 6-7.
	Key Encryption	Encryption, key generation and agreement, Message Authentication Code (MAC)	Supported using Java Cryptography Extension (JCE). See the “About the Security System Components” section on page 6-7.
	SNMP v3 support	User key authentication per device, encrypted communications	Supports authNoPriv mode only. See the “About the Security System Components” section on page 6-7.
	Certificates	Manage and store SSL, Java and PKI certificates	See the “About the Security System Components” section on page 6-7.
	Database Encryption	Secure and encrypt database, including DB admin user name and password.	Supported using Sybase version 8 features. See the “About the Database Components” section on page 6-8.
	MSP Administration role	Enable partitioning of customer networks by device group	Supported using the MSP Admin role. See the “About the Security System Components” section on page 6-7.
Graphic User Interface	CWHP	Launch point for all applications.	CiscoWorks Home Page now provides complete GUI support, with integration down to the task level for applications that are fully UII-compliant, as explained in “About the CiscoWorks Home Page Component” section on page 6-5.

CISCO CONFIDENTIAL**Table 6-1 Shared Services: Feature Requirements and Services Map**

Category	Requirement	Description	Shared Service
Operations	Process Management	Control process startup and shutdown.	See the “About the Daemon Manager Component” section on page 6-12.
	Job Scheduling	Schedule and manage scheduled jobs and processes.	Also provides resource locking. See the “About the Job and Resource Manager (JRM) Component” section on page 6-13.
	Backup/Restore	Backup and restore data and processes.	See the “About the Backup and Restore Components” section on page 6-8.
	Application Registry	Register installed applications and configurations, check runtime dependencies	See the “About the Core Client Registry (CCR) Component” section on page 6-10.
	Message Cataloging	Log activity and errors	See the “About Diagnostic and Support Components” section on page 6-14.
	Diagnostics	Diagnose problems.	See the “About Diagnostic and Support Components” section on page 6-14.
	Connectivity Tools	Utilities for diagnosing connectivity problems (e.g., Ping, Traceroute, NS Lookup)	See the “About Diagnostic and Support Components” section on page 6-14.
	Configuration Management	Manage application configurations.	See the “About the Core Client Registry (CCR) Component” section on page 6-10.
	Packaging and Installation	Package and install applications from a single CD or set of CDs.	See the “About the Installation Framework Component” section on page 6-14.
	Integration	Allow CWCS applications to integrate with other network management applications	See the “About the Cisco Management Integration Center (CMIC) Component” section on page 6-6.
	Resource locking	Lock in-use processing resources	Provided by JRM . See the “About the Job and Resource Manager (JRM) Component” section on page 6-13
Headroom monitoring	Monitor free system resources.	Provided by JRM and CWCS Diskwatcher. See the “About the Job and Resource Manager (JRM) Component” section on page 6-13.	

CISCO CONFIDENTIAL**Table 6-1 Shared Services: Feature Requirements and Services Map**

Category	Requirement	Description	Shared Service
Other	Database	Basic application data storage.	Sybase database with SQLAnywhere. See the “ About the Database Components ” section on page 6-8.
	Database Administration	Start and stop Database engines.	Does not provide database administration. See the “ About the Database Components ” section on page 6-8.
	Messaging	Java messaging capability, communicate events and event-related notifications.	Provided on top of the Tibco event engine that is part of ESS. See the “ About the Event Services Software (ESS) Component ” section on page 6-13.
	Web Server with SSL Support	Standard web server for all applications.	Apache is the standard. See the “ About Web Server and Servlet Engine Components ” section on page 6-6.
	Servlet Engine	Supports Tomcat.	See the “ About Web Server and Servlet Engine Components ” section on page 6-6.
	Secure Shell (SSH)	Support for Secure Shell	See the “ About Web Server and Servlet Engine Components ” section on page 6-6.
	IPSec	IPSecPole support for Core-based applications.	See the “ About the Security System Components ” section on page 6-7.
	NT Services	Syslog, TFTP, RSH, and CRMLogger support for Windows	See the “ About NT Service Components ” section on page 6-15.
	Perl	Perl interpreter support	Perl version 5.00502 is supported throughout.
	Online Help	Online Help engine and files	See the “ About the Online Help Component ” section on page 6-12.

About the Shared Services Components

The following topics provide basic information for each of the Shared Services components:

- [About the CiscoWorks Home Page Component](#)
- [About Web Server and Servlet Engine Components](#)
- [About the Cisco Management Integration Center \(CMIC\) Component](#)
- [About the Security System Components](#)
- [About the Database Components](#)
- [About the Backup and Restore Components](#)
- [About the Device List and Credentials Repository \(DCR\) Components](#)
- [About the Core Client Registry \(CCR\) Component](#)
- [About the Core Logging Component](#)
- [About the Online Help Component](#)
- [About the Daemon Manager Component](#)
- [About the Job and Resource Manager \(JRM\) Component](#)
- [About the Event Services Software \(ESS\) Component](#)
- [About the Event Distribution System \(EDS\) Component](#)

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- [About the Installation Framework Component](#)
- [About the Java Plug-in Component](#)
- [About Diagnostic and Support Components](#)
- [About SNMP Service Components](#)
- [About NT Service Components](#)
- [About Device Center Components](#)

Each topic includes basic information about the component's purpose and features, pointers to guidelines on using it, and a list of packages on which the component has a functional dependency.

For the same information on Per-Product components, see [Chapter 29, "Using Per-Product Services"](#).

About the CiscoWorks Home Page Component

The CiscoWorks Home Page is a replacement for the CWCS Desktop that provides:

- A lightweight, high-performance Web-based GUI compatible with the Cisco UE/UII standard.
- Easy access to CiscoWorks applications via a simple, customizable "Home Page".
- Launch points for other (non-Cisco, third party, and customer-made) applications.
- MICE sharing of session data across Tomcat and other web servlet engines.
- A CMIC application registry.

For guidelines to follow when using CiscoWorks Home Page with your application, see [Chapter 7, "Using the CiscoWorks Home Page"](#). The CiscoWorks Home Page is functionally dependent on the packages shown in [Table 6-2](#).

Table 6-2 *CiscoWorks Home Page Package Dependencies*

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files
CSCOess/ess	Event Services Software (includes Tibco event bus)
CSCOhlp/pxhlp	CWCS Help (includes help engine)
CSCOhlpDM/cdone	CWCS Help Files
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjdom/jdom	JDOM XML Processing Modules
CSCOlg4j/log4j	Log4j Logging Framework
CSCOmnd/dmgt	Daemon Manager (Process Manager)
CSCOsjre/sunjre	Core JRE 1.3.1 libraries (.so, .font, etc.)
CSCOmct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache Web Server, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxml4j/xml4j	IBM XML4J Parser
CSCOxrcs/xerces	Apache Xerces XML Parser

CISCO CONFIDENTIAL**Table 6-2** *CiscoWorks Home Page Package Dependencies (continued)*

CSCOcore/core	Core Modules
CSTM	Common Services Transport Mechanism
UII	User Interface Infrastructure
CSCOcwHP/CWHP	CiscoWorks Home Page
CSCOcmic/CMIC	Cisco Management Integration Center

About Web Server and Servlet Engine Components

The Web Server and Servlet Engine components provide Web accessibility for all Common Services components and applications based on them. For guidelines to follow when including Web Services with your application, see [Chapter 7, “Using the CiscoWorks Home Page”](#). Web Services components are functionally dependent on the packages shown in [Table 6-3](#).

Table 6-3 *Web Server and Servlet Engine Package Dependencies*

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOhelp/pxhelp	CWCS Help (includes help engine)
CSCOhelpDM/cdone	CWCS Help Files
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjaws/jaws	JSCAPE JavaAWT for widgetd
CSCOtmct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Apache Web Server, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser

About the Cisco Management Integration Center (CMIC) Component

CMIC lets installed applications register their task URLs, and discover the task URLs of other applications installed on the same server. It allows these applications to discover each other and work together to provide enhanced network management integration functions they cannot provide on their own. CMIC also provides:

- An extensive search capability, which makes the CMIC Registry a lookup service for management tasks available to the user.
- A UI that allows customers to register applications manually.

For guidelines on using CMIC with your application, see [Chapter 9, “Integrating Applications with CMIC”](#). CMIC is functionally dependent on the packages shown in [Table 6-4](#).

CISCO CONFIDENTIAL**Table 6-4** *CMIC Package Dependencies*

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOhelp/pxhlp	CWCS Help (includes help engine)
CSCOhelpDM/cdone	CWCS Help Files
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOl4j/log4j	Log4j Logging Framework
CSCOmd/dmgt	Daemon Manager (Process Manager)
CSCOmct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
CSTM	Common Transport Mechanism
UII	User Interface Infrastructure
CSCOwhp/CWHP	CiscoWorks Home Page
CSCOcmic/CMIC	Cisco Management Integration Center

About the Security System Components

The Security System provides secure logon and user authentication for all applications based on The Security System is non-hierarchical, session-oriented, and role-based, allowing applications to specify which of their tasks are visible to each of the user roles. For guidelines to follow when using the Security System with your application, see [Chapter 10, “Using the Security System”](#). Security System components are functionally dependent on the packages shown in [Table 6-5](#).

Table 6-5 *Security System Package Dependencies*

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files
CSCOcsdb/ccsdb	Core Database
CSCOdb/db	Common Services Database (includes diskwatcher, DB wrappers)
CSCOess/ess	Event Services Software (includes Tibco event bus)
CSCOhelp/pxhlp	CWCS Help (includes help engine)
CSCOhelpDM/cdone	CWCS Help Files
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjdom/jdom	JDOM XML Processing Modules
CSCOmaas/maas	maas Application Administrative Server

CISCO CONFIDENTIAL**Table 6-5 Security System Package Dependencies (continued)**

CSCOmd/dmgt	Daemon Manager (Process Manager)
CSCOsjre/sunjre	Core JRE 1.3.1 libraries (.so, .font, etc.)
CSCOtmtct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
IPSEC	Windows IPsecPol Tool (exe and dlls)

About the Database Components

The CWCS Database components provide APIs and utilities for installing, configuring and managing custom databases for your application. Among other features, the Database components allow you to set up and manipulate ODBC data sources, start and stop processes, identify versions, run scripts, and maintain backup manifests (see the [“About the Backup and Restore Components”](#) section on page 6-8). For guidelines to follow when using Database components with your application, see [Chapter 11, “Using the Database APIs”](#). Database components are functionally dependent on the packages shown in [Table 6-6](#).

Table 6-6 Database Package Dependencies

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOdb/db	Common Services Database (includes diskwatcher, DB wrappers)
CSCOhelp/pxhelp	CWCS Help (includes help engine)
CSCOhelpDM/cdone	CWCS Help Files
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjre2/jre2	CWCS JRE 1.2.2
CSCOmd/dmgt	Daemon Manager (Process Manager)
CSCOtmtct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser

About the Backup and Restore Components

The Backup and Restore components provide a complete backup and restore function for CWCS-based applications. For guidelines to follow when including Backup and Restore with your application, see [Chapter 12, “Using Backup and Restore”](#). Backup and Restore features are functionally dependent on the packages shown in [Table 6-7](#).

CISCO CONFIDENTIAL**Table 6-7 Backup and Restore Package Dependencies**

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files
CSCOcsdb/ccsdb	Core Database
CSCodb/db	Common Services Database (includes diskwatcher, DB wrappers)
CSCOess/ess	Event Services Software (includes Tibco event bus)
CSCOhlp/pxhlp	CWCS Help (includes help engine)
CSCOhlpDM/cdone	CWCS Help Files
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjdom/jdom	JDOM XML Processing Modules
CSCOjre2/jre2	CWCS JRE 1.2.2
CSCOmaas/maas	maas Application Administrative Server
CSCOmnd/dmgt	Daemon Manager (Process Manager)
CSCOperl/perl	Perl Support
CSCOsjre/sunjre	Core JRE 1.3.1 libraries (.so, .font, etc.)
CSCOtmet/tomcat	Tomcat Servlet Engine
CSCOWeb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)

About the Device List and Credentials Repository (DCR) Components

The DCR provides a common repository for CiscoWorks-based applications to share lists of managed devices and their credentials. DCR:

- Eliminates redundant storage of this information.
- Reduces the need for application users to perform redundant maintenance operations when devices and credentials change.
- Provides a central place where users add or import new devices
- Provides for application management of this data automatically.

To use DCR with your application, see [Chapter 14, “Using the Device Credentials Repository”](#). DCR is functionally dependent on the packages shown in [Table 6-8](#).

Table 6-8 DCR Package Dependencies

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files

CISCO CONFIDENTIAL**Table 6-8 DCR Package Dependencies (continued)**

CSCOcsdb/ccsdb	Core Database
CSCOess/ess	Event Services Software (includes Tibco event bus)
CSCOhelp/pxhelp	CWCS Help (includes help engine)
CSCOhelpDM/cdone	CWCS Help Files
CSCOjpwr/jpwr	JSCAPE Power Search Classes
CSCOjre2/jre2	CWCS JRE 1.2.2
CSCOjrm/jrm	Job and Resource Manager
CSCOlog4j/log4j	Log4j Logging Framework
CSCOmmd/dmgt	Daemon Manager (Process Manager)
CSCOperl/perl	Perl Support
CSCOmct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
CSTM	Common Services Transport Mechanism
UII	User Interface Infrastructure
CSCOcmic/CMIC	Cisco Management Integration Center

About the Core Client Registry (CCR) Component

CCR is the client registry component used by Core-based applications . It manages the installation, upgrade, patching and uninstall of Multiple Device Contoller (MDC) modules and the Core module itself. To use CCR with your application, see [Chapter 13, “Using the Core Client Registry”](#). CCR is functionally dependent on the packages shown in [Table 6-9](#).

Table 6-9 CCR Package Dependencies

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
CSCOcsdb/ccsdb	Core Database
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjdom/jdom	JDOM XML Processing Modules
CSCOjre2/jre2	CWCS JRE 1.2.2
CSCOmaas/maas	MAAS Application Administrative Server
CSCOmmd/dmgt	Daemon Manager (Process Manager)

CISCO CONFIDENTIAL**Table 6-9 CCR Package Dependencies (continued)**

CSCOperl/perl	Perl Support
CSCOsjre/sunjre	Core JRE 1.3.1 libraries (.so, .font, etc.)
CSCOmct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser

About the Core Logging Component

The Core Logging API allows both the Core applications (such as Multiple Device Controllers) log error, audit and application activity messages to a single file, from both C++ and Java applications. It is intended for use with the Core Client Registry (CCR), which maintains information on log accessibility and location (see the [“About the Core Client Registry \(CCR\) Component”](#) section on page 6-10). For guidelines to follow when including Core Logging with your application, see [Chapter 15, “Using the Core Logging API”](#). The Core Logging API is functionally dependent on the packages shown in [Table 6-10](#).

Table 6-10 Core Logging Package Dependencies

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
CSCOcsdb/ccsdb	Core Database
CSCOess/ess	Event Services Software (includes Tibco event bus)
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjdom/jdom	JDOM XML Processing Modules
CSCOjre2/jre2	CWCS JRE 1.2.2
CSCOMAAS/maas	maas Application Administrative Server
CSCOmD/dmgt	Daemon Manager (Process Manager)
CSCOperl/perl	Perl Support
CSCOsjre/sunjre	Core JRE 1.3.1 libraries (.so, .font, etc.)
CSCOmct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser

CISCO CONFIDENTIAL**About the Online Help Component**

The Online Help components provide access to online help for CWCS-based applications. For guidelines to follow when including Online Help components with your application, see [Chapter 16, “Adding Online Help”](#). CWCS Online Help is functionally dependent on the packages shown in [Table 6-11](#).

Table 6-11 Online Help Package Dependencies

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files
CSCOgrid/grid	Grid
CSCOhlp/pxhlp	CWCS Help (includes help engine)
CSCOhlpDM/cdone	CWCS Help Files
CSCOjre2/jre2	CWCS JRE 1.2.2
CSCOmd/dmgt	Daemon Manager (Process Manager)
CSCOtmc/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
UII	User Interface Infrastructure
CSCOcwhp/CWHP	CiscoWorks Home Page
CSCOcmic/CMIC	Cisco Management Integration Center

About the Daemon Manager Component

The Daemon Manager (also known as the Process Manager) provides process control for applications that must:

- Monitor long-running processes.
- Restart processes that terminate abnormally.
- Start dependent processes in proper sequence.
- Start and control transient processes.

For guidelines to follow when including Daemon Manager with your application, see [Chapter 17, “Using the Daemon Manager”](#). Daemon Manager is functionally dependent on the packages shown in [Table 6-12](#).

Table 6-12 Daemon Manager Package Dependencies

Package Name	Description
CSCOmd/dmgt	Daemon Manager (Process Manager)
SVC	NT Services (includes TFTP, RSH/RCP, CRM Logger, Blat mail for NT)

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About the Job and Resource Manager (JRM) Component

The JRM provides a general-purpose interface for scheduling application jobs and maintaining a shareable repository listing of the devices locked by particular jobs.

For guidelines to follow when including JRM with your application, see [Chapter 18, “Using the Job and Resource Manager”](#). JRM is functionally dependent on the packages shown in [Table 6-13](#).

Table 6-13 JRM Package Dependencies

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCodb/db	Common Services Database (includes diskwatcher, DB wrappers)
CSCOeds/eds	Event Distribution System
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOmnd/dmgt	Daemon Manager (Process Manager)
CSCOmct/tomcat	Tomcat Servlet Engine
CSCOvorb/vorb	Visigenics CORBA
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser
SVC	NT Services (includes TFTP, RSH/RCP, CRM Logger, Blat mail)

About the Event Services Software (ESS) Component

ESS is an asynchronous, publish-and-subscribe messaging service providing distributed, loosely coupled interprocess communications. ESS is the standard CWCS service for event distribution.

The Event Distribution System (EDS; see [Chapter 20, “Using the Event Distribution System”](#)) is a predecessor of ESS. EDS is maintained in Common Services for the convenience of applications using it. *ESS and EDS are disjoint systems and do not work together. EDS has been deprecated in favor of ESS. EDS support will be withdrawn in a later version of CWCS.*

For guidelines to follow when including ESS with your application, see [Chapter 19, “Using Event Services Software”](#). ESS is functionally dependent on the package CSCOess/ess.

About the Event Distribution System (EDS) Component

EDS provides a means for sending messages from one process to another in a distributed, networked environment.

EDS is a predecessor of the standard event propagation service in CWCS: Event Services Software (ESS) (see [Chapter 19, “Using Event Services Software”](#)). *ESS and EDS are disjoint systems and do not work together. EDS is also deprecated in favor of ESS. EDS support will be withdrawn in a later version of CWCS.*

For guidelines to follow when including EDS with your application, see [Chapter 20, “Using the Event Distribution System”](#). EDS is functionally dependent on the package CSCOeds/eds.

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About the Installation Framework Component

The CWCS Installation Framework supplies a complete set of tools for creating full-featured installable packages, including version- and product- dependency verification, compliance with platform standards and formats, uninstallation, and patching.

For guidelines to follow when using the Installation Framework with your application, see [Chapter 21, “Using the Installation Framework”](#). The Installation Framework is functionally dependent on the packages shown in [Table 6-14](#).

Table 6-14 *Installation Framework Package Dependencies*

Package Name	Description
ITools [Windows]	CWCS Installation Framework (Windows)
ITools [SOL]	CWCS Installation Framework (Solaris)

About the Java Plug-in Component

The Java Plug-in is the Sun Microsystems product that allows Java 2 applets on CWCS web pages. This is a basic enabling technology for all CWCS applications. See [Chapter 22, “Using the Java Plug-in”](#) for specific guidelines to follow when including the Java Plug-in with an application. The Java Plug-in is functionally dependent on the package CSCOpug/plug.

About Diagnostic and Support Components

CWCS diagnostic and support utilities help customers gather data on CWCS installations and the applications installed with them. Cisco developers and customer support specialists can use this information to resolve customer problems quickly. It provides basic tools for collecting CiscoWorks Server information and packaging this information for delivery to Cisco. This edition of CWCS also includes tools for diagnosing connectivity issues and maintain log files.

For guidelines to follow when including the Diagnostic and Support tools with your application, see [Chapter 23, “Using the Diagnostic and Support Utilities”](#). The Diagnostic and Support tools are functionally dependent on the packages shown in [Table 6-15](#).

Table 6-15 *Diagnostic and Support Package Dependencies*

Package Name	Description
CSCOperl/perl	Perl Support
CSCOCORE/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
SVC	NT Services (includes TFTP, RSH/RCP, CRM Logger, Blat mail)

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About SNMP Service Components

CWCS SNMP Service components provide support for all basic SNMPv1, SNMPv2c, and SNMPv3 functions for both C++ and Java. For guidelines to follow when including SNMP Services components with your application, see [Chapter 24, “Using SNMP Services”](#). SNMP Services are functionally dependent on the packages shown in [Table 6-5](#).

Table 6-16 *SNMP Service Package Dependencies*

Package Name	Description
CSCOdB/db	Common Services Database (includes diskwatcher, DB wrappers)
CSCOsnp/snmp	Java SNMP APIs
SNMPv3 support	SNMPv3 Support (AuthNoPriv mode only)
C++ SNMPv3 library	These Net-SNMP libraries are being used by SNMP Set/Walk and the Management Station To Device Connectivity Tools in Device Center. Net-SNMP 5.1.1 uses OpenSSL 0.9.7d to calculate MD5/SHA-1 digests.

About NT Service Components

The NT Service components provide Windows-native support for basic functions like RSH, FTP, and Syslog. For guidelines to follow when including the NT Service components with your application, see [Chapter 25, “Using NT Services”](#). NT Services are functionally dependent on the packages shown in [Table 6-17](#).

Table 6-17 *NT Service Package Dependencies*

Package Name	Description
SVC	NT Services (includes TFTP, RSH/RCP, CRM Logger, Blat mail)
IPSEC	Windows IPsecPol Tool (exe and dlls)

About Device Center Components

CWCS Device Center provides a device-centric view for CiscoWorks applications. It provides device-oriented navigation, and organizes all the application tasks and reports relevant to each device around that device, making them tools launchable from a single location. Device Center can be started from the CiscoWorks Home Page or from within an application context.

For guidelines to follow when including Device Center with your application, see [Chapter 26, “Using Device Center”](#). Device Center is functionally dependent on the packages shown in [Table 6-18](#).

Table 6-18 *Device Center Package Dependencies/*

Package Name	Description
CSCOapch/apache	Core Apache Web Server with SSL
CSCOchlp/chlp	Core Help Files
CSCOcsdb/ccsdb	Core Database
CSCOess/ess	Event Services Software (includes Tibco event bus)

CISCO CONFIDENTIAL**Table 6-18** *Device Center Package Dependencies/*

Package Name	Description
CSCOjava/java	Core JRE 1.3.1 JARs
CSCOjaws/jaws	JSCAPE JavaAWT for widgetd
CSCOjre2/jre2	CWCS JRE 1.2.2
CSCOmmd/dmgt	Daemon Manager (Process Manager)
CSCOperl/perl	Perl Support
CSCOsjre/sunjre	Core JRE 1.3.1 libraries (.so, .font, etc.)
CSCOsnmp/snmp	Java SNMP APIs
CSCOmct/tomcat	Tomcat Servlet Engine
CSCOweb/web	Web Services: Apache, OpenSSL, ModSSL
CSCOxln/xalan	Apache Xalan XSLT Processor
CSCOxrcs/xerces	Apache Xerces XML Parser
CSCOcore/core	Core Modules (includes MDC, MICE, JDOM, CAM, CCR, corelogger, License files, dlls , libs, sync files, tibrv files)
SVC	NT Services (includes TFTP, RSH/RCP, CRM Logger, Blat mail)
IPSEC	Windows IPsecPol Tool (exe and dlls)
CSTM	Common Services Transport Mechanism
UII	User Interface Infrastructure
CSCOcwhp/CWHP	CiscoWorks Home Page
CSCOcmic/CMIC	Cisco Management Integration Center
CSCOdc/DVCR	Device Center