CISCO

**Installation and Configuration Guide
for Cisco Unified Contact Center Management Portal**

Release 9.1

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Preface

Purpose

This document explains how to install the Cisco Unified Contact Center Management Portal (Unified CCMP) components.

Audience

This document is intended for System Administrators with knowledge of their Unified Contact Center Enterprise (Unified CCE) system architecture. Microsoft SQL Server database administration experience is also helpful.

Organization

The sections of this guide are as follows:

Chapter 1	Planning Your Installation	Introduces Unified CCMP, including its integration with Unified CCE.
Chapter 2	Installation Guidelines and Requirements	Lists the prerequisites for Unified CCMP installation and provides recommendations for pre installation platform configuration.
Chapter 3	Windows and SQL Component Installation	Describes how to setup the Microsoft SQL Server.
Chapter 4	Unified CCMP Component Installation	Provides instructions for the installation of all Unified CCMP components.
Chapter 5	Unified CCMP Component Configuration	Describes post-installation configuration of Unified CCMP, including setting up replication and uploading .wav files for voice announcements. The procedure for configuring a Unified CCMP server cluster is detailed as well as how to use the Unified CCMP Replication Manager to replicate data

between Database servers. Web and Database component server performance checklists are also provided.

Chapter 6	Post Installation Steps	Describes the post-installation options and the system checks for the Unified CCMP platform.
Chapter 7	Upgrading From a Previous Version	Explains the various options for upgrading an existing installation of Unified CCMP without losing your data.
Chapter 8	Single-Sided Upgrade	Describes how to upgrade a single-sided deployment.
Chapter 9	Total Outage Upgrade	Describes how to upgrade a dual-sided deployment in one operation.
Chapter 10	Split Side Upgrade	Describes how to upgrade a dual-sided deployment in two stages, a side at a time.
Chapter 11	Upgrade From Version 8.5(1) or Earlier	Describes how to upgrade from Unified CCMP 8.5(1) or earlier.
Chapter 12	Uninstalling Unified CCMP	Describes how to remove Unified CCMP from your servers.
Chapter 13	Troubleshooting	Describes how to enable logging for the Unified CCMP Installer and how to apply database permissions after the Installer has completed.

Related Documentation

Documentation for Cisco Unified ICM/Contact Center Enterprise & Hosted, as well as related documentation, is accessible from Cisco.com at: http://www.cisco.com/cisco/web/psa/default.html.

- Related documentation includes the documentation sets for Cisco CTI Object Server (CTIOS), Cisco Agent Desktop (CAD), Cisco Agent Desktop - Browser Edition (CAD-BE), Cisco Unified Customer Voice Portal (CVP),Cisco Unified IP IVR, Cisco Unified Intelligence Center, and Cisco Support Tools.

- For documentation for these Cisco Unified Contact Center products, go to http://www.cisco.com/cisco/web/psa/default.html, click **Voice and Unified Communications**, then click **Customer Contact**, then click **Cisco Unified Contact Center Products** or **Cisco Unified Voice Self-Service Products**, then click the product/option you are interested in.

- For troubleshooting tips for these Cisco Unified Contact Center products, go to http://docwiki.cisco.com/wiki/Category:Troubleshooting, then click the product/option you are interested in.

- Documentation for Cisco Unified Communications Manager is accessible from: http://www.cisco.com/cisco/web/psa/default.html.

- Technical Support documentation and tools are accessible from: http://www.cisco.com/en/US/support/index.html.

- The Product Alert tool is accessible from (sign in required): http://www.cisco.com/cgi-bin/Support/FieldNoticeTool/field-notice.

- For information on the Cisco software support methodology, refer to *Software Release and Support Methodology: ICM/IPCC* available at (sign in required): http://www.cisco.com/en/US/partner/products/sw/custcosw/ps1844/prod_bulletins_list.html.

For a detailed list of language localizations, refer to the *Cisco Unified ICM/Contact Center Product and System Localization Matrix* available at the bottom of the following page: http://www.cisco.com/en/US/products/sw/custcosw/ps1001/prod_technical_reference_list.html.

Product Naming Conventions

In this release, the product names defined in the table below have changed. The New Name (long version) is reserved for the first instance of that product name and in all headings. The New Name (short version) is used for subsequent instances of the product name.

Note This document uses the naming conventions provided in each GUI, which means that in some cases the old product name is in use.

Old Product Name	New Name (long version)	New Name (short version)
Cisco IPCC Enterprise Edition	Cisco Unified Contact Center Enterprise	Unified CCE
Cisco IPCC Hosted Edition	Cisco Unified Contact Center Hosted	Unified CCH
Cisco Intelligent Contact Management (ICM) Enterprise Edition	Cisco Unified Intelligent Contact Management (ICM) Enterprise	Unified ICM
Cisco Intelligent Contact Management (ICM) Hosted Edition	Cisco Unified Intelligent Contact Management (ICM) Hosted	
Cisco CallManager/Cisco Unified CallManager	Cisco Unified Communications Manager	Unified CM

Conventions

This document uses the following conventions:

Convention	Description
boldface font	Boldface font is used to indicate commands, such as entries, keys, buttons, folders and submenu names. For example: • Choose **Edit** > **Find** • Click **Finish**
italic font	Italic font is used to indicate the following: • To introduce a new term; for example: A skill group is a collection of agents who share similar skills • For emphasis; for example: Do not use the numerical naming convention • A syntax value that the user must replace; for example: IF (condition, true-value, false-value) • A book title; for example: Refer to the Cisco CRS Installation Guide
window font	Window font, such as Courier, is used for the following: • Text as it appears in code or that the window displays; for example: `<html><title>Cisco Systems, Inc. </title></html>`
< >	Angle brackets are used to indicate the following: • For arguments where the context does not allow italic, such as ASCII output • A character string that the user enters but that does not appear on the window, such as a password

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

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We appreciate your comments.

1. Planning Your Installation

A successful installation of Unified CCMP requires some understanding of the platform components, the environment in which they are deployed and how they are configured in a cluster of linked servers. File systems and storage options are also discussed as well as user accounts and security considerations in an internet facing environment.

Deployment Specifics

Unified CCMP Resource Management deployments are limited to standard and hosted Unified CCE deployments, with the following restrictions:

Each configured Unified CCE instance must have its own:

- Unified ICM instance.

- Dedicated Admin Workstation Real Time Distributor Server. Multiple Distributor instances on a single server are not allowed.

- Dedicated Admin Workstation CMS Server. Multiple CMS Server instances on a single server are not allowed.

Unified CCMP is only supported on Unified CCE 7.1 and later.

System Architecture

Infrastructure Software

Windows 2008 Server R2 with Service Pack 1.

SQL Server 2008 R2 Standard Edition with Service Pack 1.

Deployment Models

In many environments, Unified CCMP is installed using a dual-sided deployment model to provide load balancing, resiliency, and high availability. For deployments that require layered security, such as Internet-facing environments, both sides are

split across separate database servers and App/Web servers are separated by a demilitarized zone (DMZ).

Because Unified CCMP scales up with equipment and scales out with servers, a variety of cost-effective deployment models are possible. Review the *Hardware and System Software Specification (Bill of Materials) for Cisco Unified ICM / Contact Center Enterprise & Hosted* carefully prior to deployment model selection.

Each of the following deployment models assumes the possibility of a dual-sided server configuration that replicates data between sites.

- **Single Tier (Dedicated Server)**. All Unified CCMP components are installed on a single dedicated server.

- **Two Tier (Secure Deployment)**. Unified CCMP Application and Web components are hosted on one server. The Provisioning, Data Import and Database components are hosted on a second server.

Unified CCMP Architecture

A Unified CCMP installation comprises the following components.

- **Database Server** The Portal database stores configuration and audit information.

- **Application Server** The application server delivers application services such as search and security to the Unified CCMP Web Server.

- **Web Server** The web server is the Unified CCMP front end through which users gain access to the application.

- **Data Import Server** the Data Import Server imports configuration items and changes to configuration items such as agents, call types and skill groups from Unified CCE.

- **Provisioning Server** the Provisioning Server applies configuration changes submitted by Unified CCMP users to Unified CCE.

Depending on the deployment model chosen the components may reside on different servers.

Figure 1, below, describes the software installation layout for a single tier deployment. All components reside on a single server. Optionally, a second side can be included for resilience.

Figure 1: Unified CCMP software component layout for a single tier deployment.

Side A   Side B (Optional)

WEB & DATABASE SERVER   WEB & DATABASE SERVER

| Web Server |
| Application Server |
| Database |

| Data Import Server | Provisioning Server |

| Web Server |
| Application Server |
| Database |

| Data Import Server | Provisioning Server |
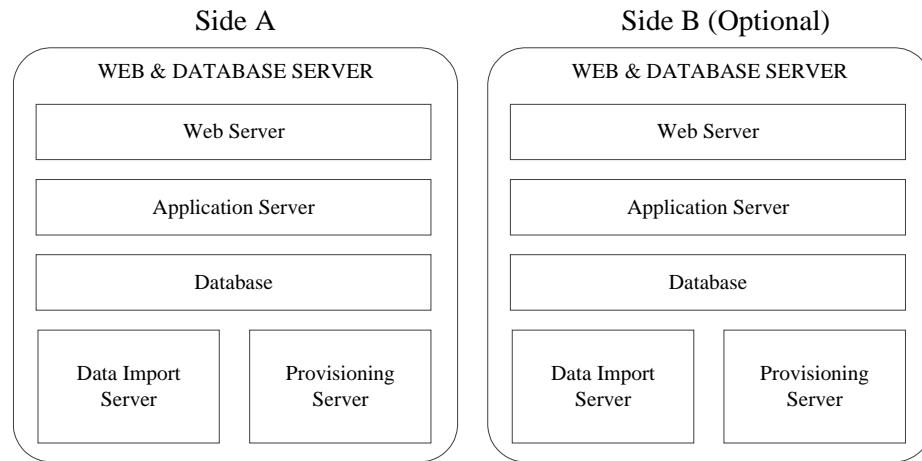
Figure 2, below, describes the software installation layout for a dual tier deployment. The web server and application server components reside on a separate server. Optionally, a second side can be included for resilience.

Figure 2: Unified CCMP software component layout for a dual tier deployment.

Side A   Side B (Optional)

WEB SERVER   WEB SERVER

| Web Server |
| Application Server |

| Web Server |
| Application Server |

DATABASE SERVER   DATABASE SERVER

| Database |
| Data Import Server | Provisioning Server |

| Database |
| Data Import Server | Provisioning Server |
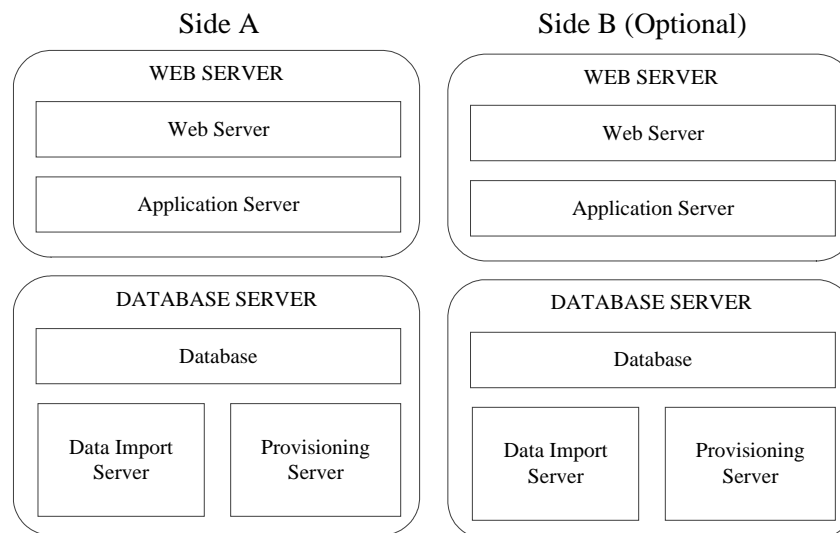
2. Installation Guidelines and Requirements

Installation Prerequisite Checklist

Each Unified CCMP component requires prerequisite software and Windows features to be installed in order to operate correctly.

A mandatory check is performed before each part of the installation that checks the required pre-requisite software elements. If this check does not find the required software then the installation will not proceed.

Windows Feature Requirements

The following Windows 2008 R2 features are required on all Servers hosting Unified CCMP:

- Microsoft .NET Framework 4.5
- TCP Activation
- Named Pipes Activation
- File Server

In addition to these features the following components must also be enabled on the associated servers:

- Machines hosting the Database Server component
  - Incoming Remote Transactions
  - Outgoing Remote Transactions
- Machines hosting the App/Web Server Component
  - IIS Elements
    - Static Content
    - Default Document
    - Directory Browsing
    - HTTP Errors
    - ASP.NET

- .NET Extensibility

- ISAPI Extensions

- ISAPI Filters

- HTTP Logging

- Request Monitor

- Basic Authentication

- Windows Authentication

- Request Filtering

- Static Content Compression

- IIS Management Console

- IIS 6 Management Compatibility
- Web Server (IIS) Tools

Windows feature requirements for each component are tested by the Unified CCMP deployment utility contained on the DVD. Should the required features be missing then they may be configured by clicking on the **Windows features enabled** option from within the deployment tool.

A summary of the software prerequisites for Unified CCMP is as follows. Some prerequisites software is distributed with Unified CCMP and will be installed automatically if it is missing from the server.

> **Note** Pre-requisite software that is not distributed with Unified CCMP is marked in **bold** in the list below and must be installed on the appropriate servers before the Unified CCMP installation is performed.

Database Server Component

- **Windows Server 2008 R2 SP1**

- **Microsoft SQL Server 2008 R2 SP1 64-bit Standard Edition**

- **Microsoft SQL Server 2008 R2 Workstation Components**

- J2SE Runtime Environment 6.0 (Update 30)

App/Web Server Component

- **Windows Server 2008 R2 SP1**

- ASP .NET State Service Enabled

General Guidelines

- Do not install any Unified CCMP component on a domain controller.

- Install Internet Explorer (IE) 7 or later on all the machines from which Unified CCMP will be accessed.

- Unified CCMP does not support SQL Server named instances. All SQL Server installations must use the default instance name.

Server Requirements

- Unified CCMP servers should be configured to use the US English character set.

- Unified CCMP server names must consist of alphanumeric characters only, without underscores or hyphens.

- Using the Windows Time Service, ensure the date and time are synchronized across all Unified CCMP servers. Unified CCMP will not be able to synchronize application data correctly between servers otherwise, and this may cause unexpected behavior.

- Configure Microsoft Terminal Services for remote configuration and support.

- In the Event Viewer, set the Application Log, Security Log and System Log to **Overwrite events as needed**.

Network and Environment Configuration

This section describes the network interaction performed by the various components of Unified CCMP. Its content can be used by network administrators to configure network requirements to ensure that Unified CCMP obtains the required access levels for each component.

IPV6 Support

Unified CCMP runs on systems equipped with IPv6 hardware, but requires that all Unified CCMP Servers have an IPv4 address and IPv6 disabled on the NIC used by Unified CCMP.

Firewalls

In many Unified CCMP configurations, Firewalls will be deployed both between the Unified CCMP servers (to create a DMZ) and possibly between Unified CCMP DB servers and the Unified CCE AWs. Care must be taken in these configurations to ensure that the correct firewall ports are opened to both-way traffic.

The Windows 2008 R2 platform incorporates its own software based firewall that must be configured to allow the various components of Unified CCMP to communicate with one another in a distributed environment. When configuring the

Windows firewall it is recommended that port restrictions are limited to only the servers that require the specified communications channels.

The incoming firewall requirements for the Unified CCMP software components are listed in the tables below.

Note These tables do not include standard Windows ports such as DNS and Kerberos. Ports are also required to access all Unified CCMP servers for support purposes (either Terminal Services or Remote Desktop).

Web Server Port Usage

Application Protocol/Service	Protocol	Incoming Ports	Used by	Usage
HTTP	TCP	80	End User	Web application
HTTPS	TCP	443	End User	Web application

Unified CCMP Database Server Port Usage

Application Protocol/Service	Protocol	Incoming Ports	Servers Requiring Access	Usage
SQL Server	TCP	1433	Database Servers and Application Servers	General
DTC	TCP	2103	Database Servers	Audit Archive
DTC	TCP	2105	Database Servers	Audit Archive
DTC (RPC)	TCP	135	Database Servers	Audit Archive
DTC (RPC)	TCP	5000-5100**	Database Servers	Audit Archive
NetBIOS File Share	UDP	137-138	Database Servers and Application Servers	Replication, Unified CVP File Upload
NetBIOS File Share	TCP	139	Database Servers and Application Servers	Replication, Unified CVP File Upload
SMB (DFS)	TCP	445	Database Servers and Application Servers	Unified CVP File Upload File***

ConAPI Local Registry	TCP	2099*	Unified CCE Admin Workstation	Provisioning
ConAPI Local Port	TCP	3333*	Unified CCE Admin Workstation	Provisioning

* Default value for Side A - use configured in Cluster Configuration.

** Dynamically assigned RPC port range used by MSDTC. Configured in registry:
```
HKEY_LOCAL_MACHINE\Software\Microsoft\Rpc\Internet
```
After each change the machine must be restarted.

*** Only required if Unified CVP Media File Upload is configured. If configured, also ensure that required ports for the Distributed File Systems are open on the Domain Controller.

Cisco Unified CCE Port Usage

Application Protocol/Service	Protocol	Incoming Ports	Servers Requiring Access	Usage
SQL Server	TCP	1433	Database Servers and Application Servers	Importing Dimension Data, Provisioning Activities, Real-time Reports.
ConAPI Remote Registry	TCP	2099*	Database Servers	Provisioning
CMS Node	UDP	9000	Database Servers	Ping Port for ConAPI services
Web Service API	TCP	443	Database Servers	Provisioning

* Default value for Side A - use configured in Cluster Configuration.

Domain Controllers for Unified CCE Instances Port Usage

Application Protocol/Service	Protocol	Incoming Ports	Servers Requiring Access	Usage
LDAP	TCP	389	Database Servers and Application Servers	Supervisor domain account provisioning

Cisco Unified CM Port Usage

Application Protocol/Service	Protocol	Incoming Ports	Servers Requiring Access	Usage
AXL Web Service (HTTPS)	TCP	443	Database Servers	Importing and Provisioning

Other Information

When configuring DTC and File Sharing on the Windows 2008 R2 firewall then the appropriate options within the Windows 2008 R2 Firewall Exceptions list may be selected. These options are labeled as follows:

- Distributed Transaction Coordinator
- File and Printer Sharing.

Security Guidelines

This section describes the security-related considerations for your installation. To secure your system, it is recommended that you take the following steps:

- Disable anonymous sessions on all CCMP servers (see section 'Disable Anonymous Sessions on all CCMP Servers' on page 14 for instructions). This prevents anonymous users from enumerating usernames and shares, and using this information to guess passwords or perform social engineering attacks. For more information, consult the Microsoft documentation http://technet.microsoft.com/en-us/library/dd349805(WS.10).aspx#BKMK_38 (checked May 2013).

- Disable cached logins on all CCMP servers (see section 'Disable Cached Logins on all CCMP Servers' on page 15 for instructions). This prevents attackers from accessing the cached login information and using a brute force attack to determine user passwords. If cached logins are disabled, windows domain users will be unable to log in if the connection to the domain controller is unavailable. For more information, consult the Microsoft documentation http://technet.microsoft.com/en-us/library/dd349805(WS.10).aspx#BKMK_27 (checked May 2013).

- Configure SSL for the Portal application (see section 'Securing Unified CCMP with SSL' on page 48 for instructions). This ensures that all data passed between the client computer and the CCMP App/Web server is transmitted privately.

3. Windows and SQL Component Installation

Windows – All Servers

Turn off FIPS Compliance Checking

Ensure that FIPS compliance checking is turned off. To do this:

1. Click **Start > All Programs > Administrative Tools > Local Security Policy** from the start menu.

2. Open **Local Policies** folder and click **Security Options** to see the list of policies.

3. Ensure the policy **System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing** is disabled.

4. Close the window.

Disable UAC

User Account Control (UAC) is a Windows feature that was introduced to protect the operating system from malicious programs. UAC must be disabled on all servers before Unified CCMP installation begins. If UAC is enabled it may cause issues with the software used to install Unified CCMP. To disable UAC perform the following steps:

1. Click **Start** > **Control Panel > User Accounts > User Accounts > Change User Account Control settings**.

2. Use slide bar to select **Never Notify** option to disable UAC.

3. Click **OK**.

4. Restart your machine to commit the new UAC settings.

UAC can be safely re-enabled after Unified CCMP installation is complete.

SQL Server

Follow these installation instructions to install SQL Server on the server(s) that will be hosting the Unified CCMP Database:

1. When presented with the SQL Server Installation Center select the **Installation** menu option from the left of the window.

2. Select **New installation or add features to an existing installation**.

3. The Setup Support Rules window will display validating the system for the installation of SQL Server 2008 R2. Once validation passes click the **OK** button to proceed.

4. Enter the product key for SQL Server 2008 R2 and click **Next**.

5. Read the license terms for SQL Server 2008 R2, if you agree with the terms check the **I accept the license terms** checkbox and click **Next**.

6. You will be prompted to install the Setup Support Files. Click **Install**.

7. Once the Setup of Support Files is complete you will be presented with a summary of checks. Review the results and make any necessary changes. If you see a warning saying that Windows Firewall is enabled, you can safely ignore it. When you are satisfied, click **Next** to proceed.

8. Select the **SQL Server Feature Installation** option and click **Next**.

9. Select the following Instance Features:

   - **Database Engine Services**
     - **SQL Server Replication**
   - **Client Tools Connectivity**
   - **Management Tools** – **Basic**
     - **Management Tools** – **Complete**

10. Update the installation directories to install in the required locations. Click **Next**.

11. Installation Rules will then be checked. Correct any issues that have been flagged by the Installation Rules check and then click **Next** to proceed.

12. The Instance Configuration window is displayed. Select **Default Instance**, with an Instance ID of **MSSQLSERVER**. Update the Instance root directory to be installed on the required drive, click **Next** to proceed.

13. The Disk Space Requirements summary window is displayed, click **Next**.

14. In the Server Configuration window, on the **Service Accounts** tab, set the following service configuration:

   - Locate the SQL Server Agent entry in the Service column, and set the corresponding Account Name to **NT AUTHORITY\SYSTEM** and the Startup Type to **Automatic**.

- Locate the SQL Server Database Engine entry in the Service column and set the corresponding Account Name to **NT AUTHORITY\SYSTEM**.

15. In the Server Configuration window, on the **Collation** tab, ensure that the Database Engine is configured with **Latin1_General_CI_AS** (Latin1_General, Case In-sensitive, Accent Sensitive) collation. Click **Next** to proceed.

16. The Database Engine Configuration window is displayed.

    - Select **Mixed Mode** authentication and enter a password for the sa user.

    - In the Specify SQL Server administrators panel click the **Add Current User** button. Also add any other accounts that require administrator permissions to the Database, for example, Domain Admins, Service Accounts etc.

    - Click **Next** to proceed.

17. The Error Reporting window is displayed. Click **Next** to proceed.

18. The Installation Configuration Rules window is displayed and installation checks are performed. Correct any reported problems and click **Next** to proceed.

19. Review the installation summary and click **Install** to begin installing SQL Server 2008 R2.

20. Once the installation is complete click the **Close** button. Installation of SQL Server 2008 R2 is complete.

When the SQL Server 2008 R2 installation is complete, locate and install SQL Server 2008 R2 Service Pack 1 before proceeding.

Note

Post-Installation Configuration

SQL Server – Database Server

Configure Distributed Transaction Coordinator (DTC)

Configure Distributed Transaction Coordinator (DTC) as follows:

1. Click **Start > All Programs > Administrative Tools > Component Services**. The Component Services management tool is displayed.

2. Expand **Component Services > Computers > My Computer > Distributed Transaction Coordinator**.

3. Right-click on **Local DTC** and select **Properties**. The Local DTC Properties window is displayed.

4. Select **Security** tab.

- Ensure that **Security Settings** has **Network DTC Access** selected, and that **Transaction Manager Communication** has **Allow Inbound** and **Allow Outbound** selected.

- Set **Transaction Manager Communication** to **No Authentication Required**.

- Click **OK** and accept the prompt to restart the MSDTC Service.

5. Close the Component Services window.

Configure SQL Server Network Protocols

To configure SQL Server network protocols follow these steps:

1. Click **Start** > **All Programs** > **Microsoft SQL Server 2008 R2** > **Configuration Tools > SQL Server Configuration Manager** to open the SQL Server Configuration Manager.

2. In the left hand pane, expand **SQL Server Network Configuration** and click **Protocols for MSSQLSERVER**.

3. In the right hand pane right click on **Named Pipes**, select **Enable**, and click **OK** at the confirmation message.

4. In the right hand pane, right click on **TCP/IP**, select **Enable**, and click **OK** at the confirmation message.

5. In the left hand pane, click on **SQL Server Services**, then right click on **SQL Server (MSSQLSERVER)** and select **Restart** to restart the SQL Server process.

6. Close the SQL Server Configuration Manager window.

Configure Windows Server 2008 R2 Firewall for SQL Server

By default the Windows Server 2008 R2 Firewall will not allow incoming traffic for SQL Server. If the Windows firewall is enabled, follow these steps to create a rule to allow SQL Server traffic:

1. Click **Start > All Programs > Administrative Tools > Server Manager**.

2. In the left hand pane, expand **Configuration** > **Windows Firewall with Advanced Security** and click on **Inbound Rules**. A list of firewall rules is displayed.

3. In the Actions pane, click **New Rule**. The **New Inbound Rule Wizard** is displayed.

4. Select **Port** as the rule type and click **Next**.

5. Select **TCP** as the protocol and enter **1433** as the specific local port. Click **Next**. The Action options are displayed.

6. Choose **Allow the connection**. Click **Next**. The Profile options are displayed.

7. Select the profile options that are appropriate to your deployment and click **Next**.

8. Enter a name for the rule and click **Finish** to create the rule. The new rule appears in the list of inbound rules as an enabled rule.

9. Close the Server Manager window.

SQL Server Backup Guidelines

- Regularly backup the SQL Server databases and truncate transaction logs to prevent them becoming excessively large.

- Schedule backups for quiet times of the day.

Required User Accounts

Unified CCMP Service Accounts

Unified CCMP Services are installed to run under Windows system accounts (such as Network Service) by default.

Accounts for Replication

You will need to create the following domain user account for Unified CCMP. Using Active Directory, create this account with the following attributes:

- Password never expires
- User cannot change password

sql_agent_user

A domain account is used by SQL Server to replicate data between SQL Server databases. By default Unified CCMP assumes this will be `sql_agent_user`, but a different account name may be specified during installation. For a single-sided installation, Unified CCMP can create this account automatically as a local user.

Optional Security Configuration

Disable Anonymous Sessions on all CCMP Servers

Note

This step is optional, although it is recommended for maximum security. See section 'Security Guidelines' on page 9 for more information.

This security setting applies to all CCMP servers. There are several ways to configure this security setting. This section describes two possible ways.

One way is to use the Group Policy Editor to view the following path

> **Computer Configuration\Windows Settings\Security Settings\Local Policies\Security Options**

then enable the setting

> **Network access: Do not allow anonymous enumeration of SAM accounts and shares**.

Alternatively, you can update the registry directly as follows:

1. From the Windows Start Menu, click **Run**, then type **regedit**.

2. In the left hand pane, select the **HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa** node.

3. In the right hand pane, if the REG_DWORD value **restrictanonymous** is present, set it to 1, otherwise, create it and set it to 1. Click **OK**.

4. Close the registry editor.

Disable Cached Logins on all CCMP Servers

Note

This step is optional, although it is recommended for maximum security. See section Security Guidelines' on page 9 for more information.

This security setting applies to all CCMP servers. There are several ways to configure this security setting. This section describes two possible ways.

One way is to use the Group Policy Editor to view the following path

> **Computer Configuration\Windows Settings\Security Settings\Local Policies\Security Options**

then set the following setting to **0**

> **Interactive logon: Number of previous logons to cache (in case domain controller is not available)**.

Alternatively, you can update the registry directly as follows:

1. From the Windows Start Menu, click **Run**, then type **regedit**.

2. In the left hand pane, select the **HKEY_LOCAL_MACHINE\Software\Microsoft\Windows Nt\CurrentVersion\Winlogon** node.

3. In the right hand pane, if the REG_SZ value **CachedLogonsCount** is present, set it to 0, otherwise, create it and set it to 0. Click **OK**.

4. Close the registry editor.

4. Unified CCMP Component Installation

Planning Your Installation

For dual-sided systems, perform a complete installation on the Side A servers, and then a complete installation on the Side B servers. It is recommended that you install the components in the order described here.

Recording Your Settings

During the installation procedure, there will be occasions where you need to record what settings you chose for later reference. It is recommended that you store the following information in a secure location, for future reference:

System Settings	
Database Catalog Name	
sql_agent_user Password	
Cryptographic Passphrase	
Administrator Password	
Java.RMI.Hostname	
Unified CCE	
Application Name	
Application Key	
RMI Registry Port	
LocalPort	

The Unified CCMP Installer

Start the Unified CCMP Installer

1. Insert the Unified CCMP DVD. If auto-run is enabled on the server, a window opens automatically showing a list of Unified CCMP components under the heading 'Server Installation' on the left hand side.

Note If auto-run is disabled and you do not see the Installation Components screen, double-click the **autorun.bat** file located on the DVD to launch the Unified CCMP installer manually.

Note If UAC has not been disabled, launch the installation manually by right-clicking on the **autorun.ba**t file located on the DVD and selecting **run as administrator** option.

Note Some anti-virus software may state that the **autorun.hta** script file is malicious. Please ignore and continue with the installation.

2. Follow the steps in the sections below to install each component, but read the information about prerequisites in the rest of this section first.

Before you can install a Unified CCMP component, the prerequisites for that component must be present. The Unified CCMP Installer checks the prerequisites for each component as follows:

*   When you click on a component to install it, the installer displays a list of prerequisites for that component and checks that each prerequisite is present. As each prerequisite check completes, you will see a green tick (check successful) or a red cross (check failed). The Install option for that component is only available when all prerequisite checks are successful.

*   Where possible, the Unified CCMP DVD includes redistributable packages for prerequisites, so if a prerequisite check fails, you can click on the link in the Unified CCMP Installer to install the missing prerequisite. Once all the prerequisite software is installed, you can click on the component again, then click **Rerun** to rerun the tests.

*   When all the prerequisites display a green tick, you will be able to click **Install** to install the chosen component.

Unified CCMP Database Server Installation

This section details how to install the Unified CCMP Database Server component.

Install the Database Installer

This process does not install the database directly. It just installs the Database Installer which is then used to install the database.

On the Side A Database Server:

1. To install the Unified CCMP Database Installer, in the Unified CCMP Installer, select **Database Server**, and wait until the prerequisite checks have completed. If any checks fail, fix them as described above. When all checks have passed, click **Install** to begin the Database Server Installation. The Setup window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. In the License Agreement window:

    - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

4. In the Cryptography Configuration window:

    - **Passphrase** Create a cryptographic passphrase of between 6 and 35 characters. This passphrase is used for encrypting and decrypting system passwords and must be the same for all servers in the Unified CCMP installation.

    - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠️ **Caution**

The cryptographic passphrase is a vital piece of information and will be needed when installing later components and when adding or replacing servers in the future. Be sure to record and retain it.

If you are upgrading from a previous version of Unified CCMP, or adding a new server to an existing cluster, you must use the same cryptographic passphrase as was originally used. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

5. In the Configure Database window:

    - **Catalog Name** Enter the name for the database catalog that will be used for Unified CCMP. It is recommended that you use the default name of Portal.

    - **Connect Using** Select the login credentials you want to use:

        - **Windows Authentication Credentials of Application** This is the recommended option

        - **SQL Server authentication using the login and password below.** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login ID and Password in the fields provided.

        - Click **Next.**

6. In the Destination Folder window, you can click **Change** to change the location for the installation of the Database Server. It is not necessary to install all Unified CCMP components in the same location.

7. Click **Install.**

Note During the Database Install Tool Installation, the J2SE pre-requisite will be automatically installed if it is not already present. A Security Alert dialog box stating that 'Revocation Information for the security certificate for this site is not available' may be displayed in some circumstances. If this dialog box appears click **Yes** to continue.

8. When the installation has completed, if you want to set up your database now, check the **Launch Database Management Utility (or Database Installer)** check box. You can also set up your database manually at a later date.

9. Click **Finish**.

Database Setup

If you selected the Launch Database Management Utility check box after installing the Database component, the database setup wizard will launch automatically. Otherwise you can launch the database install tool manually from **Start > All Programs > Management Portal > Database > Database Installer**.

The wizard will guide you through the process of installing a database.

1. Click **Next** to go through each window in turn. You will need to enter the following details:

2. In the Select an Action to Perform window:

    *   **Install a new database** You can maintain this database at a later date by running the installer again and selecting the appropriate option.

3. In the SQL Server Connection Details window:

    *   **Server Name** Enter the name of the machine that is to be the Database Server. This should normally be left as the default (local).

    *   **Database Name** Enter or select the name of the database catalog that will be used for Unified CCMP. It is recommended that you use the default name of Portal. This should match the database catalog name specified when you installed the database installer. If not, you will see a warning message.

    *   **Connect Using.** Select the login credentials you want to use:

        *   **The Windows account information I use to logon to my computer.** This is the recommended option.

        *   **The SQL Server login information assigned by the system administrator.** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

- Click **Test Connection.** This makes sure the connection to the SQL Server is established. If the connection can be established, you will see the message 'Connection succeeded but database does not exist'.

- Click **Next** to continue.

4. In the Setup Replication window, if this database installation is not side B of a replicated system, just click **Next**. If this database installation is side B of a replicated system, select **Replicated Configuration** and set up the replication folder share as follows:

- **Share Name** The name of the share for the ReplData folder. By default this is ReplData.

- **Folder Path** The path of the ReplData folder. This is configured in SQL Server, and is by default **C:\Program Files\Microsoft SQL Server\MSSQL\repldata.**

- Click **Next** when you have finished.

5. In the Configure the Location of Data Files window, if you are not using a custom installation of SQL Server, accept the defaults and click **Next**. If you are using a custom installation of SQL Server, configure the data files as follows:

- Select the check box or boxes beside the file group or file groups you want to change.

- To change the **Location**, browse to the new location.

- To change the **Max Size**, specify the amount of space that should be allocated for the chosen file group or file groups. The default value is based on Unified CCMP's analysis of your system.

- To specify a different **Initial Size**, first uncheck **Set Initial Size to Max Size**,

- You can also choose an unlimited file size by selecting **Unrestricted Size**, but this is not recommended.

- Click **Update** to save your changes to the selected file group or file groups.

- Click **Default** (in the top right corner of the window) to restore the settings for all file groups to their default.

- Click **Next** when you have finished.

6. The **Configure SQL Server Agent Service Identity** window sets up a user account that is used by SQL Server for replication:

- **Account Type** The type of user account that will be used. For a distributed installation, this must be Domain.

- **User Name** The name of the user account. This defaults to **sql_agent_user**. If you used a different name when setting up the account, enter that name instead. If you have specified a domain user, you will need to prefix the user name with the domain name, followed by a backslash.

- **Automatically create the user account if missing** If you have not already created the user account on the domain, set it up now as described in section Accounts for Replication on page 14 before continuing. For a single-sided single server system, it is possible to create a local user automatically by selecting this check box. Use of a local user will mean system re-installation when adding a second side in the future.

- **Password** Create a password for the new user, conforming to your individual system's complexity requirements.

- **Confirm Password** You will not be able to continue until the contents of this field are identical to the password entered above.

- Click **Next**.

7. In the **Web Application Servers Network Service Configuration** window, enter the details of each remote App/Web Server to be used in the installation. This information only needs to be entered in Unified CCMP deployment models where the web application servers are on a different machine from the database server itself.

   - **Domain** The network domain the web server is on, for example ACMEDOM

   - **Machine Name** The name of the machine, for example WEBSERVERA

   - Click **Add** to add each Web Server to the list.

   - When all Web Servers have been added, click **Next**.

8. In the **Ready to install the Database** window, click **Next** to begin installation. Installation will take several minutes.

9. Click **Close** to close the installer.

Database Replication

For replicated systems this installation needs to be repeated for side B. It is recommended that you complete the side A installation of all components before installing side B.

See section Configuring Replication in Chapter 5 for information about configuring database replication.

App/Web Server Component

In most installations, the App/Web Server component should be installed on a different physical machine to the Database Server component.

This section details how to install and configure the Unified CCMP App/Web component.

App/Web Installation

1. To install the Unified CCMP App/Web component, in the Unified CCMP Installer, select **App/Web Serve**r, and wait until the prerequisite checks have completed. If any checks fail, fix them as described above. When all checks have passed, click **Install** to begin the App/Web Server installation. The Management Portal: Application Server Component window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. If the Management Portal: Application Server Components Dialog is displayed, click **Install** to install the additional required components.

4. If the Microsoft .NET 4.5 Framework pre-requisite is missing, it will be installed at this point. Click **Install** to install the component and follow the on screen instructions. When the .NET 4.5 Framework is complete, restart the server to continue the installation of the App/Web Server.

5. In the **License Agreement** window:

   - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

6. In the **Cryptography Configuration** window:

   - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component.

   - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

   - Click **Next** to continue.

⚠️ **Caution** You must use the same cryptographic passphrase for all servers in the Unified CCMP installation. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

7. In the **Destination Folder** window, you can click **Change** to change the location that the App/Web Server components are installed to. Click **Next** to continue.

8. In the **Configure Database** window:

   - **SQLServer Name** Enter the name of the machine that is to be the Database Server. The default of **localhost** is valid only when installing on the Database Server. Otherwise, specify the name of the machine where you installed the database above. For a dual-sided system enter the name of the side A database server when installing the side A App/Web Server Components and enter the name of the side B database server when installing the side B App/Web Server Components.

- **Catalog Name** Enter or select the name you selected while installing the Database Server component. By default this is Portal.

- **Connect Using** Select the login credentials you want to use:

  - **Windows authentication.** This is the recommended option.

  - **SQL Server authentication.** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

- Click **Next** to continue.

9. Click **Install**.

10. When the installation has completed, click **Finish**.

Note The machine will restart once the installation is complete.

Support Tools

Unified CCMP includes support for integration with the Cisco Real Time Monitoring Tool (RTMT). This allows remote monitoring and support for your Unified CCMP installation. To use RTMT you need to install the Diagnostic Framework component of Unified CCMP which provides access to relevant support APIs. These APIs can be used by the RTMT for gathering trace levels, log files etc.

1. To install the Diagnostic Framework component, start the Unified CCMP Installer, click **Support Tools** and select **Diagnostic Framework**. The Management Portal: Diagnostic Framework InstallShield Wizard window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. In the **License Agreement** window:

   - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

   - Click **Next**.

4. In the Destination Drive window click **Update** to change the default drive where the Diagnostic Framework will be installed. Click **Next** when you have finished.

5. In the **Select Certificate** window, select the type of certificate installed with the Diagnostic Framework.

- **Self-Signed Certificate –** A new certificate will be generated by the installer. This type of certificate should be used only for lab or test deployments.

- **Trusted Certificate** – An existing certificate issued by a valid certificate server will be associated at a later date. This option should be used for production deployments.

- Click **Next**.

6. Click **Install.**

7. When the installation is completed, click **Finish.**

The installation of the Diagnostic Framework component is now complete.

5. Unified CCMP Component Configuration

Unified CCMP will normally be hosted on multiple servers for performance and data security. This chapter describes how to configure the server cluster and perform data replication. It also provides performance tuning checklists for the Web and Database components.

This section describes the following steps:

- configuring Unified CCE admin workstations
- configuring Unified CCE Admin workstations for provisioning
- configuring the Unified CCMP cluster
- configuring replication
- configuring unified CVP media file upload.

Configuring Unified CCE Admin Workstations

Note If Unified CCMP uses SQL Server Authentication to connect to Unified CCE no configuration of the AWDB is required. However, the SQL login used for the connection must have the appropriate permissions on the AWDB and the HDSDB.

If SQL Server Authentication is not in use for AW SQL connections then the following configuration is required:

1. Login to the AW as a user with local administrative privileges.

2. Open the SQL Server Management Studio, by clicking **Start > All Programs > Microsoft SQL Server > SQL Server Management Studio** Connect to the server.

3. Open up the **Security** folder, and right-click **Logins**.

4. Select **New Login** from the drop-down list. **The Login – New** window displays.

5. Add SQL logins for the Network Service accounts of each server hosting Unified CCMP (Database Servers and App/Web Servers), by filling in the fields as follows:

- **General** page:
  - **Login Name**, enter the machine name in the form
    <DOMAIN>\<MACHINENAME>$, for example
    ACMEDOM\ACMEWEBA$. This configures access for the
    NETWORK SERVICE account from the Unified CCMP server.
  - **Authentication**, select Windows Authentication unless connecting to a
    server on a different domain
- **User Mapping** page:
  - **Users mapped to this login**. select the checkboxes for AWDB and
    HDSDB
  - **Database role membership for**. AWDB and HDSDB, check the **Public**
    and **db_datareader** checkboxes.
6. Click **OK**.

Configuring Unified CCE Admin Workstations for Provisioning

Cisco Unified Contact Center Enterprise (Unified CCE) components must be
correctly configured before Unified CCMP can connect to them for Provisioning.

Configuration Overview

For each Unified CCE instance that Unified CCMP Resource Management connects
to, certain essential criteria must be met:

- Unified CCMP Resource Management uses Cisco ConAPI for the Provisioning
  connections; this interface requires that ALL connections are made to a Primary
  Distributor AW. If the AW is dual-sided, both sides must be Primary
  Distributors.

An Application Instance must be configured on each AW for Unified CCMP to
connect to. If support for provisioning multimedia resources is required, the
Application Instance must be configured to **Application Type: <Other>** instead of
the standard Cisco Voice.

Multiple Unified CCE instances can be supported, but each requires a distinct
primary Distributor AW to connect to:

- ConAPI only supports connection to one Application Instance on each physical
  server. You must therefore have a separate physical AW distributor for each
  instance.
- Parent/Child AW configurations are Supported as multiple instances in Unified
  CCMP.

Please contact your vendor if you have any queries about this configuration.

Note

Before beginning cluster configuration, you must set up the ConAPI application instance and the CMS server on your Unified CM and Unified CCE instances.

Note This is only necessary on deployments that include resource management.

Common ConAPI Credentials

To create an application instance, you must run Configuration Manager on the Unified CCE AW as follows:

1. Open Configuration Manager. This can normally be done from **Start > Program Files > Cisco Unified CCE Tools > Administration Tools > Configuration Manager**

Note If you are connecting to the Unified CCE server using Remote Desktop, you will need to set the **/admin** switch in order to run Configuration Manager.

2. Under **Tools > List Tool**s you will find the **Application Instance List**. Double-click this to open it.

3. Click **Retrieve** to display the list of configured application instances. You can use an application instance from this list for Unified CCMP or create a new one. To create a new application instance, click **Add**, and enter the following details:

    - **Name** A unique name to be used for the application instance.

    - **Application Key** A password to be used by Unified CCMP to connect. This may be between 1 and 32 characters.

    - **Confirm Application Key** Ensure that no typographical errors were made while choosing the application key.

    - **Application Typ**e Select **Cisco Voice.**

    - **Permission Level** Give the application full read/write permissions.

4. Record these details for use during the configuration of the cluster.

5. Click **Save** and then click Close.

CMS Server Setup

Before configuring the Unified CCMP server cluster you must ensure that the CMS Server(s) are set up correctly on each Unified CCE.

Firstly, check that the CMS Node option was selected when the Admin Workstation was configured. You can determine if this was the case by looking for a `cmsnode` and a `cms_jserver` process running on the Unified CCE.

If these processes are not present, set the CMS Node option on the Unified CCE. See the *Cisco Unified CCE Installation Guide* for details on how to do this.

A new application connection must be defined on each configured Unified CCE instance for each Database Server (this connection is used by the Data Import Server component). This ensures that in a dual-sided system, the alternate side can also connect to the Unified CCE in a failover scenario. To do this:

1. On the Unified CCE being configured, go to **Start > Program Files > Cisco Unified CCE Tools > Administration Tools > CMS Control** on the Unified CCE being configured. This opens the CMS control console.

2. Click **Add** to the right hand side of the window to launch the Application Connection Details window and fill in the fields as follows:

    *   **ICM Distributor AW link** This should be the name of the Unified CCMP Database Server, all in capital letters, with 'Server' appended, such as CCMPDBServer.

    *   **ICM Distributor AW RMI registry port** This is the port on the Unified CCE AW for the Unified CCMP Provisioning service to connect to. This will usually be 2099, however if the Unified CCMP Provisioning service is connecting to multiple Unified CCE instances each should use a different port.

    *   **Application link** This should be the name of the Unified CCMP Database Server, all in capital letters, with 'Client' appended, such as CCMPDBClient.

    *   **Application RMI registry port** This is the port on the Unified CCMP Database Server for the Unified CCE AW to connect to. For convenience, this should be the same as for the ICM Distributor AW RMI registry port. Each Unified CCE AW must connect to a different port on the Database Server. You should record this information for future use.

Note Each Unified CCE that Unified CCMP will be provisioning must use a unique port on the Database Server.

    *   **Application host name** The server name, such as CCMPAppServer.

3. Click **OK**, and **OK** again to cycle the CMSJServer, save your changes and close the CMS control console.

Configuring the Unified CCMP Cluster

Use the Cluster Configuration tool in the Unified CCMP Integrated Configuration Environment (ICE) to:

*   configure the servers in the Unified CCMP cluster (the Unified CCMP servers, Unified CCEs and Unified CMs)

*   set up the equipment mappings between remote tenants and Unified CCMP resources.

Follow the instructions in this section to configure your system when you first install it. For more information about using the ICE tools to modify your system configuration at a later date, see the Integrated Configuration Management section of the *Administration Guide for Cisco Unified Contact Center Management Portal*.

Starting the ICE Cluster Configuration Tool

To start ICE, on the A Side database server:

1. Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window specify the following:

   - **Server Name** This option defaults to the current machine.

   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   - **Authentication** Ensure this option is set to Windows Authentication.

3. Click **OK** to open ICE. When ICE starts, the Cluster Configuration tool is loaded as the default tool. You can use the Tool drop-down in the toolbar to switch to other ICE tools.

Setup Servers

The Setup tab of the ICE Cluster Configuration tool displays setup wizards to configure the following cluster components:

- Unified CCMP Servers

- Cisco Unified CCE Servers

- Cisco Unified CM Servers

- Cisco Unified CVP Servers.

To start setting up your servers, in the ICE Cluster Configuration tool, select the **Setup** tab in the left hand pane. This displays a series of wizards to set up the servers. The following sections explain how to use each of the wizards.

Setup Unified CCMP Servers Wizard

The Setup Unified CCMP Servers wizard configures the servers on which Unified CCMP components are installed. The wizard guides you through the steps to configure all Unified CCMP components based on your chosen deployment model.

Note If you plan to use windows authentication to connect to the Unified CCMP database (rather than SQL authentication), you must have administrator permission on the database server on which the application is running.

Note The exact windows displayed by the wizard may depend on the options you choose as you complete each step below.

To set up the Unified CCMP servers:

1. In the ICE Cluster Configuration tool, select the **Setup** tab and click **Setup UCCMP Servers** to start the wizard. Click **Next** to go through each window in turn.

2. In the **Select Deployment Type** dialog box select your chosen deployment type. For more information on the supported deployment models of Unified CCMP see section Deployment Models.

3. In the **Configure Redundancy** dialog box select whether you would like to configure a single-sided or a dual-sided system. Click **Next**.

4. If you are performing a two tier deployment then you will be asked to enter the **Number of Web Servers** for each side. Enter the number of app/web servers for each side that you would like to configure in your deployment. For dual-sided configurations you must configure an equal number of app/web servers on each side of the system. Click **Next**.

5. Click **Next**.

6. In the **Configure Servers** dialog boxes, enter the server names for each of the Unified CCMP servers. The number of dialog boxes and servers to specify will depend on the deployment options you chose above.

7. In each dialog box, enter the following, then click **Next**:

    *   Primary Server

        *   **Sever Name**: This is the non-domain qualified machine name.

        *   **Server Address:** This is defaulted to **Server Name**. This can be changed to an IP Address or a domain qualified name of the server.

    *   Secondary Server:

        *   If you chose a dual-sided setup, provide the corresponding details for the side B server.

8. Click **Next** and enter the relevant server information until you reach the **Configure Relational Database Connection** dialog box.

9. In the **Configure Relational Database Connection** dialog box enter the following details about how each Unified CCMP component connects to the Unified CCMP Relational database:

    *   **Catalog:** This is the name of the Unified CCMP Relational database. The default is **Portal**.

    *   **Authentication:** Select the authentication mode to connect to Unified CCMP relational database.

- **Windows Authentication.** The default recommended authentication mode.

- **SQL Authentication.** Only select this option if you are using a database server on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

- Click **Next**.

10. The **Deployment Summary** dialog box summarizes the choices you have made. If you want to print the deployment summary, click the **Print** button below the summary list.

11. Check the deployment details, and if you are satisfied, click **Next**.

12. A confirmation message is displayed to indicate that the wizard has completed successfully. Click **Exit** to close the wizard.

13. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

Note
Once you have made the required configuration changes, stop and restart all Unified CCMP services to ensure that all changes are propagated correctly. If you are planning to make other setup changes, you can wait until you have completed all your changes, and then stop and restart the Unified CCMP services once.

Configure Cisco Unified CCE Servers Wizard

The Configure Cisco Unified CCE Servers wizard configures Cisco Unified CCE instances. This wizard guides you through the steps to:

- add a new Cisco Unified CCE instance to the deployment

- update an existing Cisco Unified CCE instance in the deployment

- remove an existing Cisco Unified CCE instance from the deployment.

Unified CCE Deployment Models

Unified CCE offers a number of different deployment models depending on customers' requirements. Unified CCMP supports the following Unified CCE deployments:

- Administration Server and Real-time Data Server (AW)

- Configuration-only Administration Server

- Administration Server and Real-Time and Historical Data Server (AW-HDS)

- Administration Server, Real-Time and Historical Data Server, and Detail Data Server (AW-HDS-DDS)

Unified CCMP Connection Requirements

To configure the different deployment models Unified CCMP requires a connection to:

- Unified CCE real-time AWDB for data import
- Unified CCE AW for Unified CCMP Provisioning Server requests.

Note This wizard attempts to connect to Cisco Unified CCE Servers using SQL Connection. The connection credentials should be known prior to starting the configuration.

Note If you require resource management (provisioning), you will also need to know the login details for a user with appropriate access to the Unified CCE used for provisioning. On the domain controller, this user must be in the domain security group *<Server>_<UCCE-Instance>_Config*, where *<Server>* is the name of the server running Unified CCE and *<UCCE-Instance>* is the name of the Unified CCE Instance on this server.

To configure the Cisco Unified CCE servers:

1. In the ICE Cluster Configuration tool, select the **Setup** tab and click **Configure Cisco Unified CCE Servers** to start the wizard. Click **Next** to go through each window in turn.

2. In the Select Task dialog box select the action. The options are:

   - Add a new instance
   - Modify an existing instance
   - Remove an existing instance

Note The Modify and Remove options are only enabled if at least one Cisco Unified CCE has already been configured.

3. In the Specify Resource Name dialog box, specify the name for the instance being configured. You can use the default name or choose another name.

4. In the Select Required Components dialog box, select all the required components in the deployment.

   - **Admin Workstation**. Select this component for all configurations.
   - **ConAPI Server (Provisioning)**. Select this component if you require resource management.

5. In the Configure Redundancy dialog box, select whether you want to configure a single-sided or a dual-sided setup.

6. In the Configure AW Server dialog box, enter the following:

   - Primary Server:

- **Sever Name**: This is the non-domain qualified machine name where the Admin Workstation and ConAPI components are deployed.

  - **Server Address:** This defaults to **Server Name**. This may be changed to an IP Address or a domain qualified name of the server.

- Secondary Server:

  - If you chose a dual-sided setup, provide the corresponding server details for the side B server.

7. In the Configure Connection Details dialog box, enter the authentication details to connect to the Admin Workstation database.

   - **Windows Authentication**. This is the default recommended authentication mode.

   - **SQL Authentication.** If this mode is chosen then specify the SQL Server User name and the corresponding password to connect to the databases.

8. In the Select Unified CCE Instance dialog box select the AW instance to be used in the deployment. Click **Next**.

9. If you selected the **ConAPI Server (Provisioning)** option above then you will see the following dialog boxes:

   - In the Configure Primary Unified Config Web Service dialog box (only shown when the Unified CCE instance is running Unified CCE version 9.0 or later), enter the following details

     - **URL**. This is the auto-generated URL of the primary unified config web service on the Unified CCE

     - **User Name**. This is a username with appropriate access to the Unified CCE that the web service is running on. This user must be in the domain security group **<Server>_<UCCE-Instance>_Config**, where <Server> is the name of the server running Unified CCE and <UCCE-Instance> is the name of the Unified CE Instance on this server. For Unified CCE version 9.0(1) or 9.0(2), enter the username as **<domain>\<user>** and for Unified CCE version 9.0(3) or later, enter the username as **<user>@<domain>**, where <user> is the Unified CCE username, and <domain> is the name of the domain.

     - **Password**. This is the password for the user.

   - In the Configure Primary ConAPI RMI Ports dialog box enter the following ConAPI details:

     - **Local Registry Port**. This is the port on the Unified CCE for the Unified CCMP Provisioning service to connect to. This will usually be 2099.

     - **Remote Registry Port**. This is the port on the Unified CCMP Database Server for the Unified CCE to connect to. This will usually be 2099.

     - **Local Port**. This is selected as the designated port for live provisioning traffic between the Unified CCE and Unified CCMP servers. It must be

uniquely assigned for each Unified CCE and any firewalls between the CICM and Unified CCMP server must be configured to allow both-way traffic on this port.

Note If dual-sided setup is being configured you will need to provide these details for the Secondary (Side B) server in the next window.

- In the Configure ConAPI Application Instance dialog box enter the following details:
  - **Application Name.** The name of the application to be used for provisioning Unified CCE from Unified CCMP. Specify the name of the application you configured in section Common ConAPI Credentials.
  - **Application Key.** Use the password for the application you specified above.
- In the Multi Media Support dialog box, select **Yes** if you are using a Cisco Unified Web and E-Mail Interaction Manager application instance to provide support for non-voice interactions. The default is **No**.
- In the Purge On Delete dialog box select **Yes** if you want to purge items from Unified CCE automatically when they are deleted from Unified CCMP. The default is **Yes**.
- In the Self Skilling Enabled dialog box select **Yes** if you want to allow agents to reskill themselves. The default is **No**.
- In the Supervisor Active Directory Integration dialog box select **Yes** if you want to enable support for associating existing Active Directory user accounts for Unified CCE Supervisors. The default is **No**. If you select **Yes** then you will be prompted to provide Active Directory information so that Windows user accounts can be listed.

10. In the Configure Linked Unified CM Servers dialog box select the configured Unified Communications Manager servers that the Unified CCE being configured is capable of routing calls to.

Note The **Configure Linked Unified CM Servers** window only appears if at least one Unified CM server is already configured. You will be able to link the Unified CM servers to the Unified CCE from the Unified CM Configuration Wizard. You may also modify the Unified CCE once the Unified CM servers are configured and link the Unified CM later.

11. The Summary dialog box summarizes the details of the Unified CCE being configured and the settings you have chosen. If you want to print the summary, click the **Print** button below the summary list.

12. Check the details, and if you are satisfied, click **Next**.

13. A confirmation message is displayed to indicate that the wizard has completed successfully. Click **Exit** to close the wizard.

14. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

Configure Cisco Unified CM Servers Wizard

The Configure Cisco Unified CM Servers wizard configures Cisco Unified CM instances. This wizard guides you through the steps to:

- add a new Cisco Unified CM instance to the deployment
- update an existing Cisco Unified CM instance in the deployment
- remove an existing Cisco Unified CM instance from the deployment.

To configure the Cisco Unified CM servers:

1. In the ICE Cluster Configuration tool, select the **Setup** tab and click **Configure Cisco Unified CM Servers** to start the wizard. Click **Next** to go through each window in turn.

2. In the Select Task dialog box, select the action. The options are:
   - Add a new instance
   - Modify an existing instance
   - Remove an existing instance

Note The Modify and Remove options are only enabled if at least one Cisco Unified CM has already been configured.

3. In the Specify Resource Name dialog box, specify a name for the instance being configured. You can use the default name or choose another name.

4. In the Configure Unified CM Servers dialog box enter the following:
   - Primary Server
     - **Sever Name**: This is the non-domain qualified machine name where the Cisco Unified CM components are deployed.
     - **Server Address:** This defaults to **Server Name**. This can be changed to an IP Address or a domain qualified name of the server.

Note When configuring a Unified CM Cluster ensure that only the publisher of the cluster is configured.

Note Redundancy is not supported for Unified CM configuration. The Secondary Server option is always disabled.

5. In the Select Version dialog box select the version of Unified CM being configured from the drop-down list.

6. In the Connection Details dialog box enter the following details:

    *   **URL**. This is used to access the Unified CM AXL interface. The default is the default URL for the Unified CM version that has been selected. It is recommended that you use the default URL.

    *   **User Name**. This is the name of the Unified CM Administrator user. This is the user name that the Unified CCMP components use when connecting to the Unified CM AXL web service.

    *   **Password**. This is the Unified CM Administrator user's password.

7. In the Configure Linked Unified CCE Servers dialog box select the configured Cisco Unified CCE servers that can route calls to the Unified CM being configured.

Note The list will be empty if no Cisco Unified CCE servers have been configured. You will be able to link the Unified CM server to the Unified CCEs from the Cisco Unified CCE Configuration Wizard. You can also modify the Unified CM once the Cisco Unified CCE servers are configured and link the Unified CM later.

8. The Summary dialog box summarizes the details of the Unified CM being configured and the settings you have chosen. If you want to print the summary, click the **Print** button below the summary list.

9. Check the details, and if you are satisfied, click **Next**.

10. A confirmation message is displayed to indicate that the wizard has completed successfully. Click **Exit** to close the wizard.

11. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

Configure Cisco Unified CVP Servers Wizard

The Configure Cisco Unified CVP Servers wizard configures Cisco Unified CVP call server instances. This wizard guides you through the steps to:

*   add a new Cisco Unified CVP instance to the deployment

*   update an existing Cisco Unified CVP instance in the deployment

*   remove an existing Cisco Unified CVP instance from the deployment.

Configuring a Cisco Unified CVP Call Server

To configure a Cisco Unified CVP call server:

1. In the ICE Cluster Configuration tool, select the **Setup** tab and click **Configure Cisco Unified CVP Servers** to start the wizard. Click **Next** to go through each window in turn.

2. In the Select Task dialog box select the action. The options are:

    * Add a new instance

    * Modify an existing instance

    * Remove an existing instance

Note The modify and remove options are only enabled if at least one Cisco Unified CVP call server has already been configured.

3. In the Specify Resource Name dialog box, specify a name for the instance being configured. You can use the default value, or change it.

4. In the Configure Unified CVP Server dialog box enter the following:

    * Primary Server:

        * **Sever Name**: This is the non-domain qualified machine name where the Cisco Unified CVP Call Server component is deployed.

        * **Server Address:** This defaults to Server Name. You can change this to an IP Address or a domain qualified name of the server.

Note The Unified CVP Call Server configuration does not support redundancy, so the Secondary Server option is always disabled.

5. In the Configure Unified CCE Server dialog box, select the Unified CCE that is linked to the Unified CVP being configured.

6. The Summary dialog box summarizes the details of the Unified call server being configured and the settings you have chosen. If you want to print the summary, click the **Print** button below the summary list.

7. Check the details, and if you are satisfied, click **Next**.

8. A confirmation message is displayed to indicate that the wizard has completed successfully. Click **Exit** to close the wizard.

9. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

Create Tenants and Map to Contact Center Equipment

The Equipment Mapping tab of the ICE Cluster Configuration tool allows you to create new tenants and folders and associate them with the contact center equipment you have just configured. Use this tool to:

* create the Unified CCMP folder structure for your deployment

- specify the rules for importing resources into your Unified CCMP folder structure from the contact center equipment (for example, Unified CCE, Unified CM).

Creating Tenants and Folders

To create a Unified CCMP tenant:

1. In the ICE Cluster Configuration tool, select the **Equipment Mapping** tab. In the center pane, right click on the root node and select **Add Tenant**.

2. In the **Name** field enter the name of the tenant, and optionally, in the **Description** field, enter a description.

3. Select **File > Save** to save your changes. If you exit the tool without saving your changes you will be asked whether you want to save your changes when you exit the tool.

To create a Unified CCMP folder:

1. In the ICE Cluster Configuration tool, select the **Equipment Mapping** tab. In the center pane, right click on the folder tree at the location where you want to add the folder and select **Add Folder**.

2. In the **Name** field enter the name of the folder, and optionally, in the **Description** field, enter a description.

3. Select **File > Save** to save your changes. If you exit the tool without saving your changes you will be asked whether you want to save your changes when you exit the tool.

Creating an Equipment Mapping

To create an equipment mapping between a tenant or folder and the contact center equipment:

1. In the ICE Cluster Configuration tool, select the **Equipment Mapping** tab. In the folder tree, select the tenant or folder into which you want to import the resources from the contact center equipment.

2. In the adjoining pane select the check box or check boxes next to each item of contact center equipment that you want to associate with the selected folder or tenant.

3. Highlight each selected item of contact center equipment in turn, and, in the right hand pane, select one of the following check boxes:

    - **Default Import Location**. All the resources imported from the highlighted contact center equipment will be placed in the selected folder or tenant in Unified CCMP.

    - **Remote Tenant Mapping**, and select a remote tenant from the drop-down list. All resources imported from the highlighted contact center equipment

associated with the selected remote tenant will be placed in the selected folder or tenant in Unified CCMP.

Note If Remote Tenant Mapping is selected then any resources on the contact center equipment that are not associated with the selected remote tenant will be placed in the source equipment subfolder under the Unallocated folder.

4. Select **File > Save** to save your changes. If you exit the tool without saving your changes you will be asked whether you want to save your changes when you exit the tool.

Configuring Replication

In a dual-sided Unified CCMP deployment setup, SQL Server Replication is used to replicate Unified CCMP databases. Replication between these databases is setup and monitored using the **Replication Manager** application which is available in the Unified CCMP ICE Replication Manager tool.

Note The user running the Unified CCMP Replication Manager must have administrator permissions in both Windows and SQL Server, for both the targeted publisher and subscriber servers.

Note Before configuring replication you should have already configured Unified CCMP resources in dual-sided mode and saved the configuration using the **Cluster Configuration** tool detailed in section Configuring the Unified CCMP Cluster.

Note Always run Replication Manger on the Unified CCMP publisher database server.

To start the Unified CCMP Integrated Configuration Environment, proceed as follows:

1. Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The Database Connection window is displayed. In this window, set:

   * **Server Name** This option defaults to the current machine.

   * **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   * **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. The **Cluster Configuration** tool is open by default. From the **Tool** drop-down list select **Replication Manager**.

The Replication Manager offers two modes of operation; **Setup** and **Monitor**. Setup is used to configure or disable replication and Monitor is used to monitor the health of a configured Unified CCMP Replication.

Setup

Setup is used to configure or disable SQL Server Replication for the Unified CCMP databases in a dual-sided environment. Click the **Setup** tab to see the replication setup details and to configure or disable replication as required by your deployment.

The Setup tab is divided into logical groups of property settings where some information may be modified if required.

Unified CCMP Database Server Properties

This section shows the configured Publisher and the Subscriber for Unified CCMP database. The **Server Name** and **Catalog Name** for each are defaulted to the values used when the Unified CCMP servers were configured with the ICE Cluster Configuration tool.

- **Server Name**: This is fixed for both the Publisher and Subscriber and cannot be changed from the Replication Manager. They rely on configurations made previously through the Cluster Configuration tool.

- **Catalog Name**: For both Publisher and Subscriber these represent the names of the respective Unified CCMP databases. The default values are those that were used when the Unified CCMP databases were configured using Cluster Configuration tool. It is recommended that the default be used.

⚠ **Caution**

If the Catalog Name for Publisher or Subscriber is changed, a Unified CCMP database with the new name must already exist on the respective server.

Distributor Properties

This section describes the properties for the SQL Server Replication Distributor. By default the Distributor is created on the Unified CCMP Database Subscriber Server.

- **Server Name**: This is the name of the subscriber server hosting the Portal database as configured using the Cluster Configuration tool.

- **Catalog Name:** This is the name that will be assigned to the distribution database. The recommended default is **distribution_portal**.

- **Data Folder**: This is the folder path on the distributor server where the data file for the distribution database will be created.

- **Log Folder**: This is the folder path on the distributor server where the transaction log file for the distribution database will be created.

- **Distribution Share**: This is the distribution share folder where replication snapshot files will be generated.

- **Override Distributor Admin Password**: When replication is performed an auto-generated password is used as part of the process to establish connectivity. The generated password is alpha-numeric with both upper and lower case characters. It will also contain a special character and will be 14 characters long. If the generated password does not meet with the complexity requirements of the server then check the check box and specify a password of your choice.

Note In most cases the recommended defaults for these properties are valid and should be used. If you are performing an upgrade, be particularly careful with the Data Folder property, as the default path is different from previous versions. Make sure you use the path that you specified when the database was set up.

Configure or Disable Replication

Click **Configure** to start the replication configuration process. Progress messages will be logged into the Replication Output window informing you of the steps being performed as the DB is replicated.

If SQL Server Replication is already configured all of the controls will be disabled except the **Disable** button. Click **Disable** to disable replication. Progress messages will be logged into the Replication Output window.

Note After you click **Configure**, it may take several minutes to set up replication. If data has already been imported into the database to be replicated, then it will take longer to set up replication. Once replication has been set up, the Replication Manager will display the Monitor tab.

Monitor

The **Monitor** tab allows you to monitor the general health of SQL Server Replication between Unified CCMP databases. The Monitor can also be used start or stop various replication agents. The Monitor will show the details only if SQL Server Replication is currently configured.

The top left pane shows the list of Publishers and Publications on each Publisher.

Click on a publication in the top left pane to see the corresponding subscriptions in the **Subscriptions** tab in the top right hand pane. The **Agents** tab lists other agents like Snapshot Agent, LogReader Agent and Queue Reader Agent if available for the selected publication. The list of agents depends on the Publication being viewed.

Click on the listed subscriptions or agents to see their session details in the bottom left pane. This pane will list all the agent sessions in the last 24 hours. Click on each session to see the actions performed during the session in the bottom right pane. This pane provides information about failures of any agents if any.

To stop or start the various replication agents, right click on the agent and select **Stop** or **Start** in the shortcut menu.

Note By default, the Monitor refreshes every 5 seconds.

Configuring Unified CVP Media File Upload

Note This configuration is only required where Unified CCMP Resource Management is deployed.

The Unified CVP media file upload allows you to provision WAV media files directly to the Unified CVP media server. This allows the associated WAV announcement for a Network VRU Script in Unified CCE to be replaced in near real-time. This solution requires your Unified CVP media server or servers to be hosted on Microsoft Windows 2000 Server, Microsoft Windows Server 2003 or Microsoft Windows Server 2008. The Unified CVP media servers and the web servers hosting Unified CCMP must belong to the same domain.

Unified CCMP writes media files to a domain share called **PortalMedia** on the domain controller. We recommend the use of Microsoft Distributed File System (DFS) to access the file system on the Unified CVP media servers. If you have multiple Unified CVP media servers, then Microsoft File Replication can be used to keep the announcement files in step across the servers.

This section describes how to set up Microsoft DFS and Microsoft File Replication to support Unified CVP media file upload.

Preparing the Configuration

Before configuring the Unified CVP Media File Upload solution for your network perform the following tasks:

1. Make a note of the Host Name and IP Addresses of the Unified CVP media server or servers.

2. Make a note of the User Name and Password of a user with administrator rights on the domain so that you can configure DFS and File Replication.

3. Ensure that Microsoft DFS, File Replication and Remote Procedure Call services are installed and running on the Unified CVP media servers and the domain controller.

Domain Controllers Running Windows Server 2003

Follow the instructions in this section to configure Unified CVP media file upload if your domain controller is running Windows Server 2003.

Configuring DFS for Unified CVP Media File Upload

This section describes how to create the shared folder to be used by each Unified CVP media server in the domain (Windows Server 2003 domain controllers only).

1. Login to the Domain Controller as a user with administrator rights.

2. Click **Start > Program Files > Administrative Tools > Distributed File System** to open the Distributed File System configuration utility.

3. Right-click on the Distributed File System node in the left of the screen and select **New Root** option to open the New Root Wizard.

4. Ensure that the option for **Domain Root** is selected in the **Root Type** window.

5. Follow the wizard by entering the default values. When you reach the **Host Server** window enter the Host Name of the Domain Controller.

6. For the Root Name field enter **PortalMedia** in the field provided.

7. For the **Folder to Share**, select the folder to contain the Unified CVP media files that are uploaded.

> **Note** This folder requires full access security permissions for the Domain Computers group. Configure this for both the shared permissions and the security credentials.

8. Click **Finish** to complete the action and add the root to the DFS utility.

Configuring DFS Root Targets

For each media server that the Unified CVP Media File Upload will add files to, perform the following actions on the domain controller (Windows Server 2003 domain controllers only):

1. Right-click on the new root and select **New Root Target**.

2. Enter the server name for the Unified CVP media server.

3. For the **Folder to Share**, select the folder to contain the Unified CVP media files that are uploaded.

> **Note** This folder requires full access security permissions for the Domain Computers group. Configure this for both the shared permissions and the security credentials.

4. Click **Next** to create the Root Target.

Configuring File Replication for Unified CVP Media File Upload

DFS shares must be setup on all the machines to which the media files should be copied, and file replication enabled among all of them.

The following steps will take you through the process of replicating files between the DFS shares (Windows Server 2003 domain controllers only). To enable this functionality you will need to ensure that the File Replication service is set to Automatic and is currently running.

To begin file replication:

1. Login to the Domain Controller as an administrative user.

2. Click **Start > Program Files > Administrative Tools > Distributed File System** to open the Distributed File System configuration utility.

3. Right-click Distributed File System node in the left hand panel and select **Show Root** option

4. Select **PortalMedia** node.

5. Right-click **PortalMedia** node located in the left hand panel of the Distributed File System window. Select **Configure Replication** option from the menu. The Configure Replication Wizard displays.

6. When prompted to select the initial master, select the share located on the domain controller.

7. Select **Full Mesh** topology for the replication set.

8. Click **Finish** to set up replication between the selected folders.

Domain Controllers Running Windows Server 2008

Follow the instructions in this section to configure Unified CVP Media File Upload if your domain controller is running Windows Server 2008.

Create Shared Namespace

To create a namespace on the domain controller to be used for replication (Windows Server 2008 domain controllers only):

1. Login to the Domain Controller as a user with administrator rights.

2. Click **Start > Program Files > Administrative Tools > Server Manager** to open the Server Manager utility.

3. In Server Manager, expand the **Roles** node, the **File Services** node, and the **DFS Management** node to see the Namespaces node. Right click on **Namespaces**, and select **New Namespace** to run the New Namespace Wizard.

4. In the Namespace Server window, enter the name of the primary Unified CCMP database server and click **Next**.

5. In the Namespace Name and Settings window, enter **PortalMedia** for the namespace name.

> **Note**   The namespace name specified here must match the name shown by the ICE System Properties Manager tool, Media Upload group, Media Share property. The default is **PortalMedia**.

6. Click **Edit Settings**, review the shared folder permissions, and change them as required, if necessary. Click **OK**, then click **Next**.

7. In the Namespace Type window, select **Domain-based namespace** and click **Next**.

8. Review the namespace settings, and click **Create** to create the namespace you have specified. When the namespace has been created, click **Close**.

Configure Replication

To configure replication using the namespace you have just created (Windows Server 2008 domain controllers only):

1. On the domain controller, in the Server Manager utility, expand the **Roles** node, the **File Services** node, and the **DFS Management** node to see the Replication node. Right click on **Replication**, and select **New Replication Group** to run the New Replication Group Wizard.

2. In the Replication Group Type window, select **Multipurpose replication group**, and click **Next**.

3. In the Name and Domain window, enter a name for the replication group, for example, **sharePortalMedia**. Click **Next**.

4. In the Replication Group Members window, click **Add**, and in the Select Computers window, enter the name of one of the CVP media servers to be included in the replication group. Click **OK** to add the specified server to the replication group.

5. Repeat the step above to add each of the remaining CVP media servers to the replication group.

6. Click **Next**.

7. In the Topology Selection Window, select **Full mesh** and click **Next**.

8. In the Replication Group Schedule and Bandwidth window, select **Replicate continuously using the specified bandwidth** and click **Next**.

9. In the Primary Member window, choose one of the CVP media servers in the replication group to be the **Primary member**, and click **Next**.

10. In the Folders to Replicate window, click **Add**, then **Browse**. Select the folder on the primary server where the CVP media files are stored and click **OK**.

11. In the Local path on Other Members window, select one of the other CVP media servers in the replication group and click **Edit**.

12. In the Edit window, select **Enabled**, then **Browse**, and locate the folder on this server where the CVP media files are stored. Click **OK**.

13. Repeat the previous two steps for any other CVP media servers in the list of servers. Click **Next**.

14. Review the replication settings, and click **Create** to set up the replication you have specified. When the replication has been set up, click **Close**.

Share and Publish the Replicated Folder

To share and publish the replicated folder (Windows Server 2008 domain controllers only):

1. On the domain controller, in the Server Manager utility, expand the **Roles** node, the **File Services** node, and the **DFS Management** node to see the Replication node. Click on the replication group you created above, and select the **Replicated Folders** tab.

2. In the Publishing Method window, select **Share and Publish the Replicated Folder in a Namespace** and click **Next**.

3. In the Share Replicated Folders window, select one of the CVP media servers in the replication members section, and click **Edit**. Review the shared folder permissions, and change them as required, if necessary. Click **OK.**

4. Repeat the step above to set the folder permissions for each of the remaining CVP media servers in the replication group. Click **Next** when you have finished.

5. In the Namespace Path window, to set Parent folder in namespace, click **Browse**, select **\\<domain>\PortalMedia** from the list (this is the namespace you created above) and click **OK**.

6. In the Namespace Path window, enter the New folder name as **CVP**. Click **Next**.

7. Review the settings and click **Share** to publish the replicated folder.

Configure the Replicated Folder for Media File Upload

To configure Unified CCMP to use the replicated folder for CVP media file upload (Windows Server 2008 domain controllers only):

1. On the Unified CCMP database server, select **Start > All Programs > Management Portal> Configuration Tools > Integrated Configuration Environment.** The Database Connection dialog box is displayed.

2. Enter the database information for the primary database server and click **OK.**

3. In the ICE Cluster Configuration tool, in the **Tools** drop-down, select **System Properties Manager** and on the **Global** tab, navigate to the **Media Upload** group.

4.   Change the **Media Share** property from the default value of **PortalMedia** to **PortalMedia\CVP.**

5.   Select **File > Save** to save your changes. If you exit the tool without saving your changes you will be asked whether you want to save your changes when you exit the tool.

6.   Close ICE.

Testing the Replication Configuration

You have now created and configured a DFS replicated location for Unified CCMP to upload media files to. This is of the form **\\<DomainName>\PortalMedia** and can be accessed by any machine in the domain. Files written to this location will be replicated to the specified folders on the servers in the replication group.

You can confirm that replication is working by creating a file in **\\<DomainName>\PortalMedia** and ensuring that it is copied to all replication destinations.

6. Post Installation Steps

Securing Unified CCMP with SSL

Note This step is optional. Follow the instructions in this section if you want to use Secure Sockets Layer (SSL) to secure Unified CCMP. This step is optional, although it is recommended for maximum security.

Introduction

To secure the Unified CCMP web servers using SSL you need to:

- obtain a digital certificate (see section Obtaining a Digital Certificate);
- configure SSL (see section Configuring SSL).

Obtaining a Digital Certificate

A digital certificate may be obtained in any of the following ways:

- purchased from an external certificate authority, for public use;
- generated internally, for secure use within the issuing organization;
- generated as a self-certified certificate, for local use (this option is not normally recommended except for testing purposes).

If you do not already have a suitable certificate, you can request or generate one as follows:

Note Take care to specify the certificate name (common name, or friendly name, depending on the type of certificate) exactly as specified below. The certificate will not work otherwise.

1. Open **Internet Information Services (IIS) Manager** and select the web server in the folder hierarchy.

2. Select the **Features View** tab, and in the **IIS** group, click on **Server Certificates**.

3. Create a digital certificate in one of the following ways:

- To *request an external certificate*:

  - In the **Actions** pane, select **Create Certificate Request** to display the **Request Certificate** dialog box.

  - In the **Common Nam**e field, enter the URL of the web server. If you have a load-balanced system, this must be the URL of the load-balanced node, not the URL of any of the individual servers.

  - Complete the other fields as appropriate, and click **Next**.

  - In the **Cryptographic Service Provider Properties** dialog box leave the default settings and click **Next**.

  - Specify a file name for the certificate, and then click **Finish**.

  - When you receive the certificate from the certificate authority, repeat steps 1 and 2 above to show the Server Certificates and Action panes, and in the **Action** pane, select **Complete Certificate Request.**

  - Enter the file name of the certificate, and a Friendly Name of your choice and click **OK**.

- To *generate an internal certificate*:

  - Select **Create Domain Certificate** in the **Actions** pane to display the **Distinguished Name Properties** dialog box.

  - Enter the URL of the web server in the **Common Nam**e field. If you have a load-balanced system, this must be the URL of the load-balanced node, not the URL of any of the individual servers.

  - Complete the other fields as appropriate, and click **Next**.

  - In the **Online Certification Authority** dialog box specify your online authority and a friendly name. Click **Finish.**

- To *generate a self-certified certificate*:

  - Select **Create Self-Signed Certificate** in the **Actions** pane to display the **Create Self-Signed Certificate** dialog box.

  - Enter the URL of the web server in the **Friendly Nam**e field. If you have a load-balanced system, this must be the URL of the load-balanced node, not the URL of any of the individual servers.

Configuring SSL

Once you have a suitable digital certificate, configure SSL as follows:

1. Open **Internet Information Services (IIS) Manager**, expand the folder tree below the web server and select the web site that the Unified CCMP web application resides on.

2. In the **Actions** pane, select **Edit Site** > **Bindings** to display the **Site Bindings** dialog box.

3. If there no existing binding for https, click **Add** to display the **Add Site Binding** dialog box.

   - Set the **IP Address** to **All Unassigned**, and **Port** to **443**, unless your system has been set up differently. If you are unsure, contact your system administrator.

   - Set **SSL Certificate** to point to your certificate.

   - Click **OK**.

4. If there is an existing binding for https, select it and click **Edit** to display the **Edit Site Binding** dialog box, edit the settings to the values in step 3 above and click **OK**.

5. In the folder tree, select the **Portal** application,

6. Select the **Features View** tab, and click on **SSL Settings** in the **IIS** group.

7. Tick **Require SSL**, and leave the default **Ignore** for Client Settings.

8. In the **Actions** pane, click **Apply** to apply these settings.

9. Close IIS Manager.

Additional Manual Updates to Configure SSL

To complete the configuration of SSL, the CCMP Web Application configuration file requires manual updating.

1. From the location where you installed Unified CCMP (this will normally be **C:\Program Files\ Management Portal**), navigate to the **\Web** folder and open the XML file **web.config** using a text editor.

Note Some text editors, such as WordPad, may not save an XML file correctly, which can cause problems. Always back up the configuration file before making changes.

2. Locate the section beginning `<authentication mode="Forms">`, for example

```
<authentication mode="Forms">
    <forms name="ExonyAuthentication" loginUrl="~/logon.aspx"
    protection="All" timeout="20" slidingExpiration="true"
    requireSSL="false"></forms>
</authentication>
```

3. Change `requireSSL="false"` to `requireSSL="true"`, for example:

```
<authentication mode="Forms">
    <forms name="ExonyAuthentication" loginUrl="~/logon.aspx"
    protection="All" timeout="20" slidingExpiration="true"
    requireSSL="true"></forms>
</authentication>
```

4. Locate the section beginning `<system.web>`, for example:

```
<system.web>
    <httpRuntime requestValidationMode="2.0"
    enableVersionHeader="false"></httpRuntime>
</system.web>
```

Add the line `<httpCookies requireSSL="true" />`, for example:

```
<system.web>
    <httpCookies requireSSL="true" />
    <httpRuntime requestValidationMode="2.0"
    enableVersionHeader="false"></httpRuntime>
</system.web>
```

5. Save the file and close the text editor.

Other Security Configuration

To limit malicious code from intercepting web pages and modifying them to reference content outside the domain, you may also perform the following optional security configuration:

1. From the location where you installed Unified CCMP (this will normally be **C:\Program Files\Management Portal**), navigate to the **\Web** folder and open the XML file **web.config** using a text editor.

Note Some text editors, such as WordPad, may not save an XML file correctly, which can cause problems. Always back up the configuration file before making changes.

2. Locate the section beginning `<httpProtocol>`, for example:

```
<httpProtocol>
    <customHeaders>
            <clear></clear>
            <add name="X-UA-Compatible"
                    value="IE=EmulateIE10"></add>
    </customHeaders>
</httpProtocol>
```

3. Add the following lines, between `<customHeaders>` and `</customHeaders>`

```
<remove name="X-Powered-By" />
<add name="X-Content-Type-Options" value="nosniff" />
<add name="X-FRAME-OPTIONS" value="SAMEORIGIN" />
```

for example:

```
<httpProtocol>
   <customHeaders>
         <clear></clear>
         <remove name="X-Powered-By" />
         <add name="X-Content-Type-Options" value="nosniff" />
         <add name="X-FRAME-OPTIONS" value="SAMEORIGIN" />
         <add name="X-UA-Compatible"
               value="IE=EmulateIE10"></add>
   </customHeaders>
</httpProtocol>
```

4. Locate the `<httpRuntime>` tag, for example

```
<httpRuntime requestValidationMode="2.0">
</httpRuntime>
```

5. Add the attribute `enableVersionHeader="false"`, for example:

```
<httpRuntime requestValidationMode="2.0"
enableVersionHeader="false">
</httpRuntime>
```

6. Save the file and close the text editor.

Configuring Single Sign-On

Overview

By default, Unified CCMP users need to login to Unified CCMP every time they connect. Unified CCMP can optionally be configured to use Single Sign-On (SSO), which links each Unified CCMP user account to their Windows user account and allows users to connect to Unified CCMP without logging in.

Note Users cannot use SSO over a proxy connection.

Caution Setting up SSO will disable any existing Unified CCMP users which are not in domain login format. You will need to set up new Unified CCMP user accounts for all existing users.

Administrator Account Setup

Caution It is vital that the new SSO administrator account is set up correctly since the existing Unified CCMP administrator account is disabled when SSO is configured.

1. Login to Unified CCMP as 'administrator'.

2. In **User Manager**, create a user account to be the new administrator account. The login name should be of the form <DOMAIN>\<your domain login>, for example ACMEDOM\jsmith. The password should conform to the password security specified in System Settings, but will never be used

3. Click **New User** and open **Groups** tab.

4. Click **Add to Group**.

5. Select the checkbox for the Administrators group.

6. Close and save.

Configuring SSO Authentication for Unified CCMP

To configure SSO for Unified CCMP using ICE:

1. On the App/Web server, select **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. In the **Database Connection** window specify the following:

   - **Server Name** This option defaults to the current machine.

   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you used the default value, this will be **Portal**.

   - **Authentication** Ensure this option is set to Windows Authentication.

3. In ICE, in the **Tools** drop-down, select **System Properties**. The System Properties tool is displayed.

4. In the **Global** properties tab, locate the **Login Authentication Configuration** group, **Login Authentication Mode** property.

5. Using the drop-down beside the property value, change the value from **Portal** to **Active Directory**.

6. Click **Save** to save the configuration change, then **Exit**.

7. On the App/Web server, go to the location where Unified CCMP was installed (usually **C:\Program Files\Management Portal**), right-click on the **Web** folder and click **Properties**.

8. Select the **Security** tab, and ensure that all domain users have **Read** and **Read & Execute** permissions on this folder.

9. Click **Advanced** and ensure that **Include inheritable permissions from this object's parent** is selected. If this option is not selected, click **Change Permissions**, select it, and click **OK**.

10. Click **OK** to close the properties dialog.

11. From a command window, execute the **iisreset** command.

Users will now be able to access Unified CCMP directly from their domain account without needing to log in again.

Note Depending on the way that Active Directory is configured in your installation, you may also need to change additional properties in the **Login Authentication Configuration** group in ICE System Properties. The default settings will be sufficient for most installations, but in some cases, you may need to change one or both of **Active Directory Binding Options** and **Active Directory Context Type** properties too.

Note For more information about the **Active Directory Binding Options** and **Active Directory Context Type** properties, see the *Administration Guide for Unified CCMP*. For information about the values to choose for your Active Directory configuration, consult your Windows system administrator.

Managing Users with Single Sign-On

Once SSO has been set up, create a Unified CCMP login in the form `<DOMAIN>\<Windows domain login>` for Unified CCMP each user. Existing Unified CCMP user accounts will no longer be valid.

The first time a user accesses Unified CCMP using SSO a dialog box may appear requesting their Windows username and password. To sign in automatically in future, they will need to add the Unified CCMP website to the list of local intranet sites in their browser.

To add the Unified CCMP website to the list of local intranet sites in Internet Explorer:

1. Click **Tools** > **Internet Options**, and select the **Security** tab.

2. Select the **Local intranet** zone and click the **Sites** button.

3. Click **Advanced** to add the Unified CCMP site to IE's list of local intranet sites.

4. Enter the URL of the Unified CCMP website in **Add this website to the zone**, and click **Add**.

5. Click **OK** when prompted until you are returned to the browser window.

Performance Configuration Checklists

The following performance tuning steps ensure optimal performance of Unified CCMP.

Web Server

Done	Description
☐	Create a new page file, on a non-system drive, of minimum 1.5 x system memory and maximum 2 x system memory.
☐	Defragment the page file and registry hives using http://www.sysinternals.com/Utilities/PageDefrag.html.

Database Server

Done	Description
☐	Create a new page file, on a non-system drive, of minimum 1.5 x system memory and maximum 2 x system memory.
☐	Defragment page file and registry hives using http://www.sysinternals.com/Utilities/PageDefrag.html
☐	Ensure the Portal database is set to Simple Recovery Mode on all systems

System Reset

Reboot the servers after installation has finished, making sure that the Unified CCMP services start automatically on boot.

Logging into Unified CCMP

Unified CCMP can now be opened from **Start > All Programs > Management Portal > Web > Management Portal**. This will open a web page, which you can bookmark.

For login to a new system, use the username 'administrator' and a blank password. You will be prompted to change this. If you are logging into an upgraded system, the administrator password will not have changed from that previously used.

Note   If you lose the administrator password, it cannot be reset except by another user with equal permissions. It is recommended that you note down the chosen password and keep it somewhere secure.

System Checks

Once the system is installed and configured, you should run through the following checks to ensure that data is imported and the system running normally.

1. Log in to the Unified CCMP web application using the pre-configured Administrator user and confirm that the Home Page successfully displays.

2. Check that, on each Unified CCMP server, all the installed Unified CCMP services are started in `services.msc`.

3. Use the following SQL statement to confirm that resource data is being imported to the database:

```
Select count(*) from TB_DIM_AGENT
```

This query should return a value of at least 3.

7. Upgrading From a Previous Version

This chapter and the following chapters describe how to upgrade from a previous version of Unified CCMP to Unified CCMP 9.1.

The upgrade process for Unified CCMP depends on your deployment model and the version of Unified CCMP that you are upgrading from. For example, a upgrading a single server system is simpler than upgrading a resilient two-tier system where down-time must be minimized. This chapter describes several separate methods for upgrade. Read this chapter, then choose the method that best suits your system configuration and upgrade requirements.

Which Upgrade Procedure?

The upgrade procedure you choose depends on your Unified CCMP deployment model and your requirements for the upgrade.

This table lists the different upgrade procedures described in this document and the scenarios where they can be used.

Upgrade Procedure	Upgrade Requirement				
	Single-sided system	Dual-sided system	Minimal downtime	Simple process	Dual-sided with different s/w versions
Single-Sided Upgrade (see Chapter 8)	✓		✓	✓	
Total Outage Upgrade (see Chapter 9)		✓		✓	
Split Side Upgrade (see Chapter 10)		✓	✓		✓
Upgrade from Unified CCMP *.5(1) or earlier (see Chapter 11)	✓	✓			

Distributed Architecture

Unified CCMP employs a distributed architecture for dual-sided systems.

When upgrading the platform the design and architecture must be considered to ensure the minimal amount of down-time is achieved and no data loss is incurred.

Resilience is achieved by the use of a second side of the system containing the same components as the primary side.

SQL Server replication is used to replicate data from Side A to Side B and Side B to Side A.

Failover information for the individual Unified CCMP components is stored in the databases on side A and B. This information is also replicated using SQL Server replication. This means that both sides have knowledge of the primary and secondary server configuration made through the Unified CCMP Integrated Configuration Management tool, even when replication has been removed.

Figure 3: Replication and Failover Connections
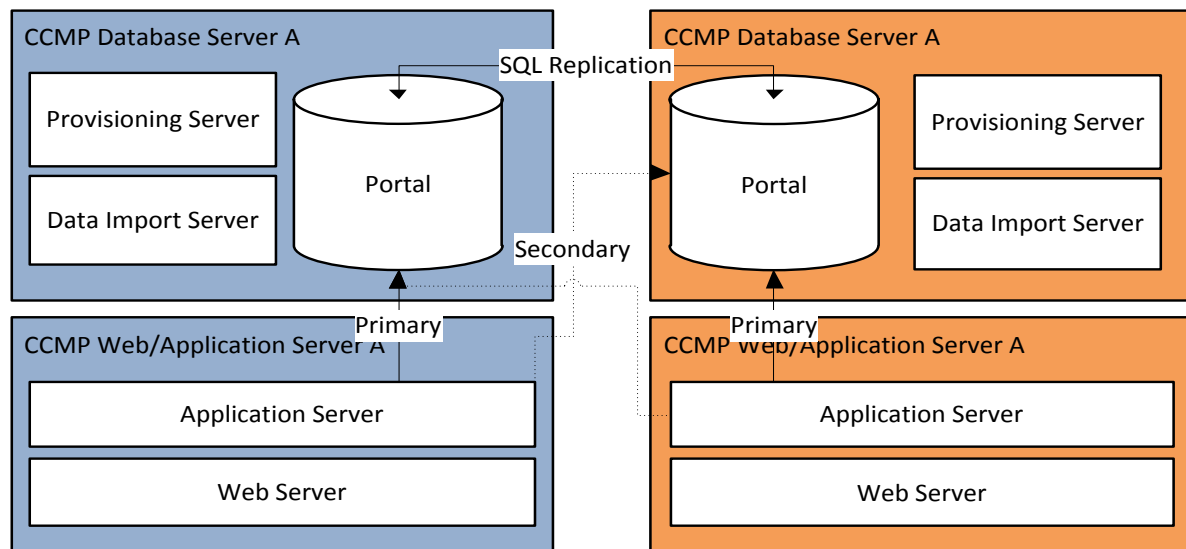
When a replicated system is upgraded one side at a time, it is possible for the individual components of Unified CCMP to fail-over to the other non-upgraded side. This will result in data inconsistencies as some data is entered to side A and some to side B with no replication running to synchronize the two sides.

There are two ways to upgrade resilient systems:

- If it is acceptable for the system to be completely unavailable whilst the upgrade is performed, then use the Total Outage Upgrade method. This is the quicker upgrade method.

- If high-availability is required, then use the Split-Sided Upgrade method. This method maximizes the system up time during the upgrade but adds additional complexity.

Validating an Upgrade

After you have upgraded your installation of Unified CCMP, check that the system is functional following the upgrade with the following tests.

Check	Success Criteria
Unified CCE Provisioning Tests	
Log in to the side A Web server (Portal) and create a new Skill Group. This tests provisioning from the side A web server. Run this test against each configured Unified CCE instance.	The Skill Group should be successfully created, and visible on side A, and, if applicable, side B.
Log in to the side A Web server (Portal) and create a new Agent This tests provisioning from the side A web server. Run this test against each configured Unified CCE instance.	The Agent should be successfully created and visible on side A, and, if applicable, side B.
Create a new Skill Group on the AW using the Cisco Skill Group Explorer tool. Wait a few minutes and check that the Skill Group is imported into Unified CCMP.	The Skill Group should be visible on side A, and, if applicable, on side B.
CUCM Provisioning Tests	
Log in to the side A Web server (Portal) and create a new IP Phone. This tests Unified CM provisioning from the side A web server.	The IP Phone should be successfully created, and be visible on side A, and, if applicable, on side B.
Replication Tests (dual-sided deployments only)	
Log in to the side B Web server (Portal) and create a new Skill Group. This tests Unified CCE provisioning from the side B Web server. Run this test against each configured Unified CCE instance.	The Skill Group should be successfully created, and visible on side A.

Create a new Skill Group on the AW using the Cisco Skill Group Explorer tool. Wait a few minutes and check that the Skill Group is imported into Unified CCMP.	The Skill Group should be visible on side A and side B.
Log in to the side B Web server (Portal) and create a new IP Phone. This tests Unified CM provisioning from the Side B web server.	The IP Phone should be visible on side A and side B.

8. Single-Sided Upgrade

Overview

This chapter describes the steps involved to upgrade a single-sided deployment. The description assumes that you have a two tier deployment (separate database and app/web servers).

Note Only use these instructions if you are upgrading from Unified CCMP 8.5(2) or later. If you are upgrading from Unified CCMP 8.5(1) or earlier, follow the instructions in Chapter 11.

Note Before you proceed with the upgrade please ensure you have the original cryptographic passphrase entered during the **original** Unified CCMP installation as you will need it at several points during the upgrade.

Checklist

Step	Complete
Prepare the in place Unified CCMP servers	
Configure DTC	
Stop the Unified CCMP Services	
Backup the Unified CCMP Portal databases	
Delete the **ReportServer** and **ReportServerTempDB** database catalogs from the DB Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall SQL Server Components from Web Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	

Step	Complete
Uninstall SQL Server Components from Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall Existing Unified CCMP Software	
Uninstall the Data Import Sever Component (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Provisioning Server Component (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Database Installer Component (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Application Server Component (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Web Application Component (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Database Component (upgrading from Unified CCMP 9.0 only)	
Uninstall the App/Web Server Component (upgrading from Unified CCMP 9.0 only)	
Install SQL Server and restore the Portal database	
Install SQL Server 2008 R2 and SQL Server 2008 R2 SP1 (upgrading from Unified CCMP 8.5 or earlier only)	
Configure SQL Agent Service account (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Restore the Portal database (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Add network service accounts (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Install new Unified CCMP Components and upgrade Portal database	
Install the Unified CCMP Database Installer	
Upgrade the Unified CCMP Portal database	
Remove 32 bit application support (upgrading from Unified CCMP	

Step	Complete
8.5(2) or Unified CCMP 8.5(3) only)	
Install the Unified CCMP App/Web Server	
Configure the Unified CCE Config Web Service (upgrades from Unified CCMP 9.0 only)	
Restart and Validate	
Restart the Unified CCMP Services	
Validate the upgrade	

Prepare the in place Unified CCMP Servers

Configure DTC

Distributed Transaction Coordinator (DTC) must be configured on all Database Servers. DTC is used for Unified CCMP audit archiving. To configure DTC follow these steps:

1. Click **Start > All Programs > Administrative Tools > Component Services**. The Component Services management tool is displayed.

2. Expand **Component Services > Computers > My Computer > Distributed Transaction Coordinator**.

3. Right-click on **Local DTC** and select **Properties**. The Local DTC Properties window is displayed.

4. Select **Security** tab.

5. In **Security Settings** ensure that **Network DTC Access Transaction Manager Communication** has **Allow Inbound** and **Allow Outbound** selected.

6. Set **Transaction Manager Communication** to **No Authentication Required**.

7. Click **OK** and accept the prompt to restart the MSDTC Service.

Stop the Unified CCMP Services

Before starting the upgrade, stop the Unified CCMP services on all servers.

Data Import Server Service

To stop the Unified CCMP: Data Import Server service:

1. On the database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **UCCMP: Data Import Server** service from the list of services.

4. Select **Stop.**

5. Close the **Services** window.

Partition Table Manager Service

To stop the Unified CCMP: Partition Table Manager service:

1. On the database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **UCCMP: Partitioning Table Manager** service from the list of services.

4. Select **Stop.**

5. Close the **Services** window.

Provisioning Server Service

To stop the Unified CCMP: Provisioning Server service:

1. On the database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **UCCMP: Provisioning Server** service from the list of services.

4. Select **Stop.**

5. Close the Services window.

System Monitoring Services, Application Search Services and Reporting Services

To stop the System Monitoring Services service, Application Search Services service and Reporting Services service:

1. On the App/Web server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click the **Unified CCMP: System Monitoring Services** service from the list of services.

4. Select **Stop.**

5. At the message: "When UCCMP: System Monitoring Services stops, these other services will also stop. Do you want to stop these services?" click **Yes.**

6. Close the Services window.

Back up the Unified CCMP Portal Database

Back up the Unified CCMP Portal database so that you can restore it in the event of a failure.

1. Start **SQL Server Management Studio as follows:**

    *   If you are upgrading from Unified CCMP 8.5(2) or 8.5(3) or earlier, on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.

    *   If you are upgrading from Unified CCMP 9.0(x), on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**

2. Connect to the Database Engine using Windows Authentication.

3. Navigate to the **Portal** database.

4. Right-click **Portal** and select **Tasks** > **Back Up**.

5. Amend the **Destination** as appropriate using the **Remove** and **Add** features

6. Click **OK**.

7. Close the SQL Server Management Studio window.

Delete ReportServer and ReportServerTempDB Databases

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

SQL Server Reporting Services is not required for Unified CCMP 9, so the Reporting Services Databases can be removed.

1. Click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.

2. Connect to the Database Engine using Windows Authentication

3. Navigate to the **ReportServer** database.

4. Right-click **ReportServer** and select **Delete**. The Delete Object window displays.

5. Check the **Close Existing Connections** checkbox.

6. Click **OK** to delete the database.

7. Repeat Steps 3 to 6 and delete the **ReportServerTempDB** database.

⚠️ **Caution**   Do not delete the Portal database.

Uninstall SQL Server Components from Web Server

✎ **Note**   This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Microsoft SQL Server 2005 Reporting Services components are not required for Unified CCMP 9.0(1) and above and must be removed.

On the Web Server:

1. Click **Start > Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **SQL Server Reporting Services** service from the list of services.

4. Select **Stop.**

5. Close the Services window.

6. Click **Start > Control Panel > Uninstall a program.** The Programs and Features window displays.

7. Select **Microsoft SQL Server 2005**

8. Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

9. Select the **MSSQLSERVER: Reporting Services Instance** and the **Workstation** components (if present). Click **Next.**

10. Review the Confirmation dialog box and click **Finish** to uninstall the SQL Server components.

11. When the uninstallation procedure completes, close the Programs and Features window.

Uninstall SQL Server Components from Database Server

✎ **Note**   This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Before installing Microsoft SQL Server 2008 R2, Microsoft SQL Server 2005 must be removed.

On the Database Server:

1. Click **Start** > **Run**. The Run window displays.

2.   In the **Open** field, enter **services.msc**. The **Services** window displays.

3.   Right-click each of the **SQL Server** services in turn from the list of services and select **Stop.**

4.   When all the SQL Server services are in the Stopped state, close the Services window.

5.   Click **Start > Control Panel > Uninstall A Program.** The Programs and Features window displays.

6.   Select **Microsoft SQL Server 2005.**

7.   Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

8.   Select the MSSQLSERVER: Database Engine and the Workstation Components (if present). Click **Next.**

9.   Review the Confirmation screen and click **Finish** to uninstall the SQL Server components.

10. When the uninstallation procedure completes. Close the Programs and Features window.

Uninstall Existing Unified CCMP Software

Uninstall the Data Import Server Component

Note   This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Data Import Server component:

1.   On the database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2.   Select **Management Portal: Data Import Server**.

3.   Click **Uninstall**. A window displays asking you if you are sure that you want to remove the Management Portal: Data Import Server.

4.   Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Provisioning Server Component

Note   This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Provisioning Server component:

1. On the database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Provisioning Server**.

3. Click **Uninstall.** A window displays asking you if you are sure that you want to remove the Management Portal: Provisioning Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. Manually delete the folder: **C:\Program Files\Management Portal\Provisioning Server\Config** if it exists.

Uninstalling the Database Installer Component

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

The Database Installer is the tool that maintains the database catalog. Uninstalling this does not remove the Unified CCMP Portal Database (which is upgraded later in the process). To remove the Database Installer component:

1. On the database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Install Tool.**

3. Click the **Uninstall** option, and confirm.

Uninstall the Application Server Component

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Application Server component:

1. On the App/Web server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Web Application Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Web Application component:

1. On the App/Web server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Web Application.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Web Application.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Database Components

Note This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Database components:

1. On the Database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Database Components.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Application Server Components

Note This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Application Server component:

1. On the App/Web server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server Components.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. When the uninstall is complete, the App/Web server will reboot automatically.

Install SQL Server and Restore the Portal Database

Install SQL Server

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Install SQL Server 2008 R2 as described in section SQL Server on page 11, then follow the post installation configuration steps to configure DTC, SQL Server Network Protocols and any required Firewall rules as described in section Post-Installation Configuration on page 12.

When the SQL Server 2008 R2 installation is complete, locate and install SQL Server 2008 R2 Service Pack 1 before proceeding.

Configure SQL Agent Service Account

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2 SP1, configure the SQL Server Agent account to run under the SQL Agent User account defined in the Required User Accounts section.

On the Database Server:

1. Click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right click the SQL Agent Service and select **Properties.** The Properties window displays.

4. Select the **Log On** tab.

5. Select the **This account** radio button.

6. Enter the username and password of the SQL Server Agent user account.

7. Click **OK.** A notification message displays confirming that a service restart will be required for the change to take effect.

8. Click **OK.**

9. Right click the SQL Agent Service and select **Restart**. Check that the service returns to the Started state.

Restore the Portal Database

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2, restore the Portal database backup.

On the database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Right click the Database folder and Click **Restore Database**.

3. In the Restore Database window choose **From Device** and **Add** the location of the portal back up file from the same side database server. You may need to copy the backup file to a local file in order to access it.

4. Select the backup file to restore the Portal database from and click **OK**.

5. Select the check box next to the backup set you just added .

6. Select the Portal database as the restore destination from the **To Database** drop-down list.

7. Select **Options** and choose **Overwrite the existing database**. This will restore the database to the same location as the previous database. If you would like to choose a different location, update the Restore As path for each file to your preferred data file location.

8. Click **OK** to start the restore.

Add Network Service Accounts

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

You must also add the NETWORK SERVICE account for the web server to the database logins with appropriate access permissions. Before this can be done the existing accounts must be deleted from the Portal database logins.

On the database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Locate and expand the Portal database. A list of folders is displayed.

3. Expand the **Portal** > **Security > Users** folder. A list of database logins is displayed.

4. Right click and **Delete** any occurrences of the NETWORK SERVICE account. **Do not** delete the entry for the NETWORK SERVICE account for the local

machine (NT AUTHORITY\ NETWORK SERVICE). For remote web server machines in the deployment the NETWORK SERVICE logins will be of the form <DOMAIN>\<WEBSERVER MACHINE NAME>$. For example CISCO\WEBSERVERA$ if your webserver is called WEBSERVERA and belongs to the CISCO domain.

5. Expand the **Security** folder. A list of folders is displayed.

6. Right Click the **Logins** folder and select **New Login**.

7. Ensure the **Windows authentication** option is selected and enter the NT AUTHORITY\NETWORK SERVICE account for the Side A webserver in the form <DOMAIN>\<WEBSERVER MACHINE NAME>$.

8. Click **User Mapping** in the Select a page panel.

9. Check the Portal database in the Users mapped to this login pane. Ensure that the User column correctly contains the Network Service account for the web server.

10. Check the **portalapp_ role**, **portalrs_role** and **portalreporting_role** in the Database Role Membership pane.

11. Click **OK**.

Install New Unified CCMP Components and Upgrade Portal Database

This section describes how to install the new Unified CCMP components and upgrade the portal database for this release of Unified CCMP.

Running the Unified CCMP Installer

1. Insert the Unified CCMP DVD. If auto-run is enabled on the server, a window opens automatically showing a list of Unified CCMP components under the heading 'Server Installation' on the left hand side.

Note If auto-run is disabled and you do not see the Installation Components screen, double-click the **autorun.bat** file located on the DVD to launch the Unified CCMP installer manually.

Note If UAC has not been disabled, launch the installation manually by right-clicking on the **autorun.ba**t file located on the DVD and selecting **run as administrator** option.

Note Some anti-virus software may state that the **autorun.hta** script file is malicious. Please ignore and continue with the installation.

2. Follow the steps in the sections below to install each component, but read the information about prerequisites in the rest of this section first.

Before you can install a Unified CCMP component, the prerequisites for that component must be present. The Unified CCMP Installer checks the prerequisites for each component as follows:

- When you click on a component to install it, the installer displays a list of prerequisites for that component and checks that each prerequisite is present. As each prerequisite check completes, you will see a green tick (check successful) or a red cross (check failed). The Install option for that component is only available when all prerequisite checks are successful.

- Where possible, the Unified CCMP DVD includes redistributable packages for prerequisites, so if a prerequisite check fails, you can click on the link in the Unified CCMP installer to install the missing prerequisite. Once all the prerequisite software is installed, you can click on the component again, then click **Rerun** to rerun the tests.

- When all the prerequisites display a green tick, you will be able to click **Install** to install the chosen component.

Install the Unified CCMP Database Installer

This process does not upgrade the database directly. It just installs the Database Installer which is then used to upgrade the database. On the Database Server:

1. To install the Unified CCMP Database Installer, in the Unified CCMP Installer, select **Database Server**, and wait until the prerequisite checks have completed. If any checks fail, fix them as described above. When all checks have passed, click **Install** to begin the Database Server Installation. The Setup window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. In the License Agreement window:

    - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

4. In the Cryptography Configuration window:

    - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

    - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠️
Caution

You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the

installation with a new passphrase you will be unable to access your existing data.

5.   In the Configure Database window:

*   **Database Name** Enter the name of the database catalog for Unified CCMP. By default this is Portal.

*   **Connect Using** Select the login credentials you want to use:

    *   **Windows Authentication Credentials of Application** This is the recommended option.

    *   **SQL Server Authentication using the login and password below** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

    *   Click **Next.**

6.   In the Destination Folder window, you can click **Change** to change the location where the Database components are installed. It is not necessary to install all Unified CCMP components in the same location.

7.   Click **Install** to install the Database Installer.

> **Note** During the Database Install Tool Installation, the J2SE pre-requisite will be automatically installed if it is not already present. A Security Alert dialog box stating that 'Revocation Information for the security certificate for this site is not available' may be displayed in some circumstances. If this dialog box appears click **Yes** to continue.

8.   When the installation has completed, to upgrade your database immediately after installing the Database Installer, select the **Launch Database Management Utility** check box at the end of the installation before clicking **Finish**.

9.   Click **Finish**.

Upgrade the Unified CCMP Portal Database

Once the Database Installer is installed, it can be used to upgrade the database.

1.   If you selected the Launch Database Management Utility check box when you installed the Database Installer, the Database Installer launches automatically after it has been installed. Otherwise, launch the Database Installer manually from **Start > All Programs > Management Portal > Database > Database Installer.** The Database Installer is a wizard which guides you through the steps to upgrade the database.

2.   Click **Next** to begin the upgrade process.

3.   In the Database Setup Window choose **Upgrade an Existing Database.** Click **Next** to continue.

4. In the SQL Server Connection Details window, take the following actions:

    - **Server Name** - select the Microsoft SQL Server where the Unified CCMP database is located. In this case this is the machine running the application, and so it must be left as the default **(local).**

    - **Database Name** - enter or select the name of the database catalog that was originally used for the Unified CCMP database.

    - **Connect Using** - select the login credentials you want to use:

        - The **Windows account information you use to log in to your compute**r. This is the recommended option.

        - The **Microsoft SQL Server login information assigned by the system administrator**. Only select this option if you are using a database catalog on a different domain. For this option you must enter your Login Name and Password in the fields provided.

    - **Test Connection** – click to make sure the connection to the Microsoft SQL Server is established. If you see the message 'Connection succeeded but database does not exist' then you must rectify this problem before continuing. Check that the database catalog name and security credentials are correct.

    - When the database connection details have been tested and the connection is successful, click **Next.**

5. Click **Next** to perform the upgrade.

6. When the Portal database upgrade is complete, click **Close** to close the Database Installation Tool.

Remove 32-Bit Application Support

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Some components used by earlier versions of Unified CCMP ran as 32-bit applications on a 64-bit operating system. Prior to installing the App/Web Server, remove 32-bit application support on the Servers where App/Web Server component will be installed:

1. Click **Start > All Programs > Accessories** then right-click **Command prompt** and select **Run as administrator**.

2. Copy the following script and paste into the command window:

    ```
    cscript %SystemDrive%\inetpub\AdminScripts\adsutil.vbs set
    w3svc/AppPools/Enable32bitAppOnWin64 0
    ```

3. Press **Enter** to execute the script. The script should return the following output:

    ```
    Enable32bitAppOnWin64          : (BOOLEAN) False
    ```

The App/Web Server component can now be installed.

Install the Unified CCMP App/Web Server

Install the new App/Web Server components on the App/Web Server.

1. To install the Unified CCMP App/Web component, in the Unified CCMP Installer, select **App/Web Server**, wait until the prerequisite checks have completed and click **Install**. The **Management Portal: Application Server Component** window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. If the Management Portal: Application Server Components Dialog is displayed, click **Install** to install the additional required components.

4. If the Microsoft .NET 4.5 Framework pre-requisite is missing, it will be installed at this point. Click **Install** to install the component and follow the on screen instructions. When the .NET 4.5 Framework is complete, restart the server to continue the installation of the App/Web Server.

5. In the **License Agreement** window:

   - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting

6. In the **Cryptography Configuration** window:

   - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

   - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠️
Caution
You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

7. In the **Destination Folder** window, you can click **Change** to change the location that the App/Web Server components are installed to.

8. In the **Configure Database** window:

   - **SQLServer Name** Enter the name of the machine that is to be the Database Server. The default of **localhost** is valid only when installing on the Database Server.

- **Catalog Name** Enter or select the name you selected while installing the Database Server component. By default this is Portal.

- **Connect Using** Select the login credentials you want to use:

  - **Windows authentication** This is the recommended option.

  - **The SQL Server authentication** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

9. Click **Install**.

10. When the installation has completed, click **Finish**.

> **Note** The machine will restart once the installation is complete.

Configure the Unified CCE Config Web Service

On the database server, the Unified CCE Config Web Service must be configured for each connected Unified CCE Server that is running Unified CCE 9.0 or later.

> **Note** This step is only required if you are upgrading from Unified CCMP 9.0. Earlier versions of Unified CCMP were not able to connect to Unified CCE Servers running Unified CCE 9.0.

To configure the Unified CCE Config Web Service:

1. On the database server, Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window, set:

   - **Server Name** This option defaults to the current machine.

   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   - **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. Select the **Setup** tab and click **Configure Cisco Unified CCE Servers** to start the wizard. Click **Next** to go through each window in turn.

5. In the Select Task dialog box select **Modify an existing instance**.

6. Select the Unified CCE instance you want to modify and click **Next**.

7. Complete the dialog boxes as follows:

- In the Configure Primary Unified Config Web Service dialog box, enter the following details

  - **URL**. This is the auto-generated URL of the primary unified config web service on the Unified CCE

  - **User Name**. This is a username with appropriate access to the Unified CCE that the web service is running on. This user must be in the domain security group **<Server>_<UCCE-Instance>_Config**, where <Server> is the name of the server running Unified CCE and <UCCE-Instance> is the name of the Unified CE Instance on this server.

  - **Password**. This is the password for the user.

- In the Configure Primary ConAPI RMI Ports dialog box enter the following ConAPI details:

  - **Local Registry Port**. This is the port on the Unified CCE for the Unified CCMP Provisioning service to connect to. This will usually be 2099.

  - **Remote Registry Port**. This is the port on the Unified CCMP Database Server for the Unified CCE to connect to. This will usually be 2099.

  - **Local Port**. This is selected as the designated port for live provisioning traffic between the Unified CCE and Unified CCMP servers. It must be uniquely assigned for each Unified CCE and any firewalls between the CICM and Unified CCMP server must be configured to allow both-way traffic on this port.

- In the Configure ConAPI Application Instance dialog box enter the following details:

  - **Application Name.** The name of the application to be used for provisioning Unified CCE from Unified CCMP. Specify the name of the application you configured in section Common ConAPI Credentials.

  - **Application Key.** Use the password for the application you specified above.

- In the Multi Media Support dialog box, select **Yes** if you are using a Cisco Unified Web and E-Mail Interaction Manager application instance to provide support for non-voice interactions. The default is **No**.

- In the Purge On Delete dialog box select **Yes** if you want to purge items from Unified CCE automatically when they are deleted from Unified CCMP. The default is **Yes**.

- In the Self Skilling Enabled dialog box select **Yes** if you want to allow agents to reskill themselves. The default is **No**.

- In the Supervisor Active Directory Integration dialog box select **Yes** if you want to enable support for associating existing Active Directory user accounts for Unified CCE Supervisors. The default is **No**. If you select **Yes** then you will be prompted to provide Active Directory information so that Windows user accounts can be listed.

8. The Summary dialog box summarizes the details of the Unified CCE being configured and the settings you have chosen. Check the details, and if you are satisfied, click **Next**.

9. A confirmation message is displayed to indicate that the wizard has completed successfully. Click **Exit** to close the wizard.

10. Click **Configure Cisco Unified CCE Servers** again, and repeat the steps above to configure the remaining Unified CCE Servers that are running Unified CCE 9.0 or later.

11. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

Restart and Validate

Restart the Unified CCMP Services

Following an upgrade it is good practice to restart all Unified CCMP services.

To restart a service:

1. Click **Start** > **Run.**

2. Enter **Services.msc** and then click **OK.**

3. If the selected service is in the **Started** state, right click the service name and click **Restart**. If the selected service is not started, right-click the service name and click **Start.**

All Unified CCMP services on both Database and App/Web Servers should be restarted.

> **Note** After starting the System Monitoring Service and Application Service on the web server, you will need to wait a few minutes before logging in to allow the services to load completely.

Validate the Upgrade

Check that the system is functional following the upgrade using the validation tests in the section Validating an Upgrade on page 60.

9. Total Outage Upgrade

Overview

This chapter describes the steps involved to upgrade a dual-sided deployment, where all servers will be taken down and upgraded at once. The description assumes that you have a two tier deployment (separate database and app/web servers).

Note Only use these instructions if you are upgrading from **Unified CCMP 8.5(2)** or later. If you are upgrading from 8.5(1) or earlier, follow the instructions in Chapter 11.

Note Before you proceed with the upgrade please ensure you have the original cryptographic passphrase entered during the **original** Unified CCMP installation as you will need it at several points during the upgrade.

Checklist

Step	Complete
Prepare the in place Unified CCMP servers	
Configure DTC	
Stop the Unified CCMP Services	
Remove database replication	
Backup the Side A and Side B Portal databases	
Delete the **ReportServer** and **ReportServerTempDB** database catalogs from the DB Servers (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	

Step	Complete
Uninstall SQL Server components from the Unified CCMP Web servers (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall SQL Server components from the Unified CCMP Database servers (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall Existing Unified CCMP Software	
Uninstall the Data Import Server from both Database Servers (upgrading from Unified CCMP 8.5(2) or 8.5(3) only)	
Uninstall the Provisioning Server from both Database Servers (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Database Installer from both Database Servers (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Application Server from both App/Web Servers (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Web Application from both App/Web Servers (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall the Database Component from both Database Servers (upgrading from Unified CCMP 9.0 only)	
Uninstall the App/Web Server Component from both App/Web Servers (upgrading from Unified CCMP 9.0 only)	
Install SQL Server 2008 R2 and Restore the Portal Database	
Install SQL Server 2008 R2 and SQL Server 2008 R2 SP1 (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Configure SQL Agent Service Account (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Restore the Portal Database (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Add the SQL Agent User (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	

Step	Complete
Add Network Service Accounts (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Install the new Unified CCMP Components and upgrade the Portal database	
Install the new Unified CCMP Database Installer on both database servers	
Upgrade the Unified CCMP Portal database on both database servers	
Remove 32 bit replication (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Install the Unified CCMP App/Web Servers on both App/Web Servers.	
Configure the Unified CCE Config Web Service (upgrades from Unified CCMP 9.0 only)	
Restore Replication	
Restore replication between the Side A and Side B databases.	
Reconfigure replication	
Confirm replication is working	
Restart and Validate	
Restart the Unified CCMP Services	
Validate the upgrade	

Prepare the in place Unified CCMP Servers

Configure DTC

Distributed Transaction Coordinator (DTC) must be configured on all Database Servers. DTC is used for Unified CCMP audit archiving. To configure DTC follow these steps:

On the Side A Database Server:

1. Click **Start > All Programs > Administrative Tools > Component Services**. The Component Services management tool is displayed.

2. Expand **Component Services > Computers > My Computer > Distributed Transaction Coordinator**.

3. Right-click on **Local DTC** and select **Properties**. The Local DTC Properties window is displayed.

4. Select **Security** tab.

5. In **Security Settings** ensure that **Network DTC Access Transaction Manager Communication** has **Allow Inbound** and **Allow Outbound** selected.

6. Set **Transaction Manager Communication** to **No Authentication Required**.

7. Click **OK** and accept the prompt to restart the MSDTC Service.

Repeat the process on the Side B Database Server.

Stop the Unified CCMP Services

Before starting the upgrade stop the Unified CCMP services on all servers.

Data Import Server Service

To stop the Unified CCMP: Data Import Server service:

1. On the Side A database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **UCCMP: Data Import Server** service from the list of services.

4. Select **Stop.**

5. Close the **Services** window.

Repeat the steps above on the Side B database server.

Partition Table Manager Service

To stop the Unified CCMP: Partition Table Manager service:

1. On the Side A database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click the **UCCMP: Partitioning Table Manager** service from the list of services.

4. Select **Stop.**

5. Close the **Services** window

Repeat the steps above on the Side B database server.

Provisioning Server Service

To stop the Unified CCMP: Provisioning Server service:

1.   On the Side A database server, click **Start** > **Run**. The Run window displays.

2.   In the **Open** field, enter **services.msc**. The Services window displays.

3.   Right-click the **UCCMP: Provisioning Server** service from the list of services.

4.   Select **Stop.**

5.   Close the Services window.

Repeat this process on the Side B database server.

System Monitoring Services, Application Search Services and Reporting Services

1.   On the App/Web server, click **Start** > **Run**. The Run window displays.

2.   In the **Open** field, enter **services.msc**. The **Services** window displays.

3.   Right-click the **Unified CCMP: System Monitoring Services** service from the list of services.

4.   Select **Stop.**

5.   At the message: **"**When UCCMP: System Monitoring Services stops, these other services will also stop. Do you want to stop these services?"**, click **Yes.**

6.   Close the Services window.

Repeat this process on the Side B App/Web server.

Remove Database Replication

Before the upgrade can proceed, database replication must be removed.

Removing Replication – Unified CCMP 8.5(2) or Unified CCMP 8.5(3)

Note

Follow these instructions if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To remove database replication:

1.   Ensure you are logged in to the Side A database server as a domain level user with administrative rights over both database servers.

2.   In your Windows desktop, click **Start** > **Programs** > **Management Portal** > and click the **Configuration Management** application.

3.   Click **OK** to login.

4.   Click **UCCMP Servers**.

5. Click the **Report Server Databases** tab.

6. Click **Replication**.

7. Click **Unreplicate**.

8. Click **Execute.**

9. Click **Yes** when prompted to remove replication. This step may take some time to complete.

10. Once complete, Click **Close.**

11. Click **OK.**

12. Select the **UCCMP Database** tab.

13. Click **Replication**.

14. Click **Unreplicate**.

15. Click **Execute.**

16. Click **Yes** when prompted to remove replication. This step may take some time to complete.

17. Once complete, Click **Close.**

18. Click **OK.**

19. Click **Close**

20. Exit Configuration Manager.

Removing Replication– Unified CCMP 9.0

Note

Follow these instructions if you are upgrading from Unified CCMP 9.0.

To remove database replication:

1. Ensure you are logged in to the Side A database server as a domain level user with administrative rights over both database servers.

2. In your Windows desktop, click **Start > Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

3. The **Database Connection** window is displayed. In this window, set:

   - **Server Name** This option defaults to the current machine.

   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   - **Authentication** Select Windows Authentication.

4. Click **OK** to open Unified CCMP Integrated Configuration Environment.

5. The **Cluster Configuration** tool is open by default. From the **Tool** drop-down list select **Replication Manager**.

6. Click the **Setup** tab to see the replication setup details.

7. Click **Disable** to remove replication from the Unified CCMP database. When prompted, click **Yes** to proceed with replication removal.

Replication removal may take several minutes. Wait for the 'Replication Removed' message to display in the Output Window and then exit the Integrated Configuration Environment.

Back up the Unified CCMP Portal Databases

Back up the Unified CCMP Portal databases so that you can restore them in the event of a failure.

1. Start **SQL Server Management Studio as follows:**

    * If you are upgrading from Unified CCMP 8.5(2) or 8.5(3) or earlier, on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.

    * If you are upgrading from Unified CCMP 9.0(x), on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**

2. Connect to the Database Engine using Windows Authentication.

3. Navigate to the **Portal** database.

4. Right-click **Portal** and select **Tasks** > **Back Up**.

5. Amend the **Destination** as appropriate using the **Remove** and **Add** features

6. Click **OK**.

7. Close the SQL Server Management Studio window.

Repeat this process for the Unified CCMP Portal database on the Side B database server.

Delete ReportServer and ReportServerTempDB Databases

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

SQL Server Reporting Services is not required for Unified CCMP 9 and so the Reporting Services Databases can be removed.

On the Side A database Server:

1. Click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.

2. Connect to the Database Engine using Windows Authentication.

3. Navigate to the **ReportServer** database.

4. Right-click **ReportServer** and select **Delete**. The Delete Object window displays.

5. Check the **Close Existing Connections** checkbox.

6. Click **OK** to delete the database.

7. Repeat Steps 3 to 6 and delete the **ReportServerTempDB** database.

⚠
Caution

Do not delete the Portal database.

Repeat the steps in this section on the Side B Database server.

Uninstall SQL Server Components from Web Servers

✎
Note

This step is only required if you are upgrading from Unified CCMP 8.5 (2) or Unified CCMP 8.5(3).

Microsoft SQL Server 2005 Reporting Services components are not required for Unified CCMP 9.0(1) and above and must be removed.

On the Side A Web Server:

1. Click **Start > Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **SQL Server Reporting Services** service from the list of services.

4. Select **Stop.**

5. Close the Services window.

6. Click **Start > Control Panel > Uninstall a program.** The Programs and Features window displays.

7. Select **Microsoft SQL Server 2005.**

8. Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

9. Select the **MSSQLSERVER: Reporting Services Instance** and the **Workstation** components (if present). Click **Next.**

10. Review the Confirmation dialog box and click **Finish** to uninstall the SQL Server components.

11. When the uninstallation procedure completes, close the Programs and Features window.

Repeat this process on the side B web server.

Uninstall SQL Server Components from Database Servers

Note
This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Before installing Microsoft SQL Server 2008 R2, Microsoft SQL Server 2005 must be removed.

On the Side A Database Server:

1. Click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click each of the **SQL Server** services in turn from the list of services and select **Stop.**

4. When all the SQL Server services are in the Stopped state, close the Services window.

5. Click **Start > Control Panel > Uninstall A Program.** The Programs and Features window displays.

6. Select **Microsoft SQL Server 2005**

7. Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

8. Select the MSSQLSERVER: Database Engine and the Workstation Components (if present). Click **Next.**

9. Review the Confirmation screen and click **Finish** to uninstall the SQL Server components.

10. When the uninstallation procedure completes. Close the Programs and Features window.

Repeat this process on the side B database server.

Uninstall Existing Unified CCMP Software

Uninstall the Data Import Server Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Data Import Server component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Data Import Server**.

3. Click **Uninstall**. A window displays asking you if you are sure that you want to remove the Management Portal: Data Import Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Repeat this process on the Side B database server.

Uninstall the Provisioning Server Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Provisioning Server component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Provisioning Server**.

3. Click **Uninstall.** A window displays asking you if you are sure that you want to remove the Management Portal: Provisioning Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. Manually delete the folder: **C:\Program Files\Management Portal\Provisioning Server\Config** if it exists.

Repeat this process on the Side B database server.

Uninstalling the Database Installer Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(3) or Unified CCMP 8.5(3).

The Database Installer is the tool that maintains the database catalog. Uninstalling this does not remove the Unified CCMP Portal Database (which is upgraded later in the process). To remove the Database Installer component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Install Tool.**

3. Click the **Uninstall** option, and confirm.

Repeat this process on the Side B database server.

Uninstall the Application Server Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Application Server component:

1. On the Side A Web server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Repeat this process on the Side B Web server.

Uninstall the Web Application Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Web Application component:

1. On the Side A Web server, click **Start > Control Panel > Uninstall A Program.** The Programs and Features window displays.

2. Select **Management Portal: Web Application.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Web Application.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Repeat this process on the Side B Web server.

Uninstall the Database Components

Note This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Database components:

1. On the Side A Database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Database Components.

4. Click **Yes**. The Setup Status window displays.   The extent of the uninstallation progress displays on the progress bar.

Repeat this process on the Side B Database server.

Uninstall the Application Server Components

Note This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Application Server components:

1. On the Side A App/Web server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server Components.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. When the uninstall is complete, the App/Web server will reboot automatically.

Repeat this process on the Side B App/Web server.

Install SQL Server and Restore the Portal Database

Install SQL Server

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

On the Side A database server:

- Install SQL Server 2008 R2 as described in section SQL Server on page 11, then follow the post installation configuration steps to configure DTC, SQL Server Network Protocols and any required Firewall rules as described in section Post-Installation Configuration on page 12 of this document.

- When the SQL Server 2008 R2 installation is complete, locate and install SQL Server 2008 R2 Service Pack 1 before proceeding.

Repeat these steps for the B side database server.

Configure SQL Agent Service Account

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2 SP1, configure the SQL Server Agent account to run under the SQL Agent User account defined in the Required User Accounts section.

On the Side A Database Server:

1. Click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right click the SQL Agent Service and select **Properties.** The Properties window displays.

4. Select the **Log On** tab.

5. Select the **This account** radio button.

6. Enter the username and password of the SQL Server Agent user account.

7. Click **OK.** A notification message displays confirming that a service restart will be required for the change to take effect.

8. Click **OK.**

9. Right click the SQL Agent Service and select **Restart**. Check that the service returns to the Started state.

Repeat this process on the Side B database server.

Restore the Portal Database

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2, restore the Portal database backup.

On the Side A database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Right click the Database folder and Click **Restore Database**.

3. In the Restore Database window choose **From Device** and **Add** the location of the portal back up file from the same side database server. You may need to copy the backup file to a local file in order to access it.

4. Select the backup file to restore the Portal database from and click **OK**.

5. Select the check box next to the backup set you just added.

6. Select the Portal database as the restore destination from the **To Database** drop-down list.

7. Select **Options** and choose **Overwrite the existing database**. This will restore the database to the same location as the previous database. If you would like to choose a different location, update the Restore As path for each file to your preferred data file location.

8. Click **OK** to start the restore.

Repeat the process on the Side B Database Server to restore the Side B portal database backup to the Side B database server.

Once the Portal databases have been restored they must then be upgraded.

Add the SQL Agent User

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

For a dual-sided system, the SQL Agent User must be re-added.

On the Side A database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Expand the **security** folder; a list of subfolders is displayed.

3. Right Click the **Logins** folder and select **New Login**

4. Ensure the **Windows authentication** option is selected and enter the SQL Agent User domain and login name in the form <DOMAIN>\<LOGIN>. For example CISCO\sql_agent_user if your user is called sql_agent_user and belongs to the CISCO domain.

5. Click **User Mapping** in the Select a page panel.

6. Check the Portal database in the Users mapped to this login pane. The User column will auto-populate with the domain username for the SQL Agent User.

7. Check the db_owner role in the Database Role Membership pane.

8. Click **OK** to apply the changes.

Repeat these steps on the Side B Database Server.

Add Network Service Accounts

Note
This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

You must also add the NETWORK SERVICE account for all web servers to the database logins with appropriate access permissions. Before this can be done the existing accounts must be deleted from the Portal database logins.

On the A side database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Locate and expand the Portal database. A list of folders is displayed.

3. Expand the **Portal** > **Security > Users** folder. A list of database logins is displayed.

4. Right click and **Delete** any occurrences of the NETWORK SERVICE account for *all remote* web servers in the deployment. **Do not** delete the entry for the NETWORK SERVICE account for the local machine (NT AUTHORITY\ NETWORK SERVICE). For remote web server machines in the deployment the NETWORK SERVICE logins will be of the form <DOMAIN>\<WEBSERVER MACHINE NAME>$. For example CISCO\WEBSERVERA$ if your webserver is called WEBSERVERA and belongs to the CISCO domain.

5. Expand the **Security** folder. A list of folders is displayed.

6. Right Click the **Logins** folder and select **New Login**.

7. Ensure the **Windows authentication** option is selected and enter the NT AUTHORITY\NETWORK SERVICE account for the Side A webserver in the form <DOMAIN>\<WEBSERVER MACHINE NAME>$.

8. Click **User Mapping** in the Select a page panel.

9. Check the Portal database in the Users mapped to this login pane. Ensure that the User column correctly contains the Network Service account for the web server.

10. Check the **portalapp_ role**, **portalrs_role** and **portalreporting_role** in the Database Role Membership pane.

11. Click **OK**.

12. Repeat steps 6 to 11 add the NT AUTHORITY\NETWORK SERVICE account for each web server in the deployment.

Repeat these steps on the Side B database server to re-add the Web Server Network Service database logins there.

Install New Unified CCMP Components and Upgrade Portal Database

This section describes how to install the new Unified CCMP components and upgrade the portal database for this release of Unified CCMP.

Running the Unified CCMP Installer

1. Insert the Unified CCMP DVD. If auto-run is enabled on the server, a window opens automatically showing a list of Unified CCMP components under the heading 'Server Installation' on the left hand side.

Note If auto-run is disabled and you do not see the Installation Components screen, double-click the **autorun.bat** file located on the DVD to launch the Unified CCMP installer manually.

Note If UAC has not been disabled, launch the installation manually by right-clicking on the **autorun.ba**t file located on the DVD and selecting **run as administrator** option.

Note Some anti-virus software may state that the **autorun.hta** script file is malicious. Please ignore and continue with the installation.

2. Follow the steps in the sections below to install each component, but read the information about prerequisites in the rest of this section first.

Before you can install a Unified CCMP component, the prerequisites for that component must be present. The Unified CCMP Installer checks the prerequisites for each component as follows:

- When you click on a component to install it, the installer displays a list of prerequisites for that component and checks that each prerequisite is present. As each prerequisite check completes, you will see a green tick (check successful) or a red cross (check failed). The Install option for that component is only available when all prerequisite checks are successful.

- Where possible, the Unified CCMP DVD includes redistributable packages for prerequisites, so if a prerequisite check fails, you can click on the link in the Unified CCMP installer to install the missing prerequisite. Once all the prerequisite software is installed, you can click on the component again, then click **Rerun** to rerun the tests.

- When all the prerequisites display a green tick, you will be able to click **Install** to install the chosen component.

Install the Unified CCMP Database Installer

This process does not upgrade the database directly. It just installs the Database Installer which is then used to upgrade the database.

On the Side A Database Server:

1. In the Unified CCMP Installer, select **Database Server**, and wait until the prerequisite checks have completed. If any checks fail, fix them as described above. When all checks have passed, click **Install** to begin the Database Server Installation. The Setup window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. In the License Agreement window:

   - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

4. In the Cryptography Configuration window:

   - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data

   - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠ **Caution** You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

5. In the Configure Database window:

   - **Database Name** Enter the name of the database catalog for Unified CCMP. By default this is Portal.

   - **Connect Using** Select the login credentials you want to use:

     - **Windows Authentication Credentials of Application** This is the recommended option.

     - **SQL Server Authentication using the login and password below** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

- Click **Next.**

6. In the Destination Folder window, you can click **Change** to change the location that the Database components are installed to. It is not necessary to install all Unified CCMP components to the same location.

7. Click **Install** to install the Database Installer.

> **Note** During the Database Install Tool Installation, the J2SE pre-requisite will be automatically installed if it is not already present. A Security Alert dialog box stating that 'Revocation Information for the security certificate for this site is not available' may be displayed in some circumstances. If this dialog box appears click **Yes** to continue.

8. When the installation has completed, to upgrade your database immediately after installing the Database Installer, select the **Launch Database Management Utility** check box at the end of the installation before clicking **Finish**.

9. Click **Finish**.

Repeat the steps above to install the Database Installer process on the Side B Database Server.

Upgrade the Unified CCMP Portal Database

Once the Database Installer is installed, it can be used to upgrade the database.

On the Side A Database Server:

1. If you selected the Launch Database Management Utility check box when you installed the Database Installer, the Database Installer launches automatically after it has been installed. Otherwise, launch the Database Installer manually from **Start > All Programs > Management Portal > Database > Database Installer.** The Database Installer is a wizard which guides you through the steps to upgrade the database.

2. Click **Next** to begin the upgrade process.

3. In the Database Setup Window choose **Upgrade an Existing Database.** Click **Next** to continue.

4. In the SQL Server Connection Details window, take the following actions:

   - **Server Name** - select the Microsoft SQL Server where the Unified CCMP database is located. In this case this is the machine running the application, and so it must be left as the default **(local).**

   - **Database Name** - enter or select the name of the database catalog that was originally used for the Unified CCMP database.

   - **Connect Using** - select the login credentials you want to use:

     - The **Windows account information you use to log in to your compute**r. This is the recommended option.

- The **Microsoft SQL Server login information assigned by the system administrator**. Only select this option if you are using a database catalog on a different domain. For this option you must enter your Login Name and Password in the fields provided.

- **Test Connection** – click to make sure the connection to the Microsoft SQL Server is established. If you see the message 'Connection succeeded but database does not exist' then you must rectify this problem before continuing. Check that the database catalog name and security credentials are correct.

- When the database connection details have been tested and the connection is successful, click **Next.**

5. Click **Next** to perform the upgrade.

6. When the Portal database upgrade is complete, click **Close** to close the Database Installation Tool.

  Repeat the Portal database upgrade steps on the Side B database server.

Remove 32-Bit Application Support

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Some components used by earlier versions of Unified CCMP ran as 32-bit applications on a 64-bit operating system. Prior to installing the App/Web Server, remove 32-bit application support on the Servers where App/Web Server component will be installed:

1. Click **Start > All Programs > Accessories** then right-click **Command prompt** and select **Run as administrator**.

2. Copy the following script and paste into the command window:

```
cscript %SystemDrive%\inetpub\AdminScripts\adsutil.vbs set
w3svc/AppPools/Enable32bitAppOnWin64 0
```

3. Press **Enter** to execute the script. The script should return the following output:

```
Enable32bitAppOnWin64            : (BOOLEAN) False
```

If you are installing a dual-sided deployment, the steps in this section must be carried out on the web servers on both sides of the deployment.

The App/Web Server component can now be installed.

Install the Unified CCMP App/Web Server

Install the new App/Web Server components on the A and B Side App/Web Servers.

On the Side A Web Server:

1. To install the Unified CCMP App/Web component, in the Unified CCMP Installer, selec**t App/Web Serve**r, wait until the prerequisite checks have completed and click **Install**. The Management Portal: Application Server Component window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. If the Management Portal: Application Server Components Dialog is displayed, click **Install** to install the additional required components.

4. If the Microsoft .NET 4.5 Framework pre-requisite is missing, it will be installed at this point. Click **Install** to install the component and follow the on screen instructions. When the .NET 4.5 Framework is complete, restart the server to continue the installation of the App/Web Server.

5. In the **License Agreement** window:

    • **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

6. In the **Cryptography Configuration** window:

    • **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

    • **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠
Caution
You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

7. In the **Destination Folder** window, you can click **Change** to change the location that the App/Web Server components are installed to.

8. In the **Configure Database** window:

    • **SQLServer Name** Enter the name of the machine that is to be the Database Server. The default of **localhost** is valid only when installing on the Database Server. Enter the name of the side A database server when installing the side A App/Web Server Components and enter the name of the side B database server when installing the side B App/Web Server Components.

    • **Catalog Name** Enter or select the name you selected while installing the Database Server component. By default this is Portal.

    • **Connect Using** Select the login credentials you want to use:

- **Windows authentication** This is the recommended option.
- **The SQL Server authentication** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

9. Click **Install**.

10. When the installation has completed, click **Finish**.

Note The machine will restart once the installation is complete.

Repeat the installation steps on the Side B Web Server.

Configure the Unified CCE Config Web Service

On the Side A database server, the Unified CCE Config Web Service must be configured for each connected Unified CCE Server that is running Unified CCE 9.0 or later.

Note This step is only required if you are upgrading from Unified CCMP 9.0. Earlier versions of Unified CCMP were not able to connect to Unified CCE Servers running Unified CCE 9.0.

To configure the Unified CCE Config Web Service:

1. On the Side A database server, Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window, set:
   - **Server Name** This option defaults to the current machine.
   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.
   - **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. Select the **Setup** tab and click **Configure Cisco Unified CCE Servers** to start the wizard. Click **Next** to go through each window in turn.

5. In the Select Task dialog box select **Modify an existing instance**.

6. Select the Unified CCE instance you want to modify and click **Next**.

7. Complete the dialog boxes as follows:

- In the Configure Primary Unified Config Web Service dialog box, enter the following details

  - **URL**. This is the auto-generated URL of the primary unified config web service on the Unified CCE

  - **User Name**. This is a username with appropriate access to the Unified CCE that the web service is running on. This user must be in the domain security group **<Server>_<UCCE-Instance>_Config**, where <Server> is the name of the server running Unified CCE and <UCCE-Instance> is the name of the Unified CE Instance on this server.

  - **Password**. This is the password for the user.

- In the Configure Primary ConAPI RMI Ports dialog box enter the following ConAPI details:

  - **Local Registry Port**. This is the port on the Unified CCE for the Unified CCMP Provisioning service to connect to. This will usually be 2099.

  - **Remote Registry Port**. This is the port on the Unified CCMP Database Server for the Unified CCE to connect to. This will usually be 2099.

  - **Local Port**. This is selected as the designated port for live provisioning traffic between the Unified CCE and Unified CCMP servers. It must be uniquely assigned for each Unified CCE and any firewalls between the CICM and Unified CCMP server must be configured to allow both-way traffic on this port.

- In the Configure ConAPI Application Instance dialog box enter the following details:

  - **Application Name.** The name of the application to be used for provisioning Unified CCE from Unified CCMP. Specify the name of the application you configured in section Common ConAPI Credentials.

  - **Application Key.** Use the password for the application you specified above.

- In the Multi Media Support dialog box, select **Yes** if you are using a Cisco Unified Web and E-Mail Interaction Manager application instance to provide support for non-voice interactions. The default is **No**.

- In the Purge On Delete dialog box select **Yes** if you want to purge items from Unified CCE automatically when they are deleted from Unified CCMP. The default is **Yes**.

- In the Self Skilling Enabled dialog box select **Yes** if you want to allow agents to reskill themselves. The default is **No**.

- In the Supervisor Active Directory Integration dialog box select **Yes** if you want to enable support for associating existing Active Directory user accounts for Unified CCE Supervisors. The default is **No**. If you select **Yes** then you will be prompted to provide Active Directory information so that Windows user accounts can be listed.

8. The Summary dialog box summarizes the details of the Unified CCE being configured and the settings you have chosen. Check the details, and if you are satisfied, click **Next**.

9. A confirmation message is displayed to indicate that the wizard has completed successfully. Click **Exit** to close the wizard.

10. Click **Configure Cisco Unified CCE Servers** again, and repeat the steps above to configure the remaining Unified CCE Servers that are running Unified CCE 9.0 or later.

11. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

Reinstate Replication

Restore Unified CCMP Database Replication

Now you must reinstate replication between the Side A and Side B databases. Replication between the Portal databases is set up and monitored using the **Replication Manager** application which is available in the Unified CCMP Integrated Configuration Environment (ICE) tool.

Note The user running the Unified CCMP Replication Manager must have administrator permissions in both Windows and SQL Server, for both the targeted publisher and subscriber servers.

Note Always run Replication Manger on the Unified CCMP publisher database server.

To restore replication:

1. Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window, set:

    *   **Server Name** This option defaults to the current machine.

    *   **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

    *   **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. The **Cluster Configuration** tool is open by default. From the **Tool** drop-down list select **Replication Manager**.

5. Click the **Setup** tab to see the replication setup details and to configure or disable replication. Details of the displayed fields are contained in the Configuring Replication section of Chapter 5 of this document.

6. The values used when replication was first set-up are displayed. Verify that the **Distributor Properties Data Folder** and **Log Folder** reflect the current data directory for SQL Server.

Note
In most cases the recommended defaults are valid and should be used.

7. Click **Configure** to start the replication configuration process. Progress messages will be logged into the Replication Output window informing you of the steps being performed as the database is replicated.

8. You may be prompted to save pending changes to the database before continuing. If so, click **Yes** to save pending changes and continue.

Note
After you click **Configure**, it may take several minutes to set up replication. Once replication has been set up, the Replication Manager will display the Monitor tab.

Confirm Replication is Working

The **Monitor** tab allows you to monitor the general health of SQL Server Replication between Unified CCMP databases.

To confirm that replication is working:

1. In the Replication Manager, click the **Monitor** tab.

2. In the top left hand pane, select the **[Portal]:BaseSubWin** publication.

3. In the bottom right hand pane (called Actions in selected session), look for a message that starts "Delivered snapshot from . . .)". When you see this message, replication is working correctly.

4. Close the ICE tool.

Restart and Validate

Restart the Unified CCMP Services

Following an upgrade it is good practice to restart all Unified CCMP services.

To restart a service:

1. Click **Start > Run**

2. Enter **Services.msc** and then click **OK.**

3. If the service is in the **Started** state, right click the service name and click **Restart**. If a service is not started, right-click the service name and click **Start.**

All UCCMP services on all Database and App/Web Servers should be restarted.

> **Note** After starting the System Monitoring Service and Application Service on the web servers, you will need to wait a few minutes before logging in to allow the services to load completely.

Validate the Upgrade

Check that the system is functional following the upgrade using the validation tests in the section Validating an Upgrade on page 60.

10. Split Side Upgrade

Overview

This chapter describes the steps involved to upgrade a dual-sided deployment, where the upgrade will be split, and one side will be upgraded at a time. Until the second side is upgraded, you will be running two different versions of the software side by side.

This upgrade configuration temporarily breaks the replication and communication channels between the two sides of the system so each side can operate independently as a single-sided system. When replication is restored, the configuration from side A of the system will replace all configuration on side B of the system.

Use this mode of operation with caution. Unified CCE and Unified CM changes committed to side B will be imported from the AW onto Side A, but any Unified CCMP specific configuration items (for example folders, users, security etc.) that are added, changed or deleted on Side B will not be reflected on Side A, even after replication is restored.

This process has two parts.

- Part 1 - split the dual-sided system and upgrade side A (see section Checklist for Split Side Upgrade Part 1 on page 107).

- Part 2 - upgrade the split side B and restore replication (see section Checklist for Split Side Upgrade Part 2 on page 131).

- The description assumes that you have a two tier deployment (separate database and app/web servers).

Note Only use these instructions if you are upgrading from **Unified CCMP 8.5(2)** or later. If you are upgrading from 8.5(1) or earlier, follow the instructions in Chapter 11. It is not possible to perform a split side upgrade in this case.

Note Before you proceed with the upgrade please ensure you have the original cryptographic passphrase entered during the **original** Unified CCMP installation as you will need it at several points during the upgrade.

Checklist for Split Side Upgrade Part 1

The first part of the split side upgrade splits the dual-sided system and upgrade side A.

Step	Complete
Prepare the in place Unified CCMP servers	
Configure DTC.	
Stop all Unified CCMP Services on the A-Side Unified CCMP servers.	
Remove database replication.	
Backup the Side A and Side B Portal databases.	
Delete the **ReportServer** and **ReportServerTempDB** database catalogs from the Side A DB Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall SQL Server Components from Side A Web Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall SQL Server Components from Side A Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall Existing Unified CCMP Software on Side A	
Uninstall the Data Import Server from the Side A Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Provisioning Server from the Side A Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Database Installer from the Side A Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Application Server from the Side A App/Web Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Web Application from the Side A App/Web Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	

Step	Complete
Uninstall the Database Component from the Side A App/Web Server (upgrading from Unified CCMP 9.0 only)	
Uninstall the App/Web Server Component from the Side A App/Web Server (upgrading from Unified CCMP 9.0 only)	
Install SQL Server 2008 R2 and Restore the Portal Database	
Install SQL Server 2008 R2 and SQL Server 2008 R2 SP1 (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Configure SQL Agent Service Account (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Restore the Portal Database (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Add the SQL Agent User (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Add Network Service Accounts (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Install the new Unified CCMP Components and upgrade the Portal database (Side A)	
Install the new Unified CCMP Database Installer on the Side A database server.	
Upgrade the Unified CCMP Portal database on the side A database server.	
Remove 32-bit application support (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Install the Unified CCMP App/Web Servers on the side A App/Web Servers.	
Finalize Configuration and Restart	
Force failover connections to the active side.	
Update side B to enable provisioning and import (optional).	
Update provisioning on the Unified CCE AW	
Update provisioning on the side B database server	

Step	Complete
Configure the Unified CCE Config Web Service (upgrades from Unified CCMP 9.0 only)	
Restart the Unified CCMP Services	

Prepare the in place Unified CCMP Servers

Configure DTC

Distributed Transaction Coordinator (DTC) must be configured on all Database Servers. DTC is used for Unified CCMP audit archiving. To configure DTC follow these steps:

On the Side A Database Server:

1. Click **Start > All Programs > Administrative Tools > Component Services**. The Component Services management tool is displayed.

2. Expand **Component Services > Computers > My Computer > Distributed Transaction Coordinator**.

3. Right-click on **Local DTC** and select **Properties**. The Local DTC Properties window is displayed.

4. Select **Security** tab.

5. In **Security Settings** ensure that **Network DTC Access** has **Allow Inbound** and **Allow Outbound** selected.

6. Set **Transaction Manager Communication** to **No Authentication Required**.

7. Click **OK** and accept the prompt to restart the MSDTC Service.

Repeat the process on the Side B Database Server.

Stop the Unified CCMP Services (Side A)

Before starting the upgrade stop the Unified CCMP services on all A side servers.

Data Import Server Service

To stop the Unified CCMP: Data Import Server service:

1. On the Side A database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **UCCMP: Data Import Server** service from the list of services.

4. Select **Stop.**

5.   Close the Services window.

Partition Table Manager Service

To stop the Unified CCMP: Partition Table Manager service:

1.   On the Side A database server, click **Start** > **Run**. The Run window displays.

2.   In the **Open** field, enter **services.msc**. The **Services** window displays.

3.   Right-click the **UCCMP: Partitioning Table Manager** service from the list of services.

4.   Select **Stop.**

5.   Close the Services window.

Provisioning Server Service

To stop the Unified CCMP: Provisioning Server service:

1.   On the Side A database server, click **Start** > **Run**. The Run window displays.

2.   In the **Open** field, enter **services.msc**. The Services window displays.

3.   Right-click the **UCCMP: Provisioning Server** service from the list of services.

4.   Select **Stop.**

5.   Close the Services window.

System Monitoring Services, Application Search Services and Reporting Services

1.   On the side A App/Web server, click **Start** > **Run**. The Run window displays.

2.   In the **Open** field, enter **services.msc**. The **Services** window displays.

3.   Right-click the **Unified CCMP: System Monitoring Services** service from the list of services.

4.   Select **Stop.**

5.   At the message: "When UCCMP: System Monitoring Services stops, these other services will also stop. Do you want to stop these services?", click **Yes.**

6.   Close the Services window.

Remove Database Replication

Before the upgrade can proceed, database replication must be removed.

Removing Replication – Unified CCMP 8.5(2) or Unified CCMP 8.5(3)

Note

Follow these instructions if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

1. Ensure you are logged in to the Side A database server as a domain level user with administrative rights over both database servers.

2. In your Windows desktop, click **Start > Programs > Management Portal >** and click the **Configuration Management** application.

3. Click **OK** to login.

4. Click **UCCMP Servers**.

5. Click the **Report Server Databases** tab.

6. Click **Replication**.

7. Click **Unreplicate**.

8. Click **Execute.**

9. Click **Yes** when prompted to remove replication. This step may take some time to complete.

10. Once complete, Click **Close.**

11. Click **OK.**

12. Select the **UCCMP Database** tab.

13. Click **Replication**.

14. Click **Unreplicate**.

15. Click **Execute.**

16. Click **Yes** when prompted to remove replication. This step may take some time to complete.

17. Once complete, Click **Close.**

18. Click **OK.**

19. Click **Close**

20. Exit Configuration Manager.

Removing Replication– Unified CCMP 9.0

Note

Follow these instructions if you are upgrading from Unified CCMP 9.0.

1. Ensure you are logged in to the Side A database server as a domain level user with administrative rights over both database servers.

2. In your Windows desktop, click **Start > Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

3. The **Database Connection** window is displayed. In this window, set:

   - **Server Name** This option defaults to the current machine.

   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   - **Authentication** Select Windows Authentication.

4. Click **OK** to open Unified CCMP Integrated Configuration Environment.

5. The **Cluster Configuration** tool is open by default. From the **Tool** drop-down list select **Replication Manager**.

6. Click the **Setup** tab to see the replication setup details.

7. Click **Disable** to remove replication from the Unified CCMP database. When prompted, click **Yes** to proceed with replication removal.

Replication removal may take several minutes. Wait for the 'Replication Removed' message to display in the Output Window and then exit the Integrated Configuration Environment.

Back up the Unified CCMP Portal Databases (Side A)

Back up the Unified CCMP Side A Portal database so that you can restore it in the event of a failure.

1. Start **SQL Server Management Studio as follows:**

   - If you are upgrading from Unified CCMP 8.5(2) or 8.5(3) or earlier, on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.

   - If you are upgrading from Unified CCMP 9.0(x), on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**

2. Connect to the Database Engine using Windows Authentication

3. Navigate to the **Portal** database.

4. Right-click **Portal** and select **Tasks** > **Back Up**.

5. Amend the **Destination** as appropriate using the **Remove** and **Add** features

6. Click **OK**.

7. Close the SQL Server Management Studio window.

Delete ReportServer and ReportServerTempDB Databases (Side A)

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

SQL Server Reporting Services is not required for Unified CCMP 9, so the Reporting Services Databases can be removed.

On the Side A database Server:

1. Click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.

2. Connect to the Database Engine using Windows Authentication

3. Navigate to the **ReportServer** database.

4. Right-click **ReportServer** and select **Delete**. The Delete Object window displays.

5. Check the **Close Existing Connections** checkbox.

6. Click **OK** to delete the database.

7. Repeat Steps 3 to 6 and delete the **ReportServerTempDB** database.

Caution

Do not delete the Portal database.

Uninstall SQL Server from Web Server (Side A)

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Microsoft SQL Server 2005 Reporting Services components are not required for Unified CCMP 9.0(1) and above and must be removed.

On the Side A Web Server:

1. Click **Start > Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **SQL Server Reporting Services** service from the list of services.

4. Select **Stop.**

5. Close the Services window.

6. Click **Start > Control Panel > Uninstall a program.** The Programs and Features window displays.

7. Select **Microsoft SQL Server 2005.**

8. Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

9. Select the **MSSQLSERVER: Reporting Services Instance** and the **Workstation** components (if present). Click **Next.**

10. Review the Confirmation dialog box and click **Finish** to uninstall the SQL Server components.

11. When the uninstallation procedure completes, close the Programs and Features window.

Uninstall SQL Server from Database Server (Side A)

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Before installing Microsoft SQL Server 2008 R2, Microsoft SQL Server 2005 must be removed.

On the Side A Database Server:

1. Click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click each of the **SQL Server** services in turn from the list of services and select **Stop.**

4. When all the SQL Server services are in the Stopped state, close the Services window.

5. Click **Start > Control Panel > Uninstall A Program.** The Programs and Features window displays.

6. Select **Microsoft SQL Server 2005.**

7. Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

8. Select the MSSQLSERVER: Database Engine and the Workstation Components (if present). Click **Next.**

9. Review the Confirmation screen and click **Finish** to uninstall the SQL Server components.

10. When the uninstallation procedure completes. Close the Programs and Features window.

Uninstall Existing Unified CCMP Software on Side A

Uninstall the Data Import Server Component

✎ **Note**
This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Data Import Server component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Data Import Server**.

3. Click **Uninstall**. A window displays asking you if you are sure that you want to remove the Management Portal: Data Import Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Provisioning Server Component

✎ **Note**
This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Provisioning Server component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Provisioning Server**.

3. Click **Uninstall.** A window displays asking you if you are sure that you want to remove the Management Portal: Provisioning Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. Manually delete the folder: **C:\Program Files\Management Portal\Provisioning Server\Config** if it exists.

Uninstall the Database Installer Component

✎ **Note**
This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

The Database Installer is the tool that maintains the database catalog. Uninstalling this does not remove the Unified CCMP Portal Database (which is upgraded later in the process). To remove the Database Installer component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Install Tool.**

3. Click the **Uninstall** option, and confirm.

Uninstall the Application Server Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Application Server component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Web Application Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Web Application component:

1. On the Side A database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Web Application.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Web Application.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Database Components

Note This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Database components:

1. On the Side A Database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Database Components.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Application Server Components

Note This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Application Server components:

1. On the Side A App/Web server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server Components.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. When the uninstall is complete, the App/Web server will reboot automatically.

Install SQL Server and Restore the Portal Database (Side A)

Install SQL Server

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

On the Side A database server, install SQL Server 2008 R2 as described in section SQL Server on page 11, then follow the post installation configuration steps to configure DTC, SQL Server Network Protocols and any required Firewall rules as described in section Post-Installation Configuration on page 12.

When the SQL Server 2008 R2 installation is complete, locate and install SQL Server 2008 R2 Service Pack 1 before proceeding.

Configure SQL Agent Service Account

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2 SP1, configure the SQL Server Agent account to run under the SQL Agent User account defined in the Required User Accounts section.

On the Side A Database Server:

1. Click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right click the SQL Agent Service and select **Properties.** The Properties window displays.

4. Select the **Log On** tab.

5. Select **This account**.

6. Enter the username and password of the SQL Server Agent user account.

7. Click **OK.** A notification message displays confirming that a service restart will be required for the change to take effect.

8. Click **OK.**

9. Right click the SQL Agent Service and select **Restart**. Check that the service returns to the Started state.

Restore the Portal Database

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2, restore the Portal database backup.

On the Side A database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Right click the Database folder and Click **Restore Database**.

3. In the Restore Database window choose **From Device** and **Add** the location of the portal back up file from the same side database server. You may need to copy the backup file to a local file in order to access it.

4. Select the backup file to restore the Portal database from and click **OK**.

5. Select the check box next to the backup set you just added.

6. Select the Portal database as the restore destination from the **To Database** drop-down list.

7. Select **Options** and choose **Overwrite the existing database**. This will restore the database to the same location as the previous database. If you would like to choose a different location, update the Restore As path for each file to your preferred data file location.

8. Click **OK** to start the restore.

Add the SQL Agent User

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

For a dual-sided system, the SQL Agent User must be re-added.

On the Side A database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Expand the **security** folder; a list of subfolders is displayed.

3. Right Click the **Logins** folder and select **New Login.**

4. Ensure the **Windows authentication** option is selected and enter the SQL Agent User domain and login name in the form <DOMAIN>\<LOGIN>. For example CISCO\sql_agent_user if your user is called sql_agent_user and belongs to the CISCO domain.

5. Click **User Mapping** in the Select a page panel.

6. Check the Portal database in the Users mapped to this login pane. The User column will auto-populate with the domain username for the SQL Agent User.

7. Check the db_owner role in the Database Role Membership pane.

8. Click **OK** to apply the changes.

Add Network Service Accounts

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

You must also add the NETWORK SERVICE account for all web servers to the database logins with appropriate access permissions. Before this can be done the existing accounts must be deleted from the Portal database logins.

On the A side database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Locate and expand the Portal database. A list of folders is displayed.

3. Expand the **Portal** > **Security > Users** folder. A list of database logins is displayed.

4. Right click and **Delete** any occurrences of the NETWORK SERVICE account for *all remote* web servers in the deployment. **Do not** delete the entry for the NETWORK SERVICE account for the local machine (NT AUTHORITY\ NETWORK SERVICE). For remote web server machines in the deployment the NETWORK SERVICE logins will be of the form <DOMAIN>\<WEBSERVER MACHINE NAME>$. For example CISCO\WEBSERVERA$ if your webserver is called WEBSERVERA and belongs to the CISCO domain.

5. Expand the **Security** folder. A list of folders is displayed.

6. Right Click the **Logins** folder and select **New Login**.

7. Ensure the **Windows authentication** option is selected and enter the NT AUTHORITY\NETWORK SERVICE account for the Side A webserver in the form <DOMAIN>\<WEBSERVER MACHINE NAME>$.

8. Click **User Mapping** in the Select a page panel.

9. Check the Portal database in the Users mapped to this login pane. Ensure that the User column correctly contains the Network Service account for the web server.

10. Check the **portalapp_ role**, **portalrs_role** and **portalreporting_role** in the Database Role Membership pane.

11. Click **OK**.

12. Repeat steps 6 to 11 to add the NT AUTHORITY\NETWORK SERVICE account for each web server in the deployment.

Install New Unified CCMP Components and Upgrade Database (Side A)

Running the Unified CCMP Installer

1. Insert the Unified CCMP DVD. If auto-run is enabled on the server, a window opens automatically showing a list of Unified CCMP components under the heading 'Server Installation' on the left hand side.

Note If auto-run is disabled and you do not see the Installation Components screen, double-click the **autorun.bat** file located on the DVD to launch the Unified CCMP installer manually.

Note If UAC has not been disabled, launch the installation manually by right-clicking on the **autorun.ba**t file located on the DVD and selecting **run as administrator** option.

Note Some anti-virus software may state that the **autorun.hta** script file is malicious. Please ignore and continue with the installation.

2. Follow the steps in the sections below to install each component, but read the information about prerequisites in the rest of this section first.

Before you can install a Unified CCMP component, the prerequisites for that component must be present. The Unified CCMP Installer checks the prerequisites for each component as follows:

*   When you click on a component to install it, the installer displays a list of prerequisites for that component and checks that each prerequisite is present. As each prerequisite check completes, you will see a green tick (check successful) or a red cross (check failed). The Install option for that component is only available when all prerequisite checks are successful.

*   Where possible, the Unified CCMP DVD includes redistributable packages for prerequisites, so if a prerequisite check fails, you can click on the link in the Unified CCMP installer to install the missing prerequisite. Once all the prerequisite software is installed, you can click on the component again, then click **Rerun** to rerun the tests.

*   When all the prerequisites display a green tick, you will be able to click **Install** to install the chosen component.

Install the Unified CCMP Database Installer

This process does not upgrade the database directly. It just installs the Database Installer which is then used to upgrade the database.

On the Side A Database Server:

1. To install the Unified CCMP Database Installer, in the Unified CCMP Installer, select **Database Server**, and wait until the prerequisite checks have completed. If any checks fail, fix them as described above. When all checks have passed, click **Install** to begin the Database Server Installation. The Setup window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. In the License Agreement window:

    *   **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

4. In the Cryptography Configuration window:

    - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

    - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠ **Caution**   You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

5. In the Configure Database window:

    - **Database Name** Enter the name of the database catalog for Unified CCMP. By default this is Portal.

    - **Connect Using** Select the login credentials you want to use:

        - **Windows Authentication Credentials of Application** This is the recommended option.

        - **SQL Server Authentication using the login and password below** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

    - Click **Next.**

6. In the Destination Folder window, you can click **Change** to change the location that the Database Server component is installed to. It is not necessary to install all Unified CCMP components to the same location.

7. Click **Install** to install the Database Installer.

✎ **Note**   During the Database Install Tool Installation, the J2SE pre-requisite will be automatically installed if it is not already present. A Security Alert dialog box stating that 'Revocation Information for the security certificate for this site is not available' may be displayed in some circumstances. If this dialog box appears click **Yes** to continue.

8. When the installation has completed, to upgrade your database immediately after installing the Database Installer, select the **Launch Database Management Utility** check box at the end of the installation before clicking **Finish**

9. Click **Finish**.

Upgrade the Unified CCMP Portal Database

Once the Database Installer is installed, it can be used to upgrade the database.

On the Side A Database Server:

1. If you selected the Launch Database Management Utility check box when you installed the Database Installer, the Database Installer launches automatically after it has been installed. Otherwise, launch the Database Installer manually from **Start > All Programs > Management Portal > Database > Database Installer.** The Database Installer is a wizard which guides you through the steps to upgrade the database.

2. Click **Next** to begin the upgrade process.

3. In the Database Setup Window choose **Upgrade an Existing Database.** Click **Next** to continue.

4. In the SQL Server Connection Details window, take the following actions:

   - **Server Name** - select the Microsoft SQL Server where the Unified CCMP database is located. In this case this is the machine running the application, and so it must be left as the default **(local).**

   - **Database Name** - enter or select the name of the database catalog that was originally used for Unified CCMP.

   - **Connect Using** - select the login credentials you want to use:

     - The **Windows account information you use to log in to your compute**r. This is the recommended option.

     - The **Microsoft SQL Server login information assigned by the system administrator**. Only select this option if you are using a database catalog on a different domain. For this option you must enter your Login Name and Password in the fields provided.

   - **Test Connection** – click to make sure the connection to the Microsoft SQL Server is established. If you see the message 'Connection succeeded but database does not exist' then you must rectify this problem before continuing. Check that the database catalog name and security credentials are correct.

   - When the database connection details have been tested and the connection is successful, click **OK** to continue.

5. Click **Next** to perform the upgrade.

Remove 32-Bit Application Support

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Some components used by earlier versions of Unified CCMP ran as 32-bit applications on a 64-bit operating system. Prior to installing the App/Web Server, remove 32-bit application support on the Servers where App/Web Server component will be installed:

1. Click **Start > All Programs > Accessories** then right-click **Command prompt** and select **Run as administrator**.

2. Copy the following script and paste into the command window:

   ```
   cscript %SystemDrive%\inetpub\AdminScripts\adsutil.vbs set
   w3svc/AppPools/Enable32bitAppOnWin64 0
   ```

3. Press **Enter** to execute the script. The script should return the following output:

   ```
   Enable32bitAppOnWin64            : (BOOLEAN) False
   ```

The App/Web Server component can now be installed.

Install the Unified CCMP App/Web Server

Install the new App/Web Server components on the side A App/Web Servers.

1. To install the Unified CCMP App/Web component, selec**t App/Web Serve**r in the Unified CCMP Installer Window, wait until the prerequisite checks have completed and click **Install**. The Management Portal: Application Server Component window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. If the Management Portal: Application Server Components Dialog is displayed, click **Install** to install the additional required components.

4. If the Microsoft .NET 4.5 Framework pre-requisite is missing, it will be installed at this point. Click **Install** to install the component and follow the on screen instructions. When the .NET 4.5 Framework is complete, restart the server to continue the installation of the App/Web Server.

5. In the **License Agreement** window:

   - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting

6. In the **Cryptography Configuration** window:

   - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

   - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠️ **Caution** You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

7. In the **Destination Folder** window, you can click **Change** to change the location that the App/Web Server components are installed to.

8. In the **Configure Database** window:

   - **SQLServer Name** Enter the name of the machine that is to be the Database Server. The default of **localhost** is valid only when installing on the Database Server. Enter the name of the side A database server.

   - **Catalog Name** Enter or select the name you selected while installing the Database Server component. By default this is Portal.

   - **Connect Using** Select the login credentials you want to use:

     - **Windows authentication** This is the recommended option.

     - **The SQL Server authentication** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

9. Click **Install**.

10. When the installation has completed, click **Finish**.

The machine will restart once the installation is complete.

Note

Finalize Configuration and Restart

Force Failover Connections to the Active Side

To operate the two sides as independent systems, add host file entries to point failover connections to the current active side. This reduces the possibility that a failover will occur to the database on the other side when replication is down.

Since the failover information is held in the database, both sides know about the other side, even though they are currently not replicated or running the same version of Unified CCMP. If a failover occurs then data integrity will be lost. To avoid this, when operating in single-sided mode add the failover connections to the hosts file on each machine to point back to the active side.

For example, in the deployment shown in Figure 4, the host file entries are :

Unified CCMP DBA

```
127.0.0.1        Unified CCMP DBB
```

Unified CCMP DBB

```
127.0.0.1        Unified CCMP DBA
```

Unified CCMP WEBA

```
<IP ADDRESS OF CCMPDBA>        Unified CCMP DBB

127.0.0. 1      Unified CCMP WEBB
```

Unified CCMP WEBB

```
<IP ADDRESS OF CCMPDBB>        Unified CCMP DBA

127.0.0. 1      Unified CCMP WEBA
```

Figure 4: Host File Entries For Failover in Single-sided Mode .
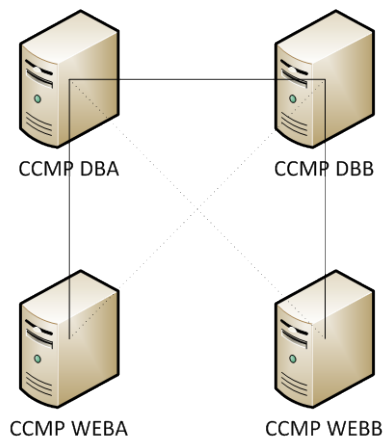
These entries must be removed once the upgrade is complete and the B-Side is re-replicated with Side A.

Update Side B to Enable Provisioning and Import (Optional)

If the sides of the system are to be run independently for some time, you may need to enable provisioning and import to run on both Side A and Side B at the same time.

To do this, follow the "Manual Provisioning/Import Failover" steps described in the Administration Manual for the version of Unified CCMP that is currently running on the B Side database server.

Update Provisioning on the Unified CCE AW

Update the CMS Control console on the Unified CCE AW to use unique ports for the side B Provisioning Server.

On the AW:

1.   Click **Start>Programs>Cisco Unified CCE Tools>Administration Tools** and select the **CMS Control** application.

2.   If the B side connection exists in the **Application Connections** then ensure it has different port numbers to the A side connection.

3. If the B side connection doesn't exist then make a note of the A side connection details.

4. Click **Add.**

5. Enter the details as for the A side but update the Server Name and Hostname details to that of the B side, and use different port numbers.

6. Click **OK.**

7. Click **Apply**

8. You will be notified that CMSJserver will restart. Please confirm this.

Update Provisioning on the Side B Database Server

To update provisioning on the side B database server, you must change the side B Provisioning Server ConAPI ports to match those on the Unified CCE AW.

Update Provisioning – Unified CCMP 8.5(2) or Unified CCMP 8.5(3)

Note Follow these instructions if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

1. On the side B database server, in your Windows desktop, click **Start > Programs > Management Portal** and select the **Configuration Management** application.

2. Click **OK** to login.

3. Click **Communication Servers**.

4. Click the **Unified ICM** tab.

5. Select the appropriate Instance from the list.

6. Update the port numbers to match those used in the CMS Control Console

7. Click **OK**

8. You will be informed that the Provisioning Services need to be restarted. Click **OK.**

9. Click **Close.**

10. Exit Configuration Manager.

Update Provisioning – Unified CCMP 9.0

Note Follow these instructions if you are upgrading from Unified CCMP 9.0.

1. On the side B database server, in your Windows desktop, click **Start > Programs** > **Management Portal** > **Configuration Tools** > **Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window, set:

   • **Server Name** This option defaults to the current machine.

   • **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   • **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. The **Cluster Configuration** tool is open by default. Select the **Connections** tab on the left hand side.

5. In the list of connections, locate the ConAPI connection to the Unified CCE AW and click on it. To reduce number of connections shown in the list, so you can find the relevant connection more easily, you may want to click the blue filter arrow on the right hand side of the window near the top, and select the following filter options:

   • Connection Source, Resource Type: Provisioning Service

   • Connection Destination, Resource Type: Cisco CICM

   • Connection Destination, Component Type: ConAPI

6. On the **Details** tab for the connection, update the port numbers to match those used in the CMS Control Console.

7. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

8. You will be informed that the Provisioning Services need to be restarted. Click **OK.**

9. Click **Close.**

Configure the Unified CCE Config Web Service

On the Side A database server, the Unified CCE Config Web Service must be configured for each connected Unified CCE Server that is running Unified CCE 9.0 or later.

Note This step is only required if you are upgrading from Unified CCMP 9.0. Earlier versions of Unified CCMP were not able to connect to Unified CCE Servers running Unified CCE 9.0.

To configure the Unified CCE Config Web Service:

1. On the Side A database server, Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window, set:

   - **Server Name** This option defaults to the current machine.

   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   - **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. Select the **Setup** tab and click **Configure Cisco Unified CCE Servers** to start the wizard. Click **Next** to go through each window in turn.

5. In the Select Task dialog box select **Modify an existing instance**.

6. Select the Unified CCE instance you want to modify and click **Next**.

7. Complete the dialog boxes as follows:

   - In the Configure Primary Unified Config Web Service dialog box, enter the following details

     - **URL**. This is the auto-generated URL of the primary unified config web service on the Unified CCE

     - **User Name**. This is a username with appropriate access to the Unified CCE that the web service is running on. This user must be in the domain security group **<Server>_<UCCE-Instance>_Config**, where <Server> is the name of the server running Unified CCE and <UCCE-Instance> is the name of the Unified CE Instance on this server.

     - **Password**. This is the password for the user.

   - In the Configure Primary ConAPI RMI Ports dialog box enter the following ConAPI details:

     - **Local Registry Port**. This is the port on the Unified CCE for the Unified CCMP Provisioning service to connect to. This will usually be 2099.

     - **Remote Registry Port**. This is the port on the Unified CCMP Database Server for the Unified CCE to connect to. This will usually be 2099.

     - **Local Port**. This is selected as the designated port for live provisioning traffic between the Unified CCE and Unified CCMP servers. It must be uniquely assigned for each Unified CCE and any firewalls between the CICM and Unified CCMP server must be configured to allow both-way traffic on this port.

   - In the Configure ConAPI Application Instance dialog box enter the following details:

- **Application Name.** The name of the application to be used for provisioning Unified CCE from Unified CCMP. Specify the name of the application you configured in section Common ConAPI Credentials.

- **Application Key.** Use the password for the application you specified above.

- In the Multi Media Support dialog box, select **Yes** if you are using a Cisco Unified Web and E-Mail Interaction Manager application instance to provide support for non-voice interactions. The default is **No**.

- In the Purge On Delete dialog box select **Yes** if you want to purge items from Unified CCE automatically when they are deleted from Unified CCMP. The default is **Yes**.

- In the Self Skilling Enabled dialog box select **Yes** if you want to allow agents to reskill themselves. The default is **No**.

- In the Supervisor Active Directory Integration dialog box select **Yes** if you want to enable support for associating existing Active Directory user accounts for Unified CCE Supervisors. The default is **No**. If you select **Yes** then you will be prompted to provide Active Directory information so that Windows user accounts can be listed.

8. The Summary dialog box summarizes the details of the Unified CCE being configured and the settings you have chosen. Check the details, and if you are satisfied, click **Next**.

9. A confirmation message is displayed to indicate that the wizard has completed successfully. Click **Exit** to close the wizard.

10. Click **Configure Cisco Unified CCE Servers** again, and repeat the steps above to configure the remaining Unified CCE Servers that are running Unified CCE 9.0 or later.

11. To save and action your changes, either click the **Save** icon in the tool bar or select **File > Save** from the menu.

Restart the Unified CCMP Services

Following an upgrade it is good practice to restart all Unified CCMP services.

To restart a service:

1. Click **Start > Run**

2. Enter **Services.msc** and then click **OK.**

3. If the service is in the **Started** state, right click the service name and click **Restart**. If a service is not started, right-click the service name and click **Start.**

All UCCMP services on the side A Database and App/Web Servers should be restarted.

Note
After starting the System Monitoring Service and Application Service on the web servers, you will need to wait a few minutes before logging in to allow the services to load completely.

Checklist for Split Side Upgrade Part 2

The second part of the split side upgrade applies the upgrade to side B and restores replication.

Step	Complete
Prepare the in place Unified CCMP servers	
Stop all Unified CCMP Services on the B-Side Unified CCMP servers.	
Backup the Side A and Side B Portal databases.	
Delete the **ReportServer** and **ReportServerTempDB** database catalogs from the Side B DB Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall SQL Server Components from Side B Web Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall SQL Server Components from Side B Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Uninstall Existing Unified CCMP Software on Side B	
Uninstall the Unified CCMP Data Import Server from the Side B Database Server(upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Unified CCMP Provisioning Server from the Side B Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Unified CCMP Database Installer from the Side B Database Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Unified CCMP Application Server from the Side B App/Web Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	

Step	Complete
Uninstall the Unified CCMP Web Application from the Side B App/Web Server (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only).	
Uninstall the Database Component from the Side B App/Web Server (upgrading from Unified CCMP 9.0 only)	
Uninstall the App/Web Server Component from the Side B App/Web Server (upgrading from Unified CCMP 9.0 only)	
Install SQL Server 2008 R2 and Restore the Portal Database	
Install SQL Server 2008 R2 and SQL Server 2008 R2 SP1 (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Configure SQL Agent Service Account (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Restore the Portal Database (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Add the SQL Agent User (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Add Network Service Accounts (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Upgrade the Portal database and install the Unified CCMP Components	
Install the Database Installer on the Side B Database Server.	
Do one of the following: • (Option 1) Upgrade the Portal database on the side B database server • (Option 2) Restore the Side B Database from the Side A Database Backup.	
Remove 32-bit application support (upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3) only)	
Install the Unified CCMP App/Web Servers on the side B App/Web Servers.	
Finalize Configuration	

Step	Complete
Stop forcing failover connections to the active side.	
Restore Unified CCMP database replication	
Confirm replication is working	
Restart and Validate	
Restart the Unified CCMP Services	
Validate the upgrade	

Prepare the in place Unified CCMP Servers

Stop the Unified CCMP Services

Before starting the upgrade stop the Unified CCMP services on all B side servers.

Data Import Server Service

To stop the Unified CCMP: Data Import Server service:

1. On the Side B database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **UCCMP: Data Import Server** service from the list of services.

4. Select **Stop.**

5. Close the **Services** window.

Partition Table Manager Service

To stop the Unified CCMP: Partition Table Manager service:

1. On the Side B database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click the **UCCMP: Partitioning Table Manager** service from the list of services.

4. Select **Stop.**

5. Close the **Services** window.

Provisioning Server Service

To stop the Unified CCMP: Provisioning Server service:

1. On the Side B database server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **UCCMP: Provisioning Server** service from the list of services.

4. Select **Stop.**

5. Close the Services window.

System Monitoring Services, Application Search Services and Reporting Services

1. On the side B App/Web server, click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click the **Unified CCMP: System Monitoring Services** service from the list of services.

4. Select **Stop.**

5. At the message: "When UCCMP: System Monitoring Services stops, these other services will also stop. Do you want to stop these services?", click **Yes.**

6. Close the Services window.

Back up the Unified CCMP Portal and Report Server Databases

Back up the Unified CCMP Portal databases so that you can restore them in the event of a failure.

1. Start **SQL Server Management Studio as follows:**
    - If you are upgrading from Unified CCMP 8.5(2) or 8.5(3) or earlier, on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.
    - If you are upgrading from Unified CCMP 9.0(x), on the Side A database server, click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**

2. Connect to the Database Engine using Windows Authentication.

3. Navigate to the **Portal** database.

4. Right-click **Portal** and select **Tasks** > **Back Up**.

5. Amend the **Destination** as appropriate using the **Remove** and **Add** features

6. Click **OK**

7. Close the Services window.

8. Repeat this process for the Unified CCMP Portal database on the Side B database server.

Delete ReportServer and ReportServerTempDB Databases (Side B)

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

SQL Server Reporting Services is not required for Unified CCMP 9, so the Reporting Services Databases can be removed.

On the Side B database Server:

1. Click **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**.

2. Connect to the Database Engine using Windows Authentication

3. Navigate to the **ReportServer** database.

4. Right-click **ReportServer** and select **Delete**. The Delete Object window displays.

5. Check the **Close Existing Connections** checkbox.

6. Click **OK** to delete the database.

7. Repeat Steps 3 to 6 and delete the **ReportServerTempDB** database.

Caution Do not delete the Portal database.

Uninstall SQL Server Components from Web Server (Side B)

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Microsoft SQL Server 2005 Reporting Services components are not required for Unified CCMP 9.0(1) and above and must be removed.

On the Side B Web Server:

1. Click **Start > Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The Services window displays.

3. Right-click the **SQL Server Reporting Services** service from the list of services.

4. Select **Stop.**

5. Close the Services window.

6. Click **Start > Control Panel > Uninstall a program.** The Programs and Features window displays.

7. Select **Microsoft SQL Server 2005.**

8. Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

9. Select the **MSSQLSERVER: Reporting Services Instance** and the **Workstation** components (if present). Click **Next.**

10. Review the Confirmation dialog box and click **Finish** to uninstall the SQL Server components.

11. When the uninstallation procedure completes, close the Programs and Features window.

Uninstall SQL Server from Database Server (Side B)

> **Note**
>
> This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Before installing Microsoft SQL Server 2008 R2, Microsoft SQL Server 2005 must be removed.

On the Side B Database Server:

1. Click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click each of the **SQL Server** services in turn from the list of services and select **Stop.**

4. When all the SQL Server services are in the Stopped state, close the Services window.

5. Click **Start > Control Panel > Uninstall A Program.** The Programs and Features window displays.

6. Select **Microsoft SQL Server 2005.**

7. Click **Uninstall.** The Microsoft SQL Server 2005 Setup dialog displays.

8. Select the MSSQLSERVER: Database Engine and the Workstation Components (if present). Click **Next.**

9. Review the Confirmation screen and click **Finish** to uninstall the SQL Server components.

10. When the uninstallation procedure completes. Close the Programs and Features window.

Uninstall Existing Unified CCMP Software on Side B

Uninstall the Data Import Server Component

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Data Import Server component:

1. On the Side B database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Data Import Server**.

3. Click **Uninstall**. A window displays asking you if you are sure that you want to remove the Management Portal: Data Import Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Provisioning Server Component

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Provisioning Server component:

1. On the Side B database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Provisioning Server**.

3. Click **Uninstall.** A window displays asking you if you are sure that you want to remove the Management Portal: Provisioning Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. Manually delete the folder: **C:\Program Files\Management Portal\Provisioning Server\Config** if it exists.

Uninstall the Database Installer Component

The Database Installer is the tool that maintains the database catalog. Uninstalling this does not remove the Unified CCMP Portal Database (which is upgraded later in the process). To remove the Database Installer component:

1. On the Side B database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Install Tool.**

3. Click the **Uninstall** option, and confirm.

Uninstall the Application Server Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Application Server component:

1. On the Side B database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Web Application Component

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

To uninstall the Web Application component:

1. On the Side B database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Web Application.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Web Application.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Database Components

Note This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Database components:

1. On the Side B Database server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Database Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Database Components.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

Uninstall the Application Server Components

Note

This step is only required if you are upgrading from Unified CCMP 9.0.

To uninstall the Application Server components:

1. On the Side B App/Web server, click **Start > Control Panel > Uninstall a program**. The Programs and Features window displays.

2. Select **Management Portal: Application Server Components.**

3. Click the **Uninstall** option. A window displays asking you if you are sure that you want to remove the Management Portal: Application Server Components.

4. Click **Yes**. The Setup Status window displays. The extent of the uninstallation progress displays on the progress bar.

5. When the uninstall is complete, the App/Web server will reboot automatically.

Install SQL Server and Restore the Portal Database (Side B)

Install SQL Server

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

On the Side B database server, install SQL Server 2008 R2 as described in section SQL Server on page 11, then follow the post installation configuration steps to configure DTC, SQL Server Network Protocols and any required Firewall rules as described in section Post-Installation Configuration on page 12.

When the SQL Server 2008 R2 installation is complete, locate and install SQL Server 2008 R2 Service Pack 1 before proceeding.

Configure SQL Agent Service Account

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2 SP1, configure the SQL Server Agent account to run under the SQL Agent User account defined in the Required User Accounts section.

On the Side B Database Server:

1. Click **Start** > **Run**. The Run window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right click the SQL Agent Service and select **Properties.** The Properties window displays.

4. Select the **Log On** tab.

5. Select the **This account** radio button.

6. Enter the username and password of the SQL Server Agent user account.

7. Click **OK.** A notification message displays confirming that a service restart will be required for the change to take effect.

8. Click **OK.**

9. Right click the SQL Agent Service and select **Restart**. Check that the service returns to the Started state.

Restore the Portal Database

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

After installing SQL Server 2008 R2, restore the Portal database backup.

On the Side B database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Right click the Database folder and Click **Restore Database**.

3. In the Restore Database window choose **From Device** and **Add** the location of the portal back up file from the same side database server. You may need to copy the backup file to a local file in order to access it.

4. Select the backup file to restore the Portal database from and click **OK**.

5. Select the check box next to the backup set you just added.

6. Select the Portal database as the restore destination from the **To Database** drop-down list.

7. Select **Options** and choose **Overwrite the existing database**. This will restore the database to the same location as the previous database. If you would like to choose a different location, update the Restore As path for each file to your preferred data file location.

8. Click **OK** to start the restore.

Add the SQL Agent User

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

On the Side B database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Expand the **security** folder; a list of subfolders is displayed.

3. Right Click the **Logins** folder and select **New Login**

4. Ensure the **Windows authentication** option is selected and enter the SQL Agent User domain and login name in the form <DOMAIN>\<LOGIN>. For example CISCO\sql_agent_user if your user is called sql_agent_user and belongs to the CISCO domain.

5. Click **User Mapping** in the Select a page panel.

6. Check the Portal database in the Users mapped to this login pane. The User column will auto-populate with the domain username for the SQL Agent User.

7. Check the db_owner role in the Database Role Membership pane.

8. Click OK to apply the changes.

Add Network Service Accounts

Note This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

You must also add the NETWORK SERVICE account for all web servers to the database logins with appropriate access permissions. Before this can be done the existing accounts must be deleted from the Portal database logins.

On the side B database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Locate and expand the Portal database. A list of folders is displayed.

3. Expand the **Portal** > **Security > Users** folder. A list of database logins is displayed.

4. Right click and **Delete** any occurrences of the NETWORK SERVICE account for *all remote* web servers in the deployment. **Do not** delete the entry for the NETWORK SERVICE account for the local machine (NT AUTHORITY\ NETWORK SERVICE). For remote web server machines in the deployment the NETWORK SERVICE logins will be of the form <DOMAIN>\<WEBSERVER MACHINE NAME>$. For example

CISCO\WEBSERVERA$ if your webserver is called WEBSERVERA and belongs to the CISCO domain.

5. Expand the **Security** folder. A list of folders is displayed.

6. Right Click the **Logins** folder and select **New Login**.

7. Ensure the **Windows authentication** option is selected and enter the NT AUTHORITY\NETWORK SERVICE account for the Side A webserver in the form <DOMAIN>\<WEBSERVER MACHINE NAME>$.

8. Click **User Mapping** in the Select a page panel.

9. Check the Portal database in the Users mapped to this login pane. Ensure that the User column correctly contains the Network Service account for the web server.

10. Check the **portalapp_ role**, **portalrs_role** and **portalreporting_role** in the Database Role Membership pane.

11. Click **OK**.

12. Repeat steps 6 to 11 add the NT AUTHORITY\NETWORK SERVICE account for each web server in the deployment.

Upgrade Portal Database and Install Unified CCMP Components

Before upgrading the database the new Database Installer tool must be installed, this will then be used to perform the database upgrade.

After you have installed the Database Installer, you need to decide whether to restore your database from the A side backup, or to upgrade the B side database directly.

- Option 1 - If the system has been running in single-sided mode for less than 24 hours, then we recommend that you upgrade the B side database as described in the section Upgrade Portal Database on Side B Database Server below.

- Option 2 - If the system has been running in single-sided mode for more than 24 hours, then we recommend that you restore the database on side B from the side A backup of the Portal database that you made when you started part 2 of the split side upgrade. This process is described in the section Restore the Side B Database from the Side A Database Backup below.

Install the Database Installer on the Side B Database Server

To install the Unified CCMP Database Installer on the Side B Database Server, refer to the steps in section Install the Unified CCMP Database Installer on page 121.

This process does not upgrade the database directly. It just installs the Database Installer which is then used to upgrade the database.

Note

To upgrade your database immediately after installing the Database Installer, select the **Launch Database Management Utility** check box at the end of the installation before clicking **Finish**.

Upgrade Portal Database on Side B Database Server (Option 1)

Choose the option if your system has been running in single-sided mode for less than 24 hours.

1. If you selected the Launch Database Management Utility check box when you installed the Database Installer, the Database Installer launches automatically after it has been installed. Otherwise, launch the Database Installer manually from **Start > All Programs > Management Portal > Database > Database Installer.** The Database Installer is a wizard which guides you through the steps to upgrade the database.

2. Click **Next** to go through each window in turn.

3. In Select an Action to Perform window select **Upgrade an existing database** and click **Next**.

4. In the SQL Server Connection Details window, take the following actions:

   - **Server Name** - select the Microsoft SQL Server where the Unified CCMP database is located. In this case this is the machine running the application, and so it must be left as the default **(local).**

   - **Database Name** - enter or select the name of the database catalog that was originally used for Unified CCMP.

   - **Connect Using** - select the login credentials you want to use:

     - The **Windows account information you use to log in to your compute**r. This is the recommended option.

     - The **Microsoft SQL Server login information assigned by the system administrator**. Only select this option if you are using a database catalog on a different domain. For this option you must enter your Login Name and Password in the fields provided.

   - **Test Connection** – click to make sure the connection to the Microsoft SQL Server is established. If you see the message 'Connection succeeded but database does not exist' then you must rectify this problem before continuing. Check that the database catalog name and security credentials are correct.

   - When the database connection details have been tested and the connection is successful, click **OK** to continue.

5. Click **Next** to perform the upgrade. The upgrade may take several minutes.

6. When the upgrade completes, click **Close** to close the Database Installer Wizard.

Restore the Side B Database from the Side A Database Backup (Option 2)

Choose the option if your system has been running in single-sided mode for more than 24 hours. This will ensure that audit information is consistent across both sides.

On the new Side B database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2> Management Studio**.

2. Right Click the Portal database and Click **Tasks > Restore**.

3. In the Restore Database window choose **From Device** and **Add** the location of the portal back up file from the A-Side database server. You may need to copy the backup file to a local file in order to access it.

4. Select the backup file to restore the Portal database from and click **OK**.

5. Select the check box next to the backup set you just added.

6. Select the Portal database as the restore destination from the **To Database** drop-down list.

7. Select **Options** and choose **Overwrite the existing database**.

8. Click **OK** to start the restore.

Remove 32-Bit Application Support

Note

This step is only required if you are upgrading from Unified CCMP 8.5(2) or Unified CCMP 8.5(3).

Some components used by earlier versions of Unified CCMP ran as 32-bit applications on a 64-bit operating system. Prior to installing the App/Web Server, remove 32-bit application support on the Servers where App/Web Server component will be installed as follows:

1. Click **Start > All Programs > Accessories** then right-click **Command prompt** and select **Run as administrator**.

2. Copy the following script and paste into the command window:

```
cscript %SystemDrive%\inetpub\AdminScripts\adsutil.vbs set
w3svc/AppPools/Enable32bitAppOnWin64 0
```

3. Press **Enter** to execute the script. The script should return the following output:

```
Enable32bitAppOnWin64          : (BOOLEAN) False
```

The App/Web Server component can now be installed.

Install the Unified CCMP App/Web Server

Install the new App/Web Server components on the B Side App/Web Server.

1. To install the Unified CCMP App/Web component, in the Unified CCMP Installer, selec**t App/Web Serve**r, wait until the prerequisite checks have completed and click **Install**. The **Management Portal: Application Server Component** window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. If the Management Portal: Application Server Components Dialog is displayed, click **Install** to install the additional required components.

4. If the Microsoft .NET 4.5 Framework pre-requisite is missing, it will be installed at this point. Click **Install** to install the component and follow the on screen instructions. When the .NET 4.5 Framework is complete, restart the server to continue the installation of the App/Web Server.

5. In the **License Agreement** window:

   - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting

6. In the **Cryptography Configuration** window:

   - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

   - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠️
Caution
You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

7. In the **Destination Folder** window, you can click **Change** to change the location that the App/Web Server components are installed to.

8. In the **Configure Database** window:

   - **SQLServer Name** Enter the name of the machine that is to be the Database Server. The default of **localhost** is valid only when installing on the Database Server. Enter the name of the side B database server.

   - **Catalog Name** Enter or select the name you selected while installing the Database Server component. By default this is Portal.

   - **Connect Using** Select the login credentials you want to use:

     - **Windows authentication** This is the recommended option.

- **The SQL Server authentication** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

9. Click **Install**.

10. When the installation has completed, click **Finish**.

> **Note** The machine will restart once the installation is complete.

Finalize Configuration

Stop Forcing Failover Connections to the Active Side

Remove the entries you made to the hosts files on all servers to force failover connections to the active side.

Restore Unified CCMP Database Replication

Replication between the Portal databases is set up and monitored using the **Replication Manager** application which is available in the Unified CCMP Integrated Configuration Environment (ICE) tool.

> **Note** The user running the Unified CCMP Replication Manager must have administrator permissions in both Windows and SQL Server, for both the targeted publisher and subscriber servers.

> **Note** Always run Replication Manger on the Unified CCMP publisher database server.

To start the Unified CCMP Integrated Configuration Environment, proceed as follows:

1. Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window, set:
   - **Server Name** This option defaults to the current machine.
   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.
   - **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. The **Cluster Configuration** tool is open by default. From the **Tool** drop-down list, select **Replication Manager**.

5. Click the **Setup** tab to see the replication setup details and to configure or disable replication. Details of the displayed fields are contained in the Configuring Replication section of Chapter 5 of this document.

6. The values used when replication was first set-up are displayed. Verify that the **Distributor Properties Data Folder** and **Log Folder** reflect the current data directory for SQL Server.

> **Note**
>
> In most cases the recommended defaults are valid and should be used.

7. Click **Configure** to start the replication configuration process. Progress messages will be logged into the Replication Output window informing you of the steps being performed as the database is replicated.

8. You may be prompted to save pending changes to the database before continuing. If so, click **Yes** to save pending changes and continue.

> **Note**
>
> After you click **Configure**, it may take several minutes to set up replication. Once replication has been set up, the Replication Manager will display the Monitor tab.

Confirm Replication is Working

The **Monitor** tab allows you to monitor the general health of SQL Server Replication between Unified CCMP databases.

To confirm that replication is working:

1. In the Replication Manager, click the **Monitor** tab.

2. In the top left hand pane, select the **[Portal]:BaseSubWin** publication.

3. In the bottom right hand pane (called Actions in selected session), look for a message that starts "Delivered snapshot from . . .)". When you see this message, replication is working correctly.

4. Close the ICE tool.

Restart and Validate

Restart the Unified CCMP Services

Following an upgrade it is good practice to restart all Unified CCMP services.

To restart a service:

1. Click **Start > Run**

2. Enter **Services.msc** and then click **OK.**

3. If the service is in the **Started** state, right click the service name and click **Restart**. If a service is not started, right-click the service name and click **Start.**

All UCCMP services on all Database and App/Web Servers should be restarted.

Note After starting the System Monitoring Service and Application Service on the web servers, you will need to wait a few minutes before logging in to allow the services to load completely.

Validate the Upgrade

Check that the system is functional following the upgrade using the validation tests in the section Validating an Upgrade on page 60.

11. Upgrade From Version 8.5(1) or Earlier

Overview

Versions of Unified CCMP prior to 8.5(2) ran on the 32-bit version of Windows Server 2003. Unified CCMP 8.5(2) and later runs on Windows Server 2008 R2 for which Microsoft do not support cross-architecture in-place upgrades. This means that you must upgrade your operating system before you can upgrade from Unified CCMP 8.5(1) or earlier.

To upgrade Unified CCMP, a backup of the Unified CCMP databases must be taken before starting the upgrade. After the operating system, SQL Server prerequisites and the Unified CCMP 9.0(x) Database component are installed the database, backups can be restored and upgraded as part of the installation process.

This checklist describes the steps that will be performed during the upgrade and can be used to track progress through the upgrade and ensure that no steps are missed. Depending on the version you are upgrading from, and the deployment model you have, some steps will not apply. The description assumes that you have a two tier deployment (separate database and app/web servers).

⚠️
Caution

Ensure that you have up-to-date backups of all Unified CCMP databases before you begin.

✎
Note

Before you proceed with the upgrade please ensure you have the original cryptographic passphrase entered during the original Unified CCMP installation as you will need it at several points during the upgrade.

Checklist

Step	Complete
Prepare to Upgrade	
Stop the Unified CCMP Services	
[Dual-sided Systems Only] Remove Reporting Services database replication.	
[Dual-sided Systems Only] Remove Portal database replication.	
Backup the Portal Databases	
Install and configure Windows 2008 Server R2 SP1	
Install SQL Server and Prerequisites	
Install SQL Server 2008 R2 and SQL Server 2008 R2 SP1	
Install the prerequisite software	
Add the SQL Agent User	
Add Network Service Accounts	
Install New Unified CCMP Components and Upgrade Database	
Install the Database Installer (side A)	
[Dual-sided Systems Only] Install the Database Installer (side B)	
Install the Unified CCMP database (side A)	
[Dual-sided Systems Only] Install the Unified CCMP database (side B)	
Restore the Portal database backup (Side A)	
[Dual-sided Systems Only] Restore the Portal database backup (Side B)	
Upgrade the Portal Database (Side A)	
[Dual-sided Systems Only] Upgrade the Portal database (side B)	
Install the Unified CCMP App/Web Server component (Side A)	

Step	Complete
[Dual-sided Systems Only] Install the Unified CCMP App/Web component (Side B)	
Finalize Configuration	
[Dual-sided Systems Only] Restore Unified CCMP database replication	
[Dual-sided Systems Only] Confirm Replication is working	
Configure the Windows Firewall for UCCE Provisioning	
Ensure all Unified CCMP Windows Services have been started on all Database and App/Web Servers	
Restart and Validate	
Ensure all Unified CCMP Windows Services have been started on all Database and App/Web Servers.	
Test that the upgrade was successful.	

Prepare to Upgrade

This section describes the procedure for upgrading Unified CCMP.

Note Before you proceed with the upgrade please ensure you have the original cryptographic passphrase entered during the **original** Unified CCMP installation as you will need it at several points during the upgrade.

This procedure covers both single-sided and dual-sided deployment models. The term 'Side A' applies to both the A Side of a dual-sided installation and a single-sided installation.

Unified CCMP 9.0(x) runs on the Windows Server 2008 R2 (64-Bit) operating system. Before the Unified CCMP 9.0(x) components can be installed, the Unified CCMP databases must be backed up and copied to a safe location so that the Windows operating system upgrade can be carried out. Prior to backing up the databases, the Unified CCMP services must be stopped and if the system is dual-sided, database replication must be disabled.

Stop the Unified CCMP Services

Before starting the upgrade the Unified CCMP services must be stopped on all servers.

To stop the Unified CCMP: Data Import Server service, proceed as follows:

1. On the Side A database server, click **Start** > **Run**. The **Run** window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click the **UCCMP: Data Import Server** service from the list of services. **Note:** In older versions of Unified CCMP this service appears as **Management Portal: Data Import Server**.

4. Click **Stop.**

5. Repeat this process for all running Unified CCMP services on the database server.

6. Close the **Services** window.

7. For dual-sided installations, repeat this process on the Side B database server.

To stop the Unified CCMP: Monitoring Service, the Unified CCMP: Application Search Server service, and the Unified CCMP: Reporting Services service, proceed as follows:

1. On the Side A web server, click **Start** > **Run**. The **Run** window displays.

2. In the **Open** field, enter **services.msc**. The **Services** window displays.

3. Right-click and click **Stop** on each of the **Unified CCMP** services from the list. **Note:** In older versions of Unified CCMP these services appear as **Management Portal: <SERVICE NAME>**

4. Close the **Services** window.

5. For dual-sided installations, repeat this process on the Side B web server.

Remove Reporting Services Replication

Note

If you have a dual-sided installation of Unified CCMP 8.0 or above Reporting Services replication must also be removed.

Once replication has been successfully removed then you may close the Configuration Manager.

Follow these steps to remove replication from the Reporting Services databases.

1. Ensure you are logged in to the Side A database server as a domain level user with administrative rights over both database servers.

2. In your Windows desktop, click **Start > Programs > Management Portal** > and click the **Configuration Manager** application.

3. Click **OK** to login.

4. Click **UCCMP Servers**.

5. Click the **Report Server Databases** tab.

6. Click **Replication**.

7. Click **Unreplicate**.

8. Click **Execute.**

9. Click **Yes** when prompted to remove replication. This step may take some time to complete.

10. After replication has been successfully removed, click **OK** to close the Replication Removal dialog box.

Remove Portal Database Replication

Note
If you have a dual-sided installation then you must follow these steps to remove replication.

Follow these steps to remove replication from the Portal databases.

1. Ensure you are logged in to the Side A database server as a domain level user with administrative rights over both database servers.

2. In your Windows desktop, click **Start > All Programs > Management Portal > Configuration Manager**. **Note:** In some earlier versions of Unified CCMP this tool is called **Cluster Configuration**.

3. Click **UCCMP Servers**. **Note:** In some earlier versions of Unified CCMP this step is not required.

4. Select the **UCCMP Database** tab. **Note:** In some earlier versions of Unified CCMP this tab is labeled **Portal Database**.

5. Click **Replication**.

6. Click **Unreplicate**, then **Execute**.

7. Click **Yes** when prompted to remove replication. **Note**: Removing replication may take some time.

8. Once complete, Click **Close.**

9. After replication has been successfully removed, click **OK** to close the Replication Removal dialog box.

Back up the Databases

Back up the Portal and Report Server databases and copy the backups to a safe location where they can be accessed once the Windows 2008 R2 Server Operating System has been installed.

1. On the Side A database server click **Start > All Programs > Microsoft SQL Server > Enterprise Manager** (for installations using SQL Server 2005 then you must select **Start > All Programs > Microsoft SQL Server 2005 > SQL Server Management Studio**).

2. Navigate to **Portal** database.

3. Right-click **Portal** and select **Tasks > Backup.** Save the **.bak** file to a suitable location.

For a dual-sided system repeat the backup process for the Side B database server.

Windows Server 2008 R2 SP1 Installation

After the database backups have been taken and stored in safe location, install Windows Server 2008 R2 SP1 on the Unified CCMP Servers.

⚠
Caution

If your Unified CCMP servers are virtual machines then rebuild these before installing Windows Server 2008 R2 SP1, as the SCSI controller is not compatible with windows 2008 R2

Apply the Windows post-installation configuration steps for Unified CCMP described in the Server Requirements section of Chapter 2.

Install SQL Server and Prerequisites

Install Microsoft SQL Server 2008 R2 SP1

Install Microsoft SQL Server 2008 R2 and Microsoft SQL Server 2008 R2 SP1 as described in the SQL Server section of Chapter 3.

Install the Prerequisite Software

Review the list of prerequisite software described in Chapter 2 and install the remaining prerequisites on the Unified CCMP servers.

Add the SQL Agent User

For a dual-sided system, the SQL Agent User must be re-added.

On the Side A database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Expand the **security** folder; a list of subfolders is displayed.

3. Right Click the **Logins** folder and select **New Login**

4. Ensure the **Windows authentication** option is selected and enter the SQL Agent User domain and login name in the form <DOMAIN>\<LOGIN>. For example

CISCO\sql_agent_user if your user is called sql_agent_user and belongs to the CISCO domain.

5. Click **User Mapping** in the Select a page panel.

6. Check the Portal database in the Users mapped to this login pane. The User column will auto-populate with the domain username for the SQL Agent User.

7. Check the db_owner role in the Database Role Membership pane.

8. Click **OK** to apply the changes.

Repeat these steps on the Side B Database Server.

Add Network Service Accounts

You must also add the NETWORK SERVICE account for all web servers to the database logins with appropriate access permissions. Before this can be done the existing accounts must be deleted from the Portal database logins.

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio**.

2. Locate and expand the Portal database. A list of folders is displayed.

3. Expand the **Portal** > **Security > Users** folder. A list of database logins is displayed.

4. Right click and **Delete** any occurrences of the NETWORK SERVICE account for *all remote* web servers in the deployment. **Do not** delete the entry for the NETWORK SERVICE account for the local machine (NT AUTHORITY\ NETWORK SERVICE). For remote web server machines in the deployment the NETWORK SERVICE logins will be of the form <DOMAIN>\<WEBSERVER MACHINE NAME>$. For example CISCO\WEBSERVERA$ if your webserver is called WEBSERVERA and belongs to the CISCO domain.

5. Expand the **Security** folder. A list of folders is displayed.

6. Right Click the **Logins** folder and select New Login

7. Ensure the **Windows authentication** option is selected and enter the NT AUTHORITY\NETWORK SERVICE account for the Side A webserver in the form <DOMAIN>\<WEBSERVER MACHINE NAME>$.

8. Click **User Mapping** in the Select a page panel.

9. Check the Portal database in the Users mapped to this login pane. Ensure that the User column correctly contains the Network Service account for the web server.

10. Check **the portalapp_ role**, **portalrs_role** and **portalreporting_role** in the Database Role Membership pane.

11. Click **OK**.

12. Repeat steps6 to 11 to add the NT AUTHORITY\NETWORK SERVICE account for each web server in the deployment.

Repeat these steps on the Side B database server to re-add the Web Server Network Service database logins there.

Install New Unified CCMP Components and Upgrade Portal Database

This section describes how to install the new Unified CCMP components and install the portal database for this release of Unified CCMP.

Running the Unified CCMP Installer

1. Insert the Unified CCMP DVD. If auto-run is enabled on the server, a window opens automatically showing a list of Unified CCMP components under the heading 'Server Installation' on the left hand side.

> **Note** If auto-run is disabled and you do not see the Installation Components screen, double-click the **autorun.bat** file located on the DVD to launch the Unified CCMP installer manually.

> **Note** If UAC has not been disabled, launch the installation manually by right-clicking on the **autorun.ba**t file located on the DVD and selecting **run as administrator** option.

> **Note** Some anti-virus software may state that the **autorun.hta** script file is malicious. Please ignore and continue with the installation.

2. Follow the steps in the sections below to install each component, but read the information about prerequisites in the rest of this section first.

Before you can install a Unified CCMP component, the prerequisites for that component must be present. The Unified CCMP Installer checks the prerequisites for each component as follows:

- When you click on a component to install it, the installer displays a list of prerequisites for that component and checks that each prerequisite is present. As each prerequisite check completes, you will see a green tick (check successful) or a red cross (check failed). The Install option for that component is only available when all prerequisite checks are successful.

- Where possible, the Unified CCMP DVD includes redistributable packages for prerequisites, so if a prerequisite check fails, you can click on the link in the Unified CCMP installer to install the missing prerequisite. Once all the prerequisite software is installed, you can click on the component again, then click **Rerun** to rerun the tests.

- When all the prerequisites display a green tick, you will be able to click **Install** to install the chosen component.

Install the Unified CCMP Database Installer

This process does not upgrade the database directly. It just installs the Database Installer which is then used to upgrade the database. On the Side A Database Server:

1. To install the Unified CCMP Database Installer, in the Unified CCMP Installer, select **Database Server**, and wait until the prerequisite checks have completed. If any checks fail, fix them as described above. When all checks have passed, click **Install** to begin the Database Server Installation. The Setup window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. In the License Agreement window:

   - **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting.

4. In the Cryptography Configuration window:

   - **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

   - **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠ **Caution**

You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

5. In the Configure Database window:

   - **Database Name** Enter the name of the database catalog for Unified CCMP. By default this is Portal.

   - **Connect Using** Select the login credentials you want to use:

     - **Windows Authentication Credentials of Application** This is the recommended option

     - **SQL Server Authentication using the login and password below** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

     - Click **Next.**

6. In the Destination Folder window, you can click **Change** to change the location that the Database Server component is installed to. It is not necessary to install all Unified CCMP components to the same location.

7. Click **Install** to install the Database Installer.

Note During the Database Install Tool Installation, the J2SE pre-requisite will be automatically installed if it is not already present. A Security Alert dialog box stating that 'Revocation Information for the security certificate for this site is not available' may be displayed in some circumstances. If this dialog box appears click **Yes** to continue.

8. When the installation has completed, to upgrade your database immediately after installing the Database Installer, select the **Launch Database Management Utility** check box at the end of the installation before clicking **Finish**

9. Click **Finish**.

Repeat the steps above to install the Database Installer process on the Side B Database Server.

Install the Unified CCMP Portal Database

Once the Database Installer is installed, it can be used to install the new Unified CCMP database.

On the Side A Database Server:

1. If you selected the Launch Database Management Utility check box when you installed the Database Installer, the Database Installer launches automatically after it has been installed. Otherwise, launch the Database Installer manually from **Start > All Programs > Management Portal > Database > Database Installer.** The Database Installer is a wizard which guides you through the steps to upgrade the database.

2. Click **Next** to begin the install process.

3. In the Database Setup Window choose **Install a New Database.** Click **Next** to continue.

4. In the SQL Server Connection Details window, take the following actions:

    - **Server Name** - select the Microsoft SQL Server where the Unified CCMP database is located. In this case this is the machine running the application, and so it must be left as the default **(local).**

    - **Database Name** - enter or select the name of the database catalog that was originally used for Unified CCMP.

    - **Connect Using** - select the login credentials you want to use:

        - The **Windows account information you use to log in to your compute**r. This is the recommended option.

- The **Microsoft SQL Server login information assigned by the system administrator**. Only select this option if you are using a database catalog on a different domain. For this option you must enter your Login Name and Password in the fields provided.

- **Test Connection** – click to make sure the connection to the Microsoft SQL Server is established. If you see the message 'Connection succeeded but database does not exist' then you must rectify this problem before continuing. Check that the database catalog name and security credentials are correct.

- When the database connection details have been tested and the connection is successful, click **OK** to continue.

5. In Select an Action to Perform window select **Install a new database**.

6. In the **Setup Replication** window for the Side A database server leave the Replicated Configuration checkbox unchecked and click **Next**. But when installing the database on the Side B database server, take the following actions:

   - **Replicated Configuration** Check this box when installing the database on the Side B database server. The Share Name and Folder Path text boxes will become active.

   - **Share Name** Enter the name of the share for the ReplData folder. By default this is **ReplData.**

   - **Folder Path** Enter the path of the ReplData folder. This is configured in Microsoft SQL Server.

7. The fields on the **Configure the Location of Data Files** window only need to be amended if you want to customize the size and location of the database files, otherwise click **Next.**

8. The **Configure SQL Server Agent Service Identity** window sets up a user account that is used by Microsoft SQL Server for replication:

   - **Account Type** The type of user account that will be used. For a distributed installation, this must be **Domain.**

   - **User Name** The name of the user account. This defaults to **sql_agent_user**. If you used a different name when setting up the account, enter that name instead. For a domain user include the domain information so the name is of the form <DOMAIN>\sql_agent_user. For example if the SQL agent user belongs to the UCCMPDOM domain then enter UCCMPDOM\sql_agent_user.

   - **Automatically create the user account if missing** For a single-sided system, it is possible to create the required user automatically. *For all other systems, you must set up the required account manually*. If you have not already created the user account, set it up now before continuing.

   - **Password** Enter the password of the sql_agent_user account.

- **Confirm Password** You are unable to continue until the contents of this field are identical to the passphrase entered above.

9. In the **Web Application Servers Network Service Configuration** window, enter the details of each Web Server, from both sides, to be used in the installation:

   - **Domain** The network domain the web server resides; for example, UCCMPDOM.

   - **Machine Name** The name of the machine; for example, WEBSERVERA.

   - **Note:** The database installer will use this information to grant access for the Network Service accounts on these web servers to the Portal database. If you need to add a new Web Server after the database has been installed you will need to grant permissions manually. For information on how to add these permissions manually, refer to Chapter 13 for details.

10. Click **Add** to add each Web Server to the list.

11. When all Web Servers have been added, click **Next** to begin installation. Installation will take several minutes.

12. Click **Close** to close the installer.

13. For dual-sided systems repeat the steps above on the Side B database server, noting the different options that need to be selected.

Restore the Portal Database Backup

Now that the Unified CCMP database is installed, the backup of the existing Portal database can be restored.

The Portal databases must now be restored from the backups made earlier.

On the new Side A database server:

1. Click **Start > All Programs > Microsoft SQL Server 2008 R2 > Management Studio**.

2. Right Click the Portal database and Click **Tasks > Restore > Database**.

3. In the Restore Database window choose **From Device** and **Add** the location of the portal back up file from the same side database server. You may need to copy the backup file to a local file in order to access it.

4. Select the backup file to restore the Portal database from and click **OK**.

5. Select the check box next to the backup set you just added

6. Select the Portal database as the restore destination from the **To Database** drop-down list.

7. Select **Options** and choose **Overwrite the existing database**. The Restore Database dialog box is displayed, showing the database file names and the locations they will be restored to.

8. The database file group names have changed, so you need to change the names in the Restore As column to use the new names. For each entry in the list of files that will be restored:

   - in the Restore Database dialog box, select the ellipsis at the end of the row

   - navigate to the folder where the portal database files were installed during the database installation (the default is **<program_drive>\Program Files\Microsoft SQL Server\MSSQL10_50.MSSQLSERVER\MSSQL\Data**)

   - refer to the table below and find the corresponding original file name and the revised file name to be used when the file is restored

   - locate the revised file in the folder tree and select it.

Original File Name	Restore As	Change Required
Portal	Portal.mdf	No Change
SUMGROUP	Portal_sum.ndf	Change required
SUMINDEXGROUP	Portal_sum_idx.ndf	Change required
FCTGROUP	Portal_fct.ndf	Change required
FCTINDEXGROUP	Porgal_fct_idx.ndf	Change required
DIMGROUP	Portal_dim.ndf	Change required
DIMINDEXGROUP	Portal_dim_idx.ndf	Change required
SECGROUP	Portal_sec.ndf	Change required
SECINDEXGROUP	Portal_sec_idx.ndf	Change Required
STGGROUP	Portal_stg.ndf	Change Required
STGINDEXGROUP	Portal_stg.idx.ndf	Change Required
ADMGROUP	Portal_adm.ndf	Change Required
ADMINDEXGROUP	Portal_adm_idx.ndf	Change Required
PortalLog	Portal.ldf	No Change

9. Click **OK** to start the restore.

10. For dual-sided systems repeat the process on Side B to restore the Side B portal database backup to the new Side B database server.

Upgrade the Portal Database

The Portal databases must be upgraded to bring them up to the required version to operate correctly with Unified CCMP 9.0(x).

On the Side A Database Server:

1. Click **Start > All Programs > Management Portal > Database > Database Installer.** The Database Installer Wizard Displays. Click **Next** to go through each window in turn

2. In Select an Action to Perform window select **Upgrade an existing database** and click **Next**.

3. In the SQL Server Connection Details window:

   - **Server Name** Select the Microsoft SQL Server where the Unified CCMP database is installed. In this case this is the machine running the application, and so it must be left as the default **(local).**

   - **Database Name** Enter or select the name of the database catalog that is used for Unified CCMP (**Portal).**

   - **Connect Using** Select the login credentials you want to use:

     - The Windows account information you use to logon to your computer. This is the recommended option.

     - The Microsoft SQL Server login information assigned by the system administrator. Only select this option if you are using a database catalog on a different domain. For this option you must enter your Login Name and Password in the fields provided.

     - **Test Connection** – click to make sure the connection to the Microsoft SQL Server is established. If you see the message 'Connection succeeded but database does not exist' then you must rectify this problem before continuing. Check that the database catalog name and security credentials are correct.

     - When the database connection details have been tested and the connection is successful, click **OK** to continue.

4. Click **Next** to perform the upgrade.

5. When the upgrade completes, click **Close** to close the Database Installer Wizard.

6. For a dual-sided system repeat the process on the Side B database server to upgrade the Side B Portal database.

Install the Unified CCMP App/Web Server

Install the new App/Web Server components on the A Side App/Web Server.

1. To install the Unified CCMP App/Web component, in the Unified CCMP Installer, selec**t App/Web Serve**r, wait until the prerequisite checks have completed and click **Install**. The **Management Portal: Application Server Component** window displays.

2. Click **Next** to go through each window in turn. You will need to enter the following details:

3. If the Management Portal: Application Server Components Dialog is displayed, click **Install** to install the additional required components.

4. If the Microsoft .NET 4.5 Framework pre-requisite is missing, it will be installed at this point. Click **Install** to install the component and follow the on screen instructions. When the .NET 4.5 Framework is complete, restart the server to continue the installation of the App/Web Server.

5. In the **License Agreement** window:

    *   **I accept the terms in the license agreement** You must select this option before you can continue. In doing so you agree to be bound by the terms in the license agreement, and so you should read it thoroughly before accepting

6. In the **Cryptography Configuration** window:

    *   **Passphrase** Enter the cryptographic passphrase you created during installation of the Database Server component when you first installed Unified CCMP. If you continue installation with a new passphrase, you will be unable to access your existing data.

    *   **Confirm Passphrase** You will not be able to continue until the contents of this field are identical to the passphrase entered above.

⚠ **Caution**   You must use the same cryptographic passphrase as was originally used when Unified CCMP was first installed. If you do not know the cryptographic passphrase, **stop the installation immediately** and contact your vendor. If you continue the installation with a new passphrase you will be unable to access your existing data.

7. In the **Destination Folder** window, you can click **Change** to change the location that the App/Web Server components are installed to.

8. In the **Configure Database** window:

    *   **SQLServer Name** Enter the name of the machine that is to be the Database Server. The default of **localhost** is valid only when installing on the Database Server. Enter the name of the side A database server when installing the side A App/Web Server Components and enter the name of the side B database server when installing the side B App/Web Server Components.

    *   **Catalog Name** Enter or select the name you selected while installing the Database Server component. By default this is Portal.

    *   **Connect Using** Select the login credentials you want to use:

- **Windows authentication** This is the recommended option.

- **The SQL Server authentication** This option should only be selected if you are using a database catalog on a different domain. For this option you must enter your SQL Server Login Name and Password in the fields provided.

9. Click **Install**.

10. When the installation has completed, click **Finish**.

Note

The machine will restart once the installation is complete.

Repeat the steps above on the B side App/Web server.

Unified CCMP Configuration

After the database has been upgraded and the Unified CCMP 9.0(x) components have been installed, the following configuration updates must be made.

Restore Unified CCMP Database Replication

If you are upgrading a dual-sided environment you must reinstate replication between the Side A and Side B databases. Replication between the Portal databases is set up and monitored using the **Replication Manager** application which is available in the Unified CCMP Integrated Configuration Environment (ICE) tool.

Note

The user running the Unified CCMP Replication Manager must have administrator permissions in both Windows and SQL Server, for both the targeted publisher and subscriber servers.

Note

Always run Replication Manger on the Unified CCMP publisher database server.

To restore replication:

1. Go to **Start > All Programs > Management Portal > Configuration Tools > Integrated Configuration Environment**.

2. The **Database Connection** window is displayed. In this window, set:

   - **Server Name** This option defaults to the current machine.

   - **Database Name** Select the Unified CCMP database that was installed when setting up the Database Component. If you accepted the default value, this will be **Portal**.

   - **Authentication** Select Windows Authentication.

3. Click **OK** to open Unified CCMP Integrated Configuration Environment.

4. The **Cluster Configuration** tool is open by default. From the **Tool** drop-down list select **Replication Manager**.

5. Click the **Setup** tab to see the replication setup details and to configure or disable replication. Details of the displayed fields are contained in the Configuring Replication section of Chapter 5 of this document.

6. The values used when replication was first set-up are displayed. Verify that the **Distributor Properties Data Folder** and **Log Folder** reflect the current data directory for SQL Server.

Note In most cases the recommended defaults are valid and should be used.

7. Click **Configure** to start the replication configuration process. Progress messages will be logged into the Replication Output window informing you of the steps being performed as the database is replicated.

8. You may be prompted to save pending changes to the database before continuing. If so, click **Yes** to save pending changes and continue.

Note After you click **Configure**, it may take several minutes to set up replication. Once replication has been set up, the Replication Manager will display the Monitor tab.

Confirm Replication is Working

The **Monitor** tab allows you to monitor the general health of SQL Server Replication between Unified CCMP databases.

To confirm that replication is working:

1. In the Replication Manager, click the **Monitor** tab.

2. In the top left hand pane, select the **[Portal]:BaseSubWin** publication.

3. In the bottom right hand pane (called Actions in selected session), look for a message that starts "Delivered snapshot from . . .)". When you see this message, replication is working correctly.

4. Close the ICE tool.

Configure the Windows Firewall for UCCE Provisioning

Note By default the Windows Server 2008 R2 Firewall will not allow incoming traffic for Unified CCMP. If the Windows firewall is on, create a rule to allow inbound TCP traffic for Unified CCMP to communicate with each configured UCCE.

This should be done for the Local Registry Port and Local Port stored for each Unified ICM server.

Steps for adding a firewall rule are described in the Configure Windows Server 2008 R2 Firewall for SQL Server section of Chapter 3.

Restarting the Unified CCMP Services

Following an upgrade it is good practice to restart all Unified CCMP services.

To restart a service:

1. Click **Start > Run**

2. Enter **Services.msc** and then click **OK.**

3. If the service is in the **Started** state, right click the service name and click **Restart**. If a service is not started, right-click the service name and click **Start.**

All UCCMP services on all Database and App/Web Servers should be restarted.

Note
After starting the System Monitoring Service and Application Service on the web servers, you will need to wait a few minutes before logging in to allow the services to load completely.

12. Uninstalling Unified CCMP

This chapter describes how to remove the Unified CCMP components from the platform. The uninstallation procedure should be performed in the following order:

Uninstalling Database Components

This process will remove the database components. This removes the ability to import and provision data between remote data sources (such as Unified CCE or Unified CM) and the Unified CCMP Database.

Removing Database Replication

If you have a dual-sided installation then you must remove database replication before removing the database components.

Note
Removing database replication may take some time.

Before removing database replication:

- Ensure that you are logged in as a domain level user with administrative rights on both database servers.

- Ensure that the database is in a consistent state

- Stop all Unified CCMP Services on all servers.

To disable replication:

1. Click **Start > All Programs > Management Portal> Configuration Tools > Integrated Configuration Environment**.

2. In the **Tools** drop-down, select **Replication Manager**. The Replication Manager tool is displayed.

3. Select the **Setup tab**.

4. Click **Disable**.

Once replication is disabled you can uninstall the database components as described in the next section.

Uninstalling Database Components

To uninstall the database components:

1. Click **Start > Control Panel > Uninstall a program.**

2. Select **Management Portal: Database Components.**

3. Click **Uninstall.**

Note

Uninstalling the database components does not remove the Unified CCMP database catalog.

Removing the Database Catalog

Caution

Do not remove the database catalog from your system unless you intend to permanently remove Unified CCMP, or you have been instructed to do so by support personnel.

To remove the Unified CCMP database catalog, you will need to use SQL Server Management Studio, as follows:

1. Click Start > All Programs > Microsoft SQL Server 2008 R2 > SQL Server Management Studio

2. Connect to the local database server.

3. In the Object Explorer pane, expand the Databases node, navigate to the Unified CCMP database (the default name is Portal), right click it and select **Delete**.

4. The Delete Database window displays.

5. Select the **Close existing connections** check box.

6. Click **OK**.

This permanently removes the database catalog.

Uninstalling Other Components

All the other Unified CCMP components may be uninstalled by clicking **Remove** from **Add/Remove Programs**.

13. Troubleshooting

Installer Logs

Unified CCMP installers are launched with logging enabled. Install logs may be located at **C:\InstallLogs** for both the Database and App/Web Server installers.

Adding a New Web Server after the Database has been Installed

If you need to recover or expand your system, you may need to install a new web server. Under normal installation conditions the details of the web server are known at install time and can be provided during the database installation so that suitable permissions for access to the database from the web server's Network Service account can be applied by the installer. Adding a web server to the cluster at a later date requires permissions to be set up manually for the Web Server's Network Service Account on the Portal database.

To add permissions for the new Web Server's Network Service Account on the Portal database:

1. Using the **SQL Server Management Studio** connect to the Portal database, right-click on the **Security** folder beneath the server instance in the **Object Explorer** pane and select **New > Login**.

2. Enter the name of the machine in the **Login Name** field in the `<DOMAIN>\<MACHINENAME$>` form.

3. Click **OK**.

4. Right-click on the **Security** folder beneath the Portal database and select **New > User**.

5. Enter the name of the machine in the **User Name** field in the `<DOMAIN>\<MACHINENAME$>` form.

6. Enter the name of the login created in Step 2 in the **Login Name** field or select it using the Explore dialog box.

7. Select the following roles in the **Database Role Membership** list:

- db_datareader
- db_datawriter
- db_ddladmin
- db_securityadmin
- portalapp_role
- portalreporting_role
- portalrs_role

8. Click **OK.**

9.