Deploying Windows Rights Management Services with Microsoft Office SharePoint Server 2007 Step-By-Step Guide

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Published: October 2006

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Abstract

This step-by-step guide provides instructions for deploying Microsoft Office SharePoint Server 2007 in a Microsoft Windows Rights Management Services (RMS) with Service Pack 2 environment. It includes the necessary information for installing and configuring RMS, installing and configuring Office SharePoint Server 2007 in the newly created RMS infrastructure, and verifying that Office SharePoint Server 2007 documents can be rights-protected and consumed.

Microsoft

Contents

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About this Guide

This step-by-step guide walks you through the process of deploying Microsoft® Windows® Rights Management Services (RMS) with Service Pack 2 and Microsoft Office SharePoint® Server 2007 together in a test environment. During this process, you create an Active Directory® domain, install and configure an RMS cluster on a Microsoft Windows Server® 2003–based server, install the RMS Logging database server, install Office SharePoint Server 2007, integrate the Office SharePoint Server 2007 with RMS, and configure a Windows XP–based RMS client computer.

Upon completion of this step-by-step guide, you will be able to use the test environment you just built as a baseline for the way it might be deployed in your organization.

⬥ **Important**

> Microsoft Windows® SharePoint® Services 3.0 does not have the Microsoft Office protector files that are required to automatically rights-protect a document when it is uploaded. You must use Microsoft Office SharePoint Server 2007 to do this.

As you complete the steps in this guide, you will:

- Prepare the infrastructure for Active Directory directory services, RMS, and Office SharePoint Server 2007.
- Install and configure RMS.
- Install and integrate Office SharePoint Server 2007 into your RMS environment.
- Verify RMS and Office SharePoint Server 2007 integration after you complete the configuration.

Office SharePoint Server 2007 provides an easy way to collaborate on documents by posting them to an Office SharePoint Server 2007 site so that they can be accessed over the corporate network. The goal of integrating an Office SharePoint Server 2007 deployment with an RMS infrastructure is to be able to protect documents that are downloaded from the Office SharePoint Server 2007 server by users of any given organization.

Note

Integrating Office SharePoint Server 2007 with RMS does not protect the documents while they are on the server. When a document is uploaded to an Office SharePoint Server 2007 site, the server will remove all protection until a download request is received by the Office SharePoint Server 2007 server. At this time, the Office SharePoint Server 2007 server will apply the appropriate restrictions to the document before it is downloaded to the client computer.

What This Guide Does Not Provide

This guide does not provide the following:

*   Guidance for integrating Office SharePoint Server 2007 with RMS in a production environment.
*   Complete technical reference for RMS. For more in-depth technical information about RMS, see http://go.microsoft.com/fwlink/?LinkId=68637.
*   Complete information about Office SharePoint Server 2007. For more information, see http://go.microsoft.com/fwlink/?LinkId=74460.

Deploying RMS in a Test Environment

We recommend that you first use the steps provided in this guide in a test lab environment. Step-by-step guides are not necessarily meant to be used to deploy Microsoft products without accompanying documentation and should be used with discretion as a stand-alone document.

Upon completion of this step-by-step guide, you will have a working RMS infrastructure integrated with Office SharePoint Server 2007. You can then test and verify RMS and Office SharePoint Server 2007 interoperability through the simple task of uploading a Microsoft Office Word 2007 document to the Office SharePoint Server 2007 portal.

The test environment described in this guide includes four computers connected to the Internet and using a clean installation of the following operating systems, applications, and services:

Computer Name	Operating System	Applications and Services
RMS-SRV	Windows Server 2003 with Service Pack 1 (SP1)	RMS, Internet Information Services (IIS) 6.0, World Wide Web Publishing Service, Message Queuing (also known as MSMQ), and Microsoft SQL Server™ 2005 Standard Edition
DC	Windows Server 2003 with SP1	Active Directory, Domain Name System (DNS)
SPS-SRV	Windows Server 2003 with SP1	Office SharePoint Server 2007
RMS-CLNT	Windows XP Professional with Service Pack 2 (SP2)	Microsoft Office Word 2007

Note

If the RMS server is not connected to the Internet, it must be enrolled offline before the provisioning of the RMS server is complete.

The computers form a private intranet and are connected through a common hub or Layer 2 switch. This configuration can be emulated in a virtual server environment if desired. This step-by-step exercise uses private addresses throughout the test lab configuration. The private network ID 10.0.0.0/24 is used for the intranet. The domain controller is named DC for the domain named cpandl.com. The following figure shows the configuration of the test environment:

DC
10.0.0.1

RMS-SRV
10.0.0.2

CPANDL.COM

RMS-CLNT
10.0.0.4

SPS-SRV
10.0.0.3
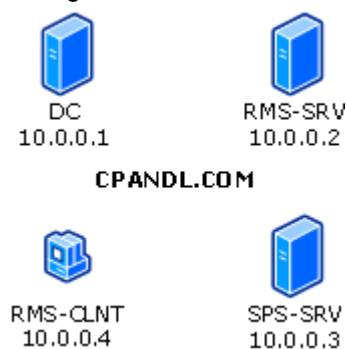
Requirements for RMS with Service Pack 2

The following table describes the minimum hardware requirements and recommendations for running RMS with Service Pack 2.

Requirement	Recommendation
Personal computer with one Pentium III processor (800 megahertz (MHz) or higher)	Computer with two Pentium 4 processors (1500 MHz or higher)
256 megabytes (MB) of RAM	512 MB of RAM
20 gigabytes (GB) of free hard disk space	40 GB of free hard disk space
One network adapter	One network adapter

The following table describes the software requirements for running RMS on a Windows Server 2003–based computer.

Software	Requirement
Operating system	Windows Server 2003, any editions except Web Edition
File system	NTFS file system is recommended
Messaging	Message Queuing
Web services	Internet Information Services (IIS) ASP.NET must be enabled.
Active Directory	RMS must be installed in an Active Directory domain in which the domain controllers are running Windows Server 2000 with Service Pack 3 (SP3) or later. All users and groups who use RMS to acquire licenses and publish content must have an e-mail address that is configured in Active Directory.

Software	Requirement
Database server	RMS requires a database and stored procedures to perform operations. In this step-by-step guide you use Microsoft SQL Server 2005 Standard Edition. In a production environment, a separate database server is recommended.

Steps for Deploying RMS with Office SharePoint Server 2007

If your test environment does not have Internet access, there are several installation files that should be manually copied to each computer. For the Office SharePoint Server 2007 computer, you should copy the .NET Framework 2.0, the .NET Framework 3.0, and the RMS with Service Pack 2 (SP2) client installation packages. For the RMS client computer, you should copy the RMS with SP2 client, and for the RMS Server you should copy the RMS with Service Pack 2 server installation package to the RMS server.

- Step 1: Setting up the Infrastructure
- Step 2: Installing and Configuring RMS on RMS-SRV
- Step 3: Installing and Configuring Office SharePoint Server 2007 on SPS-SRV
- Step 4: Verifying RMS Functionality on RMS-CLNT

Step 1: Setting up the Infrastructure

To prepare your test environment for installing RMS, you must complete the following tasks:

- Configure the domain controller (DC)
- Configure the computer to be used as the RMS cluster (RMS-SRV)
- Configure the Office SharePoint Server 2007 server (SPS-SRV)
- Configure the RMS client computer (RMS-CLNT)

Configure the domain controller (DC)

To configure the domain controller DC, you must install Windows Server 2003, configure TCP/IP properties, install Active Directory, raise both the forest and domain functional levels to Windows Server 2003, create user accounts, and then assign these user accounts an e-mail address.

First, install Windows Server 2003 as a stand-alone server.

▶ **To install Windows Server 2003, Standard Edition**

1. Start your computer by using the Windows Server 2003 product CD. (You can use any edition of Windows Server 2003 except the Web Edition to establish the domain).

2. Follow the instructions that appear on your computer screen, and when prompted for a computer name, type **DC**.

Next, configure TCP/IP properties so that DC has a static IP address of 10.0.0.1. In addition, configure 10.0.0.1 as the IP address for the DNS server.

▶ **To configure TCP/IP properties on DC**

1. Log on to DC as DC\ADMINISTRATOR.

2. Click **Start**, point to **Control Panel**, and point to **Network Connections**, double-click **Local Area Connection**, and then click **Properties**.

3. On the **General** tab, click **Internet Protocol (TCP/IP)**, and then click **Properties**.

4. Click the **Use the following IP address** option. In the **IP address** box, type **10.0.0.1**. In **Subnet mask** box, type **255.255.255.0**.

5. Click the **Use the following DNS server addresses** option. In the **Preferred DNS server** box, type **10.0.0.1**.

6. Click **OK**, and then click **OK** to close the **Local Area Connection Properties** dialog box.

Next, configure the computer as a domain controller.

▶ **To configure DC as a domain controller**

1. Click **Start**, and then click **Run**. In the **Open** box, type **dcpromo**, and then click **OK**.

2. On the Welcome page of the Active Directory Installation Wizard, click **Next**.

3. Click **Next**, click the **Domain controller for a new domain** option, and then click **Next**.

4. Select the **Domain in a new forest** option, and then click **Next**.

5. In the **Full DNS name for new domain** box, type **cpandl.com**, and then click **Next**.

6. In the **Domain NetBIOS name** box, type **CPANDL**, and then click **Next** three times.

7. Select the **Install and configure the DNS server on this computer, and set**

this computer to use this DNS server as its preferred DNS server option.

8. Select the **Permissions compatible only with Windows 2000 or Windows Server 2003 operating systems** option, and then click **Next**.

9. In the **Restore Mode Password** box, type a strong password. In the **Confirm password** box, type the password again, and then click **Next**.

10. Click **Next**.

11. When the Active Directory Installation Wizard is done, click **Finish**.

Note

You must restart the computer after you complete this procedure.

Next raise the forest functional level in Active Directory to Windows Server 2003.

Important

Once you raise a functional level in Active Directory, you cannot return it to its original level.

To raise the forest functional level

1. Log on to DC as CPANDL\ADMINISTRATOR.

2. Click **Start**, point to **Administrative Tools**, and then click **Active Directory Domains and Trusts**.

3. Right-click **Active Directory Domains and Trusts**, and then click **Raise Forest Functional Level**.

4. Choose **Windows Server 2003** from the list box, and then click **Raise**.

5. Click **OK** twice.

Next raise the domain functional level in Active Directory to Windows Server 2003.

To raise the domain functional level

1. Click **Start**, point to **Administrative Tools**, and then click **Active Directory Domains and Trusts**.

2. Right-click **CPANDL.COM**, and then click **Raise Domain Functional Level**.

3. Choose **Windows Server 2003** from the list box, and then click **Raise**.

4. Click **OK** twice.

Next, add the following user accounts: RMSSRVC, RMSADMIN, USER1, and USER2.

To add new user accounts

1. Click **Start**, point to **Administrative Tools**, and then click **Active Directory**

Users and Computers. This opens the **Active Directory Users and Computers** Microsoft Management Console (MMC) snap-in.

2. In the console tree, expand cpandl.com, right-click **Users**, point to **New**, and then click **User**.

3. In the **New Object – User** dialog box, type **RMSSRVC** in the **Full name** and **User logon name** boxes, and then click **Next**.

4. In the **New Object – User** dialog box, type a password of your choice in the **Password** and **Confirm password** boxes. Clear the **User must change password at next logon** check box, click **Next**, and then click **Finish**.

5. Perform the above steps 1-4 for each of the following users: RMSADMIN, USER1, and USER2.

Finally, add e-mail addresses to the USER1 and USER2 user accounts.

▶ **To add e-mail addresses to user accounts**

1. In the **Active Directory Users and Computers** snap-in, right-click **USER1**, click **Properties**, type **user1@cpandl.com** in the **E-mail** box, and then click **OK**.

2. Repeat this step for USER2.

3. Close the **Active Directory Users and Computers** snap-in.

Configure the computer to be used as the RMS cluster (RMS-SRV)

To configure the member server RMS-SRV so that you can install RMS on it, you must install Windows Server 2003, configure TCP/IP properties, and then join RMS-SRV to the domain cpandl.com. You must also add the account RMSADMIN as a member to the local administrators group. This is needed for RMSADMIN to install RMS on RMS-SRV. Additionally, there are several prerequisite components that must be installed on the RMS cluster including Internet Information Services (IIS), ASP.NET, Message Queuing, and SQL Server 2005 Standard Edition.

First, install Windows Server 2003 as a stand-alone server.

▶ **To install Windows Server 2003, Standard Edition**

1. Start your computer by using the Windows Server 2003 product CD. (You can use any edition of Windows Server 2003 except the Web Edition to establish the domain.)

2. Follow the instructions that appear on your computer screen, and when prompted for a computer name, type **RMS-SRV**.

Next, configure TCP/IP properties so that RMS-SRV has a static IP address of 10.0.0.2. In addition, configure the DNS server of DC (10.0.0.1).

▷ **To configure TCP/IP Properties**

1. Log on to RMS-SRV as RMS-SRV\ADMINISTRATOR.
2. Click **Start**, point to **Control Panel**, and point to **Network Connections**, double-click **Local Area Connection**, and then click **Properties**.
3. On the **General** tab, click **Internet Protocol (TCP/IP)**, and then click **Properties**.
4. Click the **Use the following IP address** option. In the **IP address** box, type **10.0.0.2**. In **Subnet mask** box, type **255.255.255.0**.
5. Click the **Use the following DNS server addresses** option. In the **Preferred DNS server** box, type **10.0.0.1**.
6. Click **OK**, and then click **OK** to close the **Local Area Connection Properties** dialog box.

Next, join RMS-SRV to the cpandl.com domain.

▷ **To join RMS-SRV to the cpandl.com domain**

1. Log on to RMS-SRV as CPANDL\ADMINISTRATOR.
2. Click **Start**, right-click **MyComputer**, and then click **Properties**.
3. Click **Computer Name** tab, click **Change**.
4. In the **Computer Name Changes** dialog box, click **Domain**, and then type **cpandl.com**.
5. Click **More**, and type **cpandl.com** in **Primary DNS suffix of this computer** box.
6. Click **OK** twice.
7. When a **Computer Name Changes** dialog box appears prompting you for administrative credentials, provide the credentials, and click **OK**.
8. When a **Computer Name Changes** dialog box appears welcoming you to the cpandl.com domain, click **OK**.
9. When a **Computer Name Changes** dialog box appears telling you that the computer must be restarted, click **OK**, and click **Close**.
10. Close the **System** dialog box.

Finally, add RMSADMIN to the local administrators group on RMS-SRV.

▷ **To add RMSADMIN to the local administrators group**

1. Click **Start**, point to **Control Panel**, point to **Administrative Tools**, and then

click **Computer Management**.

2. Expand **Local Users and Group**, and then click **Groups**.

3. Right-click **Administrators**, click **Add to Group**, click **Add**, and then type **RMSADMIN** in the **Enter the object names to select (examples)** box.

4. Click **OK** twice and then close **Computer Management**.

Configure the Office SharePoint Server 2007 server (SPS-SRV)

To configure the Office SharePoint Server 2007 server SPS-SRV, you must install Windows Server 2003, configure TCP/IP properties, join the computer to the cpandl.com domain, add the RMS cluster to the Office SharePoint Server 2007 Server's Trusted Sites Internet Explorer zone, and then install the RMS client application on this server.

▶ **To install Windows Server 2003, Standard Edition**

1. Start your computer by using the Windows Server 2003 product CD. (You can use any edition of Windows Server 2003 except the Web Edition to establish the domain).

2. Follow the instructions that appear on your computer screen, and when prompted for a computer name, type **SPS-SRV**.

Next, configure 10.0.0.3 as the IP address for the DNS server.

▶ **To configure TCP/IP properties on SPS-SRV**

1. Log on to SPS-SRV as CPANDL\ADMINISTRATOR.

2. Click **Start**, point to **Control Panel**, point to **Network Connections**, double-click **Local Area Connection**, and then click **Properties**.

3. On the **General** tab, click **Internet Protocol (TCP/IP)**, and then click **Properties**.

4. Select the **Use the following IP address** option. In the **IP address** box, type **10.0.0.3**. In **Subnet mask** box, type **255.255.255.0**.

5. Select the **Use the following DNS server addresses** option. In the **Preferred DNS server** box, type **10.0.0.1**.

6. Click **OK**, and then click **OK** to close the **Local Area Connection Properties** dialog box. Close the **Local Area Connection Status** dialog box.

7. Restart the computer for the changes to take effect.

Next, add SPS-SRV to the cpandl.com domain.

▶ **To join SPS-SRV to the cpandl.com domain**

1. Log on to SPS-SRV as CPANDL\ADMINISTRATOR.

2. Click **Start**, right-click **My Computer**, and then click **Properties**.

3. Click **Computer Name** tab, and then click **Change**.

4. In the **Computer Name Changes** dialog box, click **Domain**, and then type **cpandl.com**.

5. Click **More**, and type **cpandl.com** in **Primary DNS suffix of this computer** box.

6. Click **OK** twice.

7. When a **Computer Name Changes** dialog box appears prompting you for administrative credentials, provide the credentials, and then click **OK**.

8. When a **Computer Name Changes** dialog box appears welcoming you to the cpandl.com domain, click **OK**.

9. When a **Computer Name Changes** dialog box appears telling you that the computer must be restarted, click **OK**.

Next, add the RMS cluster to the Internet Explorer Trusted Sites zone on the Office SharePoint Server 2007 server so that RMS communication is not interrupted.

▶ **To add RMS-SRV to Trusted Sites**

1. Log on to SPS-SRV as CPANDL\ADMINISTRATOR.

2. Click **Start**, point to **Control Panel**, and then click **Internet Options**.

3. Click the **Security** tab, click **Trusted Sites**, and then click the **Sites** button.

4. Type **http://RMS-SRV**, and then click **Add**.

5. Click **Close**, and then click **OK**.

Finally, install the RMS client on Office SharePoint Server 2007 server.

▶ **To install the RMS 1.0 with SP2 client**

1. Download the RMS client from http://go.microsoft.com/fwlink/?LinkId=67736. If you are using a 64-bit version of Windows XP Professional or Windows Server 2003, download the 64-bit version of the RMS client from http://go.microsoft.com/fwlink/?LinkId=67935.

2. Double-click WindowsRightsManagementServicesSP2-KB917275-Client-ENU.exe to start the installation.

3. Click **Next**.

4. Select the **I agree** option to accept the End User License Agreement, and then click **Next** twice to start the installation.

5. Click **Close** to finish the installation.

Configure the RMS client computer (RMS-CLNT)

To configure RMS-CLNT, you must install Windows XP Professional, configure TCP/IP properties, join RMS-CLNT to the domain cpandl.com, and then install the RMS client. You must also install an RMS-enabled application. In this example, you install Microsoft Office Word 2007 on RMS-CLNT.

▶ **To install Windows XP Professional**

1. Start your computer using the Windows XP Professional product CD.
2. Follow the instructions that appear on your screen, and when prompted for a computer name, type **RMS-CLNT**.

Next, configure TCP/IP properties so that RMS-CLNT has a static IP address of 10.0.0.4. In addition, configure the DNS server of DC (10.0.0.1).

▶ **To configure TCP/IP properties**

1. Click **Start**, click **Control Panel**, and then double-click **Network Connections**. Right-click **Local Area Connection**, and then click **Properties**.
2. On the **General** tab, click **Internet Protocol (TCP/IP)**, and then click **Properties**.
3. Click the **Use the following IP address** option. In the **IP address** box, type **10.0.0.4**. In **Subnet mask** box, type **255.255.255.0**.
4. Click the **Use the following DNS server addresses** option. In the **Preferred DNS server** box, type **10.0.0.1**.
5. Click **OK**, and then click **OK** to close the **Local Area Connection Properties** dialog box.
6. Restart your computer for the changes to take effect.

Next, join RMS-CLNT to the cpandl.com domain.

▶ **To join RMS-CLNT to the cpandl.com domain**

1. Log on to DC as CPANDL\ADMINISTRATOR.
2. Click **Start**, right-click **My Computer**, and then click **Properties**.
3. On the **Computer Name** tab, click **Change**.
4. In the **Computer Name Changes** dialog box, click **Domain**, and then type **cpandl.com**.
5. Click **More**, and in **Primary DNS suffix of this computer**, type **cpandl.com**.

6. Click **OK** twice.

7. When a **Computer Name Changes** dialog box appears prompting you for administrative credentials, provide the credentials, and then click **OK**.

8. When a **Computer Name Changes** dialog box appears welcoming you to the cpandl.com domain, click **OK**.

9. When a **Computer Name Changes** dialog box appears telling you that the computer must be restarted, click **OK**.

10. Click **OK** to close the **System Properties** dialog box

11. In the **System Settings Change** dialog box, click **Yes**.

Next, the RMS client must be downloaded and installed on RMS-CLNT.

▷ **To install the RMS 1.0 SP2 client**

1. Log on to RMS-CLNT as CPANDL\ADMINISTRATOR.

2. Download the RMS client from http://go.microsoft.com/fwlink/?LinkId=67736. If you are using a 64-bit version of Windows XP Professional or Windows Server 2003, download the 64-bit version of the RMS client http://go.microsoft.com/fwlink/?LinkId=67935.

3. Double-click **WindowsRightsManagementServicesSP2-KB917275-Client-ENU.exe** to start the installation.

4. Click **Next**.

5. Select the **I agree** option, and then click **Next** twice to start the installation.

6. Click **Close** to finish the installation.

Next, install Microsoft Office Word 2007 Professional.

▷ **To install Microsoft Office Word 2007 Professional**

1. Click **setup.exe** on the Microsoft Office 2007 Professional product CD.

2. Click **Customize** as the installation type, set the installation type to **Not Available** for Microsoft Office Access, Microsoft Office Excel, Microsoft Office InfoPath, Microsoft Office Outlook, Microsoft Office PowerPoint, Microsoft Office Publisher, and Microsoft Office Visio Viewer, and then click **Install Now**. This may take several minutes to complete.

Step 2: Installing and Configuring RMS on RMS-SRV

To install RMS, you must complete the following steps:

- [Add the Application Server role to RMS-SRV](#). This will install IIS and ASP.NET.

- <u>Install Message Queuing</u>
- <u>Install SQL Server 2005 Standard Edition</u>
- <u>Install the RMS cluster</u>
- <u>Configure RMS settings</u>
- <u>Register the SCP in Active Directory</u>

Add Application Server role to RMS-SRV

RMS uses IIS and ASP.NET to communicate with the RMS clients. To install IIS and ASP.NET, you must complete the following steps:

▶ **To add the Application Server role**

1. Log on to RMS-SRV as CPANDL\ADMINISTRATOR. The **Manage Your Server** window appears.
2. Click **Add or remove a role**.
3. On the **Preliminary Steps** page of the Configure your Server Wizard, click **Next**.
4. Click **Application Server (IIS, ASP.NET)**, and then click **Next**.
5. Select the **Enable ASP.NET** check box, and then click **Next** twice.
6. When asked for files from the Windows Server 2003 product CD, insert it into the CD-ROM drive of the computer.
7. Click **Finish** to complete the installation.

Install Message Queuing

Message Queuing is used to send information from the RMS cluster to the RMS logging database and must be installed prior to installing RMS. To install Message Queuing, you must complete the following steps:

▶ **To install Message Queuing**

1. Click **Start**, point to **Control Panel**, and then click **Add or Remove Programs**.
2. Click **Add/Remove Windows Components**.
3. In the **Windows Components Wizard** dialog box, click **Application Server**, and then click the **Details** button.
4. In the **Application Server** dialog box, select the **Message Queuing** check box, and then click **OK**.
5. Click **Next** to start the installation.
6. Click **Finish** and close the **Add or Remove Programs** dialog box.

Install Microsoft SQL Server 2005 Standard Edition

RMS requires a database used for storing configuration and logging information. Microsoft SQL Server 2005 Standard Edition is the database that will be used in this guide. It will be installed on the same computer as the RMS cluster (RMS-SRV). In a production environment, it is recommended to install the RMS database on a dedicated computer.

Note

Microsoft SQL Server 2005 Express Edition is also supported as the database server. However, Microsoft SQL Server 2005 Express Edition is not recommended for use in production environments because it does not support adding additional servers to the RMS cluster or the ability to view or modify data stored in the configuration and logging databases. To download Microsoft SQL Server 2005 Express Edition, go to http://go.microsoft.com/fwlink/?LinkId=73721.

To install Microsoft SQL Server 2005 Standard Edition, refer to the following steps:

▶ To install Microsoft SQL Server 2005 Standard Edition

1. Log on to RMS-SRV as CPANDL\ADMINISTRATOR.
2. Start the installation from the Microsoft SQL Server 2005 product CD by double-clicking Setup.exe.
3. Select the **I accept the licensing terms and conditions** check box, and then click **Next**. When the **Installing Prerequisites** page reports that the required components were installed successfully, click **Next** again.
4. When the system configuration check is complete, click **Next** on the **Welcome to the Microsoft SQL Server Installation Wizard** page to start the installation.
5. If you see no errors on the **System Configuration Check** page, click **Next**.
6. Complete the **Registration Information** page, and then click **Next**.
7. On the **Components to Install** page, select the **SQL Server Database Services** check box, and then click **Next**.
8. On the **Instance Name** page, verify that **Default Instance** is selected and then click **Next**.
9. On the **Service Account** page, select the **Use the built-in System account** option, click **Next** four times, and then click **Install**. The installation may take several minutes to complete.
10. On the **Setup Progress** page, when the installation has completed and the status of all the products in the list is **Setup finished**, click **Next**, and then click **Finish**.

Install the RMS cluster

Now that all of the prerequisite software has been installed, it is time to install the RMS cluster. To download RMS, go to http://go.microsoft.com/fwlink/?LinkId=73722. From RMS-SRV, you should do the following in order to install RMS:

▶ **To install the RMS cluster**

1. Log on to RMS-SRV as CPANDL\ADMINISTRATOR.
2. Start the installation by double-clicking the installation file that you downloaded from the Microsoft Web site.
3. Click **Next**.
4. Read the License Agreement, select the **I agree** option, and then click **Next**.
5. Accept the default installation folder, click **Next**, and then click **Install**.
6. When the installation completes, click **Close**.

Configure RMS settings

RMS is provisioned and administered by using a local Web site automatically created during the RMS installation.

▶ **To provision RMS using Global Administration Web site**

1. Click **Start**, point to **All Programs**, point to **Windows RMS**, and then click **Windows RMS Administration**.
2. Click **Provision RMS on this Web site**.
3. In the **User name** box under **RMS Service Account**, type **CPANDL\RMSSRVC**, and then type the password for CPANDL\RMSSRVC in the **Password** box.
4. In the **RMS private key password** box under **Private key protection and enrollment**, enter a strong password, and then confirm this strong password in the **Enter password again** box.
5. Type **rmsadmin@cpandl.com** in the **Administrative contact** box.
6. Under **RMS Proxy Settings**, clear the **This computer uses a proxy server to connect to the Internet** check box.
7. Keep the default values for everything else on this page, and then click **Submit**. This might take a few minutes to complete.

Register the SCP in Active Directory

The RMS service connection point (SCP) in Active Directory allows RMS clients to discover the RMS cluster automatically. Active Directory SCP registration is not done automatically during installation. To register the RMS SCP, you must do the following:

▶ **To register RMS SCP in Active Directory**

1. Log on to RMS-SRV as CPANDL\ADMINISTRATOR or another Active Directory user account who is a member of the **Enterprise Admins** group in the CPANDL Active Directory domain.

2. Click **Start**, point to **All Programs**, point to **Windows RMS**, and then click **Windows RMS Administration**.

3. Click **Administer RMS on this Web site**.

4. Scroll to the bottom of the page and click **RMS service connection point**.

5. Click **Register URL**.

Step 3: Installing and Configuring Office SharePoint Server 2007 on SPS-SRV

To install Office SharePoint Server 2007, you must complete the following steps:

- Install Microsoft .NET Framework 2.0
- Install Microsoft .NET Framework 3.0
- Add the Application Server role to SPS-SRV
- Install Office SharePoint Server 2007
- Configure Office SharePoint Server 2007 for RMS

Install Microsoft .NET Framework 2.0

The Microsoft .NET Framework 2.0 is required by Office SharePoint Server 2007. To install the .NET Framework 2.0, you must complete the following steps:

▶ **To install Microsoft .NET Framework 2.0**

1. Log on to SPS-SRV as CPANDL\ADMINISTRATOR.

2. Download the .NET Framework 2.0 from http://go.microsoft.com/fwlink/?LinkId=73913.

3. Double-click **dotnetfx.exe** to start the installation, and then click **Run** in the **Open File -- Security Warning** dialog box.

4. Click **Next**, select the **I accept the terms of the License Agreement** option, and

then click **Install**.

5. Click **Finish** to complete the installation.

Install Microsoft .NET Framework 3.0

Windows Workflow Foundation, required by Office SharePoint Server 2007, has been integrated into .NET Framework 3.0. To install the .NET Framework 3.0, you must complete the following steps:

▷ **To install .NET Framework 3.0**

1. Download Microsoft .NET Framework 3.0 from http://go.microsoft.com/fwlink/?LinkId=73912.

2. Double-click **dotnetfx3setup.exe**, and then click **Run** in the **Open File - Security Warning** dialog box.

3. Click the **I have read and ACCEPT the terms of the license agreement** option, and then click **Install**.

4. Click **Exit** to complete the installation.

Add Application Server role to SPS-SRV

Office SharePoint Server 2007 uses the Application Server role, which contains IIS and ASP.NET, to host Office SharePoint Server 2007 document libraries. To install the Application Server role, you must complete the following steps:

▷ **To add the Application Server role**

1. Click **Start**, point to **All Programs**, point to **Administrative Tools**, and then click **Manage Your Server**.

2. On the **Preliminary Steps** page of the Configure your Server Wizard, click **Next**.

3. Click **Application Server (IIS, ASP.NET)**, and then click **Next**.

4. Select the **Enable ASP.NET** check box, and then click **Next** twice.

5. When prompted for the CD, insert the Windows Server 2003 product CD into the CD-ROM drive, and then click **OK**.

6. Click **Finish** to complete the installation.

Install Office SharePoint Server 2007

Once all of the prerequisite components have been installed, you are ready to start installing Office SharePoint Server 2007. The following steps are required to install Office SharePoint Server 2007 server:

▶ **To install Office SharePoint Server 2007**

1. Double-click **setup.exe** from the Office SharePoint Server 2007 product CDs.
2. Enter your Product Key, and then click **Continue**.
3. Select the **I accept the terms of the agreement** check box, and then click **Continue**.
4. Click **Basic**.
5. After installation has completed, make sure that the **Run the SharePoint Products and Technologies Configuration Wizard now** check box is selected, and then click **Close**.
6. On the **SharePoint Products and Technologies Configuration Wizard** dialog box, click **Next**. Click **Yes** on the message that appears. This may take several minutes to complete.
7. Click **Finish** to complete the installation.

📝 **Note**

Before you add users to Office SharePoint Server 2007, configure Office SharePoint Server 2007 for RMS.

Configure Office SharePoint Server 2007 for RMS

After Office SharePoint Server 2007 has been installed, there are several things that must be completed to integrate Office SharePoint Server 2007 with RMS:

- Add the Office SharePoint Server 2007 site to the Local Intranet Internet Explorer zone.
- Add the Office SharePoint Server 2007 server to the RMS certification pipeline.
- Enable Information Rights Management in Office SharePoint Server 2007.
- Add USER1 and USER2 to the SharePoint site.
- Restrict permissions by using RMS.

First, add the Office SharePoint Server 2007 site to the Internet Explorer Trusted Sites zone on the Office SharePoint Server 2007 computer.

▶ To add SPS-SRV to Trusted Sites

1. Log on to SPS-SRV as CPANDL\ADMINISTRATOR.
2. Click **Start**, point to **Control Panel**, and then click **Internet Options**.
3. Click the **Security** tab, click **Local Intranet**, and then click the **Sites** button.
4. Type **http://SPS-SRV**, and then click **Add**.
5. Click **Close**, and then click **OK**.

Next, add the Office SharePoint Server 2007 server and RMS Service Group to the RMS cluster certification pipeline.

◆ Important

By default, the RMS cluster certification pipeline ACL is configured to allow only the local System account. You must add the permissions in order for Office SharePoint Server 2007 to integrate with RMS.

▶ To add SPS-SRV to the RMS Certification Pipeline

1. Log on to RMS-SRV as CPANDL\RMSADMIN.
2. Click **Start**, and then click **My Computer**.
3. Navigate to C:\Inetpub\wwwroot_wmcs\Certification.
4. Right-click **ServerCertification.asmx**, click **Properties**, and then click the **Security** tab.
5. Click **Add**.
6. Click **Object Types**, select the **Computers** check box, and then click **OK**.
7. Type **SPS-SRV**, click **OK**.
8. Click **Add**.
9. Click **Object Types**, select the **Groups** check box, and then click **OK**.
10. Type **RMS-SRV\RMS Service Group**, and then click **OK**.
11. Click **OK** to close the **ServerCertification.asmx Properties** dialog box.

Once the RMS cluster certification pipeline has been opened to allow SPS-SRV to communicate with it, you must configure Office SharePoint Server 2007 to use the RMS cluster:

▶ To enable Information Rights Management in Office SharePoint Server 2007

1. Log on to SPS-SRV as CPANDL\ADMINISTRATOR.
2. Click **Start**, point to **Administrative Tools**, and then click **SharePoint 3.0 Central Administration**.

3. Click **Operations**, and then click **Information Rights Management**.

4. Click **Use the default RMS server specified in Active Directory**.

5. Click **OK**.

Next, give USER1 and USER2 access to the RMS SharePoint site so that the Office SharePoint Server integration with RMS can be verified later in this guide:

▶ **To add USER1 and USER2 to the SharePoint site**

1. Click **Start**, point to **All Programs**, and then click **Internet Explorer**.

2. Type **http://SPS-SRV/** in the address bar, and then click **Go**. This will open the default Office SharePoint Server 2007 site that was created during installation.

3. Click **Site Actions**, point to **Site Settings**, and then click **People and Groups**.

4. Click **New**, and then click **Add Users**.

5. Type **USER1@CPANDL.COM;USER2@CPANDL.COM** in the **Users/Groups** box, and then click **OK**.

Create an Office SharePoint Server 2007 permission policy on the default document library. This permission policy will be used to restrict the ability to print any documents that are uploaded to the document library:

▶ **To restrict permissions using RMS**

1. In the same Office SharePoint Server 2007 site, click **Home**.

2. Click **Document Center**, click **Documents**, click **Settings**, and then click **Document Library Settings**.

3. Under the **Permissions and Management** heading, click **Information Rights Management**.

4. Select the **Restrict permission to documents in this library on download** check box.

5. Type **CPANDL Protected** in the **Permissions policy title** box.

6. Type **Restrict CPANDL employees from printing** in the **Permission policy description** box.

7. Click **OK**.

📝 **Note**

In addition to the permissions policy, Office SharePoint Server 2007 will also automatically apply RMS rights to the document when it is downloaded from the Office SharePoint Server 2007 site. These rights are determined by the Office SharePoint Server 2007 group membership for that site. For example, a user

who is in the Visitors Office SharePoint Server 2007 group will not be able to modify the document when it is downloaded from the Office SharePoint Server 2007 site.

Step 4: Verifying RMS Functionality on RMS-CLNT

To verify the functionality of the RMS deployment, you log on as USER1, create a new Microsoft Word 2007 document, and upload it to the Office SharePoint Server 2007 site so that users who download the document will not be able to print it. You then log on as USER2, download the document from the Office SharePoint Server 2007 site and verify that the ability to print the document has been restricted.

▶ **To create and upload a Microsoft Word document for testing**

1. Log on to RMS-CLNT as USER1.

   📝 **Note**

   Since USER1 is the author of this document, USER1 will have full rights to the document, regardless of the RMS rights that are applied to it.

2. Click **Start**, point to **All Programs**, point to **Microsoft Office**, and then click **Microsoft Office Word 2007**.

3. Type **This document is read-only. You cannot print it.** in the new document, click the **Microsoft Office Button**, click **Save As**, and then save the file as RMS-TST.docx.

4. Close Microsoft Office Word 2007.

5. Click **Start**, point to **All Programs**, and then click **Internet Explorer**.

6. Type **http://SPS-SRV/** in the address bar, and then click **Go**.

7. Click **Document Center**, and then click **Documents**.

8. Click **Upload**, and then click **Upload Document**.

9. Click **Browse**, click **RMS-TST.docx**, and then click **Open**.

10. Click **OK** to upload the file, and then click **Check In**.

    By uploading the document into this library, the document receives the restrictions set on the library.

11. Log off as USER1.

Finally, log on as USER2 and open the document from the Office SharePoint Server 2007 site.

▶ **To open a protected document**

1. Log on to RMS-CLNT as USER2.

2. Click **Start**, click **All Programs**, and then click **Internet Explorer**.

3. Type **http://SPS-SRV/** in the address bar, and then click **Go**.

4. Click **Document Center**, and then click **Documents**.

5. Click RMS-TST, and then click **OK** to open the document as **Read Only**.

6. The following message will appear: "**Permission to this document is currently restricted. Microsoft Office must connect to http://rms-srv/_wmcs/licensing to verify your credentials and download your permission.**"

7. Click **OK**.

8. The following message will appear: "**Verifying your credentials for opening content with restricted permissions**".

9. The **Print** button in the toolbar is disabled.

You have successfully deployed, integrated, and demonstrated the functionality of RMS and Office SharePoint Server 2007, using the simple scenario of uploading a Microsoft Office Word 2007 document to an Office SharePoint Server 2007 site. You can also use this deployment to explore some of the additional capabilities of RMS through additional configuration and testing.