

# RCM Installation and Setup Guide

**Software Version 2.1**

**For Windows operating systems**

**June 16, 2011**

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# 1. Introduction

RCM is tailored to meet the replication management needs of a wide variety of organizations, such as enterprises that need to synchronize thousands of kiosks on a daily basis, companies that need to update multiple branches, each with its own unique configuration and organizations that need to synchronize data and applications to numerous mobile computers.

RCM accelerates business and drives revenue by guaranteeing production content and applications are available when and where they should be.

## Terminology

- **Organizer** - A central repository holding a topology of Managed Centers, Center job definitions, Center configurations and Center health information.
- **Console** - A Graphical User Interface for the Organizer which can be used to create a topology of Managed Centers, define Center jobs and configurations, and remotely connect to the Centers in order to monitor job status.
- **Managed Center** - An R-1 Center that has joined an Organizer. The Center retrieves its jobs definitions and configuration settings from the Organizer and reports back its health and job completion status.

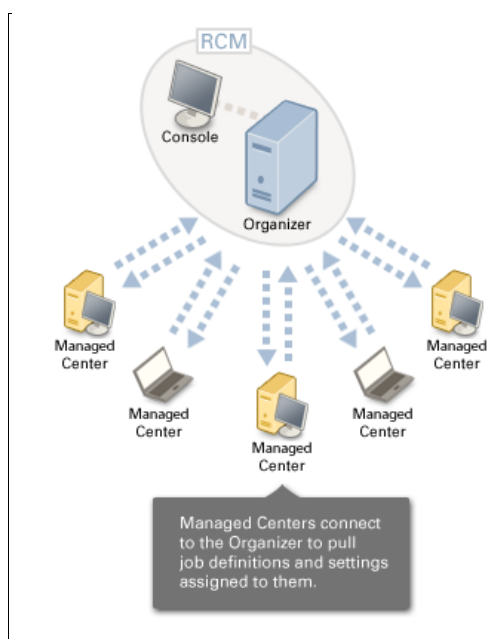


Figure 1: RCM Architecture

## RCM Security

RCM operates as a high-level application. It does not run in Kernel mode. RCM does not add accounts to the system and does not require privileges that bypass system security in any way.

In addition, RCM allows authenticated and encrypted data transfer of valuable digital assets between servers. All access can be denied by default, unless specifically permitted. Trusted IP addresses, subnets, users and schedules are supported, as well as the total anonymity of user/password/directory information from one server to another, thus allowing for secure transport between un-trusted networks. This authentication proxy mechanism adds a layer of autonomy, enabling servers that do not trust each other to synchronize massive content stores without having to divulge anything beyond the computer name or IP address, virtual user and virtual password.

## Installation Permissions

RCM should be installed by a user with Administrator privileges. This is required in order to define the RCM services.

## Installation Location

A non-intrusive application, RCM installation on production servers does not require a reboot or taking any application or user offline.

All application files are installed under the installation target directory:

```
~:\Program Files\RepliWeb\
```

RCM is not sensitive to the installation location, and default values can be changed to suit your corporate requirements.

## 2. Installation Prerequisites

This chapter lists all the prerequisites for installing RCM.



<b>Operating System</b>	<ul style="list-style-type: none"><li>▪ Windows Server 2000</li><li>▪ Windows Server 2003 (32/64-bit Editions)</li><li>▪ Windows XP (32/64-bit Editions)</li><li>▪ Windows Vista (32/64-bit Editions)</li><li>▪ Windows Server 2008 (32/64-bit Editions)</li><li>▪ Windows 2008 R2</li><li>▪ Windows 7</li></ul>
<b>Setup File</b>	rcm_win.exe
<b>Disk space</b>	500 MB
<b>Logged in user</b>	Administrator privileges required
<b>RAM</b>	













## Network Connections

RCM does not use UDP or TCP dynamic ports. RCM components use only pure TCP/IP to communicate.

The table below lists which firewall ports need to be opened according to the location and number of firewalls. Unless installed on the same machine, RCM components usually reside behind firewalls. The number and configuration (i.e. inbound or outbound ports) of the firewalls will depend on your organization's specific architecture.

### Legend:

 = Open the Outbound Firewall Port    = Open the Inbound Firewall Port

Port	Reason	Firewall Location and Configuration
2837	Connecting to the Organizer to create and manage a Managed Center topology via the Console.	Console →  Organizer
		Console  → Organizer
		Console  →  Organizer
2837	Managed Centers connect to the Organizer to sync job definitions, audit information and system health reports.	Organizer  ←  Managed Center
		Organizer  ← Managed Center
		Organizer ←  Managed Center
5475	If the WAN transport option is employed to download files from the Organizer to Managed Centers.	Organizer  ←  Managed Center
		Organizer  ← Managed Center
		Organizer ←  Managed Center

**NOTE:** If the Console and Organizer are on the same computer, the session is established internally and no changes need to be made to the firewall configuration.

Port numbers and service names can be overridden by an administrator if they conflict with the corporate standard. Using the Console GUI, port configuration can be defined for Console communication and for the transfer engine used.

For information about changing the ports, please refer to the *RCM User Guide*.

The connection request can be configured on any port but the **server** side must be pre-defined within the services file:

To change the ports on **Windows**, edit the `services` file (located in `c:\WINNT\system32\drivers\etc`)

## E-Mail Configuration

If you plan to use the exit notification feature, you should have the SMTP Host Name ready. Communication with the SMTP server is performed over port 25.

Email settings can be provided during the installation phase or afterwards, using the **Organizer > Manage Settings** option.

## 3. Installation

This chapter describes the RCM installation procedure.

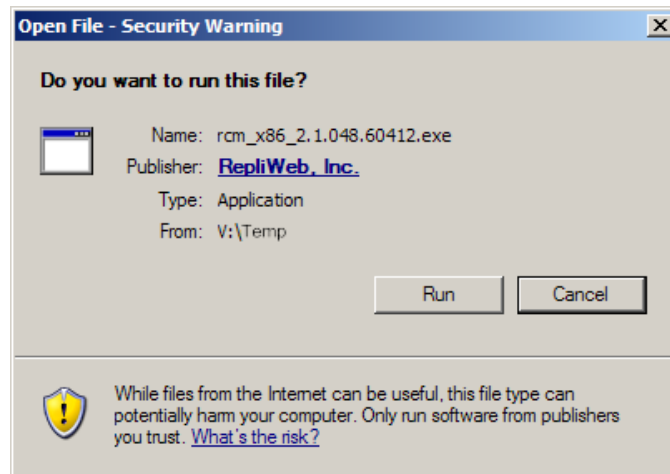
### The Windows Installation Procedure

Install RCM on Windows using either the Wizard or the [Command Line Installation](#).

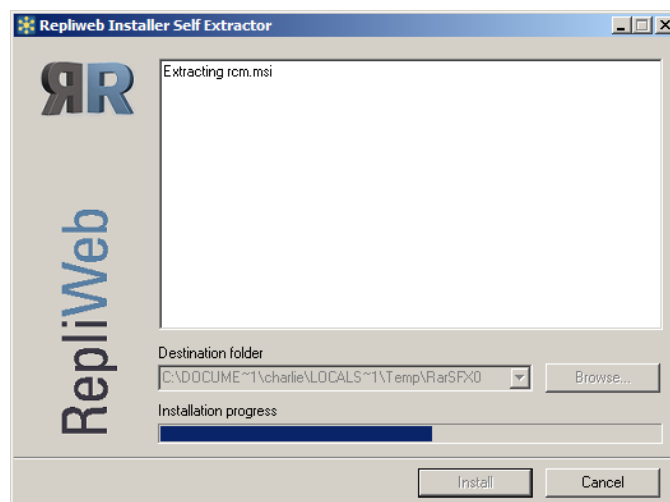
#### To install using the RCM setup wizard:

1. In **Windows Explorer**, navigate to the path of the installation package and double click the installation file `rcm_win.exe`.

The **Open File – Security Warning** screen is displayed.



2. Click **Run**. The **RepliWeb Installer Self Extractor** screen is displayed.

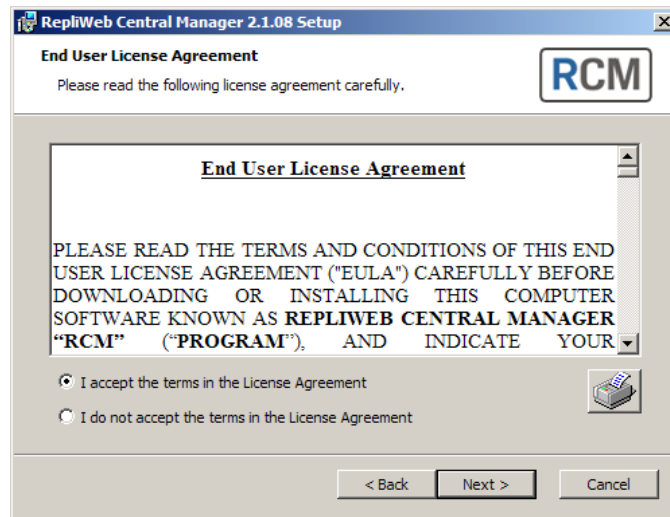


Once the **RCM extraction** is complete, the setup wizard opens.



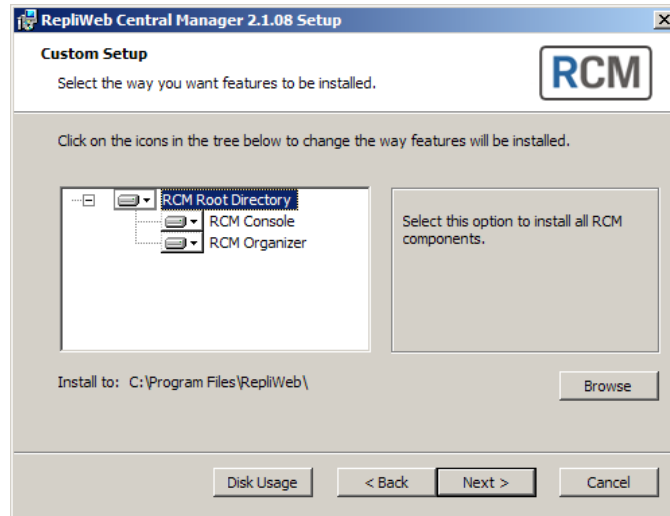
3. Click **Next**.

The **End-User License Agreement** screen is displayed.

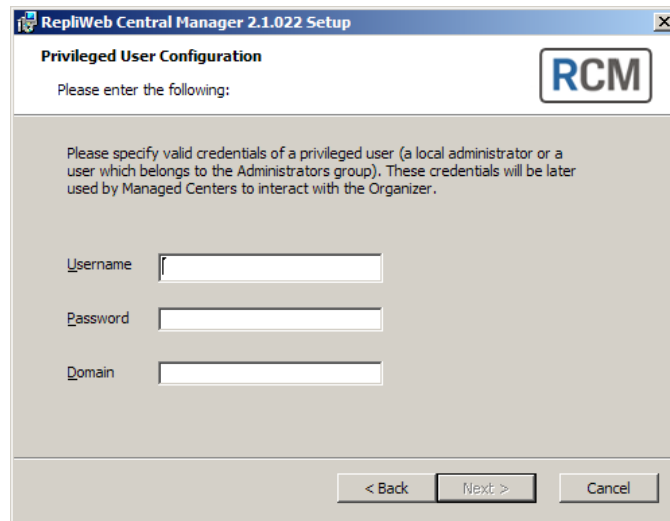


4. After reading the agreement, select the **I accept the terms in the License Agreement** option and then click **Next**.

The **Custom Setup** screen is displayed.



5. To change the default installation directory, click **Browse** and select a different directory.
6. Click **Next**. The **Privileged User Credentials** screen is displayed.



7. Enter the credentials of a local administrator or a member of the Administrators Group.

The credentials will be used to synchronize settings, job definitions, job status information and health reports between the Managed Centers and the Organizer.

The **Mail Configuration** screen is displayed.

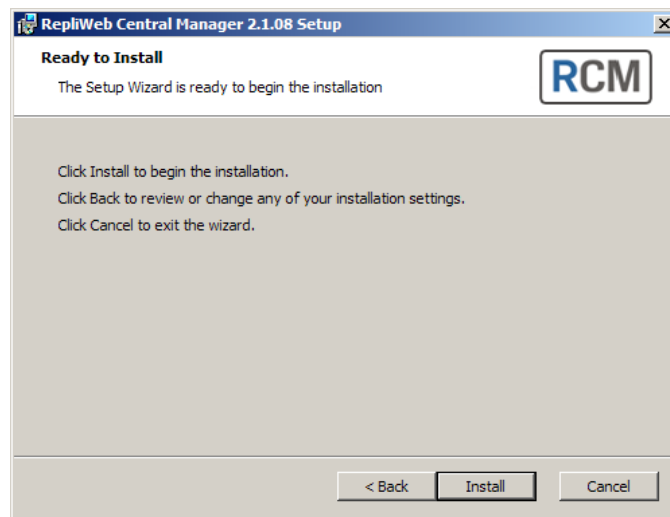


The screenshot shows a window titled "RepliWeb Central Manager 2.1.08 Setup" with a sub-header "Mail Configuration" and the RCM logo. The text "Please enter the following:" is displayed. Below this, a note states: "These fields should only be completed to enable e-mail notification feature. E-mail notification can be configured at a later time by using the Manage option." The form contains the following fields and examples:

- SMTP Host Name**: A text input field with the example "59.198.0.23 or Mail\_Server".
- Sender Address**: A text input field with the example "user@company.com".
- Use Secured Password Authentication:** A checkbox (not checked).
- Username**: A text input field.
- Password**: A text input field.

At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel".

8. Configure e-mail settings as follows:
  - a. In the **SMTP Host Name** field, specify the server name or IP address of your SMTP server.
  - b. In the **Sender Address** field, specify the text that you want to be displayed in the **From** column of the recipient's e-mail client.
  - c. If your SMTP Server requires a user name and password, specify the user name and password in the designated fields.
9. Click **Next**. The **Ready to Install** screen is displayed.



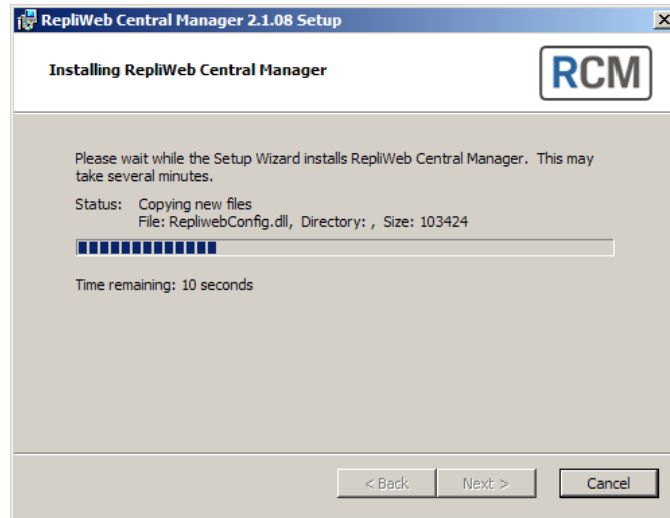
The screenshot shows a window titled "RepliWeb Central Manager 2.1.08 Setup" with a sub-header "Ready to Install" and the RCM logo. The text "The Setup Wizard is ready to begin the installation" is displayed. Below this, instructions are provided:

- Click Install to begin the installation.
- Click Back to review or change any of your installation settings.
- Click Cancel to exit the wizard.

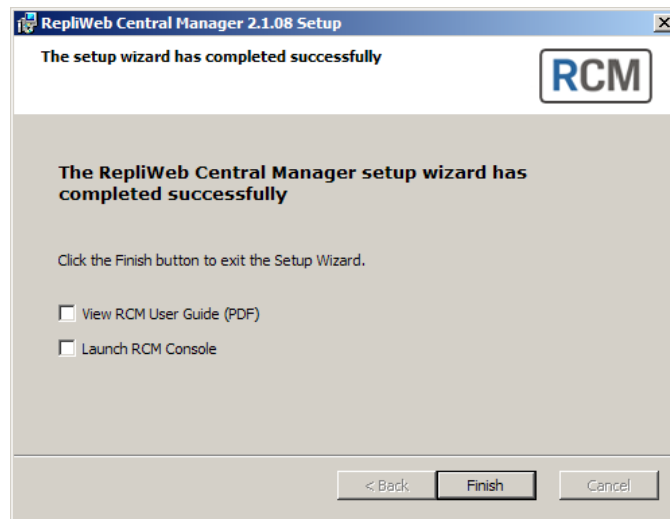
At the bottom of the window are three buttons: "< Back", "Install", and "Cancel".

10. Click **Install**.

The installation progress screen is displayed.



After the installation completes, the final screen is displayed.



11. Click **Finish** to complete installation.

## Command Line Installation and Uninstallation

RCM can be installed in silent mode via a command line, using either the RCM qualifiers or the MSI.

### Installing RCM

#### To install using qualifiers:

1. From the command prompt, issue the following command:

```
set RW_INSTALL_MODE=silent
```

2. The basic installation script/command should be:

```
Set RW_INSTALL_PARAMS=ADDLOCAL=RCM_ROOTDIR,RWRCM_CONSOLE,  
RWRCM_ORG ADMIN_USER=user_name ADMIN_PASS=password ADMIN_DOMAIN=domain
```

If you are installing the RCM Organizer component, make sure you include the credentials of a local administrator or a member of the Administrators Group:

```
ADMIN_USER=user_name ADMIN_PASS=password ADMIN_DOMAIN=domain
```

**NOTE:** To override the RCM default installation folder (C:\Program Files\RepliWeb), include `INSTALLDIR=<installation path>` in the command.

For example:

```
Set RW_INSTALL_PARAMS=ADDLOCAL=RCM_ROOTDIR,RWRCM_CONSOLE,RWRCM_ORG  
ADMIN_USER=user_name ADMIN_PASS=password ADMIN_DOMAIN=domain  
INSTALLDIR="d:\RepliWeb"
```

**NOTE:** You must specify `RCM_ROOTDIR` in any component combination (Organizer only or Organizer and Console).

3. Run the relevant RCM kit, for example, `RCM_x86.exe /s`

RCM should now be now installed on your machine.

#### To install using MSI

1. Extract the installation `.exe` file to a folder of your choice. The folder should now contain all the files that are required for the installation.
2. Install **Microsoft Visual C++ 2008 Redistributable** as follows:

On a 32-bit computer, run:

```
vcredist_x86.exe /q:a /c:"msiexec /i vcredist.msi /qb!"
```

On a 64-bit computer, run:

```
vcredist_x64.exe /q:a /c:"msiexec /i vcredist.msi /qb!"
```

- The basic installation script/command should be as follows, run it from the command prompt or from a script:

**NOTE:** You must specify `RCM_ROOTDIR` in any component combination (Organizer only or Organizer and Console).

```
msiexec /i rcm.msi /qb- ADDLOCAL=RCM_ROOTDIR,RWRCM_CONSOLE,RWRCM_ORG
ADMIN_USER=user_name ADMIN_PASS=password ADMIN_DOMAIN=domain
```

Components such as `RWRCM_CONSOLE` should be separated by a comma, and qualifiers such as `INSTALLDIR` should be separated by a space.

If you are installing the RCM Organizer component, include the credentials of a local administrator or a member of the Administrators Group:

```
ADMIN_USER=user_name ADMIN_PASS=password ADMIN_DOMAIN=domain
```

**NOTE:** To override the RCM default installation folder (**C:\Program Files\RepliWeb**), include `INSTALLDIR=<installation path>` in the command.

### Silent Mode Options

Option	Description
<code>qn+</code>	No UI except for a modal dialog box displayed at the end.
<code>qb-</code>	Basic UI with no modal dialog boxes.
<code>qb+</code>	Basic UI with a modal dialog box displayed at the end. The modal box is not displayed if the user cancels the installation.

**NOTE:** `/qb+` is not a supported UI level.

### Additional Installation Options

The following options are available for both the msi and qualifiers installation methods.

The examples used are for the qualifiers method:

**To configure SMTP email configuration, issue the following command:**

```
Set RW_INSTALL_PARAMS=ADDLOCAL=RCM_ROOTDIR,RWRCM_ORG,RWRCM_CONSOLE,
ADMIN_USER=user_name ADMIN_PASS=password ADMIN_DOMAIN=domain
SMTPHOSTNAME="10.0.12.5" SENDER="james@company.com" AUTH_USER="james"
AUTH_PASS=***
```

**To set a new port for each service, issue the following command:**

**NOTE:** This option overwrites the default RCM ports.

```
Set RW_INSTALL_PARAMS=ADDLOCAL=RCM_ROOTDIR,RWRCM_CONSOLE,RWRCM_ORG
ADMIN_USER=user_name ADMIN_PASS=password ADMIN_DOMAIN=domain
FCOPY_PORT="port value" REPLIWEB_CM_PORT="port value"
REPLIWEB_SCHED_PORT="port value"
```

**NOTE:** You should set these ports on a clean installation.

## Uninstalling RCM

### To uninstall RCM using qualifiers:

1. From the command prompt, issue the following command:

```
set RW_INSTALL_MODE=remove
```

2. Run the relevant RCM kit. For example:

```
RCM_x86.exe /s
```

RCM is removed from your machine.

### To uninstall using MSI:

Use `msiexec.exe`, usually located under `\Windows\System32\Msiexec.exe`.

1. Open a command prompt to where the `msiexec.exe` file resides, and issue the following command with the appropriate string:

For example:

```
msiexec.exe /x {CBA81D31-A0C1-41CD-85DF-56096E13B224}
```

where `/x` is for uninstalling.

2. To uninstall in a silent mode, add `/qb-` to your command.

It should look like this:

```
msiexec.exe /x {CBA81D31-A0C1-41CD-85DF-56096E13B224} /qb-
```

## 4. Configuration

The following chapter explains how to configure the system.

### Starting the RCM Scheduler on the Organizer

The RDS Scheduler service must be running before a machine can be used as an RCM Organizer. On Windows, the RCM processes run as services which start automatically on system startup.

**NOTE:** As a general policy, it is recommended that the startup of the RDS scheduler will be added to a later stage of the system initiation, rather than an early stage.

### Adding the CLI PATH

The Console CLI resides in `~\RepliWeb\RCM\Console\Bin`

To activate the Console CLI from any directory on the system, the appropriate PATH should be added to the relevant systems.

## 5. Verifying the Installation

Perform the tests provided in this chapter to ensure that RCM has been correctly installed. Run the tests that affect the network with the relevant parties' consent only.

**NOTE:** If you run tests on a live module, inform site personnel of the testing in advance to avoid unnecessary confusion.

The RCM installation is verified by using the RCM Command Line Interface (CLI). Refer to the [RCM User Guide](#) for a detailed explanation of the CLI format and options.

The Console CLI resides in `~\RepliWeb\RCM\Console\Bin`

Open a DOS Prompt and change the working directory to:

```
~\RepliWeb\RCM\Console\Bin
```

**NOTE:** RCM does NOT create any default user or password. All user names and passwords used in this guide are samples only.

### Prerequisites for Testing

Before performing the following tests, verify connectivity on port 2837 if using LAN or LFA, or on port 5745 if using WAN.

## Test Procedure

**NOTE:** The Console and Organizer must be installed on a Windows computer in order to perform this test.

### To verify that the RCM components are up and running:

1. Open the command prompt and issue the following command:

```
>cd ~\RepliWeb\RCM\Console\Bin
```

2. Issue the RCM information command.

```
>r1 info -org=<IP/Hostname> -org_user=<user_name> -org_password=<password>
```

The command output will display the version and build date of the RCM Console and Organizer (Center).

```
Console information:
  Version : RCM 2.1.048.60412 (x86)
  Build Date : Dec 16 2010 17:35:23

Center "localhost" information:
  Version : RCM 2.1.048.60412 (x86)
  Build Date : Dec 16 2010 16:55:12
```

# 6. Upgrading and Uninstalling RCM

This chapter describes how to uninstall and upgrade the RCM installation.

## Uninstalling RCM

This section explains how to uninstall RCM.

**NOTE:** Removing RCM does not require a reboot.

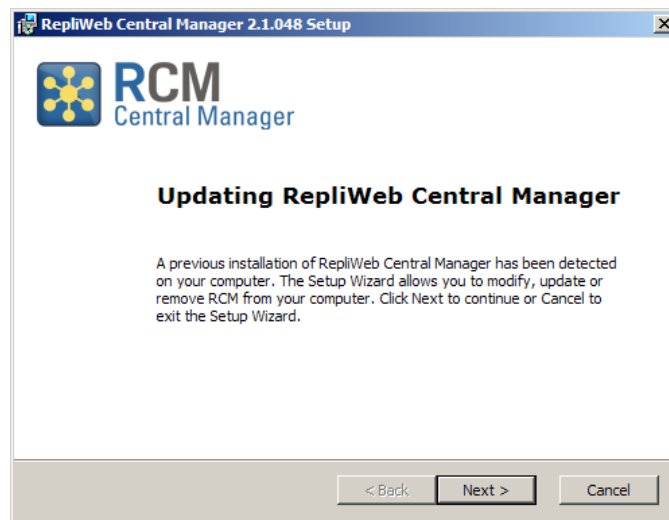
### To uninstall RCM from Windows:

1. From the **Start** menu, select **Control Panel > Add or Remove Programs**.

The **Add or Remove Programs** window opens.

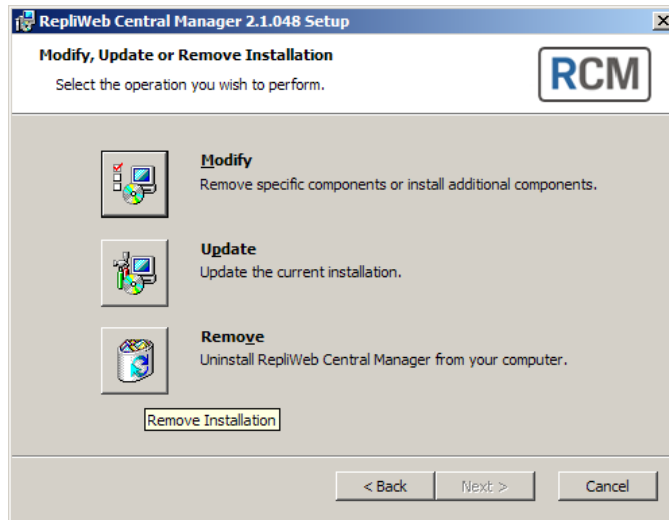
In the **Currently installed programs** list, select **RepliWeb Central Manager** and then click the **Change** button to its right.

The **RCM Uninstall/Change Wizard** opens.

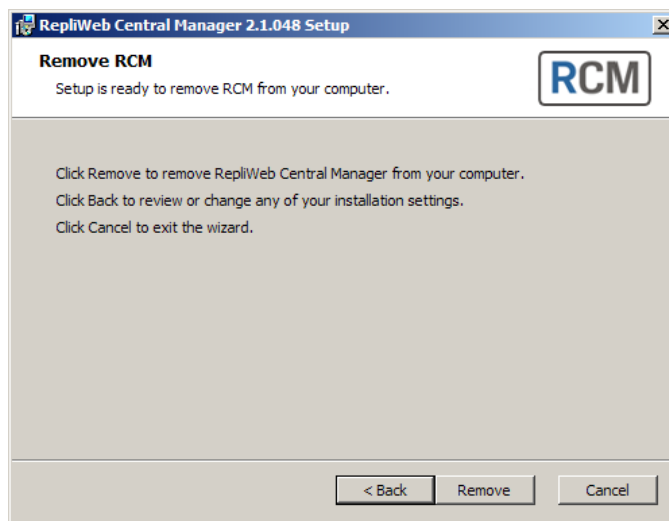


2. Click **Next**.

The **Modify, Remove or Update Installation** screen appears.



3. Click **Remove**. The **Remove RCM** screen appears.



4. Click **Remove**. RCM is uninstalled from your machine.

To uninstall via command line, see [Command Line Installation](#).

## Upgrading RCM

This section explains how to upgrade an existing RCM installation.

**NOTE:** Upgrading RCM does NOT require a reboot.

### Upgrade Preparation

Make the following preparations before you begin the upgrade procedure.

- Copy/Download the latest RCM version to your computer.
- Back up your existing RCM settings.
- Make sure that the Organizer Console and the Windows Services Window are closed.

**NOTE:** If you accidentally installed the 32-bit RCM kit over a 64-bit installation, you need to completely uninstall RCM and then re-install the 64-bit kit.

#### To upgrade your RCM version using the setup wizard (Windows):

1. Run the setup wizard and select **Repair/Update**.
2. After the upgrade completes, restore your settings if needed.

#### To upgrade your RCM version using the MSI:

- ◆ Open a command prompt and change the working directory to the directory containing the extracted installation files. Then issue the following command:  
`msiexec /fvamuse rcm.msi`