

Installation Guide

Centerm Cloud Client Manager

CCM 6.0.000.000

Issue: 01

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Centerm Information Co., Ltd.

CentermTM

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Centerm Information Co., Ltd.

Add: 2nd Floor, Building 22, Star-Net Sci. & Tech. Park, Juyuanzhou, 618 Jinshan Avenue, Fuzhou City, Fujian Province

Tel: 400-158-1515

Fax: 86-591-83057710

Postcode: 350002

Website: <http://www.centerm.com>

Customer

Service Email: centermfw@centerm.com

Foreword

Thank you for choosing Centerm Cloud Client Manager, which was independently developed by Centerm Information Co., Ltd. Before using this product, please carefully read this Manual.

Reminder Description

Note

NOTE provides additional information (explanatory note, explanation or instruction) to emphasize or supplement the main text.

Caution

CAUTION indicates a potentially hazardous situation that, if not avoided, could result in the failure in installation/use/operation, equipment damage, data loss, performance deterioration, or other unanticipated results.

- ⌘ The **cloud terminal, terminal, client** or **Agent** as mentioned in this document, unless otherwise stated, shall all indicate the computer equipment installed with CCCM Agent.
- ⌘ Unless otherwise stated, the deletion of document or record by all functional modules is irrevocable.

Revision History

Revision History describes the cumulative changes to the document. The latest document version contains all changes made in previous versions.

Document Version 01 (2016-05-24)

This version is the first official release.

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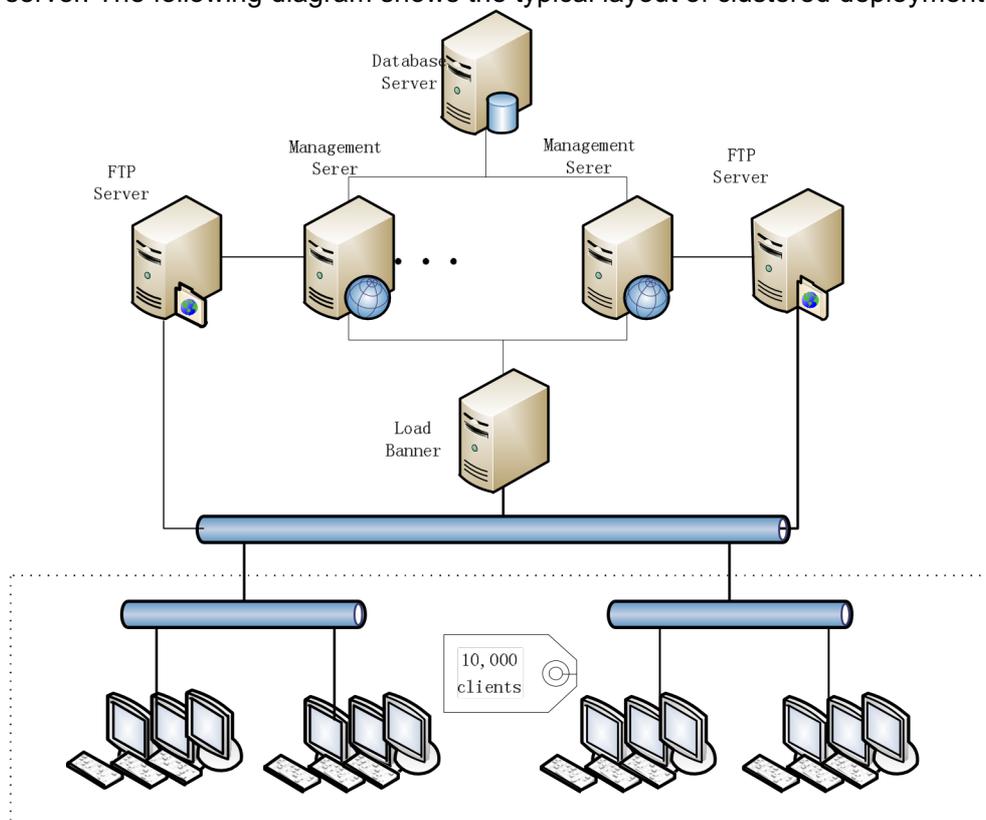
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1 Overview

Centerm Cloud Client Manager (CCCM) is a server-based application program enabling centralized management of cloud clients running Centerm programs. Consisting of multiple components, CCCM can be installed on one or multiple servers to allow single-server deployment or clustered deployment, thus enabling the management of varied number of clients.

1.1 Product Overview

CCCM consists of management server, data server, database server and load balancing server. The following diagram shows the typical layout of clustered deployment.



Management server

As a core component of CCCM, the management server provides user interface and communicates with cloud clients at the same time to carry out management operations and store operational data and files.

Data server

As a file storage server of CCCM, the data server contains a FTP Server for storing and retrieving templates, patches, OS images and other file resources.

Database server

CCCM needs to use the database server to store varied data generated during system operation. However, Centerm is not obliged to provide the installation medium and after-sales service for any third-party database product.

Load balancing server

In clustered deployment, the load-balancing server is used to redirect the access requests from clients to each management server.

1.2 Installation Resources

Resource	Installation Component
Data server installation program (CDS)	CDSsetup
Database import program (UnitedDB)	UnitedDBsetup
Management server installation program (CCCM)	CCCMsetup

1.3 Requirements for Database

CCCM supports the following database products, yet Centerm is not obliged to provide the installation files and after-sales service for any third-party database product.

- MS SQL Server 2005 Enterprise Edition
- MS SQL Server 2008 R2 Enterprise Edition
- MySQL(MySQL Community Server 5.1.52~5.7.10)
- PostgreSQL 9.4

Download database product and manual:

➤ SQL Server 2005

Download & licensing: acquire from Microsoft

Official manual:

[http://technet.microsoft.com/zh-cn/library/ms143516\(v=SQL.90\).aspx](http://technet.microsoft.com/zh-cn/library/ms143516(v=SQL.90).aspx)

➤ SQL Server 2008 R2

Download & licensing: acquire from Microsoft

Official manual:

[http://technet.microsoft.com/zh-CN/library/ms143219\(v=sql.105\).aspx](http://technet.microsoft.com/zh-CN/library/ms143219(v=sql.105).aspx)

➤ MySQL

Version: 5.1.52

Download:

<http://downloads.mysql.com/archives/get/file/mysql-5.1.52-win32.msi>

1.4 Ports Required

This section describes the standard and custom ports used by CCCM. The following ports shall remain open.

Caution:

1. It's not recommended to change the default port number for each server. If it's needed, please record the change and make the corresponding changes during the installation of associated components.
2. If port hasn't been correctly opened, although you can still finish the installation process, your program won't function normally.

Standard ports:

Port	Protocol	Usage
1433	TCP	Default communication port of SQL Server
3306	TCP	Default communication port of MySQL
5432	TCP	Default communication port of PostgreSQL

CCCM custom ports:

Port	Source	Target	Protocol	Usage
443	Administrator's browser	CCCM	TCP	Administrator accessing CCCM
9003, 8081, 8083	Administrator's browser / other server	CCCM	TCP	Communication between TC & CCCM
11021, 11020	TC/ Administrator's browser	CDS	TCP	Accessing FTP library, transmitting upgrade file
8099	TC/ Administrator's browser	CDS	TCP	Accessing HTTPS library, transmitting upgrade file
50000~50100	TC/ Administrator's browser	CDS	TCP	TC accessing FTP library, download upgrade file
5900	Administrator's browser	TC	TCP	TC remote monitoring

8000~ 8001	CCCM	TC	TCP UDP	Ports of management to be listened by TC
40000 39575	CCCM	CCCM	TCP	Data caching ports of communication between CCCM servers

1.5 Requirements for Server Configuration

The following sections describe the recommended hardware and software configurations for each component to be installed.

Server	Recommended Hardware Configurations		Operating System & Software
Management server	CPU	Dual-core 2.4GHz or higher	Windows Server 2003 SP2 32 bit Windows Server 2008 R2 64 bit Windows Server 2012 64 bit
	RAM	4G	
	Free space	1G	
Data server	CPU	Dual-core 2.4GHz or higher	Windows Server 2003 SP2 32 bit Windows Server 2008 R2 64 bit Windows Server 2012 64 bit
	RAM	4G	
	Free space	250G	
Database server	CPU	Dual-core 2.4GHz or higher	Windows Server 2003 (SP2) 32 bit Windows Server 2008 R2 64 bit Windows Server 2012 64 bit MS SQL Server 2005 MS SQL Server 2008 R2 MySQL 5.1.52~5.7.10 PostgreSQL 9.4
	RAM	4G	
	Free space	250G	
Management Server+ Data Server+ Database Server in 1 host.	CPU	Quad-core 2.4GHz or higher	Windows Server 2003 (SP2) 32 bit Windows Server 2008 R2 64 bit Windows Server 2012 64 bit MS SQL Server 2005 MS SQL Server 2008 R2 MySQL 5.1.52~5.7.10 PostgreSQL 9.4
	RAM	8GB	
	Free space	250GB	

2 Deployment Structure

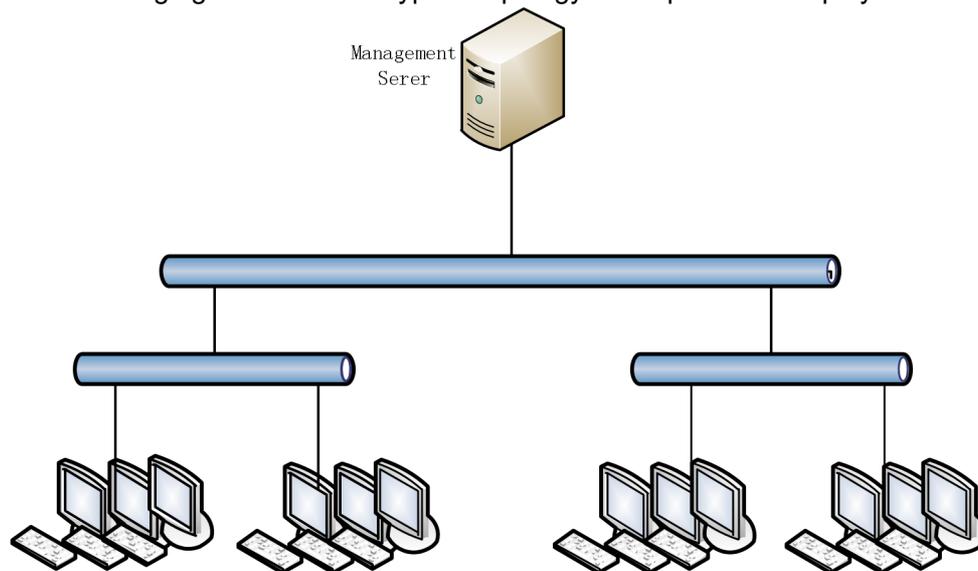
CCCM products can be used in ordinary LAN environment. You can select different deployment modes according to different numbers of clients to be managed.

1. Simple mode deployment: less than 2,000 clients and no requirement for high reliability;
2. Ordinary mode deployment: less than 5,000 clients and no requirement for high reliability;
3. Cluster mode deployment: more than 5,000 but less than 30,000 clients and requiring centralized management.

Simple mode

CCCM can be deployed with the minimal resources without the need for a load-balancing server. The management server, data server and database server can be installed on the same host computer.

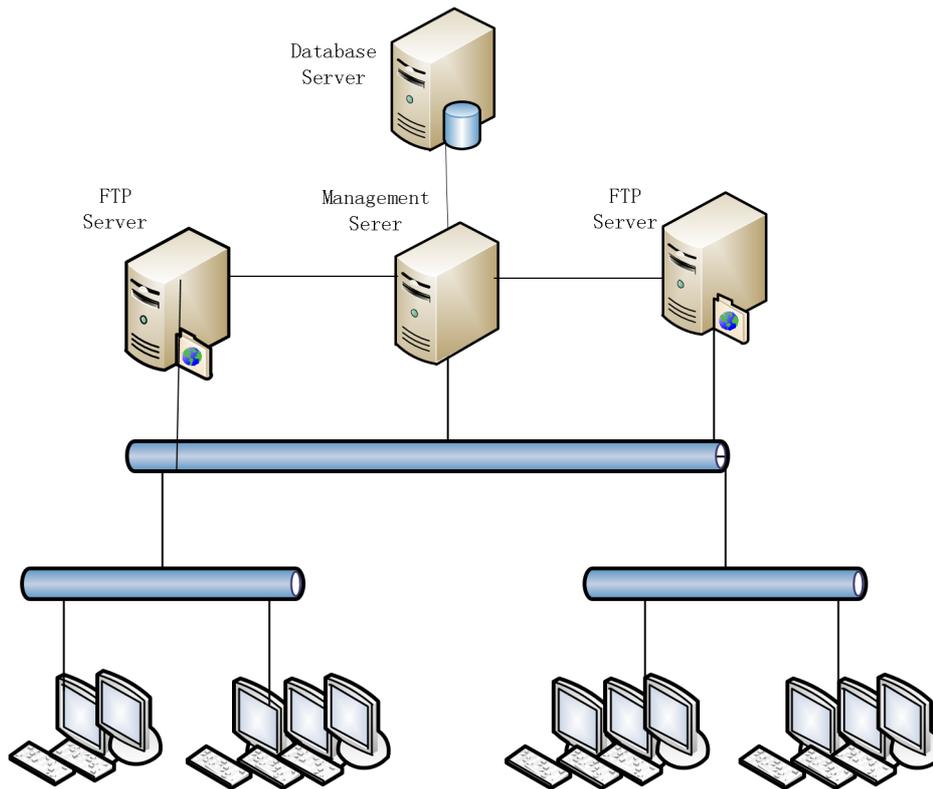
The following figure shows the typical topology of simple mode deployment:



Ordinary mode

CCCM can be deployed in ordinary mode without the need for a load-balancing server. The management server, data server and database server can be installed on different host computers, or certain components can be installed on the same host computer. The ordinary mode equals to the simple mode when all components are installed on the same host computer.

The following figure shows the typical topology of ordinary mode deployment:

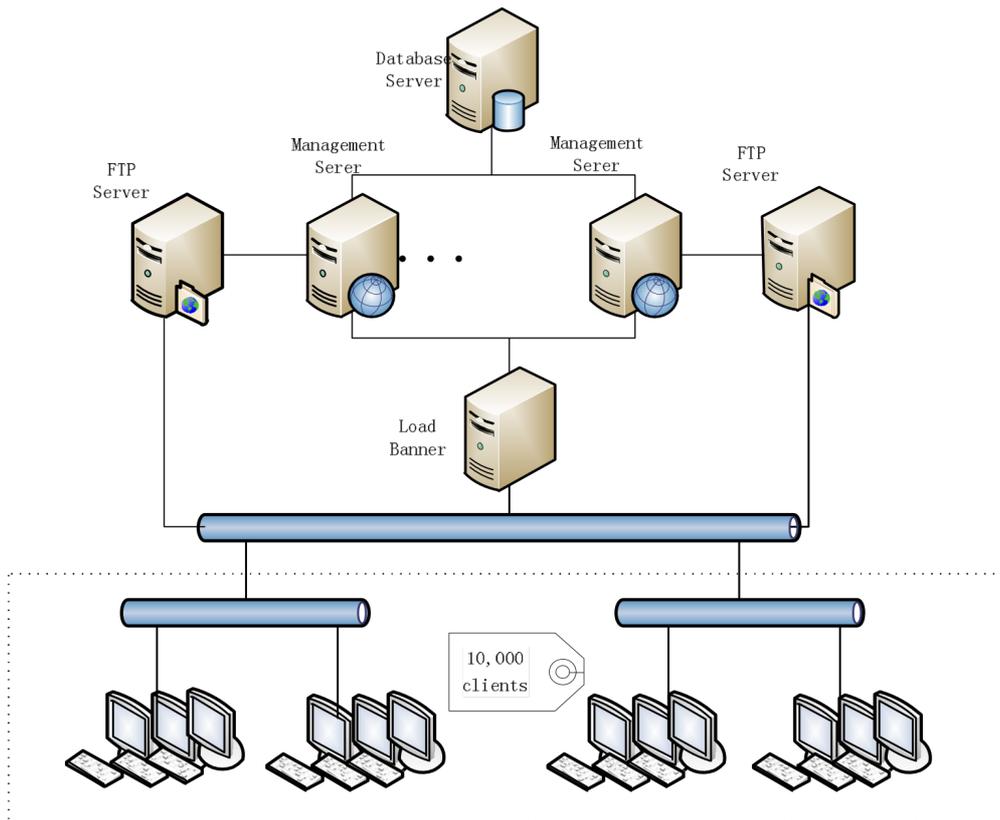


Cluster mode

CCCM can be deployed in cluster mode with the need for a load-balancing server, a database server, at least two management servers, and multiple data servers. The management servers must be deployed on separate host computers; the data servers can be deployed on the same host computer used by the management server, or on a separate one.

Each additional 3,000 clients will need one additional management server and at least one data server. The number of data servers shall be no less than the number of management servers.

The following figure shows the typical topology of cluster mode deployment:



3 Installation and Configuration

3.1 Installation Process

This section describes the installation steps of each CCCM component. Please refer to "[2 Deployment Structure](#)" to determine the deployment mode and then install the corresponding components on one or multiple host computers.

Installing Database

To install the database server, please refer to the installation manual for the database product selected and the corresponding configuration notes. Supported databases are described in "[1.3 Requirements for Database](#)".

Database configuration notes:

- ⌘ Service port: if the database server is installed on separate host computers, make sure the communication port has been included into firewall exceptions.
- ⌘ Number of connections: The number of connections for database is 50*n ("n" indicating the number of manager servers).

Explanatory notes for configuring SQL Server database:

After installing SQL Server database, please reboot the operating system to make sure SQL Server environment variables take effect.

Explanatory notes for configuring MySQL database:

- ⌘ In the dialog box of "MySQL Server Instance Configuration Wizard", select "Multifunctional Database".
- ⌘ In the dialog box of "MySQL Server Instance Configuration Wizard", select 'UTF-8' character set.

Start Installing CCCM Suit

1. Double click the CCCM package (CCCMSuitSetup).
2. Click "**Next**" on the welcome interface.
3. Setup installation path for CCCM Suit. And Click "**Next**".
4. Check components to be installed.
5. On the performance test interface, the installation program will test computer performance and indicate in different colors.

Click "**Next**" to continue installation or click "**Cancel**" to abort installation.

Note:

- i Green (excellent): the server performance has reached or is higher than the recommended requirements.

- ii Yellow (average): the server performance falls between the recommended requirements and the minimum requirements.
- iii Red (poor): the server performance falls below the minimum requirements.

6. Check and confirm the installation path, click "Install".

Installing United Database Import Package

1. Read all terms of "License Agreement", accept these terms by checking "**I accept the agreement**" and click "**Next**".
2. Create database.

Caution:

These steps require the database account to have 'Create Database' permission to create database.

Select the correct **database type** and then type in database **service port**, database **username** and **password**.

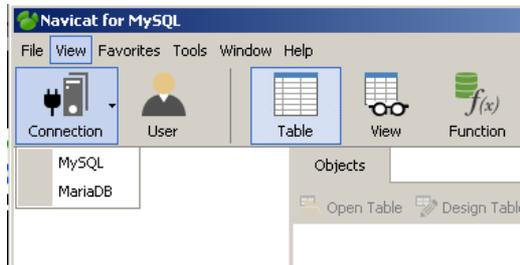
For the default communication port of database instance, please refer to [1.4 Ports Required](#)". If the database instance doesn't use the default port, please use the actual communication port of the database.

3. Use the default installation path or select another installation path, and then click "**Next**".
4. Check and confirm the installation path and click "**Install**".
On the installation completion interface, click "**Finish**" to exit.

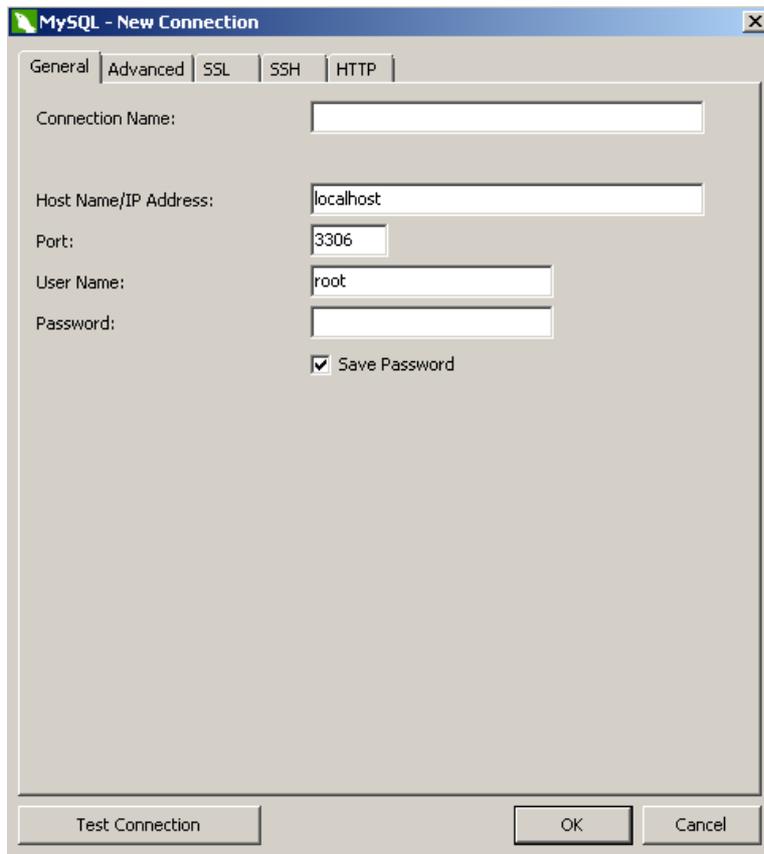
Explanatory notes for configuring MySQL database:

3rd party software such as “Navicat for MySQL”, “Navicate for PostgreSQL” and “Navicate for SQL Server” can check whether database import package is installed correctly.

1. Open corresponding software (for instance,if you use MySQL, open “Navicat for MySQL”), Click “Connection”



2. Enter the correct database information, test the connection to database.



3. Double click left side of the window to expand databases, look for “cdms_terminal”
4. If “cdms_terminal” doesn’t exist, please reinstall the database.

Installing Management Server

1. Select installation language. For instance: select "**English**".
2. Click "**Next**" on the welcome interface.
3. Read all terms of "License Agreement", accept these terms by checking "**I accept the agreement**" and click "**Next**".
4. On the performance test interface, the installation program will test computer performance and indicate in different colors.

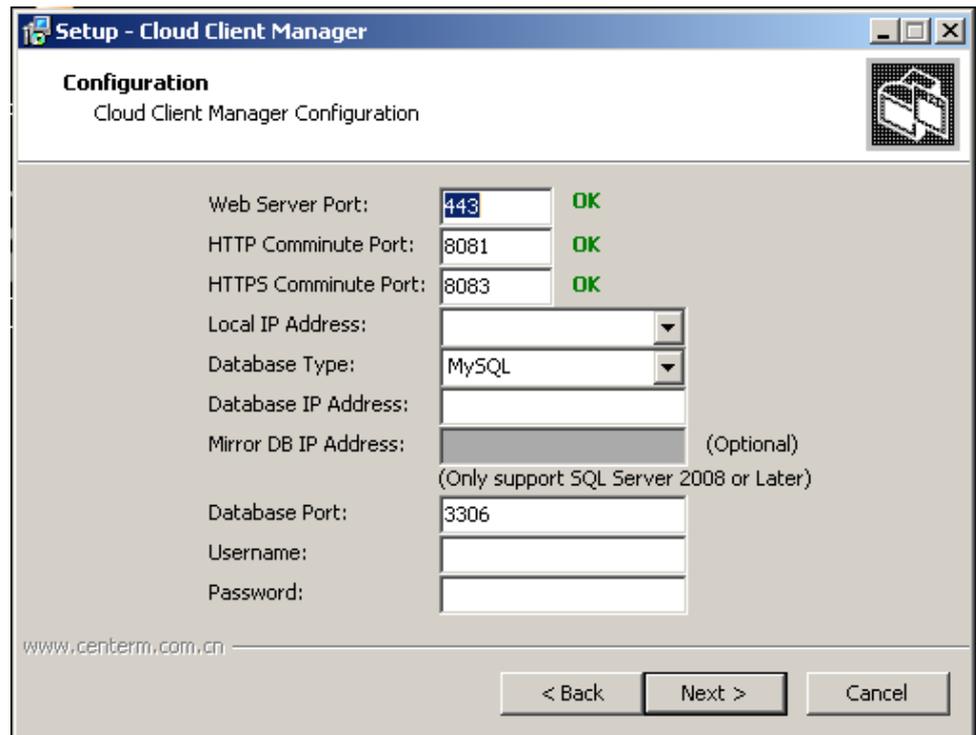
Click "**Next**" to continue installation or click "**Cancel**" to abort installation.

Note:

- ⌘ Green (excellent): the server performance has reached or is higher than the recommended requirements.
 - ⌘ Yellow (average): the server performance falls between the recommended requirements and the minimum requirements.
 - ⌘ Red (poor): the server performance falls below the minimum requirements.
5. Select installation type, "Standard Installation" or "Customized Installation" and click "**Next**"
 6. Use the default installation path or select another installation path, and then click "**Next**".
 7. In the Web certificate configuration interface, keep default settings if you have no special requirement. And click "**Next**".
 8. Setup configuration for CCCM:

Caution:

- ⌘ Local IP Address: If the local host computer has only one IP, please keep the default setting; if it has multiple IPs, please select the IP to be used by CCCM.
- ⌘ Database Port: If the default communication port has been changed during database instance installation, you will need to enter the actual database port here.
- ⌘ The database account must have insert, delete, update and select permissions on the database of "cdms_terminal".
- ⌘ You can set the "**Mirror DB IP Address**" only after have selected to use SQL Server 2008. If you don't need to configure the image database, please leave the address blank.
- ⌘ If there's no need to configure mirror database, keep the **Mirror DB IP Address** empty. But when SQL Server is in Main/Standby Switchover mode and the corresponding mirror database address is set, filling the correct **Mirror DB IP Address** will be mandatory here.



9. Check and confirm the installation path, click **"Install"**.
10. After installation is finished, click **"Finish"**.

If you are using cluster mode deployment, please repeat the above steps to install multiple management servers in cluster mode.

Installing Data Server

The data server can be installed on separate host computers, or on the same host computer where the management server is on.

1. Click **"Next"** on the welcome interface.
2. Read all terms of "License Agreement", accept these terms by checking **"I accept the agreement"** and click **"Next"**.
3. On the performance test interface, the installation program will test computer performance and indicate in different colors.

Click **"Next"** to continue installation or click **"Cancel"** to abort installation.

Note:

- i Green (excellent): the server performance has reached or is higher than the recommended requirements.
 - ii Yellow (average): the server performance falls between the recommended requirements and the minimum requirements.
 - iii Red (poor): the server performance falls below the minimum requirements.
4. Select installation type, "Standard Installation" or "Customized Installation" and click **"Next"**
 5. Use the default installation path or select another installation path, and then click **"Next"**.
 6. Configure ftp port, https port, user name and password for data server.

Note:

It's recommended to use the default communication port.

Setup - Cifin Data Server

Configuration
File Server Port Configuration

ftp port: range: 1 ~ 65535

https port: range: 1 ~ 65535

user:

pwd: (default Admin123!)

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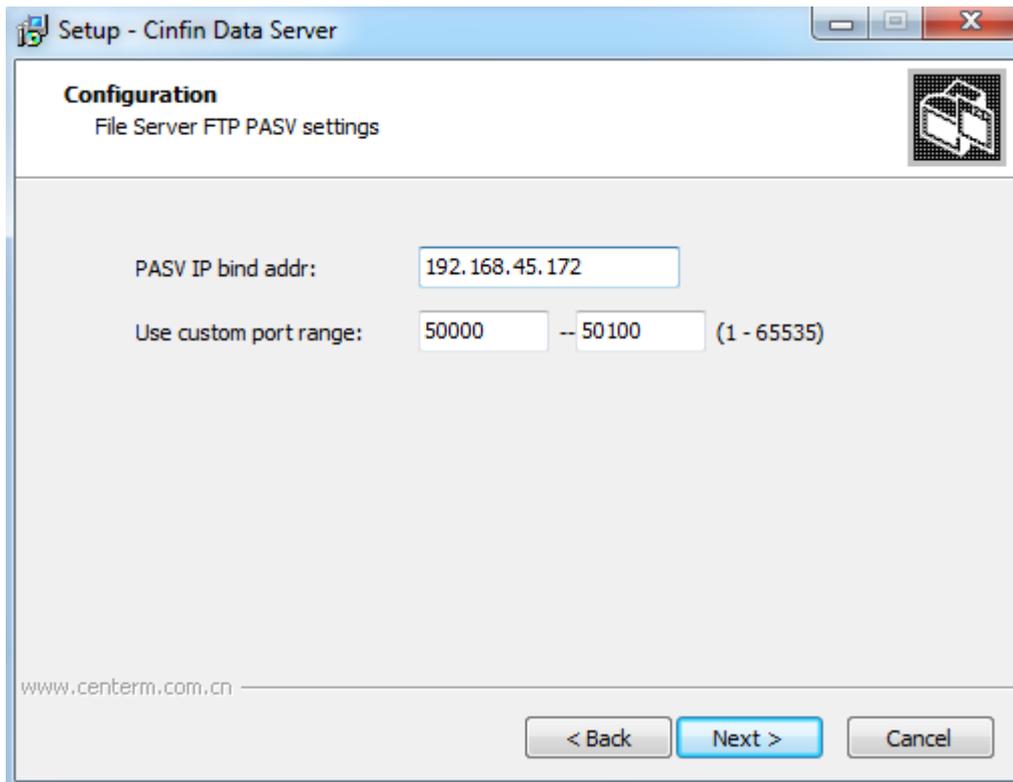
< Back Next > Cancel

7. Setup configuration for FTP passive mode.

If the host computer has multiple IPs, enter the correct IP used by data server.

Note:

It is recommended to use the default passive IP port range. If there's certain limitation on ports, the port range can be changed, but it shall be >1024.



8. Check and confirm the installation path and click "**Install**".
9. On the installation completion interface, click "**Finish**" to exit.

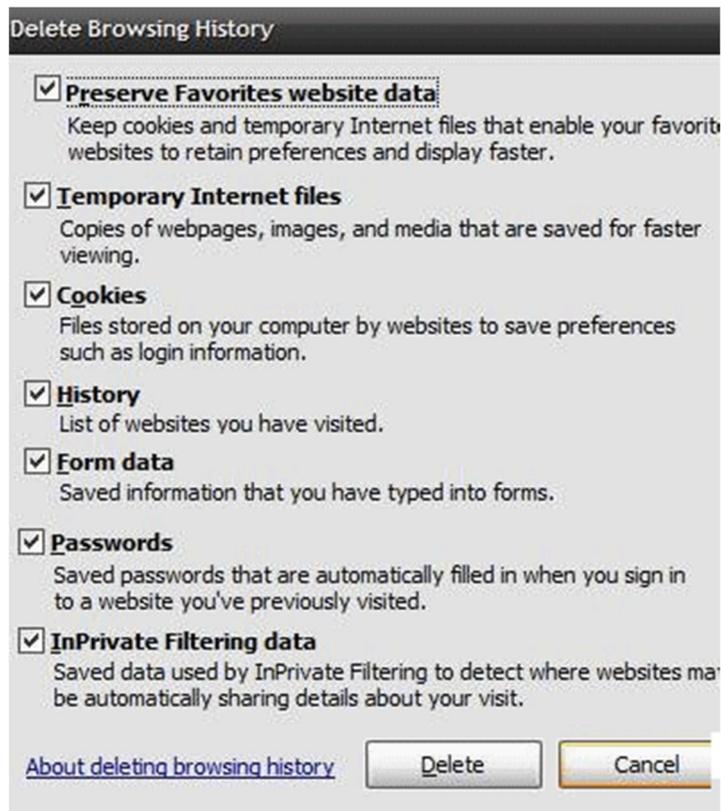
If you are using cluster mode deployment, please repeat the above steps to install multiple data servers.

3.2 System Initialization

Environment Cleanup

After the entire system is ready, log in the management system and execute the following steps. **Caution:**

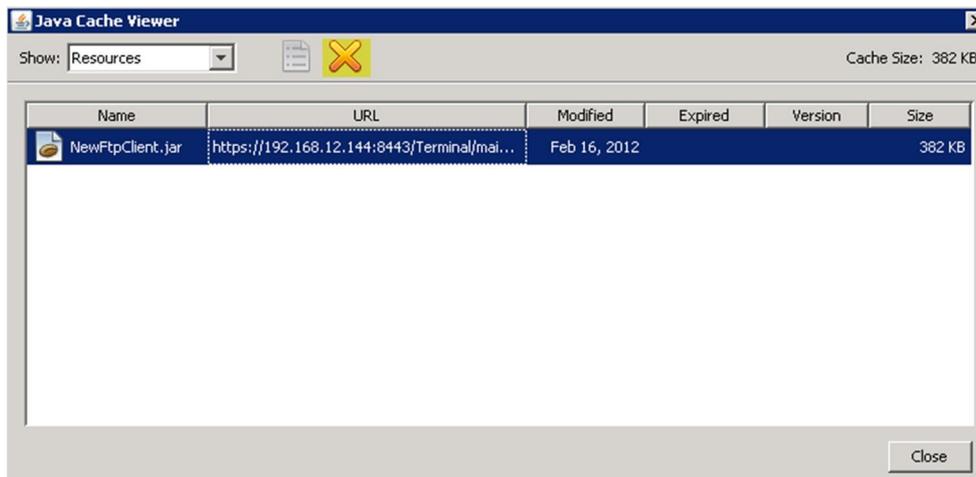
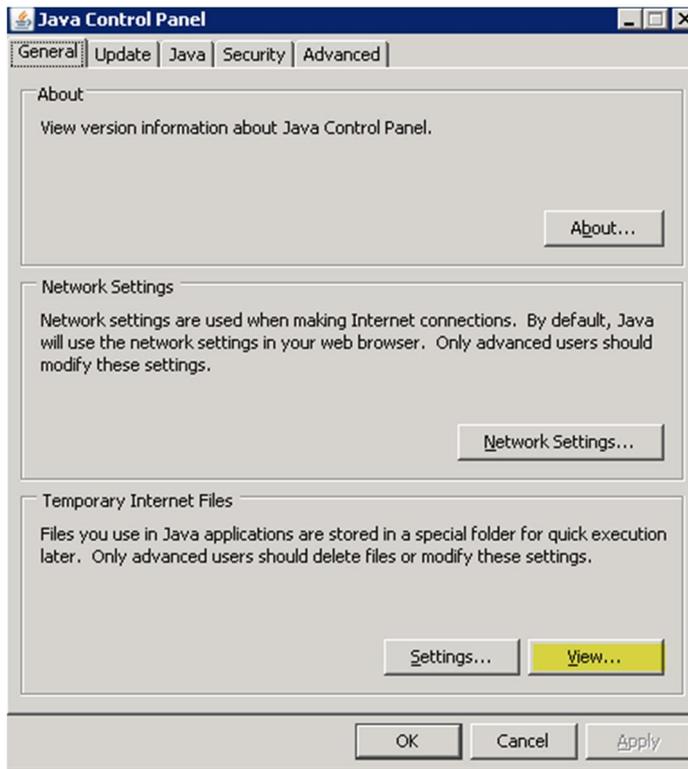
If older version of management server has been installed on the computer on which the current management server is installed, and the computer accessing the web system has also accessed this server before, then you will need to execute the following steps: Open the browser (taking IE8 as an example) and use Shift+Ctrl+Delete to open the following dialog box. Check and delete Temporary Internet files.



Open Control Panel and select "Java".



Delete the cached applet files, as shown below:



If JRE 1.7.* is installed, change following settings for host computer, to add IP address of management server host computer to exception list.

