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Installing Caché on Microsoft Windows Vista

CAUTION: Caché 2007.1 is *not* supported on the Microsoft Windows Vista operating system.

Although it is not supported, this appendix describes the known issues, suggested work-arounds, and modified installation procedures for using Caché 2007.1 on Windows Vista. It assumes you are familiar with Windows Vista directory structures, utilities, and commands. This appendix contains the following major sections:

- [Vista Considerations on Caché 2007.1](#)
- [Installation Requirements](#)
- [Caché Installation](#)
- [Post-Installation Tasks](#)
- [Special Considerations](#)

E.1 Vista Considerations on Caché 2007.1

InterSystems has identified a number of changes in the Microsoft Windows Vista operating system that require changes to Caché and Ensemble. This section summarizes each issue; if necessary, subsequent sections contain details of any required manual adjustments. This

document assumes that User Account Control (UAC) is enabled on Windows (the default), specifically that the **Run all administrators in Admin Approval Mode** setting is enabled.

- Do not install anywhere under the Program Files directory.
- If you choose Normal or Locked Down initial security settings, choose the default system account and then specify the Caché service account after installation. See the [Adjust Caché Security Settings](#) section for details.
- The %Service_Console service and the Caché **cstat** and **cterm** utilities require manual adjustments to run. See the [Adjust Caché Security Settings](#) section for details.
- To use IIS7 with Caché 2007.1, you must configure it manually after installation. See the [Configure CSP for the IIS Web Server](#) section for details.
- DDP and LAT do not run in Caché 2007.1 on Windows Vista.
- You can use the ActiveX interface, but the Caché Activate Wizard does not work in Caché 2007.1 on Windows Vista. See [Using ActiveX with Caché](#) for information.
- Be aware that the startup encryption option differs slightly on Windows Vista. If an instance uses database encryption and supports Startup with interactive key activation, Caché prompts for encryption key information. This prompt causes Vista to display an **Interactive services dialog detection** dialog box; note that the window for this dialog is initially minimized, so that it may not be visible if you configure Vista to hide the taskbar. See the “[Database Encryption](#)” chapter of the *Caché Security Administration Guide* for details.

Important: This list may evolve as InterSystems performs further testing on this platform. See the [InterSystems Corporation Web site](#) for the latest news regarding Caché on Windows Vista.

E.2 Installation Requirements

This section describes the hardware and software requirements for installations of Caché, including:

- [Disk Space Requirements](#)
- [Platforms and Web Servers](#)
- [Installation Directory Restrictions](#)

E.2.1 Disk Space Requirements

A standard Caché installation that includes support for Caché Server Pages (CSP) uses approximately 550 MB (megabytes) of disk storage (not including disk space for user data). You must have 10 MB additional disk space free on your Windows system disk for installation.

Your system must have access to a DVD drive for installation, either attached to your computer or available across a network.

Any system that can effectively support Windows should be sufficiently powerful to run Caché. Caché performance greatly improves with increased processor and disk speed.

E.2.2 Platforms and Web Servers

Caché 2007.1 is *not* supported on Windows Vista; it requires several manual adjustments to function properly. These adjustments apply to the following 32-bit and 64-bit versions of the Microsoft Windows Vista operating system:

- Windows Vista Business
- Windows Vista Enterprise
- Windows Vista Ultimate
- Windows Vista Home Premium
- Windows Vista Home Basic

If you are using CSP, you must install the Web server before installing Caché for it to automatically configure the Web server. See the “[CSP Configuration](#)” chapter of the *Using Caché Server Pages* guide for more information.

The CSP technology is supported on the Microsoft IIS Web server and on the Apache Web server, versions 2.0 and 2.2. However, the 2007.1 installer does not recognize IIS 7 on Vista; you must configure it manually after installation.

With each instance, Caché installs a private Apache Web server and a private CSP Gateway to serve CSP pages to assure proper operation of the System Management Portal and the Caché Online Documentation. Its Windows service name is “Web Server for <instname>” where <instname> is the instance name you enter when you install Caché. Caché installs the Web server into the <CacheSys>\httpd directory, where <CacheSys> is the Caché installation directory. It is uninstalled when you uninstall the corresponding Caché instance.

If you are installing Caché from a network, first copy the entire contents of the DVD to the network drive. Map the network drive to a particular drive letter, for example, “Q:”, by clicking **Map Network Drive** from the **Tools** menu in Windows Explorer.

E.2.3 Installation Directory Restrictions

You *cannot* install Caché into a destination directory that has any of the following characteristics:

- It is in the \Program Files directory.
- It has a caret (^) in the pathname.
- It has a character that is not in the US ASCII character set.
- It is at the root level of a drive (such as C:\).

E.3 Caché Installation

The steps for installing each type of a Caché configuration are fundamentally the same, but diverge slightly in the steps to select the type of installation. The differences are detailed in subsections after the standard installation description.

Important: Do not run two installations of Caché at the same time on the same machine.

E.3.1 Caché Standard Installation

The standard installation procedure installs both Caché server and client components on the computer. To perform a standard installation follow these steps:

1. Close all other Windows applications and shut down the Web server if it is installed on the same computer. For a DVD installation, load the software DVD into your DVD drive. For a network installation, ensure that you have access to the files.
2. The DVD should autoloading; if it does not, click **Start** and click **Run** from the menu. In the **Open** text box of the **Run** dialog box, enter:

```
[drive]:\nt\setup.exe
```

The drive value is the letter of your DVD drive. Click **OK** to start the Caché InstallShield Wizard.

3. The Caché setup begins. Within setup, reply to the prompts as they appear:
 - Click **Next** to continue to the next dialog box.
 - Click **Back** to go back to a previous dialog box and change what you have entered.
 - Click **Cancel** to stop the installation.
4. **License Agreement** — If there are no instances of Caché on this machine, setup displays the Caché License Agreement. Click **Yes** to confirm that you accept this agreement.
5. Depending on whether other Caché instances exist on this machine, one or both of the following dialog boxes displays:
 - a. **Select Caché Instance** — Displays a list of existing installation directories if there are other instances of Caché. You can select one of these directories to update, or choose to install a new instance into a new directory.
 - b. **Define Caché Instance Name** — Prompts you to enter a name for a new Caché instance. The default name is `CACHE`, or if other instances exist `CACHE n` , where n is the number of Caché instances including this new one. Accept the default or enter another name. Subsequent updates to this instance maintain the instance name you enter here.
6. **Setup Type** — Select the type of installation you prefer:
 - **Standard** — Installs the server, client, and ODBC driver components. Select this option if you plan to use this computer as a Caché database server.
 - **Client** — Installs only the Caché client components. Select this option if you plan to use the Caché system and configuration utilities on this computer as a client to a Caché database server on another computer. See [Caché Client Installation](#) for details.
 - **Custom** — Allows you to select which components you want to install. See [Caché Custom Installation](#) for details.

This dialog box also allows you to select a destination directory for the Caché software for a new instance; the default location is `C:\Program Files\CacheSys` (or `Cachen` when multiple instances exist). You must change to another directory by clicking **Browse**. If you enter a directory that does not exist, setup asks if you want to create it, click **Yes** to create it and continue.

CAUTION: Do not install under the \Program Files directory. Files installed under this directory are protected and cannot be overwritten without privilege. If you install under \Program Files you cannot modify or delete files in the installation directory. InterSystems recommends you install in C:\users\\CacheSys, where <CacheUser> is the Caché service account user name.

7. **Install Unicode Support** — Select either 8-bit or Unicode support for your installation (the default depends on your operating system locale):

- **8-bit** — The software handles characters in an 8-bit format.
- **Unicode** — The software handles characters in the Unicode (16-bit) format. Select Unicode if your application uses languages that store data in a Unicode format, such as Japanese.

InterSystems recommends 8-bit character support for locales based upon the Latin-1 character set, ISO 8859–1. Use Unicode if the base character set for your locale is not Latin-1, or if you plan to have data from locales based upon a different character set. If you use an 8-bit version of Caché, your data is not portable to 8-bit locales based on a different character set.

CAUTION: If you choose a Unicode installation, you cannot revert to an 8-bit version without potential data loss. This is because an 8-bit version of Caché cannot retrieve 16-bit character data from a database.

8. **Initial Security Settings** — Decide how restrictive you want the initial Caché security settings to be. If you choose **Minimal**, the installation continues with the next step. If you select **Normal** or **Locked Down**, it performs these additional steps:

- a. **User Credentials** — Choose an existing Windows user account under which to run Caché.

CAUTION: You must choose the default system account because you cannot specify the Caché service account during installation on Vista. The test for administrator membership always fails; so, therefore, the installation does not let you enter a user name and password. You must manually change the Windows user account under which to run the Caché service after installation. See the [Adjust Caché Security Settings](#) section for details.

- b. **Caché Users Configuration** — The installation creates a Caché account with the %All role for the user who is installing Caché to grant that user access to services necessary to administer Caché. Enter and confirm the password for this account. The password must meet the criteria corresponding to the security setting.

Important: If you select Minimal for your initial security setting, but Caché requires network access to shared drives and printers, you must manually change the Windows user account under which to run the Caché service. Choose an existing account or create a new account that has local administrative privileges on the server machine.

For a detailed explanation of these settings, see the [Initial Caché Security Settings](#) section of the “Preparing for Caché Advanced Security” appendix of this guide.

9. **Enter License** — If you do not have a Caché license already on your computer (no cache.key file in the system manager’s directory), the **Enter License** dialog box explains that a key was not detected and asks if you want to enter a license during the installation.

Click **No** to continue with the remaining installation steps. You can update your license information at another time by using the System Management Portal from the **[Home] > [Licensing] > [License Key]** page.

Click **Yes** to open the Caché License Wizard.

See the [Maintaining License Key](#) section of the “Managing Caché Licensing” chapter of the *Caché System Administration Guide* for details about entering InterSystems Caché licensing information.

10. **Install Summary** — Review the selected installation options and destination directory for the software files. Click **Next** to continue. Setup installs Caché in the selected directory.

A standard installation sets the following port numbers for your Caché instance:

- SuperServer port number — 1972 or the first available subsequent number equal to or higher than 56773
- [Web server port number](#) — 57772 or the first available subsequent number
- [Telnet port number](#) — 23

You may change the SuperServer port value after installation from the **[Home] > [Configuration] > [Memory and Startup]** page of the System Management Portal.

You may change the Web server and Telnet port values after installation from the **[Home] > [Configuration] > [Advanced Settings]** page of the System Management Portal.

11. If you are installing the Web Server Gateway (CSP Gateway) and a Web server is running, a dialog box appears asking if you want to stop the Web server. If you click **Yes**, the installation procedure stops the server, installs the CSP Gateway, and restarts the server. If you click **No**, the procedure does not configure the CSP Gateway for the Web server; it only installs the private CSP gateway for the private Apache Web server included with Caché.
12. **InstallShield Wizard Complete** — Indicates the installation has completed successfully. Choose whether you want to see the *Getting Started* page and click **Finish** to start Caché.

The installation procedure notifies you if a restart is necessary, and prompts you to choose to restart now or later.

After Caché is installed, the **Caché Cube** icon appears in the system tray area of the Windows tool bar. Click the cube to bring up the Caché menu. In addition, there is a **Caché** item on the Windows **Programs** menu.

For Windows servers, the installation names the Caché Windows service “Caché Controller for <instance>,” using the name from the **Define Caché Instance Name** dialog box. The service is set up to start automatically as a Windows service when you start your server.

You may change this setting, **Start Caché on System Boot**, from the **[Home] > [Configuration] > [Memory and Startup]** page of the System Management Portal (available from the **Caché Cube**). If this instance is part of a Windows cluster, you must clear the check box to prevent automatic startup, allowing the cluster manager to start Caché.

E.3.2 Caché Client Installation

If you wish, you can install only those parts of Caché that are required on a client machine. These include the Caché system and programmer utilities. The client installation follows a set of dialog boxes similar to a Caché standard installation.

This software is included when you install Caché and does not require a separate installation medium.

To perform a client installation:

1. Follow the first five steps of the [standard installation](#).
2. At the **Setup Type** dialog box, select **Client**.

The dialog box allows you to select a destination directory for the Caché software. The default location is C:\Program Files\CacheSys; change it.

CAUTION: You must enter another directory by clicking **Browse**. InterSystems recommends you install in C:\users\\CacheSys, where <CacheUser> is the Caché service account user name.

3. If the directory you enter does not exist, confirm you want it created by clicking **Yes**.
4. **Install Summary** — Review the installation name, type, and destination directory for the software files. Click **Next** to continue. Setup installs Caché in the selected directory.
5. **InstallShield Wizard Complete** — Indicates the installation has completed successfully. Click **Finish**.
6. When the installation is complete, define a preferred server for this client. This procedure is described in the [Define a Remote Server Connection](#) section of the “Connecting to Remote Servers” chapter of the *Caché System Administration Guide*.

After Caché is installed on a client, the **Caché Cube** icon appears in the system tray area of the Windows tool bar; though it appears dimmed because there is no Caché server running.

E.3.3 Caché Custom Installation

The Caché installation program allows you to select certain Caché components to install on the computer. For example, you may want to install only the Web Server (CSP) Gateway. Keep in mind that some selections require that you also install other components.

To perform a Caché custom installation:

1. Follow the first five steps of the [standard installation](#).
2. At the **Setup Type** dialog box, select **Custom**.

The dialog box allows you to select a destination directory for the Caché software. The default location is C:\Program Files\CacheSys; change it.

CAUTION: You must enter another directory by clicking **Browse**. InterSystems recommends you install in C:\users\\CacheSys, where <CacheUser> is the Caché service account user name.

3. **Select Components** — Select those components you want to install as described in the [Caché Custom Components](#) table.
4. **Select SuperServer and Web Server Ports** — You can choose to let Caché assign the port numbers as described in the standard installation procedure or you can enter custom port numbers.

5. Continue with the **Install Unicode Support** step of the standard installation.

The following table lists the components you can select.

Caché Custom Components

Component	Description	Other Required Components
Caché Application Development ¹	Installs development components for building your own applications (C, C++, Java) that use Caché databases.	
Web Server Gateway (CSP) ²	Configures the Web server gateway for Caché Server Pages (CSP).	
Caché Studio	Installs the integrated, visual development environment for creating object-oriented database and Web applications with Caché.	
WebLink	Configures the Web server to use WebLink to connect to Caché databases.	
Caché Cube	Installs this simple interface to the Caché tools used to control and configure Caché.	
ActiveX Connectivity	Installs ActiveX to provide connectivity between client applications and Caché.	Caché Direct Connectivity
Documentation	Installs the Caché online documentation.	Caché Engine
SQL Tools ³	Installs ODBC and JDBC drivers and the SQL Gateway.	
Caché Engine ⁴	Installs the base Caché database engine.	Caché Direct Connectivity and ActiveX Connectivity

Component	Description	Other Required Components
Caché Direct Connectivity	Installs Caché Direct runtime client components needed for client connectivity.	
Manager Utility Source Code	Installs the utility source code into the %SYS namespace.	Caché Engine

¹ Contains six components: **Caché Engine Link Libraries** (installs C header files and object files necessary for relinking Caché on Windows platforms), **Light C++ Binding**, **C++ Binding for Caché**, **C++ SDK for Caché**, **Perl Binding for Caché**, and **Python Binding for Caché**. If you select either the Perl or Python binding, the C++ binding is also selected.

² The installation detects installed Web servers and presents options to automatically configure them for the CSP Gateway, see *CSP Gateway Install Options* for detailed information.

³ Contains two components: **ODBC Connectivity** and **Java Database Connectivity**. You may choose which of these subcomponents to install by selecting them.

⁴ Contains the **Install all Asian locales** option which, if selected, allows you to switch to any Asian locale without inserting the distribution DVD.

Note: The default selections on the custom menu are **Caché Application Development** (but none of the subcomponents), **Web Server Gateway**, **Caché Studio**, **Caché Cube**, **ActiveX Connectivity**, **Documentation**, **SQL Tools** (both subcomponents), **Caché Engine**, and **Caché Direct Connectivity**; these are the same components installed in a standard installation.

E.3.3.1 CSP Gateway Install Options

The Caché 2007.1 installation on Vista only detects the Apache Web server and presents the option to automatically configure it for the CSP Gateway. If detected, the install presents a check box for the following:

- CSP for Apache 2.x

If you select this option, Caché installs the main CSP Gateway and configures the Web server to work with the CSP Gateway. If you select the CSP Gateway component, but clear the option, it installs all the files required for the CSP Gateway, but does not change the Web server configuration. You can change the configuration manually after installation from the CSP Gateway application.

Caché always installs the private Apache Web server with a private CSP gateway on the selected Web server port for serving the System Management Portal and the online documentation.

Important: Installing the CSP Gateway overlays any changes you previously made in the CSP Gateway configuration.

E.4 Post-Installation Tasks

You can manage your Caché instance using the System Management Portal, which is accessible from the Caché Cube. For more information on this management tool, see the “[Using the System Management Portal](#)” chapter of the *Caché System Administration Guide*.

- Review the [Adjust Caché Security Settings](#) section to verify you have adjusted Caché to run properly on Windows Vista.
- If you are using the IIS 7 Web server you must configure it manually. See the [Configure CSP for the IIS Web Server](#) section for details.
- If you plan to connect remotely to other instances of Caché, follow the procedure described in the [Define a Remote Server Connection](#) section of the “Connecting to Remote Servers” chapter of the *Caché System Administration Guide*
- If appropriate for your installation, perform any additional tasks described in the [Special Considerations](#) section.

E.4.1 Adjust Caché Security Settings

You cannot specify the Caché service account during installation. You must manually change the Windows user account under which to run the Caché service. Choose an existing account or create a new account that has local administrative privileges on the server machine. To enter an account and password for the Caché service after installation use the Windows Administrative Tools:

1. Open the **Services** tool application.
2. Double-click *Caché Controller for <instname>* to display the **Properties** dialog box.
3. Click the **Log On** tab and click **This account**.

4. Choose the account name and password. Restart the instance for these change to take effect. Your entries must meet the following conditions:
 - The account exists on the domain.
 - You have supplied the correct password.
 - The account has local administrative privileges on the server machine.

Important: If you are using Kerberos, you must enter a defined account that you have set up to run the Caché service. InterSystems recommends you use a separate account specifically set up for this purpose.

Operational adjustments:

Most Caché services work after installation, except the `%Service_Console` service; it is the only Caché service where the server process (running `cache.exe`) is started directly by the user logged in to the Windows console. All other Caché server processes are created as descendents of the Caché Control Service process and run in the service Session 0 and are logged in under the Caché service account. `%Service_Console` logins work subject to the following restrictions:

1. You must be logged in to an account with administrator group membership.
2. You must be running as administrator.
3. The Caché control service must not be running under the local system account.

If any of these conditions are not met, you see the following error when you attempt to log in to the local terminal or from the Windows command prompt: `<Cache Startup Error: Getting CP handle (203)>`

The Caché `cstat` or `cterm` utilities also must run as administrator. You can do this in one of the following ways:

- Run a program marked as `Run as Administrator` using Windows Explorer. Display the Properties of the program, click the **Compatibility** tab and select the **Run this program as an Administrator** check box.
- Run a program from the Windows menu by right-clicking on it and selecting **Run as Administrator**.

Once you set the `run as administrator` attribute and you have answered **Allow** in the **User Account Control (UAC)** dialog box, all programs started by the program you ran as administrator run as administrator. This means you can run the local terminal from the Caché Cube

without answering the UAC if you have run the cube as administrator. You can run the cube as administrator by right clicking on the **Start Cache** item in the Windows **Start** menu and selecting **Run as administrator**.

E.4.2 Configure CSP for the IIS Web Server

To use the IIS 7 Web Server you must manually configure it to work with the CSP Gateway. This includes the following tasks:

- Create virtual directories `/csp`, `/csp/bin`, `/<instname>/csp`, and `/<instname>/csp/bin`, where `<instname>` is the instance name you enter at installation.
- Map the `.cls`, and `.csp` extensions to `CSPms.dll`.
- Map the `.cxw` extension to `CSPmsSys.dll`.
- Add `CSPms.dll` and `CSPmsSys.dll` to the list of permitted extensions.
- Set permissions for the `IIS_IUSRS` group to allow read/execute access to `C:\inetpub\CSPGateway` and `<CacheSys>/csp`, where `<CacheSys>` is the installation directory.

See the “[Web Servers for Microsoft Windows](#)” chapter of the *CSP Gateway Advanced Configuration Guide* for more information.

In addition, the CSP Gateway modules in 2007.1 are ISAPI modules and do not work in a default IIS 7 installation. You must explicitly enable ISAPI modules in Windows Vista using the Control Panel **Add/Remove Programs** applet. Select **Turn Windows feature on or off**, expand **Internet Information Services, World Wide Web Services**, and **Application Development Features** and then select the **ISAPI Extensions** check box to enable the option.

E.5 Special Considerations

The following topics describe particular issues or tasks associated with licensing, specific platforms, or kinds of installations:

- [Multiple Caché Installation Issues](#)
- [Change the Caché Language](#)
- [Uninstall Caché](#)

E.5.1 Multiple Caché Installation Issues

You can install and simultaneously run multiple instances of Caché 2007.1 and later on a single Windows machine. Install Caché as for a single installation, giving each instance a unique name, a unique installation directory, and a unique port number.

Please reference the [Multiple Caché Instances](#) section of the *Caché System Administration Guide* for more detailed information.

Installing multiple Caché instances is limited by components where only one exists on a system. For example, typically there is only one Web server on a system; and as such, CSP is configured for the last installation. Caché client components stored in the registry encounter the same issue. The Caché ODBC driver and ActiveX components are stored in the registry using one name for each. Currently the last installation updates these components to point to the last instance installed. Caché makes an effort to move common components to a common directory that can be shared across Caché instances.

E.5.2 Change the Caché Language

When you install Caché, all supported language-specific utility DLLs are installed in the <cache-install-dir>\Bin directory. Each DLL contains localized strings and messages.

The format of the name of the DLL is UTILxxx.DLL, where xxx is a 3-letter code that signifies the following languages:

Code	Language
DEU	German (Standard)
ENU	English (United States)
ESP	Spanish (Spain)
FRA	French
ITA	Italian (Standard)
JPN	Japanese
KOR	Korean
NLD	Dutch (Standard)
PTB	Portuguese (Brazilian)
RUS	Russian

If you wish to change to the locale of a Caché installation, run the Caché National Language Support application `cnls.exe` from your `<cache-install-dir>/Bin` directory and update the information on the **Locale** tab.

E.5.3 Uninstall Caché

To uninstall Caché, first stop Caché and then click **Exit** on the Caché Cube to remove the cube from the system tray.

Use only the Caché-supplied uninstall program, accessible on Windows systems using the **Add or Remove Programs** utility from the Windows **Control Panel**.

Important: Other uninstall programs are not supported and using them may cause unexpected results.