Progress®
Corticon®

Corticon
Web Console Installation

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Learn about Corticon Web Console installations

Progress® Corticon® is the Business Rules Management System with the patented rules engine that enables you to automate sophisticated decision processes—without having to write code. This guide presents procedures for accessing, downloading, and running Corticon installers, as well as providing dynamic access to information about . Links to the Progress KnowledgeBase provide additional information about third-party software setup.

Note: The Corticon Installer wizards will install or update Corticon 7.x Java Server runtime components. You can install Corticon products on a machine that has a previous version installed. Where a previous version is installed, you must manage any port overloads that might result from running both versions.

Progress Corticon products

Progress Corticon distinguishes its development toolsets from its server runtime environments.

- **Corticon Web Console** enables administration of multiple remote Corticon Servers. A Web Console server is deployed into an application server, and then is accessed by users through authenticated web browser connections. The Web Console is a separate installation that enables it to maintain autonomy to manage all the supported long-term Corticon Server installations.
- **Corticon Studio** is the Windows-based development environment for creating and testing business rules.
- **Corticon runtime components** implement web services and in-process servers for deploying business rules defined in Corticon Studio:
  - **Corticon Server for Java** is supported on various UNIX and Linux web service platforms, in-process, and on various application servers. After you install it on a supported Windows platform, its runtime artifacts can be redeployed.

- **Corticon Server for .NET** facilitates deployment of Corticon Decision Services on Windows .NET Framework and Microsoft Internet Information Services (IIS).
- **Corticon Utilities** enable a command line interface for the Corticon Web Console, a utility for Corticon command line operations, and a utility for command line compilation of multiple decision services.

For details, see the following topics:

- Java requirements Web Console
- Download Web Console installer packages
- How to prepare for a Corticon Web Console installation

Java requirements Web Console

Corticon Web Console requires a supported Java distribution to run, as listed in *"Corticon 7.1 Supported Platforms"*. The user is responsible for ensuring that this Java distribution has any required security updates.

Java distributions are available from multiple sources. One good source is Adoptium: https://adoptium.net/

Note: Corticon installers utilize an embedded Java distribution for the purpose of performing install and uninstall operations. That Java distribution should not be used for any other purpose.

Download Web Console installer packages

Corticon installers can be used to perform a new install or update an existing installation.

- When performing a new installation the installer will prompt for information about the installation.
- When updating an installation, such as when applying a service pack, the installer will perform the update without asking for this information.

If the same or later version of the Corticon Web Console 7.1 component is already installed at any location on the target machine, an alert is posted that denies permission to continue.

To download the Corticon Web Console installer package:

1. Get credentials to access to download packages on the Progress Software Electronic Software Download (ESD) site.
2. Log in, and then navigate to the **Progress Corticon Server+.NET and Studio 7.1** page.
3. Click **View License**, and then click **Download**.
   - Unpack the `.zip` file.
   - Read and save the `.txt` file.
4. Locate, download, and save the Corticon Web Console installer package to a temporary location accessible by the target machine.

Corticon installer packages

Product	Platform	Format	Download
Web Console	Windows	exe	PROGRESS_CORTICON_7.1_WEB_CONSOLE_WIN_64.exe
	Linux	bin	PROGRESS_CORTICON_7.1_WEB_CONSOLE_LNX_64.bin

How to prepare for a Corticon Web Console installation

Before running the installer

To avoid possible constraints on the installer, do the following:

- **Review the supported platforms** - Refer to the Progress Software web page *Corticon 7.1 Supported Platforms Matrix* to review the operating system versions for Corticon Studio, Corticon runtime components, and supporting software.
- **Confirm that you have Administrator permissions on the target machine** - Administrator rights allow the installer to copy all the Corticon files to their proper locations. You must have Administrator rights and permissions to install this software. See your system administrator to obtain these rights.
- **Verify file system access** - Several Corticon features write files to the “home” directory structure. If the target machine for the Corticon installation does not have read and write access to this directory, you need to choose a directory location where Corticon will have both read and write access.

With each new release of Corticon, Progress strives to maintain full compatibility with prior releases. Sometimes changes in technology or product requirements introduce incompatibilities that users need to be aware of when planning an upgrade.

For detailed upgrade instructions, see the *Corticon Upgrade Guide*.

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Installing Corticon Web Console

Using the installer wizard—The Web Console installer provides a Windows installer.

Performing command-line Linux installations of Corticon components enables the Linux installer to run from the shell as a command with parameters.

For details, see the following topics:

- System requirements for Corticon Web Console
- Corticon Web Console runtime component licensing
- Running the Web Console Installer
- Installing Corticon Web Console on Tomcat 9
- Performing command-line Linux installations of Corticon Web Console
- Performing silent Web Console installations

System requirements for Corticon Web Console

Progress Corticon Web Console is supported on only on a few specific platforms and application servers.

Refer to the Progress Software web page Corticon Supported Platforms Matrix for information on supported browser versions.

The target system for a Corticon Web Console installation requires:

- Java 17 JDK
- Supported Windows or Linux operating system
- Supported application server (Documentation refers to Tomcat 9 with default port 8080)
- 8 GB Memory (16 GB or more recommended)
- 600 MB disk space

Corticon Web Console runtime component licensing

The Corticon Web Console does not require any license.

Web Console Managed Servers

The Web Console copies the `CcLicense.jar` (or its preferred name) from each managed server installation to its `CcServerSandbox`, located on the machine hosting the Web Console Server.

Running the Web Console Installer

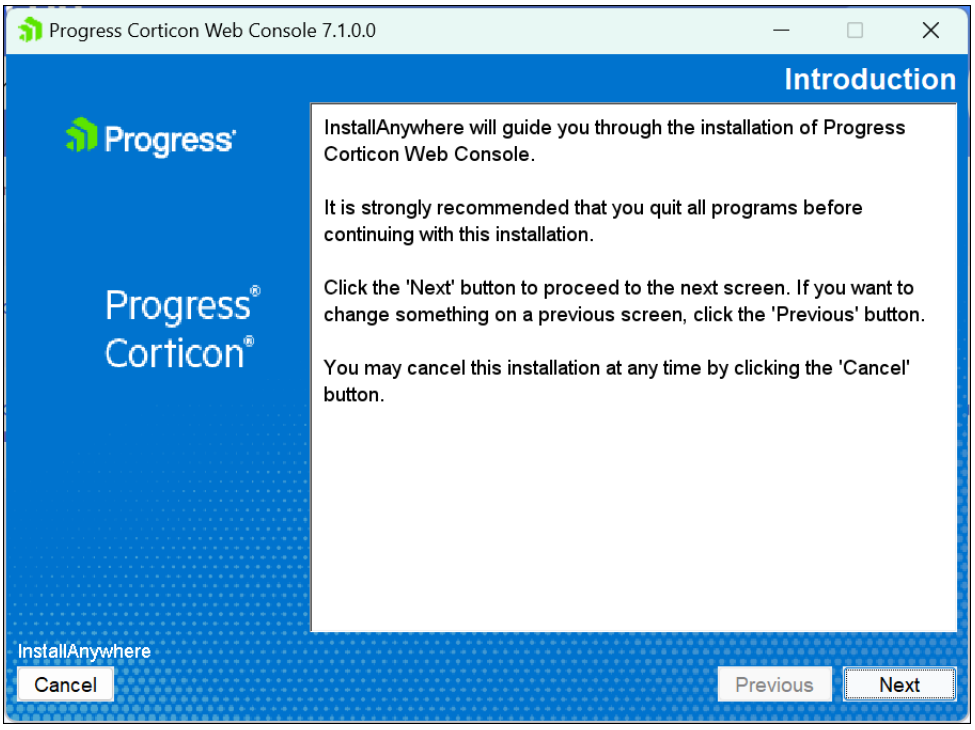
To create or update an installation of Web Console 7.1:

1. On the target machine, access the Corticon 7.1 installers you downloaded.
2. To open the Web Console Setup Wizard:
   - For Windows, double click on: `PROGRESS_CORTICON_7.1_WEB_CONSOLE_WIN_64.exe`

     Note: While not typically required, if you are told to do an administrator install, right-click on the EXE file, and then choose **Run as administrator**.

   - For Linux, run: `PROGRESS_CORTICON_7.1_WEB_CONSOLE_LNX_64.bin`

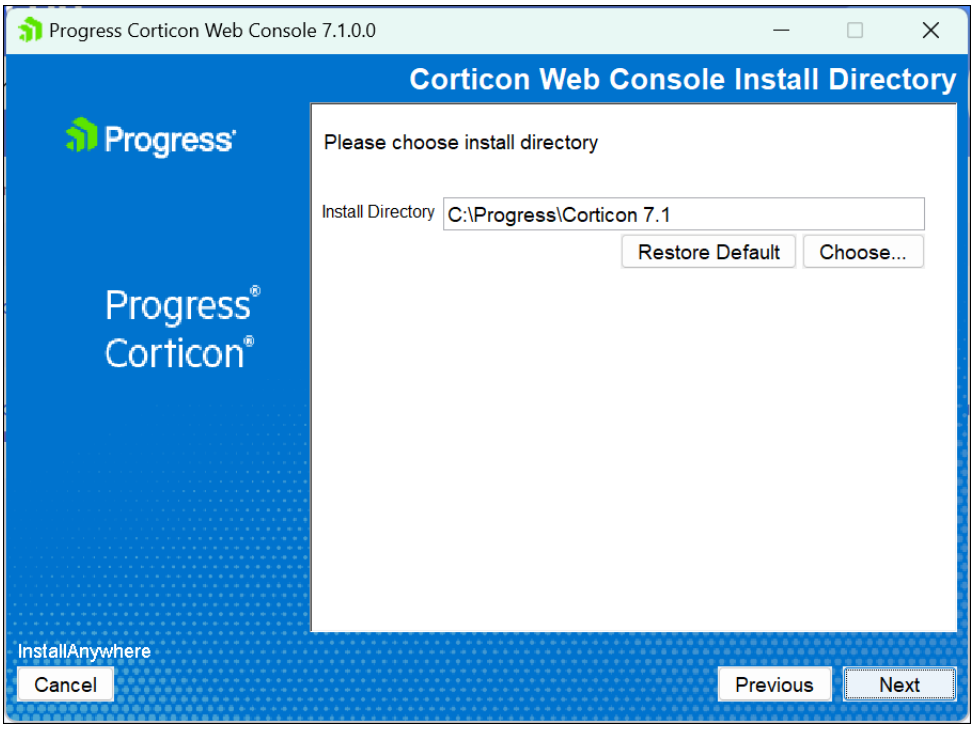
   The installer opens in the installer wizard. The first installer panel opens with information about the installer.



Note: If the same or higher Corticon 7.1 Web Console is installed at any location on the target machine, an alert is posted that denies permission to continue. You will be able to apply Web Console 7.1 service packs and patches. You can have other major.minor versions of Corticon Web Console installed in distinct folders and they can run concurrently, although they must run on separate ports.

3. Click **Next** to continue.

   The **Choose Web Console Install Directory** panel opens.



4. The default install directory is shown. To specify a preferred directory, enter the explicit path, or click **Choose** to browse to the preferred directory.
5. Verify your selections in the **Pre-Installation Summary** panel. Nothing has happened yet so you can click **Previous** to go back to a panel to make changes, or click **Cancel** to quit this installation procedure.
6. Click **Install** to continue. The installation status window opens. When done, the **Install Complete** panel opens.
7. Click **Done** to complete the Corticon Web Console 7.1 installation and close the installer.
8. In your Web Console installation's `C:\Progress\Corticon 7.1\WebConsole\Tomcat\9` folder, copy the `corticon.war` archive file, to the app server's `webapps` folder; for example, `C:\Progress\myTomcat9\apache-tomcat-9.0.91-windows-x64\apache-tomcat-9.0.91\webapps`.
9. The installation and update of Corticon Web Console and its app server are complete. Click **Done** to complete the Web Console installation and close the installer.
10. Edit the `logback.xml` file at `C:\Progress\Corticon 7.1\WebConsole\etc` to change `<property name="WORK_DIR_LOGS"` to have the `value="C:\Progress\Corticon_7.1\WebConsole\logs"/>`
11. Copy the Web Console `etc` folder with its `.groovy` and `logback.xml` files, and then paste the folder at `C:\Progress\Corticon_Server_Work_7.1\`.
12. Start the Corticon Web Console by launching the app server. For example, `C:\Progress\myTomcat9\apache-tomcat-9.0.91-windows-x64\apache-tomcat-9.0.91\bin\startup.bat`.

The installation and update of Web Console 7.1 is complete.

Note: Using an LDAP store for Web Console authentication—You can set up Corticon Web Console to authenticate users using an LDAP server. See the topic *"How to use LDAP for Web Console authentication" in the Web Console Guide.*

Installing Corticon Web Console on Tomcat 9

The Corticon Web Console requires Tomcat 9. It is not bundled with the Corticon Web Console download. The following instructions provide guidelines for installing Corticon Web Console into Tomcat to create a runtime environment. The example is specific to Windows installations, but Linux installations will follow a similar pattern.

Folder Setup

The steps below assume the following file system folder setup:

- `C:\Java_17` : Java 17 installation
- `C:\Tomcat_9` : Apache Tomcat 9 installation
- `C:\Progress\Corticon 7.1`: Default Corticon 7.1 installation

Change the folder locations as needed in each step to match your configuration.

Install Tomcat

1. Download the binary distribution of Apache Tomcat for your platform from: https://tomcat.apache.org/download-90.cgi For Windows, download "64-bit Windows zip".
2. Create a work folder:

   ```
   mkdir C:\Corticon_Work_7.1
   ```

3. Extract the downloaded files to:

   ```
   C:\Tomcat_9
   ```

4. **Deploy Corticon Web Console to Tomcat** Edit the file: `C:\Tomcat_9\bin\startup.bat`, and then add the lines:

   ```
   set JAVA_HOME="C:\Java_17"
   set CATALINA_OPTS=-DCORTICON_HOME="%CATALINA_HOME%"
   -DCORTICON_WORK_DIR="C:\Corticon_Work_7.1"
   set JAVA_OPTS=%JAVA_OPTS% -Dfile.encoding=UTF-8
   ```

5. **Copy WAR file to Tomcat** Copy the file:

   ```
   C:\Progress\Corticon 7.1\WebConsole\Deploy\Tomcat\9\corticon.war
   ```

   to:

   ```
   C:\Tomcat_9\webapps\corticon.war
   ```

6. Copy the `etc` folder (which contains the files `logback.xml` and `CorticonServerConsoleConfig.groovy`):

   ```
   C:\Progress\Corticon 7.1\WebConsole\etc
   ```

   to:

   ```
   C:\Corticon_Work_7.1\etc
   ```

7. Edit the file:

   ```
   C:\Corticon_Work_7.1\etc\logback.xml
   ```

   and then set `WORK_DIR_LOGS` to the folder to write log files:

   ```
   <property name="WORK_DIR_LOGS" value="C:\Corticon_Work_7.1\logs"/>
   ```

8. **Configure Tomcat Ports (Optional)** Edit the file:

   ```
   C:\Tomcat_9\conf\server.xml
   ```

   and then set the preferred ports (the port settings here reflect those previously used by Corticon):

   ```
   <Connector port="8850" protocol="HTTP/1.1"
       connectionTimeout="20000"
       redirectPort="8851"
       maxParameterCount="1000"/>
   <Server port="8852" shutdown="SHUTDOWN">
   ```

9. **Restart Tomcat.** If Tomcat is running, stop it.
10. Start Tomcat by running:

    ```
    C:\Tomcat_9\bin\startup.bat.
    ```

Performing command-line Linux installations of Corticon Web Console

The Corticon Web Console is set at version 7.1.1 and requires Java 17 and Tomcat 9. A command-line install runs a Linux installation in a command shell as a text command with parameters.

To perform command-line installations for Corticon Web Console on Linux:

1. On a supported 64-bit Linux platform, copy the downloaded Linux installer binary files to a temp directory `CorticonInstall`:

   - `PROGRESS_CORTICON_7.1_WEB_CONSOLE_LNX_64.bin`

2. Grant your installation user access to the installation directory:

   ```
   > cd tmp
   > sudo chmod 755 CorticonInstall
   ```

3. Review the files copied to the temp directory on your Linux machine:

   ```
   > cd CorticonInstall
   > ls
   ```

4. Ensure that you can install each Corticon Web Console `bin` files by assigning the proper rights:

   ```
   > sudo chmod 777 PROGRESS_CORTICON_7.1_WEB_CONSOLE_LNX_64.bin
   ```

5. In a shell, run the binary with the console option. For example:

```
# ./PROGRESS_CORTICON_7.1_WEB_CONSOLE_LNX_64.bin -i console
```

6. Follow the prompts to complete the installation via the command-line.

Note: The work directory path must not contain spaces.

Installing Corticon Web Console Runtime on Tomcat on Linux

Starting in version 7.2:

- The Corticon Server installation does not package the required Java or the default app server.
- The Web Console Server installation is completely decoupled from the Server installation.

The following instructions provide guidelines for installing Corticon Server into Tomcat to create a runtime environment similar to previous Corticon releases. For additional details, refer to the *Corticon Deployment Guide*.

Folder Setup

The steps below assume that the UNIX system folders are setup as follows:

- `/usr/lib/jvm/java-17-openjdk/amd64` : Java 17 installation
- `/opt/tomcat` : Apache Tomcat 9 installation
- `/usr/local/Progress/Corticon 7.1`: Default Corticon 7.1 installation
- `/opt/tomcat/work`: User chosen work directory for Tomcat Server

Change the folder locations as needed in each step to match your configuration.

How to install Corticon Runtime on Linux

These steps describe how to install Corticon Web Console on Tomcat 9.

Perform the following steps:

1. **Create a dedicated Tomcat user and group:**

```
> sudo useradd -r -s /sbin/nologin tomcat
> sudo groupadd tomcat
> sudo usermod -aG tomcat tomcat
```

2. **Install Tomcat:**

a. Download the binary distribution of Apache Tomcat for UNIX platform from: https://dlcdn.apache.org/tomcat/tomcat-9/

b. Extract the downloaded files to:

```
> sudo mkdir /opt/tomcat
> sudo tar xzvf apache-tomcat-9*tar.gz -C /opt/tomcat --strip-components=1
> sudo chown -R tomcat:tomcat /opt/tomcat
```

c. Adjust the file and directory permissions:

```
> cd /opt/tomcat
> sudo chmod -R 755 /opt/tomcat/bin
> sudo chmod -R 644 /opt/tomcat/conf
> sudo chmod -R 644 /opt/tomcat/lib
> sudo chmod -R 664 /opt/tomcat/logs
> sudo chmod -R 777 /opt/tomcat/temp
> sudo chmod -R 755 /opt/tomcat/webapps
> sudo chmod -R 777 /opt/tomcat/work
```

3. Prepare Tomcat for the Corticon Web Console:

Note: The log file location, CDD location, and Decision Service deployment file location all depend on the CorticonServerWork directory. To change the CorticonServerWork directory, add a `trtup.sh` to the Tomcat `bin` directory. Edit the `setenv.sh` file to include the example `CATALINA_OPTS` line below. The `setenv.sh` file will be initialized by the Tomcat `catalina.sh` file automatically to set the CorticonServerWork directory.

---

a. Edit the file: `=/opt/tomcat/bin/startup.sh` , and then add the lines:

```
Environment=JAVA_HOME=/usr/lib/jvm/java-17-openjdk-amd64
Environment=CATALINA_PID=/opt/tomcat/temp/tomcat.pid
Environment=CATALINA_HOME=/opt/tomcat
Environment=CATALINA_BASE=/opt/tomcat

ExecStart=/opt/tomcat/bin/startup.sh
ExecStop=/opt/tomcat/bin/shutdown.sh
```

b. Create the work directory:

```
> sudo mkdir /usr/local/Progress/Corticon_Server_Work_7.1
```

Create the `setenv.sh` file:

```
> cd /opt/tomcat/bin
> sudo nano setenv.sh
```

c. Add the export Tomcat and Java options to `setenv.sh`:

```
export CATALINA_OPTS="$CATALINA_OPTS
        -Dfile.encoding=UTF-8
        -DCORTICON_WORK_DIR=/usr/local/Progress/Corticon_Server_Work_7.1
        -DCORTICON_SETTING=SER

-CORTICON_LICENSE=/usr/local/Progress/Corticon_Server_Work_7.1/license/Server/CcLicense.jar

        -DCORTICON_SETTING=SER"
export JAVA_OPTS="-Xms1g -Xmx2g"
```

d. Modify the execution permissions for this file to Tomcat user group:

```
> chown :tomcat ./setenv.sh
> chmod g+x ./setenv.sh
```

e. Install the license:

```
> cd /usr/local/Progress/Corticon_Server_Work_7.1
> sudo mkdir license
> cd license
> sudo mkdir Server
> sudo chmod 644 /usr/local/Progress/Corticon_Server_Work_7.1/license/Server
> sudo cp /tmp/CorticonInstall/CcLicense.jar
/usr/local/Progress/Corticon_Server_Work_7.1/license/Server
```

f. Install the `.war` file into Tomcat:

```
> sudo cp /usr/local/Progress/Corticon_7.1/WebConsole/Deploy/Tomcat/9/corticon.war
/opt/tomcat/webapps/
```

4. **a.** Edit the file:

```
/usr/local/Progress/Corticon_7.1/WebConsole/etc/logback.xml
```

and then set `WORK_DIR_LOGS` to the folder to write log files:

```
<property name="WORK_DIR_LOGS" value=/usr/local/Progress/Corticon_Server_Work_7.1/logs
```

b. Copy the `etc` folder (which contains the files `logback.xml` and `CorticonServerConsoleConfig.groovy`):

```
> sudo cp -r /usr/local/Progress/Corticon_7.1/WebConsole/etc
```

Start Tomcat: Reload `systemd` and start Tomcat:

```
> sudo systemctl daemon-reload
> sudo systemctl start tomcat
> sudo systemctl enable tomcat
```

To confirm that the Web Console is running, in your web browser enter:

```
> http://<Server IP>:8850/corticon
```

Configure the app server installation

Several tunings can improve your installation. Restart the app server after you make any changes.

- **Date and time**-Check your Linux Server's date/time settings, especially in Cloud implementations. Your local time should be properly recorded in the Web Console statistics log files.
- **Encryption**-Use HTTPS and then see the topics under Secured deployment on Java web services
- **Tomcat Port:** Edit the file:

```
> cd /opt/tomcat/conf/
> sudo nano server.xml
```

and then set the preferred ports (the port settings here reflect those previously used by Corticon):

```
<Connector port="8850"
   protocol="HTTP/1.1"
```

```
   connectionTimeout="20000"
   redirectPort="8851"
   maxParameterCount="1000"/>
<Server port="8852" shutdown="SHUTDOWN">
```

- **BRMS Properties:**—The `brms.properties` file is installed by default at `/usr/local/Progress/Corticon_Server_Work_7.1` with several commented-out options to help you tune the behavior of a Corticon deployment. For additional properties, "Server Properties and Settings" in the Server guide. If you are upgrading from a previous version of Corticon, you should assess the differences between the prior file and the installed one, and then either reuse the prior file or update the installed file. To copy it to the Corticon Server Work directory:

  ```
  > sudo cp /usr/local/Progress/Corticon_7.1/Server/brms.properties
       /usr/local/Progress/Corticon_7.1/Corticon_Server_Work_7.1/brms.properties
  ```

  Any changes to the `brms.properties` file are not implemented until you restart the Tomcat service.

- **Tomcat as a service** - Create a `systemd` service file to run Tomcat as a service. This ensures that if your Linux machine is rebooted, Tomcat and Corticon will auto-start:

  ```
  > sudo nano /etc/systemd/system/tomcat.service
  ```

  Add content to the Tomcat service definition:

  ```
  [Unit]
  Description=Tomcat Corticon Server 7.1
  After=network.target

  [Service]
  Type=forking
  Environment=JAVA_HOME=/usr/lib/jvm/java-17-openjdk-amd64
  Environment=CATALINA_PID=/opt/tomcat/temp/tomcat.pid
  Environment=CATALINA_HOME=/opt/tomcat Environment=CATALINA_BASE=/opt/tomcat

  ExecStart=/opt/tomcat/bin/startup.sh
  ExecStop=/opt/tomcat/bin/shutdown.sh

  User=tomcat
  Group=tomcat
  UMask=0007
  RestartSec=10
  Restart=always

  [Install]
  WantedBy=multi-user.target
  ```

Performing silent Web Console installations

An unattended (silent) install requires that you first run an installation or updater in the installer wizard to capture the selected options, and then use the captured response file on other targets to 'playback' the responses into the installer without any user interaction.

To perform silent installations of Corticon Web Console:

1. Run the Corticon Web Console installer with your preferred locations and options to capture a response file, using the syntax *`installer`*`.exe` **`-r`** *`file`* where *`installer`* is the preferred Studio installer, and

file is the response file you will reuse. For example, `PROGRESS_CORTICON_7.x_WEBCONSOLE_WIN_64.exe -r C:\CorticonStudio64_7x.responses`

2. On other target machines, access the Studio 7.1 installer executable and the response file.
3. On those machines, run the installer using the syntax *installer*`.exe` **`-i silent -f`** *file* where *installer* is the WebConsole installer, and *file* is your response file. For example, `PROGRESS_CORTICON_7.x_WEBCONSOLE_WIN_64.exe -i silent -f C:\CorticonWEBCONSOLE_7x.responses`.

Silent installations or updates for runtime components on Linux:

1. Run the runtime component's Linux installer with your preferred locations and options to capture a response file, using the syntax *installer*`.bin` **`-r`** *file* where *installer* is the preferred Server installer, and *file* is the response file you will reuse. For example:

   ```
   PROGRESS_CORTICON_7.x_WEBCONSOLE_LNX_64.bin -r
   /usr/corticon/WEBCONSOLE_7x_LNX.responses
   ```

2. Then, on other target Linux machines, access the Web Console 7.x installer binary and the response file.
3. Run the installer using the syntax *installer*`.bin` **`-i silent -f`** *file* where *installer* is the Web Console installer, and *file* is your response file. For example:

   ```
   PROGRESS_CORTICON_7.x_WEBCONSOLE_LNX_64.bin -i silent -f
   /usr/corticon/WEBCONSOLE_7x_LNX.responses
   ```

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Uninstalling Web Console

The Corticon Web Console uses the common 7.1 installation directory.

To uninstall Web Console on Windows:

1. Stop the Web Console on the machine.
2. Backup any files you want to retain.
3. Choose the **Start** menu **Control Panel** function **Programs and Features**, and then double-click on Progress Corticon 7.1 Web Console to launch its uninstaller.

   Note: You could initiate the same task directly by navigating to the component's uninstall folder, and then run the uninstall executable.

To uninstall Web Console on Linux:

1. Stop the Web Console on the machine.
2. Backup any files you want to retain.
3. In a command shell, navigate to `[CORTICON_HOME]\Uninstall Progress Corticon Web Console 7.1`, and then run the uninstall `bin`.

Note: Files you created are NOT removed or replaced during this process.