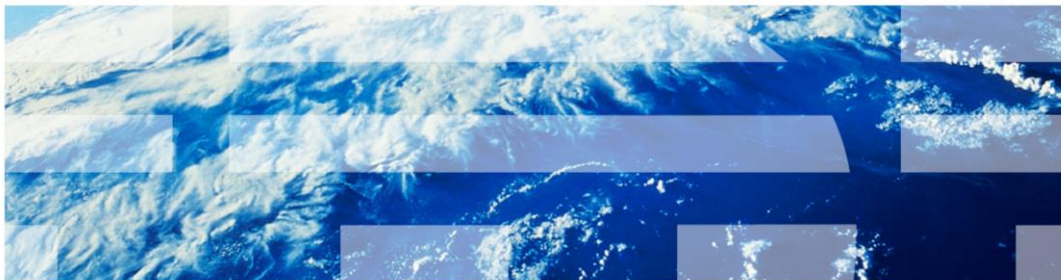

WebSphere eXtended Transaction Runtime V2.1

Getting started



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This presentation will help you get started with WebSphere® eXtended Transaction Runtime by providing you an overview of requirements, installation and configuration.

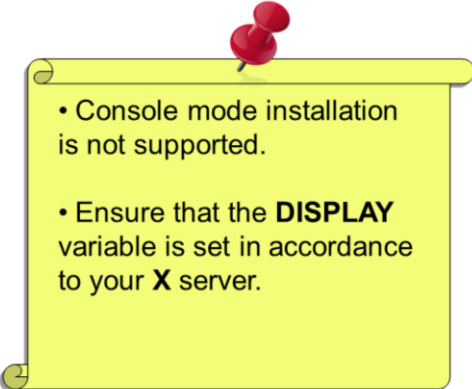
WebSphere eXtended Transaction Runtime system requirements

- Disk space
 - WebSphere eXtended Transaction Runtime **400 MB**
 - Maximum space required **500 MB**
- Software
 - Operating system
 - IBM AIX® V6.1 TL6, AIX V7.1 TL1 SP2
 - IBM Installation Manager V1.4.3
 - WebSphere Application Server V7.0.0.19 or V8.0.0.2
 - If you plan to use CICS® facilities
 - DB2® V9.7 Fix Pack 5
 - Choice of Resource Manager
 - DB2 V9.7 Fix Pack 5
 - Oracle V11.2.0.1
- Maintained list of system requirements at:
<http://www-01.ibm.com/support/docview.wss?uid=swg21597442>

To install WXTR, you need hardware (such as Power 7) capable of running either of the two mentioned AIX operating system versions. You will need at least 500 MB of disk space. As WXTR is a container within WebSphere application server, you need a copy of WebSphere Application Server as a prerequisite. IBM installation manager is required for installing both WXTR and WebSphere Application Server. A copy of IBM Installation manager is provided with the WXTR. If you plan to use CICS facilities with WXTR (such as VSAM files), you will also need DB2. Though most of these prerequisites are checked during the installation process, it is always good to verify beforehand.

Installing WXTR

- Different installation options
 - GUI
 - Silent
- Install image based on your WebSphere Application Server version
 - WebSphere Application Server 7 or WebSphere Application Server 8?
- Resolving installation problems
 - Installation logs are found in the `/var/ibm/InstallationManager/logs/` directory

- 
- Console mode installation is not supported.
 - Ensure that the **DISPLAY** variable is set in accordance to your **X** server.

You can install WXTR either in GUI mode or the silent mode. Since there is no support for the console mode installation, you have to export your display to an X server to proceed with the GUI installation mode. WXTR supports two versions of WebSphere Application Server, so there are separate WXTR images for each of these. You have to pick the right image based on your WebSphere Application Server version. If the installation fails for any reason, you can check the installation logs for more information.

Installing WXTR in GUI mode

- Ensure that the LANG environment variable is set in the `/etc/environment` file to **en_US**
- Export your display to an X server
- Start the Installation Manager using the same user ID that was used to install WebSphere Application Server
 - `/<IBM Installation Manager location>/eclipse/tools/imcl input -log <log file>`
- Check if WXTR is in the repository.
 - File -> preferences -> repositories
- Choose the WXTR version based on your WebSphere Application Server version
- On the Location page, ensure that the path points to the installation directory where WebSphere Application Server is installed
- Click **Next** to continue. The Install Packages wizard checks your system for operating system prerequisites
- WXTR will be installed in `<WAS_HOME>/WXTR`
- Use the `export logs` option in the Installation Manager if there is an installation failure. This will consolidate the installation logs to an archive file

This slide walks you through the installation steps. As US English is the only language that is supported with this version of WXTR, you have to ensure that the LANG environment variable is set to “en_US” before you start the installation. You can verify the same using the “locale” command. Start the IBM installation manager using the same user ID that was used for WebSphere Application Server installation. Make sure WXTR packages are in the repository. Click “Install” and select the appropriate WXTR image based on your WebSphere Application Server version. Verify the installation location on the location page; it should point to the WebSphere Application Server installation directory. The installer will do all the prerequisite checks. If the installation fails, you can use the ‘export logs’ option in the Installation Manager. This will consolidate all the install logs to a .zip file that can be sent to IBM for analysis.

Installing WXTR in GUI mode: Steps

- On the Features page, click **Next** to continue
- Review your choices on the Summary page before installing WXTR
- Click **Install** to install the package. A progress indicator shows the progress of the installation
- A message confirms the successful completion of the installation
- Click **Finish** to close the Installation Manager



Continuing with the installation, you can review your choices at the summary page and click “Install” to start the installation. Once the installation is done, a message is displayed indicating the success or failure of the installation process. If everything goes well, click Finish to close Installation Manager.

Configuring WXTR

- Do you need DB2?
 - If you plan to use CICS facilities and VSAM files, you need to install and configure DB2
 - If your application does not contain CICS APIs, you might not need DB2
- Create a WebSphere Application Server supported profile (If you do not already have one)

```
cd /opt/IBM/WebSphere/AppServer/bin
./manageprofiles.sh -create -profileName sample
```
- Supported profiles:
 - Application server
 - Custom
 - Deployment manager

Before you proceed with the configuration of WXTR, determine whether or not you need DB2. If you plan to use VSAM files and other CICS facilities, you need to install DB2.

To configure WXTR you need one of the supported WebSphere Application Server profiles. WXTR V2.1 supports the application server profile (also known as default profile), custom profile, and the deployment manager profile. If you do not have a profile, you can create one using the manage profiles script.

Configuring WXTR to use CICS facilities

- Configuring DB2
 - Environment setup
 - Export the following variables according to your DB2 configuration
 - DB2DIR
 - DB2INSTANCE
 - Creating a database

```
su -${DB2INSTANCE} -c "db2 create database ${database_name}
  USING CODESET ISO8859-1 TERRITORY US"
```
 - Grant permission
 - db2 grant dbadm on database to user \${cics_user}
 - db2 grant dbadm on database to user \${os_user}
 - cics_user is the user who performs operations on the File Manager
 - os_user is the owner of WebSphere Application Server and WXTR installation

Because using CICS facilities in WXTR is popular choice, you will see how to configure DB2 for WXTR. You have to export environment variables indicating the DB2 installation directory and the instance. The next step is to create a database that will be used by the WXTR runtime. You can use the commands listed here to create the database. You have to grant the database administrative privileges for both the CICS user and the WebSphere Application Server user. The CICS user is the user who performs operations on FileManager and the WebSphere Application Server user is the owner of WebSphere Application Server and WXTR installation.

Configuring WXTR: Augmenting your profile

- Run this command:

```
./manageprofiles.sh -augment -profileName <profile name> -templatePath <WAS install  
PATH>/profileTemplates/WXTR/default.wxtr -adminUserName <admin id> -  
adminPassword <admin password> -soapPort <soap port>
```



- You need to run this command from your profile **bin** directory.

- When augmenting an existing profile, make sure that you pick the correct template path based on your profile (default profile = WXTR/default.wxtr)

As a next step you must augment the WebSphere Application Server profile with WXTR. You can augment the profile using the manageprofiles script from your profile bin directory. It is very important that you run this command from the profile's bin directory. When augmenting an existing profile, you have to pick the template that matches your profile. WXTR profile templates are located in the /profileTemplates/WXTR directory within the WebSphere Application Server installation directory.

Configuring WXTR: Configure the server

- Install COBOL Runtime
 - If you do not have IBM COBOL runtime installed, install it using the command:
`/opt/IBM/WebSphere/AppServer/WXTR/IBMCOBOL/install_cobol_rte.sh`
- Run the configuration script

```
cd /opt/IBM/WebSphere/AppServer/profiles/sample/bin
./configureServerWithWXTR.sh -s server1 -c ${wxtr_port} -i
${db_instance} -f true -d ${database_name} -n ${cics_user} -w
{cics_user_password}
```
- Ensure that the `${wxtr_port}` port is not occupied by any other service
- Ensure that the profile is augmented with WXTR (default template in this case)
- If the configuration fails at samples installation, ensure that the IBM COBOL compiler and XLC are in PATH

If you intend to run COBOL applications in WXTR you need an IBM COBOL runtime. If you have IBM COBOL compiler installed, you already have the runtime. If you do not have the compiler, you can install the IBM COBOL runtime that is shipped with WXTR using the script mentioned here. The final step is to configure your server for WXTR. You can configure your server using the `configureServerWithWXTR` script. Make sure you run these commands from your profile's bin directory. With this step you have successfully configured WXTR.

Verifying your installation and configuration

- Configure IVP

```
wxtrivp -w <server name>
```

- If security is enabled, you need to edit the config.mak file in <WXTR Install Dir>/samples to provide the correct credentials:

```
WXTR_SERVER_USERNAME= is the WebSphere Application Server administrative  
username if security is enabled.
```

```
WXTR_SERVER_PASSWORD= is the WebSphere Application Server administrator password  
if security is enabled
```

- Restart the application server

Now that you have installed and configured WXTR it is time to make sure everything is done properly. You can run the WXTR installation verification program (IVP) to verify your installation and configuration. If you have security configured for your server, you must provide the user credentials in the config.mak file before running the IVP configuration script. Run the IVP configuration script and restart the application server.

Verifying your installation and configuration

- Enter this URL in your internet browser:
 - <http://hostname:port/WXTRSample>, where;
 - *hostname* is the name or IP address of the machine where WebSphere Application Server is running
 - *port* is the WebSphere Application Server HTTP port
 - *WXTRSample* is the context root
- The *Welcome to IBM WebSphere eXtended Transaction Runtime Samples* web page is displayed
- To run the Employee Management install verification program, click **Employee Management** in the left pane of the Web page
- Choose an Employee Management option. You can choose to:
 - Add a New Employee
 - View all Employees
 - Search/Update Employee

Once you have configured the IVP, you can try the employee management sample from the WXTR samples page. You can access the WXTR's samples page using the URL shown here. Once you are at the samples page, you can click the Employee Management installation verification program, in the left pane. If everything goes well, you can conclude that WXTR is installed and configured correctly.

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