

Installing WebSphere MQ for use with IBM Integration Bus for Developers

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Learn how to install WebSphere MQ for Developers for use with IBM Integration Bus for Developers version 10, to be able to exploit features of WebSphere MQ: download and then install WebSphere MQ, through to testing use of MQ features, all in minutes.

- [Background: WebSphere MQ is not a prerequisite for IBM Integration Bus version 10](#)

On distributed systems, WebSphere MQ is no longer a prerequisite for using IBM Integration Bus Version 10, which means that you can develop and deploy applications with IBM Integration Bus without needing WebSphere MQ. However, some IBM Integration Bus features require access to WebSphere MQ, including the MQ nodes and the event-driven processing nodes that are used for aggregation and timeout flows, message collections, and message sequences. For more information about features that require access to WebSphere MQ, see [Enhanced flexibility in interactions with WebSphere MQ](#) in the IBM Integration Bus Version 10 product documentation.

If you choose to use the IBM Integration Bus features that require access to WebSphere MQ, you can install and use WebSphere MQ within the terms of the license for IBM Integration Bus.

If you want to try IBM Integration Bus for Developers with self-study labs that require access to WebSphere MQ, you can install and use WebSphere MQ Advanced for Developers without charge:

1. Install WebSphere MQ Advanced for Developers on the same machine as your integration node
2. Create a queue manager for use with IBM Integration Bus
3. Create the set of IBM Integration Bus queues on your queue manager
4. Associate the queue manager with your integration node

This tutorial assumes that you have already installed IBM Integration Bus for Developers on Windows, and want to add WebSphere MQ Advanced for Developers onto the same Windows computer.

Prepare: Download WebSphere MQ Advanced for Developers

Downloading WebSphere MQ Advanced for Developers is straightforward, and only needs you to agree to the license and then save the ZIP file (~512 MB) to your computer.

To download now, click the following button: [Download](#)

Result: The software is on your computer, and you are ready to install WebSphere MQ Advanced for Developers

Step 1: Install WebSphere MQ Advanced for Developers

Installing WebSphere MQ Advanced for Developers is little more than to unpack the software.

- [Read a description of installing on Windows](#)

1. Extract the ZIP file that you downloaded to a directory of your choice

This creates the subdirectory, `cdimage_developers`; for example,
`C:\mqadv_dev80_windows\cdimage_developers`

2. To start the installation process, run the `Setup.exe` file.

For detail about the steps to follow, see [Installing and configuring using the graphical user interface](#) in the WebSphere MQ version 8 product documentation.

The installation programs contain links to further information if you require it during the installation process. The installation process has five parts:

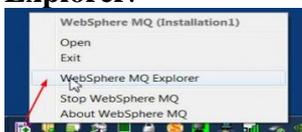
1. Use the Launchpad to check and install software requirements, specify network information, and start the WebSphere MQ installation wizard.
2. Use the installation wizard to install the software, and start the Prepare WebSphere MQ wizard.
3. Use the Prepare WebSphere MQ wizard to start the WebSphere MQ service.
4. Optionally, use the Default Configuration wizard to create a default configuration and associated objects for verifying the installation by using the Postcard application that is supplied with WebSphere MQ.
5. Optionally, if you completed step 4, use the Postcard application to verify your installation.

Result: You've successfully installed WebSphere MQ for Developers for use with IBM Integration Bus.

Step 2: Create a queue manager for use with IBM Integration Bus

This step assumes that you do not want to use the default queue manager, and that you want to use the queue manager name, `QM1`, as described in the WebSphere MQ product documentation. If you choose a different name, remember to use that name for the queue manager if needed in any self-study labs that you try.

1. Start IBM MQ Explorer as an administrator. For example, right-click the WebSphere MQ icon in the system tray and then in the context menu click **WebSphere MQ Explorer**.



2. In the Navigator view, right-click the Queue Managers folder, then click **New > Queue Manager**. The Create Queue Manager wizard starts.
3. In the **Queue Manager name** field, type QM1.
4. Select the **Make this the default queue manager** check box.
5. In the **Dead-letter queue** field type SYSTEM.DEAD.LETTER.QUEUE. This is the name of the dead-letter queue that is automatically created when you create the queue manager.
6. Leave the other fields empty and click **Finish**, or if that button is disabled, click **Next**. The **Finish** button is disabled if the port number conflicts with an existing queue manager, for example the queue manager that is created as part of the default configuration. You must continue through the wizard to change the default port number.
7. If you clicked Next, continue to accept the defaults and click Next on each page until you get to the final page of the wizard, when the Finish button becomes available. Change the specified port number, for example to 1415, and click **Finish**.

IBM MQ displays a Creating Queue Manager dialog window while the queue manager is created and started.

These instructions are taken from [Create a queue manager, called QM1 by using the IBM MQ Explorer](#) in the WebSphere MQ product documentation

Result: In WebSphere MQ, you have created a queue manager, QM1, for use with IBM Integration Bus.

Step 3: Create the set of IBM Integration Bus system queues on your queue manager

1. Open the IBM Integration Console; for example, click **Start > All Programs > IBM Integration Bus...Developer Edition > IBM Integration Console...**
2. In the Console window, navigate to the /samples/wmq/ subdirectory of the IBM Integration Bus installation; for example:
3. C:\Program Files\IBM\IIB\10.0.0.0\server\sample\wmq
4. Run the following command:

```
iib_createqueues.cmd QM1
```

5. Optional: If you want to verify that the queues have been created in WebSphere MQ, you can use the WebSphere MQ Explorer or runmqsc command (as follows):
In the IBM Integration Console, run the following commands (responses are shown after each command):

1. **runmqsc**
2. 5724-H72 (C) Copyright IBM Corp. 1994, 2014.
3. Starting MQSC for queue manager QM1.
- 4.
5. **display queue (SYSTEM.BROKER*)**
6. 3 : display queue (SYSTEM.BROKER*)
7. AMQ8409: Display Queue details.
8. QUEUE (SYSTEM.BROKER.ADAPTER.PROCESSED)
9. TYPE (QLOCAL)
10. AMQ8409: Display Queue details.
11. QUEUE (SYSTEM.BROKER.ADMIN.STREAM) TYPE (QLOCAL)
12. ...

13. AMQ8409: Display Queue details.
14. QUEUE(SYSTEM.BROKER.WS.REPLY) TYPE(QLOCAL)
- 15.

See [Creating the default IBM Integration Bus queues on a WebSphere MQ queue manager](#) in the IBM Integration Bus version 10 product documentation.

Result: You have created the system queues for IBM Integration Bus.

Step 4: Associate the queue manager with the integration node, `TESTNODE_userid`

1. In the IBM Integration Console, stop the integration node:
2. `mqsistop -i TESTNODE_userid`
3. Associate the queue manager with the integration node, `TESTNODE_userid`
4. `mqsichangebroker TESTNODE_userid -q QM1`

Example output:

```
BIP8251W: Service dependencies for component 'TESTNODE_userid'
changed to 'MQ_
Installation1 '; the previous value was ' '.
BIP8071I: Successful command completion.
```

Start the integration node:

```
mqsistart TESTNODE_userid
```

Result: You have associated the queue manager with the integration node.

What next?

Create a message flow to test the use of WebSphere MQ by IBM Integration Bus for Developers; for example, see the self-study lab [Lab MQ: Build and run an integration solution that uses WebSphere MQ](#). The lab page provides links to a PDF for the lab instructions and a ZIP file for lab resources including a sample message file.

Explore other [self-study labs](#) and [tutorials](#) that make use of WebSphere MQ features supported by IBM Integration Bus.