This article shows you how to use a script to administer IBM Integration Bus V9 and WebSphere Message Broker V8 users who access broker resources through a web browser. The script simplifies and speeds web user administration by checking the administrative security on new installations, and providing options for creating, modifying, listing, and deleting both admin and non-admin users.

Introduction

IBM® WebSphere® Message Broker V8.0.0.1 or later, and IBM Integration Bus V9 or later, include a web user interface (web UI) utility to administer broker resources. The web UI enables users to access broker resources through web browsers (HTTP clients). The default for new integration servers and brokers is to enable the web UI listener and disable administrative security, enabling users to access the integration server and broker resources without any authentication, as default users with full administrative access. This default setting is of course a security vulnerability in a production environment.

This tutorial includes a script to check administrative security, enable security if desired, and create, modify, list, and delete users. The default port for the web UI is 4414. Here is a flowchart of the script used to administer web users:
Script configuration

Web user access of WebSphere Message Broker V8.0.0.1 and IBM Integration Bus broker resources is based on the roles the user is mapped against. The script uses a couple of roles, so you need to set these up at the principle level before running the script, as described below.

Admin role

Create a user **webadmin** and add it to the **mqm** group. Since users in the **mqm** group have full admin access to all queues, they have full admin access to broker resources. Therefore, only add WebSphere Message Broker, WebSphere MQ, and IBM Integration Bus administrators to the admin role.

Non-admin roles

Create a user **webdev** and provide the access to the system broker queues as shown below:
setmqaut -m <Qmgr> -g <Group-name> -n 'SYSTEM.BROKER.**' -t queue -all +inq +browse +dsp

Do not put webdev in the mqm or mqbkrks group, because if you do, then users of the webdev role will have admin access.

**Syntax**

Run the script by passing the valid broker name:

```bash
sh webbroker.sh <brokername>
```

If the broker name is invalid, the script displays invalid broker name exception

**Script functions**

You can use the provided script to administer web users of all newly created WebSphere Message Broker and IBM Integration Bus servers and brokers. Here are the script functions:

- Enable administrative security for newly created brokers
- Create new admin and non-admin users
- Modify existing user passwords and roles
- List admin and non-admin users
- Delete admin and non-admin users.

**Enable administrative security**

You can access all newly created IBM Integration Bus servers and brokers using port 4414 and a web browser, with admin security disabled by default. If admin security is not enabled, then when the broker is accessed via the web UI, full admin access to broker resources is provided to the default user, which is a security vulnerability because there is no authentication via the web UI. Therefore the script first checks whether admin security is enabled, and if not, it provides the option to enable admin security:

![IBM WebSphere Message Broker](image.png)

```bash
[web82@cc6350667875 ~]$ sh webbroker.sh <brokername>
Admin security is not enabled
Do you want to enable Admin security? [y/N] yes
Enter yes or no:yes
Broker Administrative security enabled
Do you want to continue further? [y/N] y
Select yes/no:[n]
```
Create new user
You can use the script to create both admin and non-admin users. Admin users have full admin access to broker resources, including the ability to stop or start them. Non-admin users just have read-only access to broker resources, and cannot stop or start them.

The script enables you to create admin and non-admin users. Do not provide admin access to anyone other than authorized administrators. New users to be created need not be present on the server, which means the userid need not be present on the sever at the operating system level. Here is an example of creating a user with an admin role:

Similarly, you can create a non-admin user by selecting Option 2 from the Create Option menu.

Modify user
Users are created by assigning them to a specific role. The admin role provides full admin access to broker resources for the web UI users, and the non-admin role provides read-only access. The Modify user option lets you change web user roles. For example, you can change user1 belonging to the admin role to the non-admin role, so that user1 will just have read-only access to broker resources, and the password for user1 will be reset. For security, the script encrypts keyboard input.
**List user**

The script provides options to display all web users, display only admin users, and display only non-admin users, so that you can check which users are present:

```
LIST USER MENU
=================================================================
Select one of the list user options
=================================================================
1 List all Users
2 List Admin Users
3 List non-admin Users
4 Exit the user list prompt

Enter your choice: [ ]
```

**Delete user**

The script enables you to delete both admin and non-admin users created using the create broker utility. After a user is deleted, the associated user ID can no longer be used to access the web UI.

```
DELETE USER MENU
=================================================================
Do you want to continue with delete user
=================================================================
Select yes/no: [ ]
```

**Conclusion**

This tutorial showed you how to use the provided script to administer the new web UI feature of WebSphere Message Broker and IBM Integration Bus.
### Downloads

<table>
<thead>
<tr>
<th>Description</th>
<th>Name</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code sample</td>
<td>webbroker.zip</td>
<td>4 KB</td>
</tr>
</tbody>
</table>
Resources

- **IBM Integration Bus resources**
  - **IBM Integration Bus V9 Knowledge Center**
    A single portal to all IBM Integration Bus documentation, with conceptual, task, and reference information on installing, configuring, migrating to, and using IBM Integration Bus.
  - **IBM Integration Bus developer resources page**
    Downloads, tutorials, education, product info, and other resources to help you use IBM Integration Bus to enable connectivity and transformation in heterogeneous IT environments for businesses of any size using a wide range of platforms, including cloud and z/OS.
  - **IBM Integration Bus product family page**
    Product features, use cases, and resources.
  - **Video: What's new in IBM Integration Bus**
    A short YouTube video showing key IBM Integration Bus features.
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    A lightweight edition that you can use for evaluation, development, unit test, and other scenarios.
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    Forum on mqseries.net for user questions, answers, and tips.
  - **Track IBM Integration Bus user requirements**
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- **WebSphere resources**
  - **developerWorks WebSphere**
    Technical resources for developers who use WebSphere and related middleware products. Includes downloads, how-to information, support resources, and a free technical library of tutorials, best practices, IBM Redbooks, and product manuals.
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    Join a conversation with developerWorks users and authors, and IBM developers.
  • Technical events for developers
    Conferences, seminars, and technical events to deepen your technical expertise and help you succeed in your software projects.
  • developerWorks podcasts
    Listen to interesting and offbeat interviews and discussions with software innovators.
  • developerWorks on Twitter
    Check out recent Twitter messages and URLs.
  • IBM Education Assistant
    A collection of multimedia educational modules that will help you better understand IBM software products and use them more effectively to meet your business requirements.
About the author

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Sridhar B. Gajaparthasarathy joined IBM in 2011 and has six years of experience with WebSphere Message Broker and message queuing. He is currently involved in training with the Middleware Center of Excellence and the Advanced Skill Development Program for IBM Global Technology Services in India. Previously, he worked on new version enablement for WebSphere Message Broker V8. His certifications include Sun Certified Java Programmer, WebSphere Message Broker Administrator, and WebSphere MQ Administrator. You can contact Sridhar at sgajapar@in.ibm.com.

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