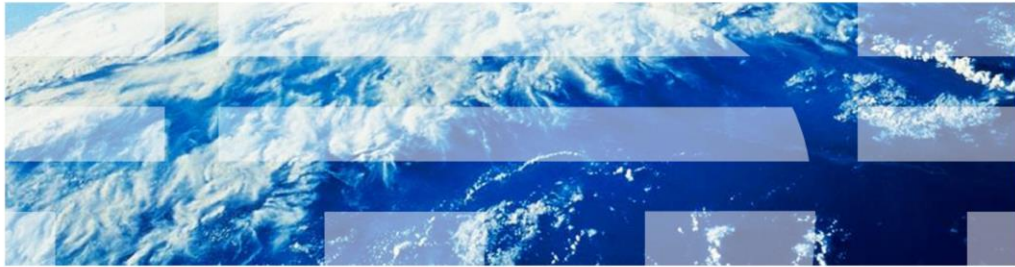


IBM Workload Deployer Appliance

LDAP Integration



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This presentation provides an overview of the Lightweight Directory Access Protocol, or LDAP, integration features of the IBM Appliance.

Agenda

- Overview
- LDAP authentication configuration
- LDAP user and group management

This presentation starts with an overview of LDAP integration with Workload Deployer, then covers how to configure and verify the LDAP authentication, followed by the details of LDAP user and group management.

Overview

This section of the presentation provides an overview of LDAP integration.

Overview

- A Lightweight Directory Access Protocol (LDAP) directory can be used to authenticate users with your Workload Deployer Appliance
- An administrator must create Workload Deployer user accounts for each LDAP user and LDAP group member in the LDAP directory who requires access to the appliance
- The cbadmin user can always access the Workload Deployer Appliance
- LDAP authentication configuration settings can be verified

Local authentication is a great way to get started with Workload Deployer. However, if the Workload Deployer Appliance is going to be shared by a larger organization or a group of people who are not working side by side, you should use an external authenticator, like a Lightweight Directory Access Protocol, or LDAP directory.

Using an LDAP server to authenticate users is optional. If you choose to use an external LDAP server, then all LDAP users must have Workload Deployer user accounts created to access the appliance. Furthermore, Workload Deployer users that are not registered in the LDAP directory cannot be authenticated. The one exception to this rule is the cbadmin user. Credentials for the cbadmin user always rely on the internal appliance security registry, so even if your LDAP directory server is down, the cbadmin user can access the appliance.

Also, in Workload Deployer, the product has provided test buttons to verify that the LDAP authentication configuration settings are working as planned.

LDAP authentication configuration

This section of the presentation focuses on the process of configuring your Workload Deployer appliance for LDAP authentication using the web console.

Authenticate users with LDAP

- To enable LDAP authentication, go to the **System** menu and expand the **Security** section

IBM Workload Deployer Administrator

Welcome Instances Patterns Catalog Reports Cloud **System**

Security

Permissions

Allow new users to create their own accounts

Allow password reset from the serial console

Sessions

Logout inactive users after 24 hours. [\[edit\]](#)

Allow local authentication

Allow local authentication

External Authentication

Enable LDAP authentication

Name	Demo LDAP Configuration
JNDI provider URL	ldap://bigblue.ibm.com:489/
JNDI base DN (users)	ou=bigblue, o=ibm.com
JNDI base DN (groups)	ou=bluegroups o=ibm.com
Search filter (users)	(&(uid={0})(objectclass=ibmperson
JNDI security authentication	None provided
Password	•••••••• [edit]

[Test LDAP authentication settings](#)

To configure your appliance to authenticate users with an LDAP directory, go to “Appliance”, then “Settings” from the web console top menu and expand the “Security” section. The enable LDAP authentication check box is not set by default. You must select the “Enable LDAP authentication” check box and enter the information for your external LDAP server for Workload Deployer to use the specified LDAP server to authenticate users at log in. You should perform the LDAP authentication test described in the next two slides, before enabling LDAP security.

LDAP authentication test

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Welcome Instances Patterns Catalog Reports Cloud System

Security

Permissions

Allow new users to create their own accounts

Allow password reset from the serial console

Sessions

Logout inactive users after 24 hours. [\[edit\]](#)

Allow local authentication

Allow local authentication

External Authentication

Enable LDAP authentication

Name [Demo LDAP Configuration](#)

JNDI provider URL [ldap://bigblue.ibm.com:489/](#)

JNDI base DN (users) [ou=bigblue, o=ibm.com](#)

JNDI base DN (groups) [ou=bluegroups, o=ibm.com](#)

Search filter (users) [\(&\(uid={0}\)\(objectclass=ibmperson](#)

JNDI security authentication [None provided](#)

Password [\[edit\]](#)

[Test LDAP authentication settings](#)

Initial LDAP setup for new users can be a challenging task. The Workload Deployer product has provided some test buttons to verify the LDAP integration is working. Again, you should use the “Test LDAP authentication” function before enabling LDAP security.

To work with these test tools, click the blue “Test LDAP authentication settings” text to expand the verification section.

LDAP authentication test buttons

Test LDAP authentication settings

To test whether LDAP authentication settings are setup correctly.

LDAP user name

Successful result

Found LDAP User DN: uid=930809897,c=us,ou=bluepages,o=ibm.com

LDAP group name

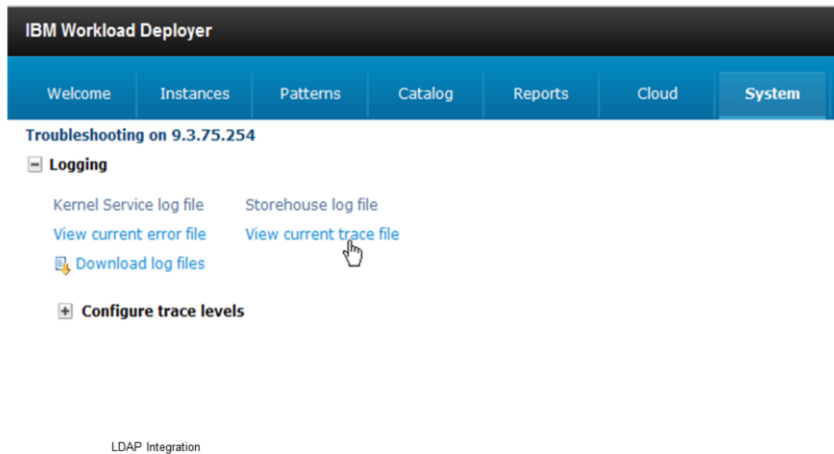
Failure points you to trace file

The LDAP query test has failed (see trace file for details)

Workload Deployer has provided a validation function to test the connection to the LDAP server by submitting a query to find a particular LDAP user name or LDAP group name. When successful, your Distinguished Name (DN) or group Distinguished Name is displayed. When the query is unsuccessful, "The LDAP query test has failed" message is displayed. If there is an error with the LDAP parameters or if a connection to the LDAP server cannot be established, an exception will show in the trace file.

Trace file

- Trace file will contain LDAP errors.
- Located under **System** > **Troubleshooting**



LDAP exceptions can be found in the current trace file. Go to the “System” menu and choose “Troubleshooting.” Click to view the current trace file.

LDAP user and group management

This section of the presentation focuses on the management of LDAP users and groups.

Integration with LDAP

- When adding a LDAP user, the appliance:
 - Verifies that it is a valid user
 - Automatically adds the user to defined groups if the user is a member of the group
- When adding a LDAP group, the appliance:
 - Checks that it is a valid LDAP group
 - Adds existing users on the appliance to the group if they are members
- With LDAP is enabled, the appliance can no longer modify group membership
 - Unable to add or remove groups for a user using the user details page
 - Unable to add or remove users from a group using the group details page

The appliance has two authentication schemes -- you can either use the local registry or an LDAP server, but not both (except for the cadmin user which is always stored locally). When LDAP authentication is enabled, defined users are stored locally on the appliance, but the authentication happens against the LDAP directory server. So, when adding a LDAP user, Workload Deployer will verify that it is a valid user with the LDAP directory, define that user locally and will automatically add the user to any groups to which the user has been assigned.

When adding an LDAP group to the appliance, Workload Deployer will verify that it is a valid group with the LDAP directory and will add any users who have been defined on the appliance to the group if they are members.

Every user that will need to access the appliance must be defined using the normal Workload Deployer user account creation process.

Defining an LDAP group with Workload Deployer does not allow all users of that group automatic access to the Workload Deployer Appliance. In fact, the primary reason to define LDAP groups with Workload Deployer is so you can set permissions all at once at the group level, not to permit all users in the group access to the appliance.

Since the LDAP account and group creation is restricted by whoever controls the LDAP directory, LDAP group membership cannot be modified from the Workload Deployer Appliance. So, when LDAP is enabled, the “Add more...” text field under the “User groups” section of the User panel and the Add more...” text field under “Group membership” section of the “User Groups” panel are not displayed, so you can no longer modify group membership from the appliance.

Section

Summary

This section contains the summary.

Summary

- A Lightweight Directory Access Protocol (LDAP) directory can be used to authenticate users with your Workload Deployer Appliance
- Verification of LDAP authentication configuration settings
- LDAP users and LDAP group members must have Workload Deployer user accounts created to access the appliance and to control Workload Deployer specific permissions

IBM Workload Deployer Appliance offers LDAP integration to provide an additional layer of security to the appliance and LDAP authentication verification tools to verify the correct configuration of the LDAP server. When LDAP security is enabled, the LDAP directory server manages user authentication and group membership; while permissions and authorization to Workload Deployer resources are handled by the appliance.

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