

Deploying applications in a managed domain

Goals

After completing this section, students should be able to do the following:

- Describe the different options available for deploying applications in an EAP managed domain.

Deploying applications in a managed domain

Deploying an application to a managed domain requires a different process than that used to deploy in standalone mode. You cannot select a specific server to deploy an application to. All applications must be deployed to a pool, and then all servers belonging to the specified pool deploy that application. The host controller communicates with the domain controller and ensures that deployments are synchronized across all servers in the managed domain that are part of the pool.

There are two ways to deploy an application using domain mode:

- The management console
- The CLI tool

Unlike standalone mode, it cannot be deployed using the deployment-scanner subsystem. This is because it is not possible to guarantee that the application is available to the entire pool (manually deployed for each server).

Application deployment using the management console

Application deployment using the management console is a two-step process, in which the application (EAR, WAR, JAR, etc.) is first uploaded to the *content repository*, and then deployed to a server pool selected in the managed domain. The content repository is a folder on the domain controller located at `DOMAIN_BASE_DIR/domain/content`, where `DOMAIN_BASE_DIR` is the base directory where the managed domain configuration files are stored.

Using the Content Repository menu, click Add to upload a new implementation to the repository.

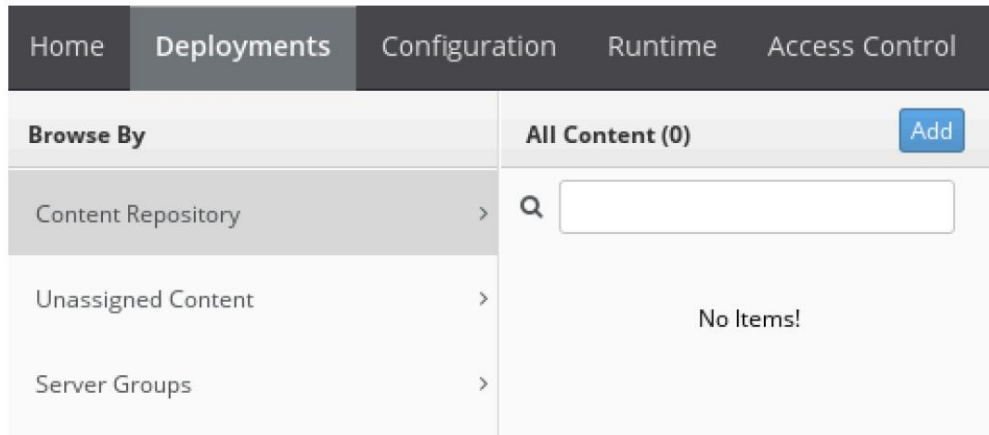


Figure 5.25:
EAP Managed Console - Empty Content Repository page

A wizard will begin uploading a new application to the repository. In the first step of the wizard, the deployment type is requested. Two options are available:

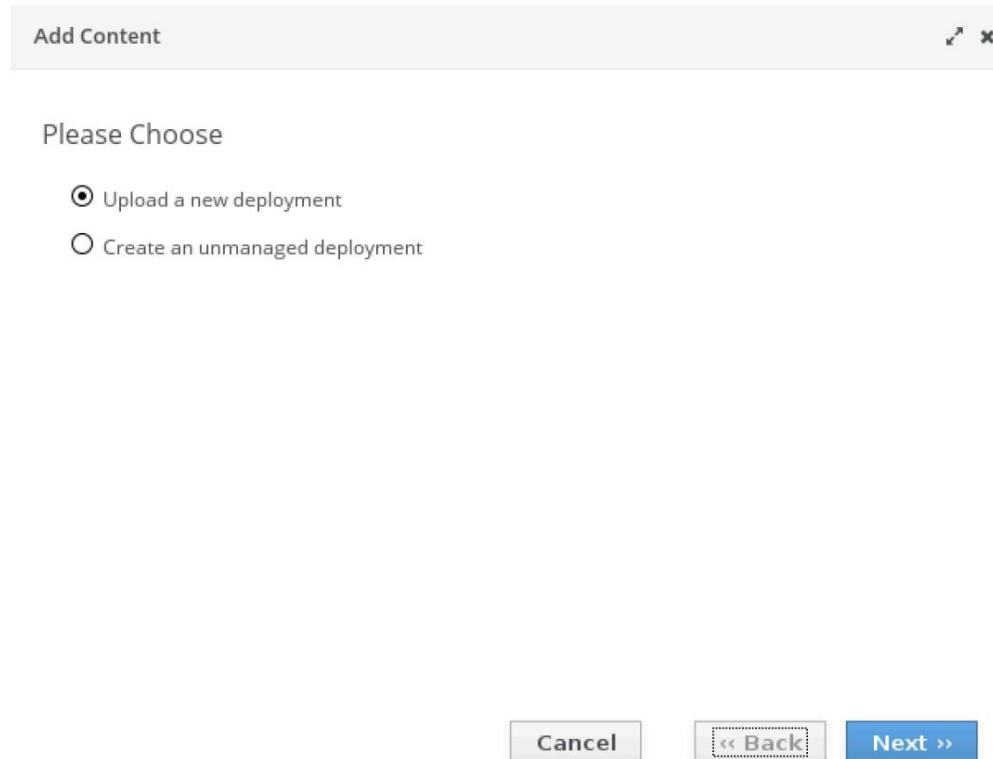
- **Upload a new implementation** – Using this option uploads an application, which is available in the repository. A reference to the application is created in the domain.xml file.
- **Create an unmanaged deployment** – When using this option, you must specify a path where the application file is available. Deployment content will not be uploaded to the repository and will be deployed directly from the specified location.



use

To deploy an application using an unmanaged method, the application file must be available in the same path to all hosts. This is **NOT** a recommended practice, as you may end up having different application files on some hosts. The unmanaged method exists for applications that must be deployed as expanded applications. Also note that such applications violate the JEE specifications.

Application deployment using the management console



Add Content

Please Choose

☒ Upload a new deployment

☐ Create an unmanaged deployment

Cancel << Back Next >>

*Figure 5.26:**EAP Managed Console - Managed and Unmanaged Deployments*

When using the Upload a new implementation option, the second step prompts you to upload the file. Click Browse to navigate to and select the required file.

In the next step of the wizard, two options must be defined:

- **Name:** The identifier of the implementation. This value must be unique across all implementations.
- **Runtime Name:** Defines the context of the application. The context is the name of the application in the runtime environment. If a deployment has a runtime name defined as myapp.war, it will be available at http://server:port/myapp.

Applications added to the Content Repository can then be assigned to one or more server groups using the Assign button next to the deployments.

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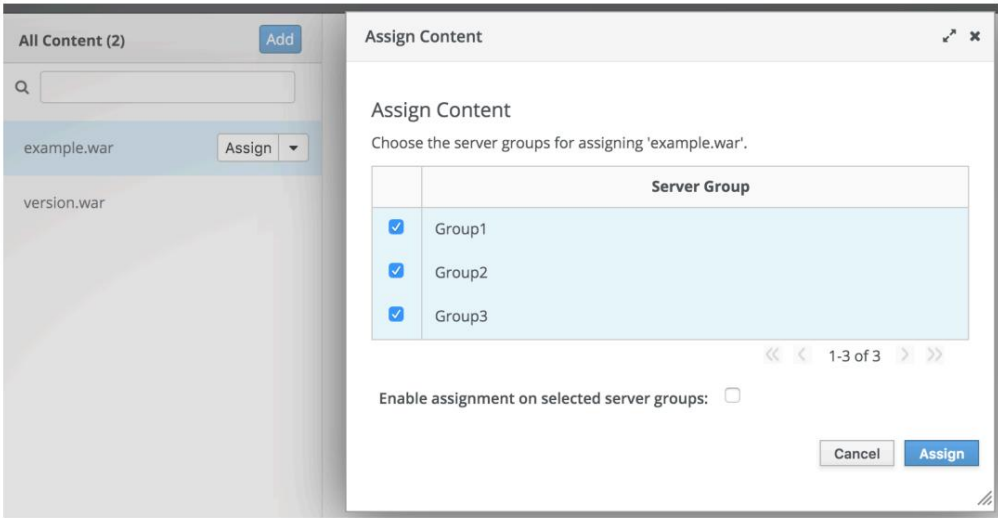


Figure 5.27: Assignment of a content

Another approach is to choose a server group from the Server Group section of the Deployments tab in the management console and select applications that should be deployed to this server group.

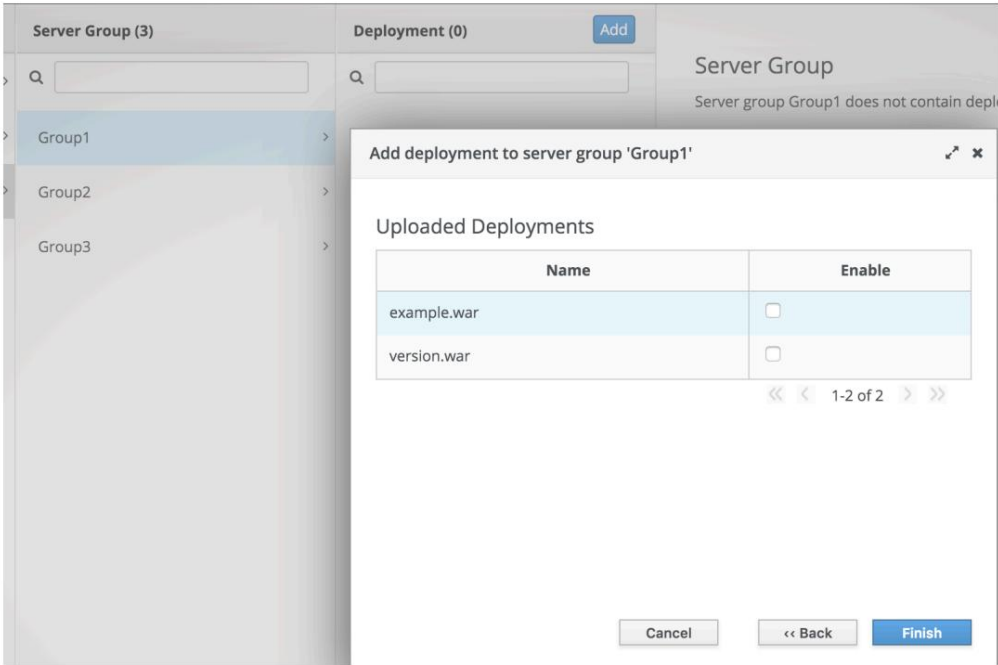


Figure 5.28: Adding a deployment to a server group

Applications can be deallocated from a pool to which they were assigned prior to undeploying pool applications.

Deploying applications using the JBoss EAP CLI

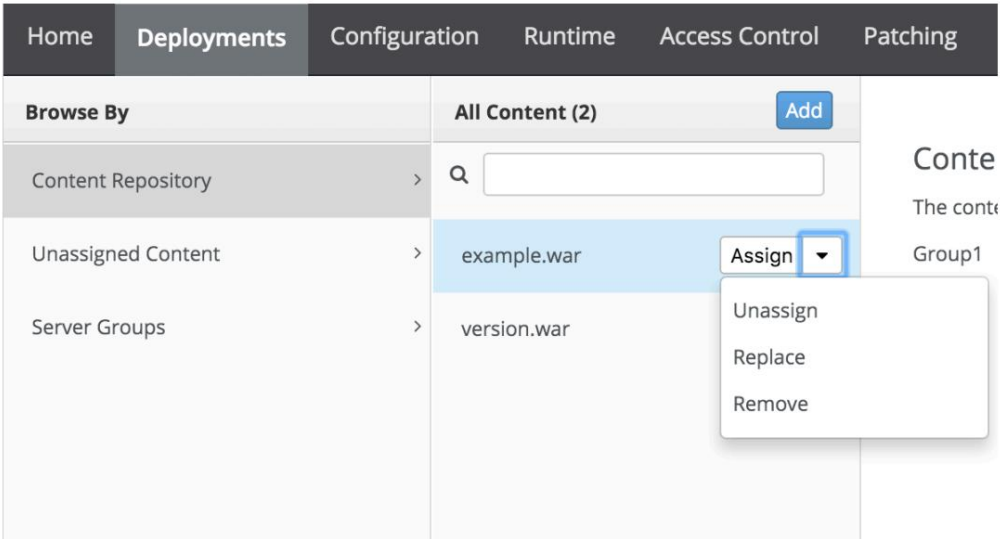


Figure 5.29: Deallocate a deployment from all server groups

Alternatively, applications can be deallocated or disabled from the Server Group section of the Deployments tab in the management console.

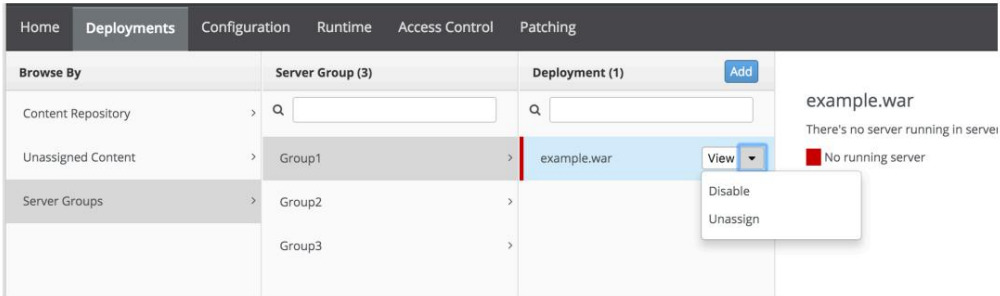


Figure 5.30: Disable a deployment on a server group

Deploying applications using the CLI

JBoss EAP

Deploying applications using the EAP CLI gives administrators the benefit of a Command Line Interface with the ability to create and run deployment scripts. An administrator can use this scripting capability to configure deployment and management scenarios for specific applications. An administrator can manage deployments for an entire network of servers running in a managed domain from a single point of control.

The advantage of this approach is that the steps to deploy and manage the applications can be scripted as part of an automated workflow, and it is faster for deploying multiple applications to a managed domain in batch mode.

The JBoss EAP CLI provides the deploy and undeploy commands in the default top-level namespace to deploy and undeploy applications to a managed domain. One of the advantages of the CLI approach is that an application can be deployed to *all* server groups using a single command:

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```
[domain@workstation:9990 /] deploy /path/to/example.war --all-server-groups
```

To deploy an application to a specific server group, provide a comma-separated list of server groups as arguments to the deploy command:

```
[domain@workstation:9990 /] deploy /path/to/example.war \
--server-groups=Group1,Group2,Group3
```

To undeploy a server group application, the EAP CLI provides a handy `--all-relevant-server-groups` option, because the CLI has already detected the deployments and keeps track of the server groups to which they are deployed. which application was assigned:

```
[domain@workstation:9990 /] undeploy example.war --all-relevant-server-groups
```

An explicit list of server groups from which to undeploy an application can be provided, if the undeployment of the application is not to be performed on all relevant server groups:

```
[domain@workstation:9990 /] undeploy example.war --server-groups=Group1,Group2
```

Undeploy an Application Using the CLI The undeploy command undeploys an application from the domain. To undeploy and remove an application from the entire domain, the name argument and the `--all-relevant-server-groups` option must be declared:

```
[domain@172.25.250.254:9990 /] undeploy myapp.war --all-relevant-server-groups
```

In the example above, the app is also removed from the content repository. To keep the app in the repository, use the `--keep-content` argument:

```
[domain@172.25.250.254:9990 /] undeploy myapp.war --all-relevant-server-groups \
--keep-content
```

It is possible to specify only specific groups with the `--server-groups` argument:

```
[domain@172.25.250.254:9990 /] undeploy myapp.war --server-groups=main-server-group \
--keep-content
```



Important

If the application is assigned to two or more groups, the `--keep content` argument is required, since the content of the application cannot be removed.