

JBoss Operations Network 3.0

Managing JBoss Servers with JBoss ON

real scenarios for managing EAP instances

Edition 0.1

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Abstract

Once JBoss Operations Network is installed, you are ready to set up your inventory. The inventory in JBoss ON lists all of the recognized platforms, servers, and services

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1. MANAGING JBOSS PRODUCTS WITH JBOSS ON

JBoss Operations Network provides extra tools that help manage JBoss server instances. These management tools cover everything from manually configuring a JBoss inventory to applying JBoss patches.

2. DEPLOYING APPLICATIONS ON JBOSS INSTANCES

A number of different types of services can be deployed on a JBoss instance by adding it as a child of that instance. JBoss ON provides additional guidance and options in the UI to simplify the process for deploying EARs, WARs, data sources, connection factories, and JMS queues.

2.1. Deploying EAR and WAR Files

- 1. Search for the JBoss server instance to which to deploy the EAR or WAR.
- 2. On the details page for the selected JBoss server instance, open the **Inventory** tab.
- 3. In the **Create New** drop-down menu, select the item for- **Web Application (WAR)** or **Enterprise Application (EAR)**, as appropriate.
- 4. In the resource form, enter the information for the application to be deployed. Aside from the obvious settings, like the resource name, the WAR or EAR resource entry requires the following information:
 - The package name that the EAR or WAR file will be deployed *as*. In other words, the target entry name.
 - The package architecture.



NOTE

For EAR and WAR deployment, the package architecture should always be **noarch**.

- The full path to the file to be deployed, in the **File** field.
- Whether the file should be unzipped when it is deployed.
- The path to the directory to which to deploy the EAR or WAR package. The destination directory is relative to the JBoss server instance installation directory; this cannot contain an absolute path or go up a parent directory.

2.2. Deploying Data Sources

- 1. Search for the JBoss server instance to which to deploy the data source.
- 2. On the details page for the selected JBoss server instance, open the **Inventory** tab.

- 3. In the **Create New** drop-down menu, select the item for- **Data Sources**.
- 4. Select a template for the data source. There are three data sources templates to populate a data source with common information:
 - The default template is used with SQL databases like PostgreSQL or MySQL
 - The Oracle Local TX is used for Oracle databases with local transactions.
 - The Oracle XA template is used for Oracle databases with XA transactions.
- 5. Along with the obvious settings, like the resource name, enter the information for the specific child resource to be deployed:
 - The type of data source to create, either No TX Data Sources, Local TX Data Sources or XA Data Sources
 - A unique JNDI name for the DataSource wrapper to use to bind under
 - The fully qualified name of the JDBC driver or DataSource class, such as org.postgresql.Driver
 - The JDBC driver connection URL string, such as jdbc:postgresql://127.0.0.1:5432/foo
 - The username and password to use to connect to the data source
 - The minimum and maximum connection pool sizes for this data source

Additional settings are available under the **Advanced Settings** area. These are the same as the advanced settings available when the JBoss ON server is installed.

2.3. Deploying Connection Factories

- 1. Search for the JBoss server instance to which to deploy the connection factory.
- 2. On the details page for the selected JBoss server instance, open the **Inventory** tab.
- 3. In the Create New drop-down menu, select the item for- Connection Factory.
- 4. Along with the obvious settings, like the resource name, enter the information for the specific child resource to be deployed:
 - The type of connection factory to create, either tx-connection-factory (transaction) or no-tx-connection-factory (no transaction)
 - A unique JNDI name for the DataSource wrapper to use to bind under
 - The username and password to use to connect to the data source
 - The minimum and maximum connection pool sizes for this data source

Additional settings are available under the **Advanced Settings** area. These are the same as the advanced settings available when the JBoss ON server is installed.

2.4. Configuring JMS Queues and Topics

JMS Queues and JMS Topics are child resources of a JBossMQ service or JBossMessaging service resource, which itself is a child of a JBoss server instance.

- 1. Search for the JBoss messaging service to which to deploy the JMS queue or topic.
- 2. On the details page for the selected JBoss messaging service, open the **Inventory** tab.
- 3. In the **Create New** drop-down menu, select the item for-**JMQ JMS Topic** or **JMQ JMS Queue**, as appropriate.
- 4. Aside from the obvious settings, like the resource name, the JMS Queue or JMS Topic entry requires two additional parameters:
 - The name of the queue or topic to use as the JMX object name
 - A unique JNDI name for the DataSource wrapper to use to bind under

Additional settings are available under the **Advanced Settings** area. These are the same as the advanced settings available when the JBoss ON server is installed.

2.5. Updating and Deleting Applications on JBoss Servers

EARs and WARs can both be updated on JBoss server instances simply by uploading the updated packages.

- 1. Browse to the EAR or WAR resource in the JBoss ON UI.
- 2. In the EAR or WAR resource details page, open the **Content** tab, and click the **New** subtab.

 Jetengine > 0.0.0 	/ar (//localho 0.0:2099	st/hellother	e)			
Summary						
Type: Web Application Version: none	ation (WAR) (Service	/hei	llothere)	Application (//localhos	t	
SUMMARY			ALERT			т
DEPLOYED		UBSCRIPTIONS	HISTORY			
	eployment					
The following packages for deployment, use the Package Name	were found from the	b to subscribe this			rder to enable more e	existing packages
for deployment, use the	were found from the subscriptions sub-ta Version Ty	b to subscribe this	resource to more		rder to enable more e	existing packages
for deployment, use the Package Name	were found from the subscriptions sub-ta Version Ty	b to subscribe this	resource to more	e repositories.		existing packages

3. Click the UPLOAD NEW PACKAGE button.

4. Click the **UPLOAD FILE** button.

SUMMARY	MONITOR	INVENTORY	► ALERT	CONTENT
DEPLOYED	► NEW	SUBSCRIPTIONS	HISTORY	
Package File				
UPLOAD FILI		k		

5. In the pop-up window, click the **Add** button, and browse the local filesystem to the updated WAR or EAR file to be uploaded.

۲	RHQ - Package File Upload - Mozilla Firefox 💶 🗆	\boxtimes
	http://localhost:7080/rhq/resource/content/file-uploa 🏫	
Pa	ckage File Upload	
	Add Vpload	
	hellothere.war Cancel	
		_
D	one 🛷 🔽	

- 6. Click the **UPLOAD** button to load the file and dismiss the window.
- 7. In the main form, select the repository where the WAR or EAR file package should be stored. If one exists, select an existing repository or a subscribed repository for the resource. Otherwise, create a new repository.
- 8. Confirm the details for the new package, then click **CONTINUE**.

SUMMARY	MONITO				OPERATIONS		
DEPLOYED	▶ NEW	SUBSC	RIPTIONS HIS	TORY			
eview Packages							
	view' button	on the desired				hat steps will be perform e that this will make a liv	
Package Name	Versio	n	Туре	Architecture	Description		Instructio
hellothere.war	12725	91633911	file	noarch			VIEW
					Total: 1		
ackages Deployme	nt Notes						
ackages Deployme Notes specified belo They are not sent to Packages: <u>hellother</u>	w will be displa the plugin for i	use during the		s request in or	der to help further ide	entify the purpose of this	request.

When the package is successfully uploaded, the UI redirects to the history page on the **Content** tab.

SUMMARY		INVENTORY	ALERT 🕑 OPE		DNTENT
DEPLOYED	NEW SUB:	SCRIPTIONS IN HI	STORY		
urrently Executing Re	quests				
There are no currently e	executing content reque	sts			
completed Requests					
Request Started	Notes	Request Status	Request Type	Details	User
Thu Apr 29 21:43:30 EDT 2010	Packages: hellothere.war 1272591633911	Success	Deploy	VIEW	rhqadmin
Thu Apr 29 21:24:18 EDT 2010	Packages: hellothere.war 1272590648498	Success	Deploy	VIEW	rhqadmin
			Total: 2		Þ
ull Package Audit Trai	I				
status of the package.		that are referenced mo			hey are ordered from tem indicates the current
Package Name	Version	Architecture	Status	Timestamp	Details
hellothere.war	1272591633911	noarch	Current	4/29/10 9:43:31	PM, EDT VIEW
hellothere.war	1272590648498	noarch	Missing	4/29/10, 9:43:31	PM, EDT VIEW
hellothere.war	1272591633911	noarch	Discove	ered 4/29/10, 9:43:31	PM, EDT VIEW
hellothere.war	1272591633911	noarch	Installat In Prog	1/20/10 0·/3·30	PM, EDT VIEW

Figure 1. Deployment History for a Resource

NOTE



To undeploy an EAR or WAR, simply delete the EAR or WAR child resource.

3. APPLYING JBOSS PATCHES

Content management can be used to apply cumulative patches to JBoss Enterprise Application Platform 4. By default, the JBoss ON server comes pre-configured with the JBoss Patch Content Source and JBoss Patch Repository.

A content source connects a JBoss ON server to all the JBoss patches. Arepository maps a content source to the resources in the inventory that the patches are applied to. For JBoss patches, the default content provider connects the JBoss ON server to the cumulative patches provided by the JBoss Customer Service Portal. The default repository associated with the content provider is where the metadata about the patches and the patches themselves are stored within JBoss ON.

The patch process updates existing JAR and class files with upgraded JAR and class files that are contained in the patch package. Other changes that need to be completed manually (all the "Not Performed" steps, for example) are also listed. If the configuration does not include one of the JAR files to be patched, then that step is skipped.

The patching process does not care what the server configuration profile is called or which base configuration it is derived from.

The JBoss ON agent is the entity which actually executes the patching process on a resource. The agent is informed of updates, pulls the information from the server, and then updates the local JAR and class files within the managed JBoss instance. The patching process runs independently of any server configuration profile or base configuration.

3.1. Supported JBoss Products for Patch Updates

JBoss Enterprise Application Platform 4 can receive and apply patch updates through the JBoss CSP feed in JBoss ON.



NOTE

Patch updates using the Patch RSS Feed is not supported for JBoss Enterprise Application Platform 5 or newer.



NOTE

A CSP feed is only available for a product or a specific version of a product if there is a patch in the CSP for that product. JBoss ON depends on the JBoss CSP to provide patch information.

3.2. Situations That Can Require Manual Steps

Some patches require additional, manual changes, such as editing an XML configuration file. Any required manual changes are listed as *special steps* in the patch installation summary. There are several different situations that require manual intervention:

• The file to be patched is not present in the configuration.

- There are files that need to be removed manually.
- Configuration files, such as XML or Java properties files, require patches that need to be applied manually.
- Seam is being used and must be patched manually.

3.3. Enabling the Default JBoss Patch Content Source



NOTE

Perform patch installations during off hours or scheduled maintenance periods.

- 1. In the Administration tab in the top menu, open the**Content** menu and select the **Content Sources** item.
- 2. Click the JBoss CSP Patch Feed source.

Boss	S Overview Reso	ources Groups Adı	ministration Help							
Cont	Content Sources									
Content	Sources									
	Name	Date Created	Date Modified	Lazy Load?						
	JBoss CSP Patch Feed	3/31/10, 4:16:40 PM, EDT	3/31/10, 4:16:40 PM, EDT	true						
C	REATE NEW DELETE	SELECTED SYNC SELE	Go To All Rep	ositories Vie						

- 3. Click the **Edit** button at the bottom of the**CSP Feed Settings** area to modify the content source.
- 4. Fill in the required connection information.

sic Details			
	Type: Ji	BossASPatchSource	
	Name: 🛛	JBoss CSP Patch Feed	
De	scription:	an <u>RSS</u> feed published by the <u>Boss</u> Customer Service Portal (<u>CSP</u>) website which provides a list of all <u>Boss</u>	
ynchronization :	Schedule:	0001*?	
ı	azy Load:		
Downle	oad Mode:	DATABASE	
	-		
Creat	tion Date: 3	/31/10, 4:16:40 PM, EDT	
		//31/10, 4:16:40 PM, EDT :/31/10, 4:16:40 PM, EDT	
Last Modif Last Downle	fied Date: 3 oad Error: N	/31/10, 4:16:40 PM, EDT	
Last Modific Last Downle	fied Date: 3 oad Error: N	/31/10, 4:16:40 PM, EDT	a cola
Last Modification Last Downle	fied Date: 3 oad Error: N	/31/10, 4:16:40 PM, EDT	a colia
Last Modif	fied Date: 3 oad Error: N	/31/10, 4:16:40 PM, EDT Ione	a cole Description URL of the RSS feed.
Last Modification Last Downled denotes a required field CSP Feed Setting Name	fied Date: 3 oad Error: N	/31/10, 4:16:40 PM, EDT Jone	Description
Last Modificant Last Downless a required field.	fied Date: 3 oad Error: N gs Unset	/31/10, 4:16:40 PM, EDT Jone Value https://access.redhat.com/jbossnetwork/restricted/feed/software	Description URL of the RSS feed. Username used to log into the CS
Last Modif Last Downle denotes a required field CSP Feed Setting Name Feed URL *	fied Date: 3 oad Error: N gs Unset	/31/10, 4:16:40 PM, EDT lone Value https://access.redhat.com/jbossnetwork/restricted/feed/software jsmith	Description URL of the RSS feed.

- The Customer Support Portal username and password
- The URL for the content source (https://access.redhat.com/jbossnetwork/restricted/feed/software.html? product=all&downloadType=all&flavor=rss&version=&jonVersion=2.0)
- The activation state (Yes)

Most of the default settings, such as the schedule, can be kept.



IMPORTANT

Keep the **Lazy Load** checkbox activated, or all patches defined in the RSS feed, 1 GB of data, is preemptively downloaded by the JBoss ON server.

- 5. Click Save.
- 6. Optionally, use **Synchronize** button to force the content source to pull down the latest RSS Feed and synchronize it with the local data. The history of synchronization attempts is listed in the **Synchronization Results section**.

3.4. Subscribing a Specific Resource to the Default JBoss Patch Repository

1. In the **Resources** item in the top menu, go to the**Servers** item.

- 2. Search for the JBoss instance to subscribe to the repository.
- 3. On the JBoss server resource's entry page, open the **Content** tab and select the **Subscriptions** subtab. The JBoss patches repository is listed as available for subscription.

nmary				
Type: JBossAS Server (S Version: 2.2.3 Server Built: Jul 15 20	Parent: Linux 'localhost.lo		atform	
SUMMARY MON		PERATIONS	EVENTS	CONTENT
rrent Resource Subscription	ns			
Name	Description	Package Count	Created	Last Modified
UNSUBSCRIBE	Description	Package Count	Created	Last Modified
	Description	-		Last Modified
UNSUBSCRIBE	Description Description	-		Last Modified
UNSUBSCRIBE		Total: 0		
UNSUBSCRIBE	Description the patches obtained from the JBoss CSP	Total: 0	Created 3/31/10, 4:16:40	Last Modified 7/1/10, 9:23:47
UNSUBSCRIBE illable Repositories Name JBoss Patches	Description the patches obtained from the JBoss CSP	Total: 0 Package Count 0	Created 3/31/10, 4:16:40 PM, EDT 6/23/10, 6:34:42	Last Modified 7/1/10, 9:23:47 AM, EDT 6/23/10, 6:34:42

4. Select the checkbox beside the JBoss patches repository, and click the **SUBSCRIBE** button. When the assignment is complete, the repository is listed under the **Current Resource Subscriptions** area, rather than **Available Repositories**.

<pre> 127.0.0.1:1099 Iocalhost.localdomain > 127.0.0.1:1099 ✓</pre>									
Summary				•					
Type: JBossAS Server (Server) Version: 2.2.3 Server Built: Jul 15 2009 09:	Description: JBoss Enterprise Parent: Linux 'localhost.loca		atform						
SUMMARY MONITOR	0 0	ERATIONS	EVENTS						
DEPLOYED NEW Subscribed [1] repositories to resour	▶ SUBSCRIPTIONS HISTORY								
Current Resource Subscriptions									
Name	Description	Package Count	Created	Last Modified					
JBoss Patches	JBoss Patches the patches obtained from the JBoss CSP patch feed 0 3/31/10, 4:16:40 PM, EDT 7/1/10, 9:23:47 AM, EDT								
UNSUBSCRIBE	٦	fotal: 1							

3.5. Subscribing Multiple JBoss Resources to the Default JBoss Patch Repository

The repository is associated with a content source (the patches that can be applied) and resources are then subscribed to this repository (where the patches can be applied to).

- 1. In the Administration tab in the top menu, open the**Content** menu and select the **Repositories** item.
- 2. Click the JBoss Patch Channel.

The JBoss patch repository is associated with the JBoss patch content source by default. To associate the repository to another content source, click the **ASSOCIATE...** button and assign the content source.

- 3. In the main page for the repository, click the **SUBSCRIBE...** button to subscribe JBoss resources to the patch repository.
- 4. In the search area, select **Server** in the drop-down menu.
- 5. Select all the JBoss server instance resources to subscribe to this repository.

3.6. Applying a Patch

For patches to be applied to a JBoss server, the server must first be subscribed to the JBoss content repository.

- 1. Stop the JBoss instance.
- 2. In the **Resources** item in the top menu, go to the**Servers** item.
- 3. Search for the JBoss instance to patch.
- 4. On the JBoss server resource's entry page, open the **Content** tab and select the **New** subtab. This lists all of the packages and patches which are available for that specific resource type.
- 5. Select the checkboxes beside the names of the patched to install, and click the **DEPLOY SELECTED** button.

DE	EPLOYED	▶ NEW SU	BSCRIPTIONS	HISTORY	(
acka	ges Eligible for Dep	loyment			
	ollowing packages we syment, use the subso				bed to by this resource. In order to enable more existing packages for ore repositories.
	Package Name	Version	Туре	Architecture	Description
	JBoss EAP 5.0.0.GA_CP02	5.0.0.GA_CP02	Cumulative Patch	noarch	CP02 is the second cumulative patch for JBoss EAP 5.0.0.GA. All the patches included in this patch are listed in the long description. More information about Cumulative Patches can be found in the JBoss ON wiki: What is a CP?
	JBoss EAP 5.0.0.GA_CP07	5.0.0.GA_CP07	Cumulative Patch	noarch	CP07 is the seventh cumulative patch for JBoss EAP 5.0.0.GA. It should NOT be applied to JBoss AS 5.0.0.GA. All the patches included in this patch are listed in the long description. More information about Cumulative Patches can be found in the JBoss ON wiki: What is a CP?
	DEPLOY SELECTED	7			Total: 2

6. Review the information on the page and verify everything is correct. Click the **VIEW** link in the **Instructions** column to review the steps that will be performed during the package installation process.

SUMMARY DEPLOYED	MO ► N			ALERT	OF (PERATIONS	EVENTS		
view Packages	P N	CVV 3	UBSCRIF HONS	histort					
he following packag			each package, the e to request the ins						
ackage Name		Version	Туре	Ar	chitecture	Description			Instruction
IBoss EAP 5.0.0.G.	A_CP02	5.0.0.GA_CP	02 cumulativ	ePatch no	barch	EAP 5.0.0.GA All the patche in the long des More informat	s included in this p	atch are listed ive Patches	VIEW
ckages Deployme						Total: 1			
	w will be o r use durir	ng the installat		s of this request	in order to	help further ide	entify the purpose	of this request.	They are no

- 7. Optionally, enter any notes to describe the patch deployment or environment.
- 8. Click the **CONTINUE** button to install the updates. The patch process runs in the background; the progress can be viewed in the **History** subtab of the **Content** tab.

 When the installation process is complete, the patch job is listed in the Completed Requests area. Clicking the VIEW button displays the list of steps that performed in the process and whether they succeeded, failed, or were skipped.

🕸 sum	IMARY	MONITOR	INVENTORY	ALERT	OPERATIONS	EVENTS	CONTE	NT
DEPLO	YED	NEW	SUBSCRIPTIONS	▶ HISTORY				
ackage D	etails							
Package	Name			JBoss EAP 5.0.0.GA	_CP02			
Version				5.0.0.GA_CP02				
Archited	ture			noarch				
Result				Success				
Error Me	essage							
Step Number	Description						Errors	Result
	java.lang.RuntimeException: Could not stream package bits for [PackageDetailsKey[Name=JBoss EAP 5.0.0.GA_CP02, Version=5.0.0.GA_CP02 Arch=noarch Type=cumulativePatch]]						2	Success
1					geDetaliskey[Name=JBos	S EAP 5.0.0.GA_CP0.	View	Success
1	Version=5.0.0).GA_CP02 Arch= digest of [#{dov	noarch Type=cumula	ativePatch]]	ing the [MD5] algorithm a	-	View	Not Performed

10. When the patch process is complete, start the JBoss instance.

4. MANAGING MOD_CLUSTER DEPLOYMENTS

The **mod_cluster** module provides intelligent, dynamic load balancing for web applications. There are two halves to **mod_cluster**: one in the JBoss application server (which manages the web application contexts) and one in the HTTP server (which manages sessions and routing). JBoss ON monitors and manages the **mod_cluster** module within the JBoss server.



NOTE

JBoss ON supports **mod_cluster** version 1.1.2. This version of**mod_cluster** is not currently supported on JBoss EAP or the **httpd** service on Red Hat Enterprise Linux.

4.1. About mod_cluster

mod_cluster is an HTTP load balancer that provides a level of intelligence and control over web applications that is not available with other HTTP load balancers. **mod_cluster** has lots of features that improve performance and management, but two are crucial:

- By using multicast (*advertising*), **mod_cluster** signals workers what proxy servers are available, so workers can register themselves dynamically with the cluster domain.
- Using a special communication layer between the JBoss server and the HTTP server, mod_cluster can not only register when a web context is enabled but also when it is disabled and removed from load balancing. This allows mod_cluster to handle full web application life cycles.

More detail about the features of **mod_cluster** is in the product documentation at http://www.jboss.org/mod_cluster.

mod_cluster has two modules: one for the HTTP server which handles routing and load balancing and one for the JBoss server to manage the web application contexts. Both modules must be installed and configured for the cluster to function.

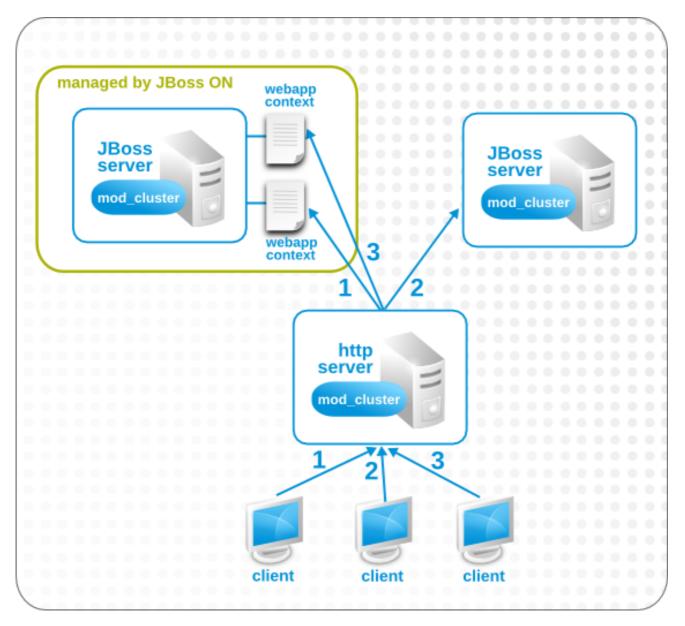


Figure 2. The mod_cluster Topology

In JBoss ON, the entire **mod_cluster** domain is imported as a child resource for the JBoss server. The web application contexts are listed as children resources for the cluster, with contexts as children within the **mod_cluster** module.

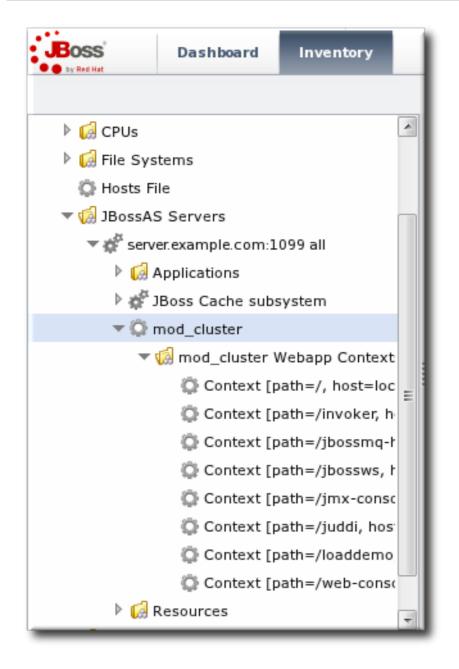


Figure 3. The mod_cluster Resource Hierarchy



IMPORTANT

The **mod_cluster** module in the HTTP server is configured externally from JBoss ON and is not managed by JBoss ON.

The **mod_cluster** module in the JBoss server can be managed by JBoss ON, and it is critical that the cluster is properly configured in order for JBoss ON to manage its resources. JBoss ON detects **mod_cluster** like any other JMX resource (such as Hibernate).

There are a number of resources available for installing and configuring **mod_cluster**:

- http://docs.jboss.org/mod_cluster/1.1.0/html/
- https://access.redhat.com/documentation/en-US/JBoss_Enterprise_Application_Platform/5/html/HTTP_Connectors_Load_E

4.2. Managing mod_cluster

The **mod_cluster** properties provide direct management over how the**mod_cluster** domain operates. Almost any part of the **mod_cluster** configuration can be managed through JBoss ON, but two elements are critical for domain behavior:

- How the **mod_cluster** domain handles sticky sessions. Sticky sessions are enabled in **mod_cluster** by default, but this can be disabled or its behavior can be changed through the configuration properties.
- Enabling advertising (multicast). **mod_cluster** can send the JBoss information to any VirtualHost configured in the HTTP server. This allows workers to find the cluster and register themselves with the JBoss server dynamically.

	Dashboard	Inventory	Reports	Bundles	Adm	inistration	Help		rhqadmin Logout	
	1 All configura	tion properties ha	ve valid values, so	the configurat	ion can	now be sav	ed.	►0 Favor	ites 💌 Message Center	
 Image: PUs Image: PUs			► Cluster MOD_CLUSTER Tags: ©							
🔻 🕼 JBossA	🔻 🍻 JBossAS Servers		💭 Summary	🖆 Invento	ory [▶ Alerts	📟 Monitoring	Operation	ns 🖉 Configuration	
▼ 🋱 ser	🔻 💣 server.example.com:1099 all		Current ⊦	Current History						
▶ 😡	Applications		Save	Cave						
🕨 💣 JBoss Cache subsystem										
-	▼ ۞ mod_cluster		Property	Property		nset? Value		Description		
	♥ Ø mod_cluster Webapp Context ♥ Context [path=/, host=loc ♥ Context [path=/invoker, h ♥ Context [path=/jbossmq-F		Sticky Sessions			Yes	🔿 No	Ena	bles sticky sessions.	
			Sticky Session I	Remove		🖲 Yes	🔿 No	requ	nove session when the lest cannot be routed to the t node.	
	Context [path=/jbossws, + Context [path=/jmx-consc		Advertise	Advertise Yes No		Ena	ble autodiscovery of httpd vers.			
	💭 Context [path=/juddi, hos									
	💭 Context [path=/loaddemo									
🔅 Context [path=/web-consc										
▶ 😡	Resources	+								

Figure 4. Setting Server-Level Properties

The server-level operations apply to all web application contexts configured within the **mod_cluster** domain domain. The obvious ones that impact the web application contexts are enabling and disabling all contexts. The other options are used to reset the **mod_cluster** domain after an error (reset the node) or reload the cluster configuration after making changes to the cluster properties.

▶ ♥ mod_clu Tags: ②	ster mod_cluster 🗸 🕵
🔅 Summary 📓	Inventory 🏲 Alerts 🔤 Monitoring 🕑 Operations 🖉 Configuration
Schedules Histo	γ
Create New Op	peration Schedule
Operation * :	Refresh configuration
Parameters :	Enable all webapps neters. Refresh configuration
Schedule using	Reset the node Disable all webpapps
● Now ○ Now & Repeat	Later Later & Repeat
Schedule	Reset Cancel

Figure 5. Running Server-Level Operations

4.3. Managing Web Applications Contexts

JBoss ON manages the full lifecycle of web application contexts within the **mod_cluster** load-balancing cluster.

Web application contexts can be stopped or disabled. Stopping or disabling a webapp context removes it from load-balancing balancing so that the Apache server cannot forward requests to the webapp, but it leaves the application running and available directly from the JBoss server address. (Stop allows the webapp context to drain before removing it from the load-balancing, so this essentially shuts down the webapp gracefully. It can take several minutes or even hours for the webapp context to stop. Disabling a webapp context immediately removes it from load balancing.)

JBoss ON has operations that allow JBoss administrators to manage the state of their web contexts within the **mod_cluster** domain.

Context [[path=/, host=localhost] MOD_CLUSTER WEBAPP	√ இ
💭 Summary 🛛 🖾	Inventory 🏲 Alerts 🖾 Monitoring 🕑 Operations	
Schedules Histo	ry	
Create New Op	peration Schedule	
Operation * :	Enable webapp 👻 Enable the webapp	~
Parameters :	Stop webapp neters.	
Schedule using	Enable webapp Disable webapp g: O Calendar Expression	E
● Now ○ Now & Repeat	Later Later & Repeat	
		2
Schedule	Reset Cancel	

Figure 6. Running Web Application Context Operations

Web context resource operations only apply to the specific selected context.

5. DOCUMENT INFORMATION

This guide is part of the overall set of guides for users and administrators of JBoss ON. Our goal is clarity, completeness, and ease of use.

5.1. Giving Feedback

If there is any error in this guide or there is any way to improve the documentation, please let us know. Bugs can be filed against the documentation for the community-based RHQ Project in Bugzilla, http://bugzilla.redhat.com/bugzilla. Make the bug report as specific as possible, so we can be more effective in correcting any issues:

- 1. Select the **Other** products group.
- 2. Select RHQ Project from the list.
- 3. Set the component to **Documentation**.
- 4. Set the version number to 3.0.
- 5. For errors, give the page number (for the PDF) or URL (for the HTML), and give a succinct description of the problem, such as incorrect procedure or typo.

For enhancements, put in what information needs to be added and why.

6. Give a clear title for the bug. For example, "Incorrect command example for setup script options" is better than "Bad example".

We appreciate receiving any feedback — requests for new sections, corrections, improvements, enhancements, even new ways of delivering the documentation or new styles of docs. You are welcome to contact Red Hat Content Services directly at docs@redhat.com.

5.2. Document History

Revision 3.0-5 Rebuild with publican 4.0.0	2013-10-31	Rüdiger Landmann
Revision 3.0-0	December 5, 2011	Ella Deon Lackey

With the initial release of JBoss Operations Network 3.0.

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