

# JBoss Operations Network Hands on Lab

## JON

JBoss by Red Hat

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### Introduction

#### Overview

JBoss Operations Network (JON) is a tool that allows you to monitor and manage the JBoss instances you have installed on your network. It is simple Server Client/Agent architecture, whereby you install the JON server for production with an Oracle or Postgress database; for this example we will use an embedded Hypersonic database not intended for production. Then you install an agent and it will automatically discover the JBoss, OS and other instances that are running on the same computer as the Agent. We will then walk though some of the features of JBoss Operations Network.

#### **Included Files**

Several files are included with this workshop. These files are all included in the \${User\_Home}/Downloads directory. You will need to get files out of the Platforms and JON directory, and we will walk you through those steps.

#### System Expectations

It is expected that you have a Windows, Linux or Mac notebook and you are comfortable working and running Java programs on it. It is expected you will have the environment PATH set to include a JDK 6.0 to use for these labs. It is also a good idea to have JAVA\_HOME set to your JDK that you plan on using. Please make sure you do this before running any of the labs. Two examples of what these settings might look like is below:

PATH=\${Some Path}/jdk1.6.0\_20/bin:\${Some Path}/ant/apache-ant-1.8.1: \${More Path Info}
JAVA\_HOME=\${Some Path}jdk1.6.0\_20

To verify that this is correct you will have to look at these values on your system One simple way to check the JDK version that you have is to run:

java -version

to see which one is in your path, and it should be a JDK 6 version to run this lab. Also note that Ant has been installed for you and you will have to install a few other things as the lab progresses.

Please note that having an existing CLASSPATH environment variable set may cause odd issues with jar class loading, it is recommended to have this empty and not set. Please make sure to back up this value for when the lab is over. You are welcome to not do this, however weird things may happen when you are running through the labs.

#### What is Expected of You

Please feel free to raise your hands with any questions that you have about the lab; feel free to ask why it is you are doing something, or if something does not feel right. Please know that all care was made in creating this user guide, but all screen shots and steps along the way might be off by just a little so please be patient with any issues.

### Lab Number 1: Install JON Server

#### Get the File

In the \${USER\_HOME}Downloads/JON directory you will find the JON installer, it is platform agnostic and it should look something like this:

downloadJBNLicense.xml
jon-plugin-pack-eap-2.3.1.GA.zip
jon-server-2.3.1.GA.zip

#### Just Unzip and Go

Installing the JON is very very simple, and has the following high level steps: Create a ServersJON directory in the user home directory, make this unique Unzip the contents of the jon-server\* file above into that directory

mkdir \${UserHome}/ServerJON
cd \${User\_Home}/ServerJon
unzip ~student/Downloads/JON/jon-server-2.3.1.GA.zip

Your command should look something like this:



Now make a temp directory for the jon-plugin pack and unzip it

mkdir tmp
cd tmp
unzup ~student/Downloads/JON/jon-plugin-pack-eap-2.3.1.GA.zip

It should look like this:

jimtyrrell@localhost:~/ServerJON/tmp	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp	
inflating: jon-server-2.3.1.GA/jbossas/bin/wsrunclient.sh	
inflating: jon-server-2.3.1.GA/jbossas/bin/wsconsume.sh	
inflating: jon-server-2.3.1.GA/jbossas/bin/jboss_init_redhat.sh	
inflating: jon-server-2.3.1.GA/jbossas/bin/shutdown.sh	
inflating: jon-server-2.3.1.GA/jbossas/bin/jboss_init_suse.sh	
inflating: jon-server-2.3.1.GA/jbossas/bin/jboss_init_hpux.sh	
inflating: jon-server-2.3.1.GA/jbossas/bin/twiddle.sh	
inflating: jon-server-2.3.1.GA/bin/rhq-server.sh	
[jimtyrrell@localhost ServerJON]\$ mkdir tmp	
[jimtyrrell@localhost ServerJON]\$ cd tmp	
[jimtyrrell@localhost tmp]\$ unzip ~jimtyrrell/Downloads/JON/jon-plugin-pack-eap-2.3.1.GA.zip	~

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The next step is to copy those unzipped jar files into the correct location, by opening the README.txt above we can see the home for those files.

```
cd jon-plugin-pack-eap-2.3.1.GA
cp -R *.jar
~student/ServerJON/jon-server-2.3.1.GA/jbossas/server/default/deploy/rhq.ear.rej/rhq-d
ownlaods/rhq-plugins
```

As shown below:

jimtyrrell@localhost:~/ServerJON/tmp/jon-plugin-pack-eap-2.3.1.GA	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp	
<pre>inflating: jon-plugin-pack-eap-2.3.1.GA/LICENSE inflating: jon-plugin-pack-eap-2.3.1.GA/EULA inflating: jon-plugin-pack-eap-2.3.1.GA/jopr-hibernate-plugin-2.3.1.GA.jar inflating: jon-plugin-pack-eap-2.3.1.GA/jopr-jboss-cache-v3-plugin-2.3.1.GA.jar inflating: jon-plugin-pack-eap-2.3.1.GA/jopr-jboss-cache-v3-plugin-2.3.1.GA.jar inflating: jon-plugin-pack-eap-2.3.1.GA/jopr-jboss-as-plugin-2.3.1.GA.jar inflating: jon-plugin-pack-eap-2.3.1.GA/jopr-jboss-as-plugin-2.3.1.GA.jar inflating: jon-plugin-pack-eap-2.3.1.GA/jopr-jboss-as-5-plugin-2.3.1.GA.jar inflating: jon-plugin-pack-eap-2.3.1.GA/jopr-rhg-server-plugin-2.3.1.GA.jar [jimtyrrell@localhost tmp]\$ cd jon-plugin-pack-eap-2.3.1.GA/</pre>	
[jimtyrrell@localhost jon-plugin-pack-eap-2.3.1.GA]\$ cp -R *.jar ~jimtyrrell/ServerJON/jon-server-2.3.1.GA/jbos ver/default/deploy/rhq.ear.rej/rhq-downloads/rhq-plugins/	sas/ser =

Please note if you have already started the JON server at least once this path is slightly different as noted in the README.txt

Okay we are now almost done, while we are here, lets unzip a JBoss EAP instance so we have something to discover.

```
cd ../..
unzip ~student/Downloads/Platforms/jboss-eap-5.0.0..GA.zip
as shown:
```

```
      jimtyrrell@localhost:~/ServerJON

      File Edit View Terminal Tabs Help

      [jimtyrrell@localhost jon-plugin-pack-eap-2.3.1.GA]$ cd ../..

      [jimtyrrell@localhost ServerJON]$ unzip ~jimtyrrell/Downloads/Platforms/jboss-eap-5.0.0.GA.zip
```

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Now lets startup a tail -f session so we can see our server log output.

cntrl-shift-n
cd jon-server-2.3.1.GA
tail -f logs/rhq-server-log4j.log

This will open up a new window to view the logfile as it is generated, as shown:

jimtyrrell@localhost:~/ServerJON/jon-server-2.3.1.GA 🗕 🗖	×
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp	
<pre>[jimtyrrell@localhost ~]\$ cd ServerJON/ jboss-eap-5.0/ jon-server-2.3.1.GA/ tmp/ [jimtyrrell@localhost ~]\$ cd ServerJON/jon-server-2.3.1.GA [jimtyrrell@localhost jon-server-2.3.1.GA]\$ ls bin etc EULA jbossas LICENSE [jimtyrrell@localhost jon-server-2.3.1.GA]\$ tail -f logs/rhq-server-log4j.log tail: cannot open `logs/rhq-server-log4j.log' for reading: No such file or directory tail: no files remaining [jimtyrrell@localhost jon-server-2.3.1.GA]\$ </pre>	

Opps you can see we have an error, lets just leave that window there for a second, so we can go back to it.

Lets go back to our other window and start up JON.

cd jon-server-2.3.1.GA/bin
./rhq-server.sh start

#### As shown below:

jimtyrrell@localhost:~/ServerJON/jon-server-2.3.1.GA/bin					
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp					
inflating: jboss-eap-5.0/seam/examples/quartz/view/search.xhtml	-				
inflating: jboss-eap-5.0/seam/examples/quartz/view/screen.css					
inflating: jboss-eap-5.0/seam/examples/quartz/view/index.html					
inflating: jboss-eap-5.0/seam/seam.bat					
[jimtyrrell@localhost ServerJON]\$ ls					
jboss-eap-5.0 jon-server-2.3.1.GA tmp					
[jimtyrrell@localhost ServerJON]\$ cd jon-server-2.3.1.GA/bin/					
[jimtyrrell@localhost bin]\$ ./rhq-server.sh start					
Trying to start the RHQ Server					
RHQ Server (pid 19603) is starting	=				
[jimtyrrell@localhost bin]\$	~				

It should be noted that this command will return after starting up JON. You can then use it to "stop" the server also.

Hit enter, and then up arrow in your other window to watch the log output. You might have to try a few times until the server starts generating the log output.

That window at server completion will look like this, notice the "Started" message in the bottom:

jimtyrrell@localhost:~/ServerJON/jon-server-2.3.1.GA
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp
2010-05-13 09:18:12,129 INFO [org.quartz.simpl.RAMJobStore] RAMJobStore initial
ized.
2010-05-13 09:18:12,129 INFO [org.quartz.impl.StdSchedulerFactory] Quartz sched uler 'DefaultQuartzScheduler' initialized from default resource file in Quartz p
ackage: 'quartz.properties'
2010-05-13 09:18:12,130 INFO [org.quartz.impl.StdSchedulerFactory] Quartz sched
uler version: 1.6.5
2010-05-13 09:18:12,130 INFO [org.quartz.core.QuartzScheduler] Scheduler Defaul
tQuartzScheduler_\$_NON_CLUSTERED started.
2010-05-13 09:18:12,142 INFO [org.jboss.web.tomcat.service.TomcatDeployer] depl
oy, ctxPath=/installer, warUrl=/deploy/rhq-installer.war/ 2010-05-13 09:18:12,933 INFO [org.rhq.helpers.rtfilter.filter.RtFilter] Initial
ized response-time filter for webapp with context root 'installer'.
2010-05-13 09:18:12,952 INFO [org.apache.catalina.core.ContainerBase.[jboss.web
].[localhost].[/installer]] Autoinstaller Servlet: Server is not preconfigured -
will not perform auto-install. Please perform a manual install.
2010-05-13 09:18:13,048 INFO [org.apache.coyote.http11.Http11Protocol] Starting Coyote HTTP/1.1 on http-0.0.0.0-7080
2010-05-13 09:18:13,060 INFO [org.apache.coyote.http11.Http11Protocol] Starting
Coyote HTTP/1.1 on http-0.0.0.0-7443
2010-05-13 09:18:13,065 INFO [org.jboss.system.server.Server] JBoss (MX MicroKe <sup>≡</sup>
<pre>rnel) [4.2.3.GA (build: SVNTag=JBoss_4_2_3_GA date=200807181417)] Started in 12s</pre>
:100ms

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Now that the server is started, lets open it via a web browser: <a href="http://localhost:7080">http://localhost:7080</a>

It should look like this:

👻 Welcome to JON! - Mozilla Firefox		
<u>E</u> lle <u>E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
💠 🗢 🧒 🔞 👘 http://localhost:7080/installer/welcome.jsf	☆ 🔻 🕻 🕶 Google	۹
📷 Most Visited 🔻 💐 Red Hat 💐 Red Hat Magazine 💐 Red Hat Network 💐 Red Hat Support		
JEOSS		
by Red Hat		
Welcome to JON!		
You have reached the JON Installer. Use this page to install and configure the JON Server. Once complete you will be able to log on and use JON.		
<u>Click here to continue the installation</u>		
Please review the documentation linked below to learn more about JON:		
JON Server Installation Guide		
JON Server Users Guide     JON Agent Users Guide		
Frequently Asked Questions		
Deer		
Done		ii

Click on the Click here to continue the installation

J	В	0	S	S	D	Е	v	Е	L	0	Р	Е	R	S	т	U	D	Ι	0
•	-	•	<u> </u>	•	-	_	•	_		•			••	U U		•	-	_	•

2	Welcor	ne to JON! - Mozilla Firefox 📃 🗆 🗙						
<u>F</u> ile <u>E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>E</u>	ookmarks <u>T</u> ools <u>H</u> elp	0						
🗢 🔿 🕶 🕺 🖸 🍯	http://localhost:7080/installer/start.jsf	😭 🔻 🔂 🔍						
👸 Most Visited 🔻 💐 Red Ha	at 🛯 🥦 Red Hat Magazine 🛛 🧏 Red Hat Network	Red Hat Support						
		Boss by Red Hat						
Welcome to JO	N!							
	ngs for this JON Server installation. You may customize I after restarting the server. In this case restart the serve	some, all or none as required. Click on the setting name for setting-specific help. Changes to settings marked as "Restart r immediately after successful installation.						
Click this checkbox to see both	standard and advanced configuration settings.							
Show Advanced Settings	Show Advanced Settings							
		ed. Use the "Test Connection" button to validate the settings.						
▲ Usage of the selected	database is for demo purposes only. It should not be us	ed in production installations. No support is available for installations that use H2 or MS SQL Server for their database,						
Database Type	H2 (embedded) 🗘							
Database Connection URL	jdbc:h2:/home/jimtyrrell/ServerJON/jon-serve	r-2.3.1.GA/jbossas/server/default						
Database JDBC Driver Class	org.h2.Driver							
Database XA DataSource Class	org.h2.jdbcx.JdbcDataSource							
Database User Name	rhqadmin							
Database Password	•••••							
Confirm database settings								
Done								

Change the Database Type to H2(embedded) as shown:

#### Click OK on the pop up window

0	The page at http://localhost:7080 says:	×
	Usage of the selected database is for demo purposes only. It should not be used in production installations. No support is available for installations that use H2 or MS SQL Server for their database.	

#### Scroll to the bottom and Click Install Server:

0	Welcome to JON! - Mozilla F	irefox		
<u>File E</u> dit <u>V</u> iew Hi <u>s</u> to	ry <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp			1010 1010
🗢 🔿 🗸 🍪 🔇	http://localhost:7080/installer/start.jsf		☆ 🔻 Google	
📷 Most Visited 🔻 🛤 R	ed Hat 💐 Red Hat Magazine 💐 Red Hat Network 💐 Red Hat Support			
Embedded Agent Enabled	I O Yes 🐵 No	No		
Email SMTP Hostname	localhost	No		
Email From Address	rhqadmin@localhost	No		
Install Server!				
Done				.al
JBoss by Red Ha	t			JON

J	в	0	S	S	D	F	v	F	1	0	Р	F	R	S	т	U	D	т	0
J	D	U	3	3			v	_	_	U	F		n	5		U		- <b>-</b>	U

Wait until JON is finished installing. To kill time you can watch the log output scroll by in your tail -f terminal window.

Once it is finished installing, click on the "Done! Click here to get started"

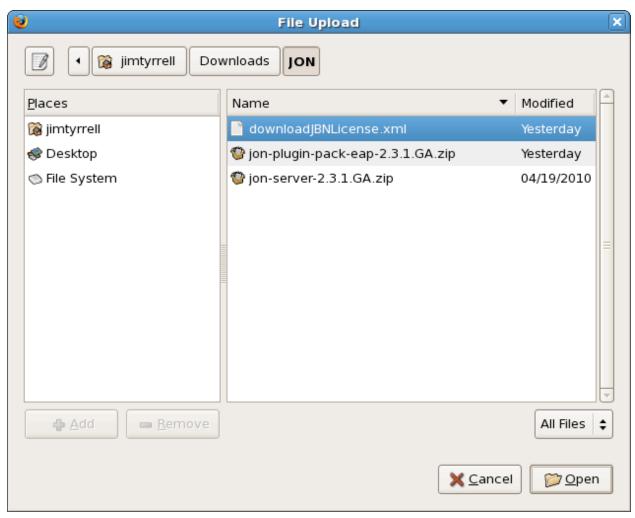
Welcome to JON! - Mozilla Firefox		
<u>F</u> ile <u>E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp		1 1 4 2 1 4 2 1 4
🝦 🔻 🕺 💿 🏫 💿 http://ocalhost:7080/installer/welcome.jsf	☆ 🔻 🕻 🕶 Google	
📷 Most Visited 🔻 💐 Red Hat 💐 Red Hat Magazine 💐 Red Hat Network 💐 Red Hat Support		
BOSS <sup>®</sup> by Red Hat		
Welcome to JON!		
JON will be installed!		
Done! Click here to get started!		
Please review the documentation linked below to learn more about JON:		
JON Server Installation Guide		
JON Server Users Guide     JON Agent Users Guide		
Frequently Asked Questions		
Done		

-	-	~	~	~	-	-		-		~	-	-	-			-		-	-	•
J	в	0	S	S	D	E	v	E	L	0	Р	E	R	S	)		U	D	T	0

Clicking this will bring you to the main login page. Your username and password are rhqadmin and rhqadmin. Click login when done.

ور او	N Login - Mozilla Firefox
<u>F</u> ile <u>E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	
💠 🔻 🕺 💿 🏫 🎑 http://localhost:7080/Login.do	🗘 💌 💽 🔍 🔍
🛅 Most Visited ▼ 🛛 🤜 Red Hat 💐 Red Hat Magazine 💐 Red Hat Netw	rork 💐Red Hat Support
	by Red Hat
Welcome to JB6	oss Operations Network
Please Login	
Login: Password:	Ingadmin Login
Done	

This will bring you to a page that tells you No license file loaded, click on Update License and load the file from the ~student/Downloads/JON directory as shown.



Click on Open

JBOSS DEVELOPER STUDIO	J	В	0	S	S		D	Е	V	Е	L	0	Ρ	Е	R		S	т	U	D	Ι	0
------------------------	---	---	---	---	---	--	---	---	---	---	---	---	---	---	---	--	---	---	---	---	---	---

Click OK

Update JON License - Mozilla Firefox	
<u>F</u> ile <u>E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp	
💠 💠 < 🏟 🕃 🏫 🧲 http://ocalhost:7080/admin/license/LicenseAdmin.do?mode=edit	☆ ▼ Google 🔍
📷 Most Visited 🔻 💐 Red Hat 💐 Red Hat Magazine 💐 Red Hat Network 💐 Red Hat Support	
Boss Overview Resources Groups Administration Help	2 Logged in as rhqadmin
Update JON License An up to date license file can be downloaded from the JBoss Network Customer Service Portal. LicenseFile /home/jimtyrrell/Downloads/ Browse	
OK RESET CANCEL	
Done	

You are now ready to use JON, except we do not have an Agent nor any JBoss instance started, lets do that now.

# Lab Number 2: JON Agent Install

In order to install the Agent, you need to click in the FIIe menu at the top of the rendered Web Page Administration -> Downloads as shown

<b>e</b>	JBoss Operations N	Vetwork License - Mozilla Firefox	
<u>File Edit View History B</u> ookmarks <u>T</u> ools	<u>H</u> elp		
🗢 🗼 🔻 🕺 🙁 🏫 🎑 http://loc	alhost:7080/admin/license/Lio	censeAdmin.do?mode=view&update=true	ি বি coogle 🔍
🛅 Most Visited 🔻 💐 Red Hat 💐 Red Hat Ma	gazine 🛛 🤜 Red Hat Network	Ned Hat Support	
Overview         Resources         Groups           ✓         JON has been successfully updated with your new lie         JBoss Operations Network License	Administration     Help       Security     System Configuration       Content     High Availability       Reports     Downloads       License     Iticense	view means allows to get started	C Logged in as rhqadmin
Done			al a

J	в	0	S	S	D	Е	v	Е	L	0	Р	Е	R	S	т	U	D	Ι	0
•	_	•	•	•	-	_	-	_	_	•		_	••	•		•	_	_	•

#### Then click on the Download Agent Installer:

jON - Resource Version Inventory Report - Mozilla Firefox		
<u>F</u> ile <u>E</u> dit <u>V</u> iew Hi <u>s</u> tory <u>B</u> ookmarks <u>T</u> ools <u>H</u> elp		*** ***
💠 🗣 🔹 🏟 🥰 http://localhost:7080/rhq/admin/downloads.xhtml 😭 💌	<b>G</b> ▼ Google	
📷 Most Visited 🔻 📕 Red Hat 💐 Red Hat Magazine 🛛 🦊 Red Hat Network 💐 Red Hat Support		
Boss Overview Resources Groups Administration Help	<b>C</b> Lo	gged in as rhqadmin
Downloads		
Agent Download		
Agent Version: 1.3.1.GA Agent Build: 5295 Agent MD5: 5509d6bf1ccc7e65cad77b918cbb46b4		
Agent Install		
java - jar < agent-download.jar>install= <new agent="" dir="">] When specified, this will install a new agent without attempting to update any existing agent. If you do not specify the directory, the default is Note the directory w home installation directory. This is mutually exclusive ofupdate</new>	will be the parent o	f the new agent
Agent Update		
java -jar <a -="" jap<="" psychia="" td=""><td>e ofinstall</td><th></th></a>	e ofinstall	
Connector Downloads		
connector-rtfilter.zip connector-apache.zip		
Command Line Client Download		
Download Client Installer Client Version: 1.3.1.GA Client Build: 5295		
http://localhost:7080/agentupdate/download		

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This by default will save this file to your desktop. Open up a new terminal window cntrl shift n when a terminal is focused opening a new terminal session.

cd ~student/ServerJON/
mkdir jon-agent
cd jon-agent
java -jar ~student/Desktop/rhq-enterprise-agent-1.3.1.GA.jar --install

As shown:

					jimtyrrell@localhost:~/ServerJON/rhq-agent	
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>T</u> erminal	Ta <u>b</u> s	<u>H</u> elp	
				Us us	grade script URL found in the classloader. ers will rarely need this; e this only if you know what you are doing. fault=rhq-agent-update-build.xml	•
	-		40:22 MD			
RHQ	Agent	Upda	te Binary	/ Vers	ion Information:	
rhq- rhq- [jim	agent agent ityrre	.late .late ll@lo	st.versio st.build calhost	on=1.3 numbe hq-ag	r=5295 ent]\$ java -jar ~jimtyrrell/Desktop/rhq-enterprise-agent-1.3.1.GA.jarins	stall
ANT Thu	targe May 1	t [(d 3 09:	efault)] 40:50 MD <sup>-</sup>	F 2010		
[hea ==== Inst Vers Buil	der-f = RHQ allin ion: d Num	or-in AGEN g Age 1.3.1 ber:	stall] [0 T INSTALI nt To: . .GA 5295	echo] _ ====	-	
[ins [ins l/Se	tall] tall] rverJ	[ech [unj ON/rh	o] Extrac ar] Expan q-agent	t the nding:	esktop/rhq-enterprise-agent-1.3.1.GA.jar agent distro zip from the agent update binary /home/jimtyrrell/Desktop/rhq-enterprise-agent-1.3.1.GA.jar into /home/jim1	tyrrel
[ins me/j	tall] imtyr	[unz rell/	ip] Expan ServerJO	nding: √rhq-	gent distro into the new installation directory /home/jimtyrrell/ServerJON/rhq-agent/rhq-enterprise-agent-1.3.1.GA.zip in1 agent executables under ./rhq-agent	to /ho
[ins [ins [ins	tall] tall] tall]	[ech [del [ech	o] Remove ete] Dele	e the eting: Agent	agent distro zip /home/jimtyrrell/ServerJON/rhq-agent/rhq-enterprise-agent-1.3.1.GA.zip version 1.3.1.GA (build number=5295) has been installed to .	

Now it is time to start up the rhq-agent:

cd rhq-agent/bin

./rhq-agent.sh

When it is done starting it will look like this:

jimtyrrell@localhost:~/ServerJON/rhq-agent/rhq-agent/bin	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp	
	<b></b>
ANT target [(default)]	
Thu May 13 09:40:50 MDT 2010	
[header-for-install] [echo]	
===== RHQ AGENT INSTALL =====	
Installing Agent To: .	
Version: 1.3.1.GA	
Build Number: 5295	
Jar File: /home/jimtyrrell/Desktop/rhq-enterprise-agent-1.3.1.GA.jar	
[install] [echo] Extract the agent distro zip from the agent update binary [install] [unjar] Expanding: /home/jimtyrrell/Desktop/rhq-enterprise-agent-1.3.1.GA.jar into /home/jimt	vrrol
l/ServerJON/rhg-agent	yrrec
[install] [echo] Unzip the agent distro into the new installation directory	
[install] [unzip] Expanding: /home/jimtyrrell/ServerJON/rhq-agent/rhq-enterprise-agent-1.3.1.GA.zip int	o /ho
me/jimtyrrell/ServerJON/rhq-agent	
[install] [echo] chmod +x on executables under ./rhq-agent	
[install] [echo] Remove the agent distro zip	
[install] [delete] Deleting: /home/jimtyrrell/ServerJON/rhq-agent/rhq-enterprise-agent-1.3.1.GA.zip	
[install] [echo] DONE! Agent version 1.3.1.GA (build number=5295) has been installed to . [jimtyrrell@localhost rhg-agent]\$ ls	
rhg-agent rhg-agent-update.log	
[jimtyrrell@localhost rhq-agent]\$ cd rhq-agent/	
[jimtyrrell@localhost rhq-agent]\$ ls	
bin conf lib plugins	
[jimtyrrell@localhost rhq-agent]\$ cd bin/	
[jimtyrrell@localhost bin]\$ l	
bash: l: command not found	
[jimtyrrell@localhost bin]\$ ls	
rhq-agent.bat rhq-agent-env.sh rhq-agent-wrapper.bat wrapper rhq-agent-env.bat rhq-agent.sh rhq-agent-wrapper.sh	
[jimtyrrell@localhost bin]\$ ./rhq-agent.sh	
RHQ 1.3.1.GA [5295] (Wed Feb 24 16:46:23 MST 2010)	=
>	-
-	

Now open up two more terminal windows, and lets get two JBoss EAP instances started:

Before you do that, you will need to uncomment the admin=admin username in the all and default folder:

nano -w

\${User\_Home}/ServerJON/jboss-eap-5.0/jboss-as/server/default/conf/props/jmx-console-us
ers.properties

jimtyrre	ll@localhost:~/ServerJON/jboss-eap-5.0/jboss-as/bin	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>t</u>	us <u>H</u> elp	
jbossws-roles.properties jbossws-users.properties	<pre>jndi.properties xmdesc/ login-config.xml \$ nano -w/server/default/conf/props/ jmx-console-roles.properties messaging-roles.properties jmx-console-users.properties messaging-users.properties \$ nano -w/server/default/conf/props/jmx-console-users.properti</pre>	es 🛛 🔻

JBoss by Red Hat

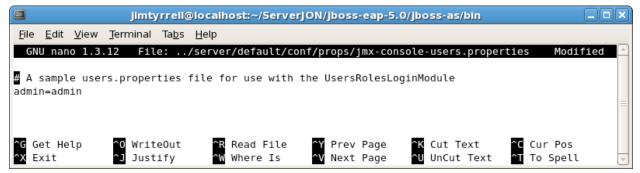
JBOSS DEVELOPER STUDI	0
-----------------------	---

and for all

nano -w

\${User\_Home}/ServerJON/jboss-eap-5.0/jboss-as/server/all/conf/props/jmx-console-users.
properties

In both directories the file needs to look like this:



Don't forget to make sure this is done for both all and default.

```
cd ~student/ServerJON/jboss-eap-5.0/jboss-as/bin
```

./run.sh -c default -Djboss.service.binding.set=ports-01

	jimtyrrell@localhost:~/ServerJON/jboss-eap-5.0/jboss-as/bin	
<u>F</u> ile	<u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp	
[jim [jim	tyrrell@localhost bin]\$ cd ~jimtyrrell/ServerJON/jboss-eap-5.0/jboss-as/bin/ tyrrell@localhost bin]\$ ./run.sh -c default -Djboss.service.binding.set=ports- <mark>0</mark> 1	

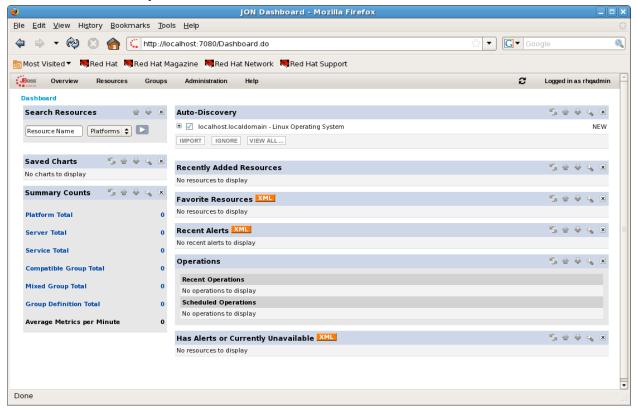
	J	В	0	S	S	D	Е	V	Е	L	0	Ρ	Е	R	S	т	U	D	Ι	0
in an	other	wind	low																	
./ru	n.sł	л-с	all	L																

jimtyrrell@localhost:~/ServerJON/jboss-eap-5.0/jboss-as/bin	
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> erminal Ta <u>b</u> s <u>H</u> elp	
Halting VM [jimtyrrell@localhost bin]\$ ./run.sh -c all	

### Lab Number 3: Explore the JON Interface

Either log back into JON, or go to the main Dashboard Overview -> Dashboard

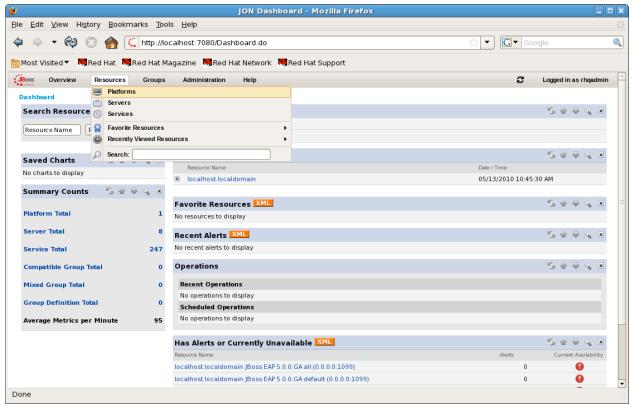
You should see the Auto Discovery has some things already automatically discovered. If not in the rhg-agent you can run the command discovery -f. Once resources are discovered, the UI should look like this:



Feel free to click on the plus sign to the left of the localhost.localdomain, expanding the list of resources discovered. You will notice our JBoss instances, all, default, the Jon Server, the Agent, and of course your local Operating System. Click import

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•	-	•	<u> </u>	•		_	•	_	_	•			•••	•		•	-	_	•

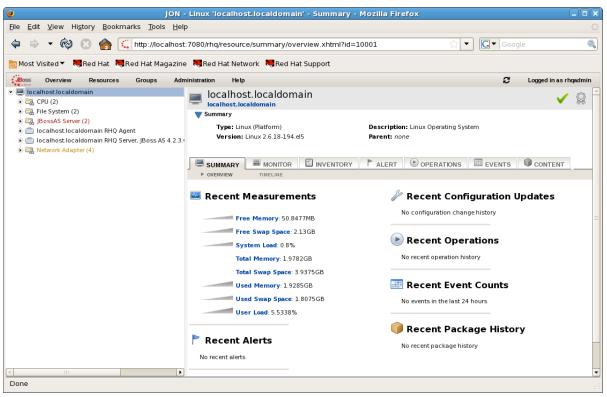
Once this is done you should notice the left hand side has Platform (OS), Server (JBoss), and Service totals as shown below. Also note that Resources Menu at the top as shown. This is one way to navigate to the specific resources that you wish to browse:



A few Activities:

1. Click on the Resources -> Platforms One this page loads, click on localhost.localdomain. You should see a page that looks like this:

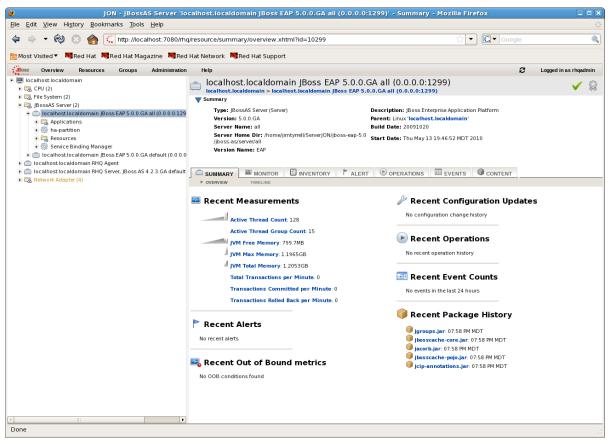
J	В	0	S	S	D	Е	V	Е	L	0	Ρ	Е	R	S	5	т	U	D	Ι	0



Note the Summary, Monitor, Inventory...etc that go across the top. Also note the summary information, you can see at a glance information specific to the Operating System that you are running on.

2. If you expand the JBossAS Server view you will see your two JBoss instances. Click on one of them. Notice that the theme or the decoration is the same based on the Resource type, in other words, Summary, Monitor, Inventor.... etc are repeated as makes sense for various resources.

J	В	0	S	S	D	Е	V	Е	L	0	Ρ	Е	R	S	Т	U	D	Ι	0



Also note their is a summary if JVM stats for that resource as shown above.

- 3. For the JBoss instance click on the Monitor tab, this gives you a graph of past performance of the system. You might need to a wait a few mins for this data to populate, but it will.
- 4. Click, on the localhost.localdomain in the upper left corner. Notice the "Monitor" tab was remembered. NIce user interface feature.

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5. Now go to the Alert tab this is where you can set alerts. Click on New Definition and note the Available Metric that you can search as you can see below:

ГО ЛОПИ И И И И И И И И И И И И И И И И И И	ew Platform Alert Definition - localhost.loc	aldomain - Mozilla Firefox	×
Ele Edit View History Bookmarks Tools Help			
🖕 🗼 🔻 🤣 💿 🏫 🛴 http://localhost:7080/al	erts/Config.do?id=10001&mode=new&conversatio	nid=207 🗘 🔹 Google	
📷 Most Visited 🔻 💐 Red Hat 🦄 Red Hat Magazine 💐 Red	Hat Network Sed Hat Support		
Boss Overview Resources Groups Administration		3	Logged in as rhqadmin
localhost.localdomain		5	
< Return to Alert Definitions			
Alert Properties			
*Name:		* Priority: <u>!!</u> - Medium 🔷	
Description:		* Active:      YES	
		O NO	
Condition Set			
	of the following conditions become(s) true.		
If Condition:   Metric: Select  Select			
Free Memoi Free Swap 1	y (absolute value)		
Idle (disabl System Los	ed) 🗘 % of Select 💠		
Total Memo Total Swap	ny Space		
○ Trait: Used Memo Used Swap	ry alue changes		
Availab User Load Wait Load			
Operation: Select			
	ect   🖨 and matches expression (optional):		
Add Another Condition	1		
* Dampening Rule:   Each time condition	a cat is true		
	times condition set is true consecutively		
	times condition set is true during the last evaluation	15	
	times condition set is true within a time period of	minutes ᅌ	
Action Filters: Disable alert until re	e-enabled manually or by recovery alert		
	SET		-
Done			

- 6. Open up your JBoss view, and few the same metrics, see how they are different.
- 7. Lets create a JBoss Metric, click on one of your JBoss Instances, and come to a screen that looks like this, set the Metric to be JVM Free Memory is less then 50% of Baseline Value, and Once ever 10 times condition is true consecutively, as shown below:

J	в	0	S	S	[	)	F	v	F	Т	0	Р	F	R	S	т	U	D	т	0
J	D	U	3	3		,		v		L .	U	Г		n	3		U	U	- <b>-</b>	U

JON New Server Alert Definition - localhost.localdomain JBoss EAP 5.0.0.GA all (0	).0.0.0:1299) - Mozilla Firefo	x	X
Ele Edit View Higtory Bookmarks Tools Help			**** ***
💠 💠 🔻 🕺 🛞 🏠 🌠 http://localhost:7080/alerts/Config.do?id=10299&mode=new&conversationId=228	☆ <b>▼</b> (	<b>G</b> ▼ Google	Q
📷 Most Visited 🔻 📕 Red Hat 🔍 Red Hat Magazine 🗧 🥦 Red Hat Network 💐 Red Hat Support			
Coverview Resources Groups Administration Help		C	Logged in as rhqadmin
localhost.localdomain > localhost.localdomain jBoss EAP 5.0.0.GA all (0.0.0.0:1299) < Return to Alert Definitions			
Alert Properties			
* Name: High Memory Alert Description:	* Priority: <u>II - Medium</u> * Active: • YES NO		
Condition Set			
Expression: Fire an alert when ALL 💠 of the following conditions become(s) true.			
If Condition: <ul> <li>Metric:</li> <li>JVM Total Memory</li> </ul>			
<pre>is &gt; (Greater than) (absolute value)</pre>			
Action Ellbarga			
Action Filters: Disable alert until re-enabled manually or by recovery alert			
OK			•
Done			

You can then set a control action if you want, feel free to do this. Click Edit under the Operation tab at the bottom, and select a control type, in this case select Restart. And Select Okay. Now pick a series of people to alert. Click on the Notify Other Recipients, and notice how you can type in free text email addresses. Check out how you can select individual JON Users via Notify JON Users Check out how you can add in a JON Role via the Notify Roles Tab.

If you are having any problems, feel free to raise your hand.

J	В	0	S	S	1	D	Е	V	Е	L	0	Р	Е	R	S	т	U	D	I	0
•	-	•	•	•		-	_	-	_	_	•		_		•		•	-	_	•

8. The last thing we will look at is how to deploy a war file. From a highlighted JBoss instance, go to the Inventory tab, at the bottom select, click OK:

JON - JBossAS Server 'localh ile Edit View History Bookmarks Tools Help	ost.localdomain JBo	ss EAP 5.0.0.GA all (0.0	.0.0:1299)'	- Inventory Data - Mozil	la Firefox		_ 0
E cut view mighting gook mans gools rep	resource/inventory/view	v.xhtml?id=10299		 ☆	▼ G▼	Google	(
🖞 Most Visited 🔻 🧠 Red Hat Magazine 🍓 Red Hat	Hat Network 🛚 🧏 Red Hat	t Support					
Boss Overview Resources Groups Administration	Help					C Logged	in as rhqadmi
💻 localhost.localdomain		PLY	SCIVICE	Queue	0003am00		×
> 근급 CPU (2) > 근급 File System (2) > 근급 (BossAS Server (2) ★ ① Tocalhost localdomain (Boss EAP 5.0 0.GA all (0.0 0.0.129	☐ ■¤►≁⊳	DefaultDS	Service	Local Tx Datasource	JBossAS5	Local Transaction Datasources deployed in the instance of JBoss AS	~
<ul> <li>Ea Applications</li> <li>m ha-partition</li> </ul>		ExpiryQueue	Service	Queue	JBossAS5		<ul> <li>Image: A second s</li></ul>
Resources     Service Binding Manager		JBoss Web	Service	JBoss Web	JB ossAS5	JBoss Web Servlet Container	×
Dicalhost.localdomain JBoss EAP 5.0.0.GA default (0.0.0     Dicalhost.localdomain RHQ Agent     Dicalhost.localdomain RHQ Server, JBoss AS 4.2.3.GA default		JmsXA	Service	Tx ConnectionFactory	JBossAS5	A ConnectionFactory that takes part in JTA transactions.	×
Ea Network Adapter (4)		ROOT.war	Service	Web Application (WAR)	JBossAS5	a standalone web application (WAR)	×
		Service Binding Manager	Service	Service Binding Manager	JBossAS5	The Service Binding Manager manages the ports of the deployed services	~
		admin-console.war	Service	Web Application (WAR)	JB 055AS5	a standalone web application (WAR)	<ul> <li></li> </ul>
		classpath.sh	Service	Script	JBossAS5		<ul> <li>Image: A set of the set of the</li></ul>
		ha-partition	Service	JBoss Cache	JBossCache3	JBoss Cache	<ul> <li>Image: A second s</li></ul>
		invoker.war	Service	Embedded Web Application (WAR)	JBossAS5	an embedded web application (WAR)	×
		jboss-local-jdbc.rar	Service	Resource Adapter Archive (RAR)	JBossAS5	a standalone JCA resource adapter archive (RAR)	×
		jboss-xa-jdbc.rar	Service	Resource Adapter Archive (RAR)	JBossAS5	a standalone JCA resource adapter archive (RAR)	×
		jboss_init_hpux.sh	Service	Script	JB ossAS5		<ul> <li>Image: A second s</li></ul>
		jboss_init_redhat.sh	Service	Script	JBossAS5		<ul> <li>Image: A second s</li></ul>
	DELETE			Total: 32 Items Per Page:	15 🛟	123	
	Manually Add: Sc	ript 💠 ОК Crea	te New: 🗌 - W	/eb Application (WAR)	ок		
	Groups Containing this Reso	urce					
	This resource is not curren	tly a member of any groups.					
one							

9. Click Upload FIle, and browse to the \${User\_Home}/Downloads/JON and select the guess.war. Click yes and okay as needed. Click create, wait for the file to be deployed. You should see the file deployed in one of your two JBoss EAP terminal windows: Browse to either <u>http://localhost:8080/guess</u> or <u>http://localhost:8280/guess</u> to see the application

You have now completed this lab, congratulations.

# Conclusion

#### What you learned

- How to install JBoss Operations Network
- · How to load in new resources
- How to explore the user interface