Installing IBM Business Monitor 8.5.6 on Linux

by Seth - Tuesday, November 17, 2015

http://www.sethgagnon.com/installing-ibm-business-monitor-8-5-6-on-linux/

This document outlines the installation procedures for the IBM Business Monitor 8.5.6 product for a development environment.

1. A Development Environment

The following outlines the installation steps for the DEV environment.

1.1 Installation of Binaries for DEV

This section describes the steps to install the bianries for Business Monitor.

1.2 Environment Setup

Please ensure that you have prepped your operating system using the following instructions:

http://www-01.ibm.com/support/knowledgecenter/SSFPJS 8.5.6/com.ibm.wbpm.mon.imuc.doc/topics/pr ep bpm os lin.html?lang=en

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1.3 Extract the binaries to a common location

The directory structure should look like that in the following image.

```
COCAL 50

COCAL
```

1.4 Install the Business Monitor Binaries

There are a few different ways to install the product binaries: 1) Using the Launchpad, which requires your servers to have a working web browser and be able to export your display, or 2) Using response files to install the product binaries. We will be using option 2.

1.5 Prep your response file

Our response file has been created and contains all the information necessary to install the product binaries for IBM Business Monitor (non-production). We will have another response file for production. Here is the text of the response file:

```
<?xml version='1.0? encoding='UTF-8??>
<agent-input>
<variables>
<variable name='sharedLocation' value='/opt/IBM/IMShared'/>
</variables>
<server>
<repository location='/was_inst_BAM_V856/ExtractedBinaries/repository'/>
</server>
installLocation='/opt/IBM/WebSphere/AppServer'>
<data key='eclipseLocation' value='/opt/IBM/WebSphere/AppServer'/>
<data key='user.import.profile' value='false'/>
<data key='cic.selector.os' value='linux'/>
<data key='cic.selector.arch' value='x86'/>
<data key='cic.selector.ws' value='gtk'/>
<data key='cic.selector.nl' value='en'/>
</profile>
```

```
<install modify='false'>
<!- 8.5.0.0-WS-WASJavaSDK-LinuxX64-IFPI35615 ->
<offering profile='IBM WebSphere Application Server V8.5? id='8.5.0.0-WS-WASJavaSDK-
LinuxX64-IFPI35615'/>
<!- 8.5.5.5-WS-WAS-IFPI35502 ->
<offering profile='IBM WebSphere Application Server V8.5? id='8.5.5.5-WS-WAS-IFPI35502'/>
<!- 8.5.5.5-WS-WASProd-IFPI35667 ->
<offering profile='IBM WebSphere Application Server V8.5? id='8.5.5.5-WS-WASProd-IFPI35667'/>
<!- IBM WebSphere Application Server Network Deployment 8.5.5.5 ->
<offering profile='IBM WebSphere Application Server V8.5? id='com.ibm.websphere.ND.v85?</pre>
version='8.5.5005.20150220_0158?
features='core.feature,ejbdeploy,thinclient,embeddablecontainer,com.ibm.sdk.6_64bit'
installFixes='none'/>
<!- IBM WebSphere SDK Java Technology Edition (Optional) 7.0.8.10 ->
<offering profile='IBM WebSphere Application Server V8.5? id='com.ibm.websphere.IBMJAVA.v70?</pre>
version='7.0.8010.20150219 1802? features='com.ibm.sdk.7? installFixes='none'/>
<!- IBM® Business Monitor 8.5.6.0 ->
<offering profile='IBM WebSphere Application Server V8.5? id='com.ibm.websphere.MON.v85?</pre>
version='8.5.6000.20150303_1517? features='Monitor.NonProduction' installFixes='none'/>
<!- IBM® Cognos Business Intelligence 64 bit 10.2.2.0 ->
<offering profile='IBM WebSphere Application Server V8.5? id='com.ibm.ws.cognos.v1022.linuxia64?</p>
version='10.2.2.20150304 1653? features='com.ibm.cognos.feature' installFixes='none'/>
</install>
com.ibm.cic.common.core.preferences.eclipseCache' value='${sharedLocation}'/>
com.ibm.cic.common.core.preferences.connectTimeout' value='30'/>
cpreference name='com.ibm.cic.common.core.preferences.readTimeout' value='45'/>
com.ibm.cic.common.core.preferences.downloadAutoRetryCount' value='0'/>
```

```
cpreference name='offering.service.repositories.areUsed' value='true'/>
cpreference name='com.ibm.cic.common.core.preferences.ssl.nonsecureMode' value='false'/>
com.ibm.cic.common.core.preferences.http.disablePreemptiveAuthentication`
value='false'/>
continue 
intlm.auth.kind' value = 'NTLM'/>
cpreference name='http.ntlm.auth.enableIntegrated.win32? value='true'/>
cpreference name='com.ibm.cic.common.core.preferences.preserveDownloadedArtifacts'
value='true'/>
com.ibm.cic.common.core.preferences.keepFetchedFiles' value='false'/>
erence name='PassportAdvantageIsEnabled' value='false'/>
cpreference name='com.ibm.cic.common.core.preferences.searchForUpdates' value='false'/>
cpreference name='com.ibm.cic.agent.ui.displayInternalVersion' value='false'/>
com.ibm.cic.common.sharedUI.showErrorLog' value='true'/>
com.ibm.cic.common.sharedUI.showWarningLog' value='true'/>
com.ibm.cic.common.sharedUI.showNoteLog' value='true'/>
</agent-input>
```

This will install the product to /opt/IBM/WebSphere/AppServer. Notice some of the areas highlighted in red to observe installation paths and features. This will not install DB2 Express, as we are using Oracle for our product database.

1.6 Run the command to install the binaries using your response file.

Make sure you are in the following directory: /was_inst/BPM_856/ExtractedBinaries/IM64/

Execute the following command:

/was_inst/BAM_V856/ExtractedBinaries/IM64/installc -acceptLicense input /was_inst/BAM_V856/ExtractedBinaries/MonNonProdResponseFile.xml -log /was_inst/BAM_V856/ExtractedBinaries/installLogs/silent_install.log

```
1 IM64]# ./installc -acceptLicense input /was_inst/BAM_V856/ExtractedBinaries/responsefiles/MonNonProdRe sponseFile.xml -log /was_inst/BAM_V856/ExtractedBinaries/installLogs/silent-install.log
Installed 8.5.0.0-Ws-WASJavaSDK-LinuxX64-IFPI35615_8.5.0.20150224_1408 to the /opt/IBM/WebSphere/AppServer directory.
Installed 8.5.5.5-Ws-WAS-IFPI35502_8.5.5005.20150225_1959 to the /opt/IBM/WebSphere/AppServer directory.
Installed 8.5.5.5-Ws-WASProd-IFPI35667_8.5.5005.20150225_1021 to the /opt/IBM/WebSphere/AppServer directory.
Installed com.ibm.websphere.ND.v85_8.5.5005.20150220_0158_to the /opt/IBM/WebSphere/AppServer directory.
Installed com.ibm.websphere.IBMJAVA.v70_7.0.8010.20150219_1802_to the /opt/IBM/WebSphere/AppServer directory.
Installed com.ibm.websphere.MON.v85_8.5.6000.20150303_1517_to the /opt/IBM/WebSphere/AppServer directory.
Installed com.ibm.websphere.MON.v85_8.5.6000.20150303_1517_to the /opt/IBM/WebSphere/AppServer directory.
Installed com.ibm.websphere.MON.v85_8.5.6000.20150303_1517_to the /opt/IBM/WebSphere/AppServer directory.
Installed com.ibm.websphere.MON.v85_8.5.6000.20150304_1653_to the /opt/IBM/WebSphere/AppServer directory.
```

1.7 Verify binary installation

Go to /opt/IBM/WebSphere/AppServer/bin and execute the following command:

./versionInfo.sh

You should see the following in the image below.

Please note you will need to repeat these steps 1.1 - 1.6 for each Linux server that will be part of your clustered environment!

Product Directory /opt/IBM/WebSphere/AppServer

Version Directory /opt/IBM/WebSphere/AppServer/properties/version
DTD Directory /opt/IBM/WebSphere/AppServer/properties/version/dtd

Log Directory /var/ibm/InstallationManager/logs

Product List

IBMJAVA7 installed
ND installed
WBM installed

Installed Product

Name IBM WebSphere SDK Java Technology Edition (Optional)

 Version
 7.0.8.10

 ID
 IBMJAVA7

 Build Level
 cf051507.01

 Build Date
 2/19/15

Package com.ibm.websphere.IBMJAVA.v70 7.0.8010.20150219 1802

Architecture x86-64 (64 bit)

Installed Features IBM WebSphere SDK for Java Technology Edition 7

Installed Product

Name IBM WebSphere Application Server Network Deployment

Version 8.5.5.5

Build Level cf051507.01
Build Date 2/20/15

Package com.ibm.websphere.ND.v85 8.5.5005.20150220 0158

Architecture x86-64 (64 bit)

Installed Features IBM 64-bit WebSphere SDK for Java

WebSphere Application Server Full Profile EJBDeploy tool for pre-EJB 3.0 modules

Embeddable EJB container

Stand-alone thin clients and resource adapters

Installed Product

Name IBM Business Monitor

Version 8.5.6.0 ID WBM

Build Level 20150303-130609

Build Date 3/3/15

Package com.ibm.websphere.MON.v85 8.5.6000.20150303 1517

Architecture x86-64 (64 bit)

Installed Features Business Monitor Server Non-production

End Installation Status Report

Connection 'Dev - Monitor 01' opened

1.8 Creation of Deployment Manager Profile in Dev

To create the Deployment Manager profile, you will need to execute the following command from /opt/IBM/WebSphere/AppServer/bin

./manageprofiles.sh -create -templatePath
"/opt/IBM/WebSphere/AppServer/profileTemplates/wbmonitor/dmgr" -profileName Dmgr01
-profilePath "/opt/IBM/WebSphere/AppServer/profiles/Dmgr01" -cellName MonCell1 -nodeName
DMGRNode -enableAdminSecurity true -adminUserName wsadmin -adminPassword
ADMINPASSWORD -wbmDBType Oracle11g -wbmDBDelayConfig true -wbmDBSchemaName
MONITOR -wbmDBName ibmdtool -wbmDBUserId Monitor -wbmDBPassword DBPASSWORD
-wbmDBJDBCClasspath "/opt/IBM/WebSphere/AppServer/jdbcdrivers/Oracle" -wbmDBHostName
DBHOSTNAME -wbmDBServerPort 1521 -wbmDBDriverType 4 -wbmCognosDBName ibmdtool

-wbmCognosDBUserName COGNOS -wbmCognosDBPassword DBPASSWORD

The output is seen here

INSTCONFSUCCESS: Success: Profile Dmgr01 now exists. Please consult /opt/IBM/WebSphere/AppServer/profiles/Dmgr/logs/AboutThisProfile.txt for more information about this profile.

1.9 Creation of Custom Node Profile in Dev

To create the Node profile, you will need to execute the following command from /opt/IBM/WebSphere/AppServer/bin

./manageprofiles.sh -create -templatePath

"/opt/IBM/WebSphere/AppServer/profileTemplates/wbmonitor/managed" -profileName MonServer01

-profilePath "/opt/IBM/WebSphere/AppServer/profiles/MonServer01" -nodeName Node -federateLater false -dmgrAdminUserName wsadmin -dmgrAdminPassword ADMINPASSWORD -dmgrHost HOSTNAME -dmgrPort 8879 -wbmDBType Oracle11g -wbmDBJDBCClasspath "/opt/IBM/WebSphere/AppServer/jdbcdrivers/Oracle"

The output is seen in the second image.

1.10 Creation of Deployment Environment in Dev

The following steps outline how to create the Monitor Deployment Environment in DEV.

BEFORE CONTINUING, PLEASE ENSURE STEP 2 HAS BEEN COMPLETED.

1.11 Prep properties file

Below is a copy of the properties file needed to create clusters on one Node and single member clusters:

The IBM Business Monitor Golden Topology is a three cluster environment

where each cluster has one member.

clusterName.1=MonAppCluster

clusterName.1.capabilities=application

clusterName.1.memberName.1=MonAppServer01

clusterName.1.memberName.1.memberNode.1=Node

clusterName.2=MonMECluster

clusterName.2.capabilities=messaging

clusterName.2.memberName.1=MonMEServer01

clusterName.2.memberName.1.memberNode.1=Node

clusterName.3=MonSupCluster

clusterName.3.capabilities=support

clusterName.3.memberName.1=MonSupServer01

clusterName.3.memberName.1.memberNode.1=Node

1.12 Run deployment environment creation

Run the following script from /opt/IBM/WebSphere/AppServer/scripts.wbm/monConfig

./monConfig.sh -d Dmgr01 -u wsadmin -p ADMINPASSWORD -c /opt/IBM/WebSphere/AppServer/scripts.wbm/monConfig/customized_monconfig.properties

monConfig]# ./monConfig.sh -d Dmgr01 -u wsadmin -p admin123 -c /opt/IBM/WebSphere/AppServ r/scripts.wbm/monConfig/customized_monconfig.properties

1.13 Output from deployment environment creation

WAS_HOME = /opt/IBM/WebSphere/AppServer

THIS_CLASSPATH = /opt/IBM/WebSphere/AppServer/lib/wbminstall_util.jar:/opt/IBM/WebSphere/AppServer/lib/wbminstall_log.jar:/opt/IBM/WebSphere/AppServer/scripts.wbm/monConfig/lib/JSON4J.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.lifecycle.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.lifecycle.spi.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.repository.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.bpm.config.jar:/opt/IBM/WebSphere/AppServer/runtimes/com.ibm.ws.ejb.thinclient_8.5.0.jar

/opt/IBM/WebSphere/AppServer/bin/wsadmin.sh -profileName Dmgr01 -conntype SOAP -username wsadmin -password ADMINPASSWORD -lang jython -wsadmin_classpath /opt/IBM/WebSphere/AppServer/lib/wbminstall_util.jar:/opt/IBM/WebSphere/AppServer/lib/wbminstall_log.jar:/opt/IBM/WebSphere /AppServer/scripts.wbm/monConfig/lib/JSON4J.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.lifecycle.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.lifecycle.spi.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.repository.jar:/opt/IBM/WebSphere/AppServer/plugins/com.ibm.ws.ejb.thinclient_ 8.5.0.jar -f /opt/IBM/WebSphere/AppServer/scripts.wbm/monConfig/monConfig.jproperties

WASX7209I: Connected to process "dmgr" on node DMGRNode using SOAP connector; The type of process is: DeploymentManager

^{*}sys-package-mgr*: processing new jar,

^{&#}x27;/opt/IBM/WebSphere/AppServer/scripts.wbm/monConfig/lib/JSON4J.jar'

^{*}sys-package-mgr*: processing new jar,

^{&#}x27;/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.lifecycle.jar'

^{*}sys-package-mgr*: processing new jar,

^{&#}x27;/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.lifecycle.spi.jar'

^{*}sys-package-mgr*: processing new jar,

^{&#}x27;/opt/IBM/WebSphere/AppServer/plugins/com.ibm.wbimonitor.repository.jar'

^{*}sys-package-mgr*: processing new jar,

^{&#}x27;/opt/IBM/WebSphere/AppServer/plugins/com.ibm.bpm.config.jar'

^{*}sys-package-mgr*: processing new jar,

^{&#}x27;/opt/IBM/WebSphere/AppServer/runtimes/com.ibm.ws.ejb.thinclient_8.5.0.jar'

WASX7303I: The following options are passed to the scripting environment and are available as arguments that are stored in the argy variable:

"[/opt/IBM/WebSphere/AppServer/scripts.wbm/monConfig/customized_monconfig.properties]"

- Validating configuration file
- Loading configuration file.
- $Reading \ properties \ file \\ / opt/IBM/WebSphere/AppServer/scripts.wbm/monConfig/customized_monconfig.properties$
- Resolving new cluster names.
- Validating no white spaces in properties.
- Validating cluster names are unique.
- Validating only 1 or 3 clusters have been defined.
- Associating capabilities with clusters.
- Validating only 1 or 3 capabilities have been defined.
- Resolving new cluster members.
- Validating cluster member names are unique.
- Resolving new node names.
- Collecting current configuration
- Retrieving current cell name.
- Current cell name MonCell1
- Retrieving existing cluster names.
- Collecting a list of existing Clusters.

AdminClusterManagement: List server clusters
Usage: AdminClusterManagement.listClusters()
Return: List of the clusters in the cell.
Retrieving existing cluster member names.
- Collecting a list of existing Cluster Members.
Retrieving existing managed node names.
- Collecting a list of existing Managed Nodes.
– Validating new configuration
Validating configuration clusters are new.
Validating configuration cluster members are new.
Validating configuration nodes already exist.
– Validating configuration nodes are IBM Business Monitor nodes.
Create new clusters and cluster members
- Creating cluster MonAppCluster.
- Creating cluster member MonAppServer01. Please wait
- Creating cluster MonMECluster.

```
trying to set property oracle.jdbc.autoCommitSpecCompliant = false
Checking ["] for a match to { 'oracle.jdbc.autoCommitSpecCompliant': 'false'}
Creating: [['name', 'oracle.jdbc.autoCommitSpecCompliant'], ['value', 'false']]
trying to set property eclipse.bundle.setTCCL = false
Checking ['oracle.jdbc.autoCommitSpecCompliant(cells/MonCell1/nodes/Node/servers/MonSupServer0
1|server.xml#TypedProperty_1438889468886)'] for a match to {'eclipse.bundle.setTCCL': 'false'}
Checking: oracle.jdbc.autoCommitSpecCompliant against eclipse.bundle.setTCCL
Creating: [['name', 'eclipse.bundle.setTCCL'], ['value', 'false']]
- Configuring runWbmConfigureEventEmitterFactory
- Deploying runWbmDeployMessagingEngine.
- Deploying runWbmDeployActionServices.
- Deploying runWbmDeployDefAsync.
- Deploying runWbmDeployScheduledServices.

    Deploying runWbmDeployEventEmitterServices.

- Deploying runWbmDeployBPMEmitterService.
- Running configureCognosService

    Deploying runWbmDeployDashboardsForMobileDevices.

- Installing installRESTGatewayService
ADMA0073W: Custom permissions are found in the [("java.security.AllPermission" "<all
permissions>" "<all actions>")] policy file. Custom permissions can compromise the integrity of Java 2
Security.
WASX7327I: Contents of was.policy file:
grant codeBase "file:${application}" {
permission java.security.AllPermission;
};
```

ADMA5016I: Installation of REST Services Gateway started.

ADMA5058I: Application and module versions are validated with versions of deployment targets.

ADMA5005I: The application REST Services Gateway is configured in the WebSphere Application Server repository.

ADMA5005I: The application REST Services Gateway is configured in the WebSphere Application Server repository.

ADMA5081I: The bootstrap address for client module is configured in the WebSphere Application Server repository.

ADMA5053I: The library references for the installed optional package are created.

ADMA5005I: The application REST Services Gateway is configured in the WebSphere Application Server repository.

ADMA5001I: The application binaries are saved in /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/ws temp/Script14f047c0898/workspace/cells/MonCell1/applications/REST Services Gateway.ear/REST Services Gateway.ear

ADMA5005I: The application REST Services Gateway is configured in the WebSphere Application Server repository.

SECJ0400I: Successfully updated the application REST Services Gateway with the appContextIDForSecurity information.

ADMA5005I: The application REST Services Gateway is configured in the WebSphere Application Server repository.

ADMA5005I: The application REST Services Gateway is configured in the WebSphere Application Server repository.

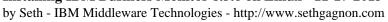
ADMA5113I: Activation plan created successfully.

ADMA5011I: The cleanup of the temp directory for application REST Services Gateway is complete.

ADMA5013I: Application REST Services Gateway installed successfully.

- Deploying runUpdateRESTGatewayService.
- Running installBusinessSpace
- Running configureBusinessSpace

Perform the following to complete the configuration prior tostarting the new cluster(s) and cluster member(s):
Make sure that you are using a user ID with sufficient authority tocreate tables.
 1. Copy the database scripts from the profile you most recently configured to a directory on the database system.
 The scripts are located in /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/dbscripts/BusinessSpace
 - 2. Open a command prompt on your database system and run - configBusinessSpaceDB.sh/.bat based on that operating system.
 For DB2 for z/OS, run the following files in order: createTablespace_BusinessSpace.sql createTable_BusinessSpace.sql
Restart the deployment manager and all nodes.Then start the new cluster(s).



- SUCCESS: The Monitor DE has been created successfully.

PROCEEED TO STEP 5.

2. Execute Database scripts

At this point you will have scripts created in /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/dbscripts (DEV) or in /opt/WebSphere/AppServer/profiles/Dmgr01/dbscripts (QA)

You will need to provide those to your DBA to get the MONITOR and COGNOS schemas created. You will have some additional scripts for BusinessSpace to give to the DBA after you create the deployment environment.

3. Execute BusinessSpace database scripts

At this point you will have scripts created in /opt/IBM/WebSphere/AppServer/profiles/Dmgr01/dbscripts (DEV) or in /opt/WebSphere/AppServer/profiles/Dmgr01/dbscripts (QA)

You will need to provide those to your DBA to get the BusinessSpace tables created. DO NOT START YOUR ENVIRONMENT UNTIL THESE SCRIPTS HAVE COMPLETED SUCCESSFULLY.

4.	Start	vour	environm	ent
		, , ,		

You will want to start your JVMs here one at a time, as there needs to be some first time initialization that
has to occur, specifically with the Support server for Cognos. So, please start one server at a time in this
order:

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Messaging		
Support		
Application		
Tail the logs and look f	or successful startup	

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