



WebSphere Application Server: Configuration and Use of the Job Manager Component

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WebSphere Application Server Sessions



S H A R E

Room	Day	Time	Title	Speaker
208B	Monday	11:00	Lab	Multi
201A	Monday	11:00	The Value of the WebSphere Application Server Job Manager	Loos
205A	Monday	4:30	WebSphere Application Server for z/OS -- I am NO Longer a Dummy but...	Loos
205B	Tuesday	9:30	Performance Tuning for WebSphere Application Server for z/OS - Practical Advice	Everett
205A	Wednesday	4:30	WebSphere Application Server for z/OS: Tools and Tricks (Potpourri)	Loos and Co.
205A	Wednesday	6:00	WebSphere Application Server for z/OS: Helping Customers Help Themselves	Stephen
206B	Thursday	8:00	Securing WebSphere Application Server for z/OS	Kearney
206B	Thursday	9:30	Application Improvement and Savings Through Simplification	McCorkle
206B	Thursday	11:00	WebSphere Application Server for z/OS: Batch	Bagwell
206A	Thursday	12:15	WebSphere Application Server 101	Stephen
206B	Thursday	1:30	WebSphere Application Server for z/OS: Availability Considerations	Bagwell
206B	Thursday	3:00	WebSphere Application Server: z/OS Exploitation/Differentiation	Follis
206B	Thursday	4:30	Performance Tuning for WebSphere Application Server for z/OS - WAS and WLM Interactions and Concepts	Follis

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Value of the WebSphere Application Server Job Manager

The screenshot shows a spreadsheet with the following sections and data:

Section	Variable Name	Value
Job Card Customization	Job Card Line 1:	{ACCTNO ROOM}, Mike Loos, CLASS=A, REGION=0M
	Job Card Line 2:	// MSGCLASS=A, NOTIFY=?
	Job Card Line 3:	//
	Job Card Line 4:	//
Variables related to SSL Configuration	Generate Certificate Authority (CA) Certificate (Y N)?	Y
	Certificate Authority (CA) Certificate Label ==>	WebSphereCA.S1CELL
	Expiration Date for Certificate Authority -->	2018/12/31
	Enable Writable SAF Keyring Support (Y N)?	N
Variables related to TCP/IP Network	Host Name for Deployment Manager ==>	wsc3.washington.ibm.com
	System 1 Host Name for Stand-Alone Server or Empty Managed Node ==>	wsc3.washington.ibm.com
	System 2 Host Name for Stand-Alone Server or Empty Managed Node ==>	wsc4.washington.ibm.com
	Host Name for Job Manager ==>	wsc3.washington.ibm.com
IP Address to bind Deployment Manager's ports to, or * for all >	IP Address to bind System 1 Stand-Alone Server's ports to, or * for all >	*
	IP Address to bind System 2 Stand-Alone Server's ports to, or * for all >	*

A red callout bubble with the text "Select the Job Manager tab..." points to the "Job Manager" tab in the bottom sheet list of the spreadsheet.

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Starting (as usual) with the spreadsheet. You can either do this as an additional part of an existing cell (this allows you to reuse the existing security infrastructure) or you could do the Job Manager as a totally separate configuration. No matter which way you decide, the Job Manager is actually a separate cell, with its own daemon. Basically it is a specialized standalone server. Once you've filled out the spreadsheet, you can select the Job Manager "tab".

Value of the WebSphere Application Server Job Manager



```
08
#
# WebSphere Configuration Excel Workbook
#
# Generated responseFile to configure:
#
# Job Manager
# In Cell - S1JMGRG
#
# To be imported into the z Profile Management Tool that is part of
# Application Server Toolkit (AST).
#
# 1. Copy contents of this column by clicking on the column 'A' header above,
# then press CTRL-C to copy to clipboard.
#
# 2. Open a new file with notepad/wordpad and paste this in (CTRL-V).
#
# 3. Save the newly created file as S1JMGRG.responseFile
#
# 4. Load into z Profile Management Tool
#
#
create
adminPassword=
```

Copy the entire contents of Column "A", then paste the results into a text file.

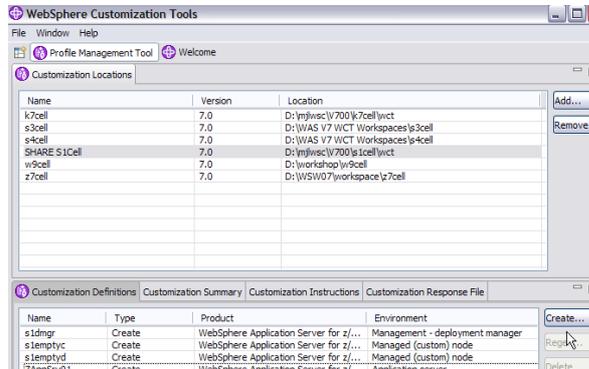
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Next step is to use “edit copy” to get the entire first column into the clipboard. Then paste it into a text file for use as a response file that will be the input to the zPMT.

Value of the WebSphere Application Server Job Manager



While not necessary, I'm bulding within an existing cell location.

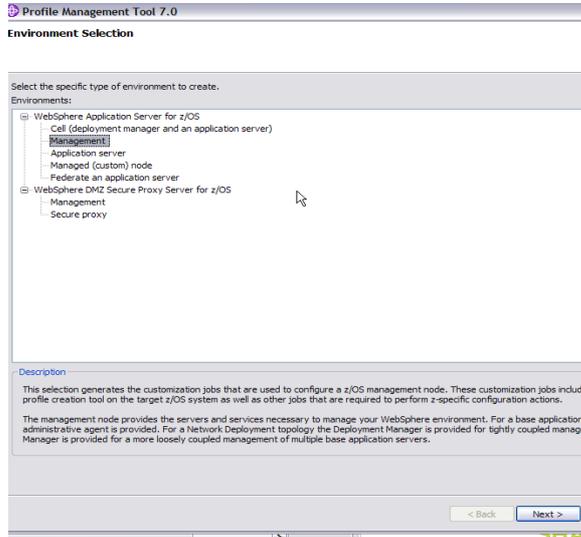
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For this presentation, we'll be using an existing cell, the s1cell which I've been using for SHARE presentations since the GA of WAS V7. We'll basically be adding what looks like another component, the Job Manager, but which really only shares security profiles and therefore some long and short names with the rest of the cell. It truly is a separate standalone server that just happens to share enough of the naming to make the security still work.

Value of the WebSphere Application Server Job Manager



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Once you've clicked on Create, you can select the Management option...

Value of the WebSphere Application Server Job Manager



Server Type Selection

Management - job manager

Select the type of server to be created within this management profile

- Administrative agent
An administrative agent provides management capability for multiple stand-alone application servers. An administrative agent can manage servers that exist within the same installation on one machine.
- Deployment manager
A deployment manager provides management capability for multiple federated nodes. A deployment manager can manage nodes that span multiple systems and platforms. The nodes that are managed by a deployment manager can only be managed by a single deployment manager and must be managed by that deployment manager.
- Job manager
A job manager provides management capability for multiple stand-alone application servers, administrative agents, and deployment managers. A job manager can manage nodes that span multiple systems and platforms. The nodes that are managed by one job manager also can be managed by another job manager.

< Back Next >

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Then select “Job Manager”...

Value of the WebSphere Application Server Job Manager



Profile Management Tool 7.0

Customization Definition Name
Management - job manager

Specify the name that will identify this customization definition.

Customization definition name:

Response file path name (optional)

Specify the full path name of the response file that contains the default values. When this value is specified, the input fields in the tool will be pre-loaded with the values in the response file.

Note: This tool creates customization data and instructions that are used to configure a WebSphere Application Server for z/OS runtime environment. However, a z/OS runtime profile is not created nor augmented until the steps listed in the generated instructions are performed on the target z/OS system.

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Give the customization definition a name, s1jmgrc, and indicate that you want to use the response file which we just created.

Value of the WebSphere Application Server Job Manager



Profile Management Tool 7.0
Configuration File System
Management - job manager

Mount point:
/wasv7config/s1mgrc/s1mgrc

Directory path name relative to mount point:
JobManager

Data set name:
OMVS.S1JMGRC.S1JMGRC.CONFIG.ZFS

Profile Management Tool 7.0
Configuration File System
Management - job manager

Mount point:
/wasv7config/s1cells1mgrc

Directory path name relative to mount point:
JobManager

Data set name:
OMVS.S1JMGRC.S1JMGRC.CONFIG.ZFS

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While the normal progression at this point would be to just click Next all the way through, accepting the values provided by the response file, we're going to make a couple of exceptions to make setup a little easier and to minimize the changes to the security configuration.

The first one is we'll change the mountpoint so that the zfs for the job manager configuration is mounted in the same directory as the other zfs files for the rest of the s1cell configuration (again, understanding that we're not really part of the cell, just "sharing space").

Value of the WebSphere Application Server Job Manager



SSL Customization

Management - job manager

Certificate authority keylabel: WebSphereCA.S1CELL

Generate certificate authority (CA) certificate

Expiration date for certificates: 2018/12/31

Default SAF keyring name: WASKeyring.S1MGRRC

Enable SSL on location service daemon

SSL Customization

Management - job manager

Certificate authority keylabel: WebSphereCA.S1CELL

Generate certificate authority (CA) certificate

Expiration date for certificates: 2018/12/31

Default SAF keyring name: WASKeyring.S1CELL

Enable SSL on location service daemon

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The next exception is to use the same keyring name as the rest of the cell so that we don't have to define any new ones and so that ssl handshakes will work for us when we start testing.

Value of the WebSphere Application Server Job Manager



Security Managed by the z/OS Product
Management - job manager

SAF profile prefix (optional):
S1MGRC

WebSphere Application Server unauthenticated user

User ID: S1GUEST

UID

Allow OS security to assign UID

Assign user-specified UID: 40002

Enable Writable SAF Keyring support

SAF profile prefix (optional):
S1CELL

WebSphere Application Server unauthenticated user

User ID: S1GUEST

UID

Allow OS security to assign UID

Assign user-specified UID: 40002

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Last, we'll reuse the SAF profile prefix that the s1cell already uses so that we can use the same EJBROLE, APPL, and some other profiles.

Value of the WebSphere Application Server Job Manager



Name	Type	Product	Environment	
s1dmgr	Create	WebSphere Application Server for z/...	Management - deployment manager	Create...
s1emptyc	Create	WebSphere Application Server for z/...	Managed (custom) node	Regen...
s1emptyd	Create	WebSphere Application Server for z/...	Managed (custom) node	
s1jmgrc	Create	WebSphere Application Server for z/...	Management - job manager	Delete
ZAppSrv01	Create	WebSphere Application Server for z/...	Application server	Process...

```

DSLIST - Data Sets Matching MJL00S.S1*
Command ==> █

Command - Enter "/" to select action
-----
MJL00S.S1CELL.S1DMNODE.CNTL
MJL00S.S1CELL.S1DMNODE.DATA
MJL00S.S1CELL.S1EMPTYC.CNTL
MJL00S.S1CELL.S1EMPTYC.DATA
MJL00S.S1CELL.S1EMPTYD.CNTL
MJL00S.S1CELL.S1EMPTYD.DATA
MJL00S.S1CELL.S1JMGRC.CNTL
MJL00S.S1CELL.S1JMGRC.DATA
MJL00S.S1SR01CS.TRACE.TXT
***** End of Data Set
    
```

BBOSBRAK,
BBODBRAK,
BBOSBRAM

Maybe...

BBODCPY1
BBODCFS
BBODHFSA
BBOWWPFDF

s s1jrcr,JOBNAME=s1jmgrc,ENV=s1jmgrc.s1jmgrc.s1jmgrc



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After we've finished CREATING the customization definition and PROCESSED it (uploading the CNTL and DATA datasets), we can begin processing.

If we hadn't caused reuse of the SAF profiles and mountpoints earlier, we would have to run the BBOSBRAK, BBODBRAK, and BBOSBRAM jobs.

Since we did reuse most of the SAF profiles, the only additional profiles we need are the STARTED class profiles for the daemon and controller started tasks.

```
"RDEFINE STARTED XXDMNJ*.* STDATA(USER(XXACRU) GROUP(XXCFG) TRACE(YES))"
```

```
"RDEFINE STARTED XXJCR*.* STDATA(USER(XXACRU) GROUP(XXCFG) TRACE(YES))"
```

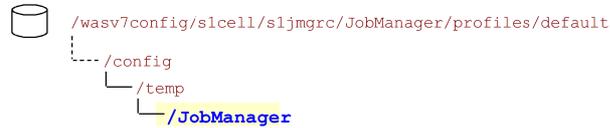
In every case, we do have to run the BBODCPY1, BBODCFS, BBODHFSA, and BBOWWPFDF jobs.

We then would be ready to start the Job Manager server using the start command shown at the bottom of the screen.

Value of the WebSphere Application Server Job Manager

You must create some additional directories...

In the Job Manager configuration file system...



In the Deployment Manager configuration file system...



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We also need to make a change to the configuration file system for the Job Manager configuration to add the directory where scripts will be found.

Also, any “target” configuration will need a place for the scripts to be downloaded.

These directory names and locations are non-negotiable.

Value of the WebSphere Application Server Job Manager



Integrated Solutions Console provides a common administrative console for multiple products. The table lists the product suites that can be administered through this installation. Select a product suite to view more information.

Suite Name	Version
WebSphere Application Server	7.0.0.13

Integrated Solutions Console
7.0.0.13
Build Number: 0131029-07
Build Date: 10/21/10
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At this point the configuration work is basically complete.

A comparison of the adminconsole for the network deployment cell (s1cell) and the Job Manager cell shows the difference (and more importantly the similarities) between the two.

Value of the WebSphere Application Server Job Manager



Integrated Solutions Console Welcome mjl00s

View: All tasks

Deployment manager

Deployment manager

Use this page to stop the deployment manager from running, and to link to other administrative console pages that you can use to define additional properties for the deployment manager. The deployment manager provides a single, central point of administrative control for all elements of the distributed cell.

Runtime Configuration

Stop

General Properties

Name: dmgr

Short Name: SIDMGR

Unique ID: C3BC9F3DA65BEA49000001800000000109521847

Run in 64 bit JVM mode

Start components as needed

Apply OK Reset Cancel

Server Infrastructure

Java and JRE Administration

Additional Properties

Core group service

Job managers

Ports

Administration services

Custom services

CRS service

Logging and tracing

Change Log Detail Levels

Web container transport chains

HTTP transports

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The first thing that has to happen, is we must “register” the s1cell with the Job Manager.

This is done from the adminconsole for the cell (not the Job Manager) by opening up System administration, clicking on Deployment manager, and then on Job managers.

Value of the WebSphere Application Server Job Manager

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A particular node may be registered to multiple Job managers.

To start the registration process for a node, click on the Register with Job manager button.

On the next screen, the managed node name should be pre-filled with the name of the node with which you are working. You must fill in the hostname and port (WC_adminhost_secure) for the Job manager with which you wish to register, as well as the security credentials you will use for the process.

When you click on OK, the process will start.

Value of the WebSphere Application Server Job Manager



Deployment manager

Deployment manager > Job managers

View the list of job managers to which this node is registered. The UUID uniquely identifies a job manager. To register a managed node with a job manager, click Register with Job Manager. To unregister a managed node from a job manager, click Unregister from a Job Manager.

Preferences

Register with Job Manager | Unregister from a Job Manager

Select	UUID	URL
<input type="checkbox"/>	default-JOB_MANAGER-7b845c24-9d25-4e7e-bd5e-ca22942dea9b	https://wsc3.washington.ibm.com:15446/otis/OMADMServlet

Total 1

Deployment manager

Deployment manager > Job managers > default-JOB_MANAGER-7b845c24-9d25-4e7e-bd5e-ca22942dea9b

Use this panel to change the polling interval and the URL for this job manager registration.

General Properties

* UUID
default-JOB_MANAGER-7b845c24-9d25-4e7e-bd5e-ca22942dea9b

Polling interval
30 seconds

URL
https://wsc3.washington.ibm.com:15446/otis/OMADMServlet

Apply | OK | Reset | Cancel



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Once registration is complete you will return to the screen listing the Job managers for which the node is registered. If you click on the UUID of the Job Manager, you'll get a screen showing the details.



Application servers

Use this page to view a list of the application servers in your environment and the status of each of these servers. You can also use this page to change the status of a specific application server.

Preferences

New Delete Templates... Start Stop Restart ImmediateStop Terminate

Select	Name	Node	Host Name	Version	Cluster Name	Status
<input type="checkbox"/>	s1sr01c	s1nodec	wsc3.washington.ibm.com	ND 7.0.0.13		✖
<input type="checkbox"/>	s1sr02c	s1nodec	wsc3.washington.ibm.com	ND 7.0.0.13		✖
<input type="checkbox"/>	s1sr03c	s1nodec	wsc3.washington.ibm.com	ND 7.0.0.13	s1sr03	✖
<input type="checkbox"/>	s1sr03d	s1noded	wsc4.washington.ibm.com	ND 7.0.0.13	s1sr03	✖
<input type="checkbox"/>	s1sr04d	s1noded	wsc4.washington.ibm.com	ND 7.0.0.13		✖

Total 5



Now that we've completed registration, we can actually do something with the Job manager. To begin, we'll get a list of application servers using the adminconsole for the cell. As you can see, there has yet to be a server named s1sr05c created.

Value of the WebSphere Application Server Job Manager



1. Open up the Jobs section, then click on Submit.

2. Select Create application server from the dropdown selection menu.

3. Click on Next.

1. Fill in a valid node name.

2. Provide the authentication info.

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To create a new server, one way would be to use the Job Manager.

To start, in the adminconsole for the Job manager, open up the Jobs section, and click on Submit. On the pane which that opens, select Create application server from the dropdown selection list. Click Next.

On the next panel, select the target node (the deployment manager node for an ND cell), and provide the proper credentials. Click Next.

Value of the WebSphere Application Server Job Manager



Submit a job to the job manager

Enter the parameters for the job. The parameters vary based on the type of job that you previously selected.

Step 1: Choose a job type
Step 2: Choose job targets
→ Step 3: Specify job parameters
Step 4: Schedule the job
Step 5: Review the summary and submit the job

Specify job parameters

Job type: Create application server

* Server name
s1sr05c Find...

Node name
s1nodec

Additional job parameters

Server template

Template name

Template location

Port control

Generate unique ports

Platform specific

Specific short name
s1SR05C

Generic short name
s1SR05

Bit mode

Previous Next Cancel

Clicking on this "+" opens up the fields

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On the next panel you'll need to specify the new server long name (s1sr05c) and the actual appserver node long name (s1nodec).

If you open up the Additional job parameters, you'll be given the opportunity to specify the new server short names (specific and generic), and the bit mode (64bit is the default). Click Next.

Value of the WebSphere Application Server Job Manager



Submit a job to the job manager

Review the options that you entered. If you are satisfied with the options, click Finish to submit the job. Otherwise, click Previous to make further changes to the job options.

Step 1: Choose a job type
Step 2: Choose job targets
Step 3: Specify job parameters
Step 4: Schedule the job
→ Step 5: Review the summary and submit the job

Review the summary and submit the job

Summary of actions:

Options	Values
Job type	Create application server
Description	createApplicationServer
Node names	s1dmnode
Notification	mikelos@us.ibm.com
Initial Availability	Make the job available now.
Expiration	Use the default expiration.
User name	s1admin
Server name	s1sr05c
Node name	s1nodec
Specific short name	S1SR05C
Generic short name	S1SR05

Previous Finish Cancel

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The next screen is a job summary panel, and if everything looks OK, simply click on Finish and the job will be submitted.

Value of the WebSphere Application Server Job Manager



Job status

Job status
This panel shows the status of submitted jobs with a status summary. It provides links to view status at the target nodes and explore the job history. Set the find parameters to limit the search results for submitted jobs. The results of the job search are displayed in the following collection.

Status summary key: Succeeded Partially succeeded Failed Incomplete

Find
Preferences

Suspend Resume Delete

Select	Job ID	Description	State	Activation time	Expiration time	Status summary
<input type="checkbox"/>	12954327845881071	createApplicationServer	Active	01/20/2011 17:07:58	01/21/2011 17:07:58	

Total 1

Job status

Job status
This panel shows the status of submitted jobs with a status summary. It provides links to view status at the target nodes and explore the job history. Set the find parameters to limit the search results for submitted jobs. The results of the job search are displayed in the following collection.

Status summary key: Succeeded Partially succeeded Failed Incomplete

Find
Preferences

Suspend Resume Delete

Select	Job ID	Description	State	Activation time	Expiration time	Status summary
<input type="checkbox"/>	12954327845881071	createApplicationServer	Active	01/20/2011 17:07:58	01/21/2011 17:07:58	

Total 1

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The next screen, the Job status screen will start out with a Status summary of Incomplete (grey in color) and when the job completes will change to Succeeded (green) or one of the less happy colors and statuses.

Value of the WebSphere Application Server Job Manager



Application servers

Use this page to view a list of the application servers in your environment and the status of each of these servers. You can also use this page to change the status of a specific application server.

Preferences

New Delete Templates... Start Stop Restart ImmediateStop Terminate

Select	Name	Node	Host Name	Version	Cluster Name	Status
<input type="checkbox"/>	s1sr01c	s1nodec	wsc3.washington.ibm.com	ND 7.0.0.13		✖
<input type="checkbox"/>	s1sr02c	s1nodec	wsc3.washington.ibm.com	ND 7.0.0.13		✖
<input type="checkbox"/>	s1sr03c	s1nodec	wsc3.washington.ibm.com	ND 7.0.0.13	s1sr03	✖
<input type="checkbox"/>	s1sr03d	s1noded	wsc4.washington.ibm.com	ND 7.0.0.13	s1sr03	✖
<input type="checkbox"/>	s1sr04d	s1noded	wsc4.washington.ibm.com	ND 7.0.0.13		✖
<input type="checkbox"/>	s1sr05c	s1nodec	wsc3.washington.ibm.com	ND 7.0.0.13		✖

Total 6

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If we return to the cells adminconsole and look at the list of application servers, we see that s1sr05c is now there.

If we were to check, the port assignments are all “default” values which don't do us much good on most z/OS systems. Also, nothing has been done to add the http/https ports to the virtual host list for the cell. So, we either have a choice of hand modifying the ports, running a script to modify them, or for purposes of this presentation, we're going to (behind the scenes) delete the server and re-define it using a custom wsadmin script.

Value of the WebSphere Application Server Job Manager



```
:/wasv7config/slcell/sljmgrc/JobManager/profiles/default/config/temp/JobManager
-> cp /u/mjloos/tb/v7/createNewServerv7.py .
:/wasv7config/slcell/sljmgrc/JobManager/profiles/default/config/temp/JobManager
-> ll
total 52
drwxrwxr-x  2 MJLOOS  S1CFG      416 Jan 20 12:16 .
-rwxr-xr-x  1 MJLOOS  S1CFG    11895 Jan 20 12:16 createNewServerv7.py
-rwxrwxr-x  1 MJLOOS  S1CFG     2215 Jan 12 17:00 applist.py
-rwxrwxr-x  1 MJLOOS  S1CFG     1949 Jan 12 16:31 appoptlist.py
-rwxrwxr-x  1 SlADMIN S1CFG     2960 Jan 12 15:41 appinfov2.py
drwxrwx---  6 SlADMIN S1CFG      384 Jan 12 11:40 ..
:/wasv7config/slcell/sljmgrc/JobManager/profiles/default/config/temp/JobManager
```

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The first thing that needs to happen is that the script needs to be pre-positioned into the proper directory of the Job manager file system. As show, we have added a jython script, createNewServerv7.py. This script will create the server and set all values properly (in line with the naming standards we've adopted), set the ports accordingly, and add the proper ports to the virtual host alias list.

Value of the WebSphere Application Server Job Manager



Submit a job to the job manager

Choose the type of job that you want to perform. Optionally provide a description for the job.

Step 1: Choose a job type
Step 2: Choose job targets
Step 3: Specify job parameters
Step 4: Schedule the job
Step 5: Review the summary and submit the job

Choose a job type

Job type: **Distribute file**

Description: distributeFile

Choose the type of target to use. The target can be a group, a single node, or a list of nodes found using a query. If security is enabled and no user name and password are entered, the user name of the console user is used to authenticate the job.

Step 1: Choose a job type
Step 2: Choose job targets
Step 3: Specify job parameters
Step 4: Schedule the job
Step 5: Review the summary and submit the job

Job type: Distribute file

Groups of nodes
No groups -->

Node names

s1d1mnode

Node authentication

User name: s1admin
Password: *****
Confirm password: *****

Previous Next Cancel

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Now that the script is properly pre-positioned we can “distribute” it. This puts a copy of it into a pre-defined directory in the deployment manager file system.

To start, we go into the submit job dialog and select Distribute file from the dropdown selection list. Click Next.

On the next panel we select the target node and provide credentials. Click Next.

Value of the WebSphere Application Server Job Manager



The screenshot displays two sequential screens of the WebSphere Application Server Job Manager. The top screen, titled "Specify job parameters", shows a "Job type: Distribute file" configuration. The "Source" field is highlighted with a red circle and a callout bubble stating: "Note that the format for the Source is a file URL." The "Destination" field contains the text "createNewServer7.py". The bottom screen, titled "Schedule the job", shows scheduling options. The "Initial Availability" section has "Make the job available now." selected. The "Expiration" section has "Use default expiration - 1 days." selected. The "Job Availability Interval" section has "Run once" selected. Navigation buttons "Previous", "Next", and "Cancel" are visible at the bottom of the second screen.



On the next screen we have to specify the URL of the file in the Job manager file system, and give it a name to be used at the destination.

On the next screen we can do scheduling. Same as before. Default is right now.

Value of the WebSphere Application Server Job Manager



Submit a job to the job manager

Review the options that you entered. If you are satisfied with the options, click Finish to submit the job. Otherwise, click Previous to make further changes to the job options.

Review the summary and submit the job

Summary of actions:

Options	Values
Job type	Distribute file
Description	distributeFile
Node names	sidmnode
Notification	mikelooa@us.ibm.com
Initial availability	Make the job available now.
Expiration	Use the default expiration.
User name	sadmin
Source	file/createNewServerv7.py
Destination	createNewServerv7.py

Previous Finish Cancel

Job status

This panel shows the status of submitted jobs with a status summary. It provides links to view status at the target nodes and explore the job history. Set the find parameters to limit the search results for submitted jobs. The results of the job search are displayed in the following collection.

Status summary key: Succeeded Partially succeeded Failed Incomplete

Find Preferences

Suspend Resume Delete

Select	Job ID	Description	State	Activation time	Expiration time	Status summary
<input type="checkbox"/>	129555630929681078	distributeFile	Active	01/20/2011 20:45:09	01/21/2011 20:45:09	Succeeded
Total 1						



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Summary screen, click Finish.

Status screen, wait for successful completion.

Value of the WebSphere Application Server Job Manager



```
:/wasv7config/s1cell/s1dmnode/DeploymentManager/profiles/default/downloadedContent
-> ll
total 54
drwxrwxr-x  3 S1ADMIN S1CFG      448 Jan 20 15:45 .
-rw-rw-rw-  1 S1ASRU  S1CFG    11895 Jan 20 12:16 createNewServerv7.py
-rw-rw-rw-  1 S1ASRU  S1CFG     2215 Jan 12 17:00 applist.py
-rw-rw-rw-  1 S1ASRU  S1CFG     1949 Jan 12 16:31 appoptlist.py
-rw-rw-rw-  1 S1ASRU  S1CFG     2960 Jan 12 15:41 appinfov2.py
drwxrwxr-x  2 S1ADMIN S1CFG      256 Jan 12 15:21 appl
drwxrwxr-x 20 S1ADMIN S1CFG      928 Jan 12 15:20 ..
:/wasv7config/s1cell/s1dmnode/DeploymentManager/profiles/default/downloadedContent
->
```

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As you can see, the script has now been downloaded to the deployment managers node file system. We're ready to run...

Value of the WebSphere Application Server Job Manager



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Cloud
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Enterprise
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This time when we get to the Job submit dialog, we select Run wsadmin script. Click Next.

On the next panel we specify the name of the script (as it was downloaded) and any parameters necessary to run it. For this script the parameters are: new server longname, target node long name, and low port number for the server. Click Next.

Value of the WebSphere Application Server Job Manager



Job status

Job status
This panel shows the status of submitted jobs with a status summary. It provides links to view status at the target nodes and explore the job history. Set the find parameters to limit the search results for submitted jobs. The results of the job search are displayed in the following collection.

Status summary key: Succeeded Partially succeeded Failed Incomplete

Find
 Preferences

Suspend Resume Delete

Select	Job ID	Description	State	Activation time	Expiration time	Status summary
<input type="checkbox"/>	129555710982381085	runWaadminScript	Active	01/20/2011 20:58:29	01/21/2011 20:58:29	Succeeded

Total 1

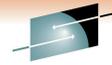
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You'll see the same panels as before and fill them out in the same fashion and eventually you'll get to the successful completion Job status panel. Where did the output go?

Value of the WebSphere Application Server Job Manager



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From the Deployment Manager Servant SYSPRINT:

```
Trace: 2011/01/20 15:58:40.641 01 t=8C9CF0 c=UNK key=PB (13007002)
ThreadId: 000000cf
FunctionName: com.ibm.ws.scripting.AbstractShell
SourceId: com.ibm.ws.scripting.AbstractShell
Category: AUDIT
ExtendedMessage: BB0002221: WASX70911: Executing script: "/wasv7config/sicell/s1dnode/DeploymentManager/profiles/default/download
edContent/CreateNewServerV7.py"
Server name is s1sr05c
Server short name will be: S1SR05C
Cluster Transition name will be: S1SR05
Node name is s1nodec
First port number is 15540
BOOTSTRAP_ADDRESS values before modification: host = wsc3.washington.ibm.com port = 2809
BOOTSTRAP_ADDRESS values after modification: host = wsc3.washington.ibm.com port = 15543
SOAP_CONNECTOR_ADDRESS values before modification: host = wsc3.washington.ibm.com port = 8880
SOAP_CONNECTOR_ADDRESS values after modification: host = wsc3.washington.ibm.com port = 15542
ORB_LISTENER_ADDRESS values before modification: host = * port = 2809
ORB_LISTENER_ADDRESS values after modification: host = * port = 15543
WC_adminhost values before modification: host = * port = 9060
WC_adminhost values after modification: host = * port = 15545
WC_defaulthost values before modification: host = * port = 9080
WC_defaulthost values after modification: host = * port = 15547
DCS_UNICAST_ADDRESS values before modification: host = * port = 9353
DCS_UNICAST_ADDRESS values after modification: host = * port = 15550
ORB_SSL_LISTENER_ADDRESS values before modification: host = * port = 15407
ORB_SSL_LISTENER_ADDRESS values after modification: host = * port = 15544
WC_adminhost_secure values before modification: host = * port = 9043
WC_adminhost_secure values after modification: host = * port = 15546
WC_defaulthost_secure values before modification: host = * port = 9443
WC_defaulthost_secure values after modification: host = * port = 15548
```

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Since we didn't specify anything different, anything which would have been directed to STDOUT will go to the deployment manager servant SYSPRINT and STDERR to SYSOUT ddnames.

Value of the WebSphere Application Server Job Manager



```
SIP_DEFAULTHOST values before modification: host = * port = 5060
SIP_DEFAULTHOST values after modification: host = * port = 15555

SIP_DEFAULTHOST_SECURE values before modification: host = * port = 5061
SIP_DEFAULTHOST_SECURE values after modification: host = * port = 15556

IPC_CONNECTOR_ADDRESS values before modification: host = localhost port = 9633
IPC_CONNECTOR_ADDRESS values after modification: host = localhost port = 15549

SIB_ENDPOINT_ADDRESS values before modification: host = * port = 7276
SIB_ENDPOINT_ADDRESS values after modification: host = * port = 15551

SIB_ENDPOINT_SECURE_ADDRESS values before modification: host = * port = 7286
SIB_ENDPOINT_SECURE_ADDRESS values after modification: host = * port = 15552

SIB_MQ_ENDPOINT_ADDRESS values before modification: host = * port = 5558
SIB_MQ_ENDPOINT_ADDRESS values after modification: host = * port = 15553

SIB_MQ_ENDPOINT_SECURE_ADDRESS values before modification: host = * port = 5578
SIB_MQ_ENDPOINT_SECURE_ADDRESS values after modification: host = * port = 15554

Host Alias entry for port number 15545 already exists.
Host Alias entry for port number 15546 already exists.
Host Alias entry for port number 15547 already exists.
Host Alias entry for port number 15548 already exists.
Host Alias entry for port number 15555 already exists.
Host Alias entry for port number 15556 already exists.
Skipping node sidmnode
Done with node sinodec
Done with node sinoded
All Done!
```

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Value of the WebSphere Application Server Job Manager



If you'd rather the output not go to SYSPRINT:

```
EDIT /u/mjloos/tb/listServersToFile.py
Command ==>
*****
000001 import sys
000002 #
000003 # Set up for printing to a file
000004 #
000005 listout = "/tmp/listServersToFile.out"
000006 prtout = open(listout, "w")
000007 #
000008 # Get list of application servers in the cell
000009 #
000010 serverlist = AdminConfig.list('Server').splitlines()
000011 #
000012 # Loop through them and print the list of servers.
000013 #
000014 for server in serverlist:
000015     print >>prtout, server.split('(')[0],
000016     print >>prtout, 'in node: ',
000017     print >>prtout, server.split('/')[3]
000018 print >>prtout,
*****
```

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What if we want the output to go elsewhere? Any option that you can use with jython/python will work. Here is one possibility that causes the print statement to redirect to file prtout, which has been opened for output, and sent to location /tmp/listServerToFile.out.

Basically this script will print out a list of servers in a cell. Let's run it.

We would do the same type of function as we just previously did for the createNewServerV7.py script. Load the script into the Job manager file system, submit a job to distribute the file to the deployment manager file system, and then submit a job to run the wsadmin script.

Value of the WebSphere Application Server Job Manager



Note that the output file will be in ASCII.

```
VIEW /SYSC/tmp/listServersToFile.out
Command ==>
*****
000001 dmgr in node: s1dmnode
000002 nodeagent in node: s1nodec
000003 nodeagent in node: s1noded
000004 p7http1 in node: s1noded
000005 s1db21c in node: s1nodec
000006 s1sr01c in node: s1nodec
000007 s1sr02c in node: s1nodec
000008 s1sr03c in node: s1nodec
000009 s1sr03d in node: s1noded
000010 s1sr04d in node: s1noded
000011 s1sr05c in node: s1nodec
000012
*****
```

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The output looks like this (it will be in ASCII).

In Summary...



- Job Manager is configured as its own cell.
 - Basically a specialized Standalone Server.
- Can be used to run jobs on both ND cells and Standalone Servers.
 - ND cells via the deployment manager node.
 - Standalone Servers via the Administrative Agent.
- Can be used to schedule jobs in a variety of ways.
- Relatively easy to configure and use.

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Q and A?



Questions?

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Q and A?