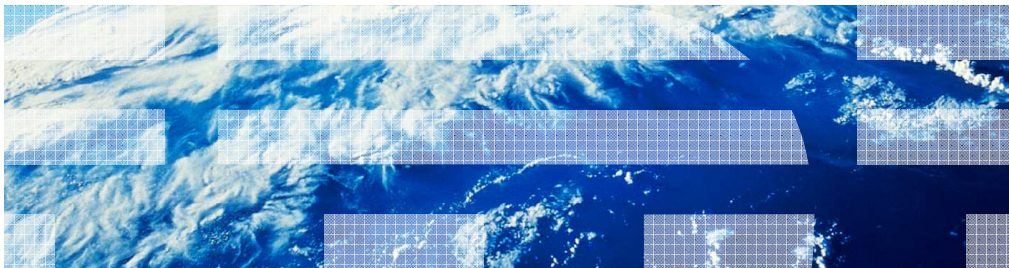

IBM WebSphere Application Server V8

Centralized Installation Manager



This presentation describes support for the centralized installation manager included in IBM WebSphere Application Server V8.

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 - Register a target
 - Install IBM Installation Manager
- Summary

This presentation will introduce the Centralized Installation Manager in WebSphere Application Server V8. It will cover these topics.

Overview and history

Centralized Installation Manager in WebSphere Application Server V7

What's new in V8

Centralized Installation Manager in Job Manager

New Centralized Installation Manager Jobs

Supported platforms and software

Demo

Register a target

Install IBM Installation Manager

Summary

Centralized Installation Manager – Overview and History

- Centralized Installation Manager (CIM) was first introduced in WebSphere Virtual Enterprise version 6.1 and made available to WebSphere Application Server version 7.0.
- Accessible from the Deployment Manager
- Remotely drive ISMP and Update Installer
- Remotely install and update WebSphere Application Server version 7 onto multiple nodes within a cell

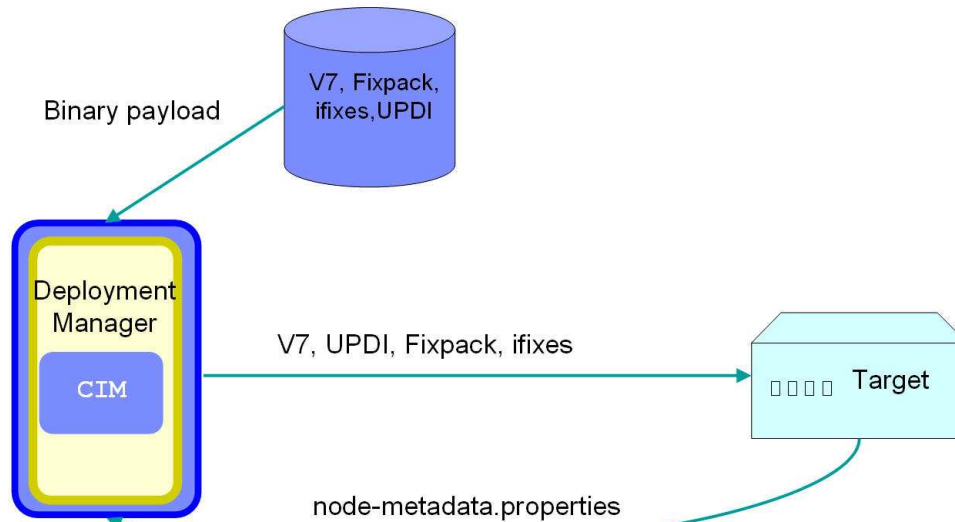
Centralized installation manager was first introduced in WebSphere Virtual Enterprise version 6.1. It was able to remotely install WebSphere Virtual Enterprise version 6.1 and apply maintenance of WebSphere Virtual Enterprise and WebSphere Application Server. Centralized installation manager can be accessed from the deployment manager.

CIM remotely drives the Install Shield Multiple Platform (ISMP) and the Update Installer to perform install and update operations.

Later, CIM has been made available to WebSphere Application Server version 7.0. CIM can be used to install WebSphere Application Server version 7.0 and apply its maintenance to remote targets.

WebSphere Application Server V7 CIM in Deployment Manager

Deployment manager pushes binary payload to targets



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Centralized Installation Manager

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In WebSphere Application Server V7, CIM is available in the deployment manager. The CIM repository was created during the installation of WebSphere Application Server V7. Next, a deployment manager profile was created. The deployment manager was represented as a blue rectangle in the left side.

A new target was added to CIM and WebSphere Application Server V7 would be installed into the target. CIM retrieved the WebSphere Application Server V7 binary from the repository and pushed it out to the target. After WebSphere Application Server has been installed on the target, CIM would create a custom profile on the target and run addNode. The target would become a managed node in the deployment manager.

CIM can also be used to apply WebSphere Application Server fixpacks and interim fixes to its targets in a similar fashion.



What's new in Centralized Installation Manager in V8

- CIM is now available from the Job Manager
- Remotely drive IBM Installation Manager
- Install WebSphere Application Server, IBM HTTP Server, Application Clients, DMZ Secure Proxy Server, web Server Plug-ins and WebSphere Customization Toolbox
- Support job scheduling
- Support multiple cells
- Better scalability

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Centralized Installation Manager

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In WebSphere Application Server version 8, CIM is integrated into the Job Manager. CIM can drive IBM Installation Manager remotely to perform install, update or modify operations. In version 7, CIM was able to install WebSphere Application Server only. In version 8, CIM can remotely install WebSphere Application Server, IBM HTTP Server, Application Clients, DMZ Secure Proxy Server, web Server Plugin-ins and WebSphere Customization Toolbox.

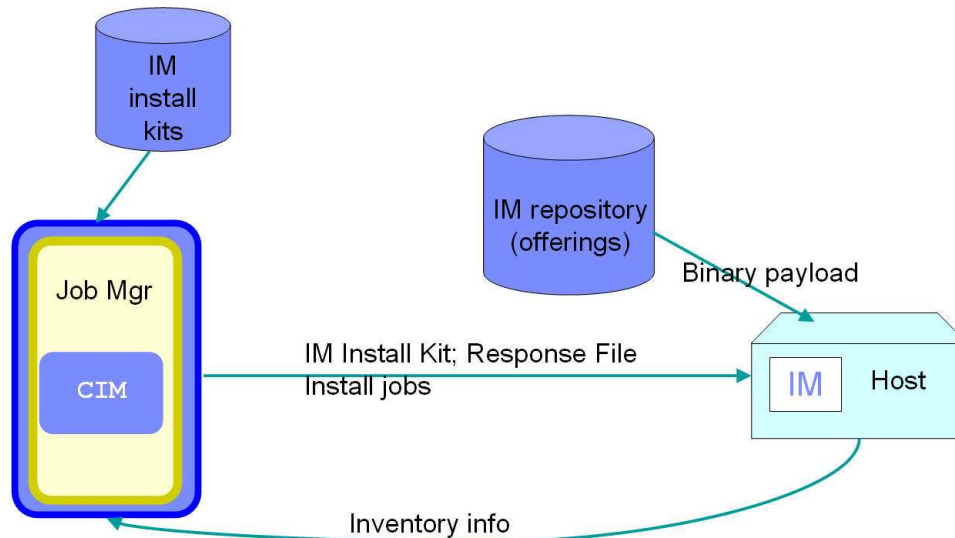
Since CIM's functions are implemented as jobs, they support job scheduling.

In version 7, CIM can manage nodes within a cell only. In version 8, CIM can manage targets across cells.

With the adoption of IBM Installation Manager and its network repository, CIM does not push the product binary from the server. Instead, Installation Manager on the targets will pull the product binary from the network repository directly. This reduces the network traffic between the server and the targets and it also reduces the CPU utilization on the server. Therefore, the scalability has improved.

WebSphere Application Server V8 CIM in Job Manager

Separation between Job Manager, Target Hosts and IM repositories



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Centralized Installation Manager

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In WebSphere Application Server version 8, CIM has been integrated into the Job Manager. It was represented as a blue rectangle on the left side. The Installation Manager repository was separated from the server. The server, which was the Job Manager, only contained the Installation Manager installation kits.

First, a new host was register to the Job Manager. During the installation of Installation Manager to the target, the Installation Manager installation kit was pushed to the target. Next, WebSphere Application Server V8 can be installed by CIM with response files. Product binary was pull from the IM repository. Profiles can be created by running manage profiles job with response files.

Installation information was gathered by CIM from the targets by running an inventory job.

New Centralized Installation Manager jobs

- Inventory
- Install, update and uninstall Installation Manager (**New** capability in version 8)
- Manage offerings (like install, update, uninstall WebSphere Application Server)
- Manage profiles (**New** capability in version 8)
- Run command (**New** capability in version 8)
- Install SSH public key
- Distribute, collect and delete file (**New** capability in version 8)
- Test connection
- Add or search Installation Manager agent data locations

These are new CIM jobs in the Job Manager.

Inventory: To collect installation information.

Install, update and uninstall Installation Manager: Use these jobs to install, update and uninstall Installation Manager.

Manage offerings: Use this job to install, update or uninstall WebSphere Application Server and its supplementary products.

Manage profiles: Use this job to create, augment and remove profiles.

Run command: Use this job to run any operating system, shell or product commands.

Install SSH public key: Use this job to install the SSH public key to the targets. This is a prerequisite of using SSH private/public key authentication.

Distribute, collect and delete file: Use these jobs to send shell scripts to targets, collect log files from targets.

Test connection: Use this job just to test the connection between the job manager and targets.

Add or search Installation Manager agent data locations: (for advanced users only) Use this job to add or search non-default location of Installation Manager agent data locations.

Supported platforms and software

- Supported platforms
 - Windows, Linux, AIX, Solaris, HP-UX, IBM i and z/OS
- Supported Installation Manager version
 - Version 1.4.3 and later
- Supported WebSphere Application Server version
 - Install and uninstall of WebSphere Application Server V8 and the supplemental products
 - IBM HTTP Server
 - Web Server Plug-ins
 - WebSphere Customization Toolbox
 - Application Client
 - DMZ Secure Proxy Server

In WebSphere Application Server version 8, CIM adds support of z/OS.

CIM can remotely drive IBM Installation Manager version 1.4.3 or later.

CIM can also remotely install these supplemental products:

IBM HTTP Server

Web Server Plug-ins

WebSphere Customization Toolbox

Application Client

DMZ Secure Proxy Server

Section

Demo

This section demonstrates the use of the Centralized Installation Manager.

Centralized Installation Manager in Job Manager

WebSphere software Welcome ad

View: All tasks

- Welcome
- Jobs
 - Submit
 - Status
 - Targets
 - Target resources
 - Target groups
 - Installation Manager installation kits
- Resources
- Security
- Environment
- System administration
- Users and Groups
- Troubleshooting

Welcome

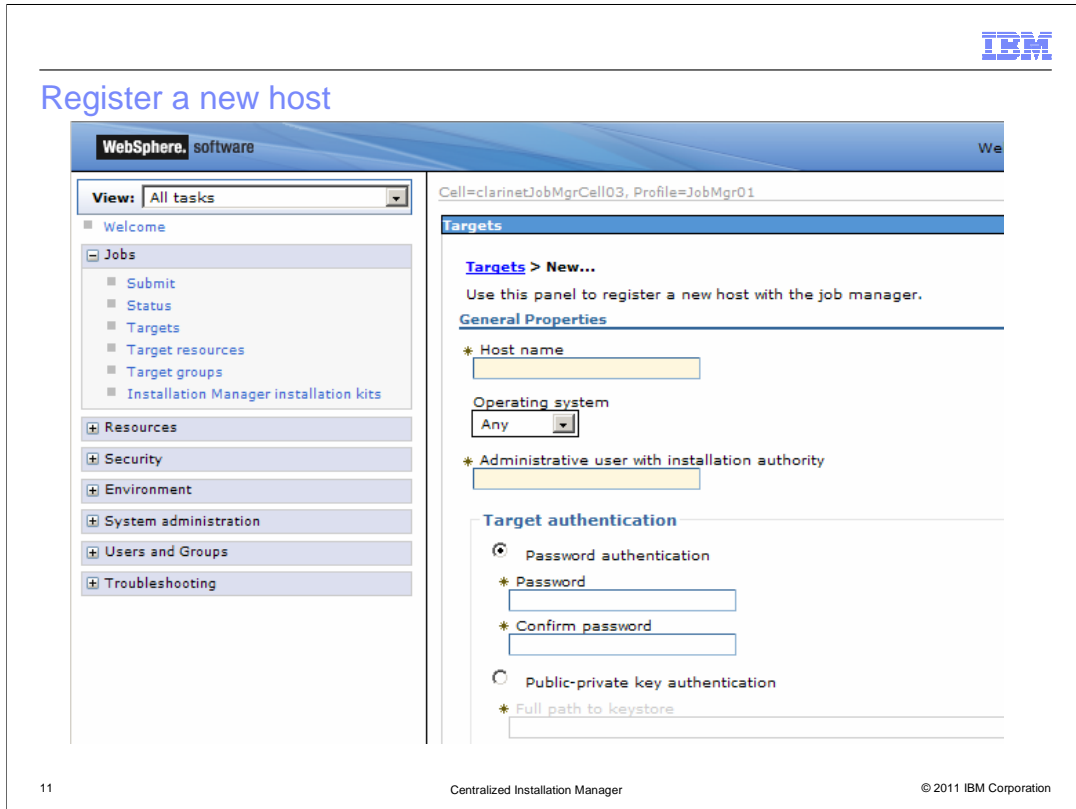
Welcome

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	8.0.0.0

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Centralized Installation Manager functions in WebSphere Application Server version 8 can be found in the Job Manager administrative console under the Jobs section. Most of the CIM functions in the console can also be performed using AdminTask in the wsadmin tool.



First, register a new target to the Job Manager.

From the Jobs section, click Targets. On the Targets page, click New Host

Provide these information

Host name

(Optional) Operating system

Administrative user with installation authority (User name)

Select password authentication or public-private key authentication

For password authentication, provide the password

For public-private key, provide a fully qualified path of the private key file located at the Job Manager. Passphrase is optional.

Check the save security information check box

Click OK

Target properties

The screenshot shows a web interface with a blue header bar labeled 'Targets'. Below the header, the text reads 'Targets > wasvm044'. A sub-header 'General Properties' is followed by a text input field containing 'wasvm044'. Below this is a table titled 'Target properties' with two columns: 'Name' and 'Value'.

Name	Value
Administrative agent UUID (com.ibm.websphere.management.agent.uuid)	JobMgr01-JOB_MANAGER-3bcec414-624c-453b-95cc-7763b00f1ed4
Host name (hostname)	wasvm044
Node name (managedNodeName)	wasvm044
OS_Arch	i686
OS_BitMode	32
OS_Name	linux
OS_Type	RedHat Linux

Once a target has been registered successfully, click the host name and the target properties are displayed.

Add Installation Manager installation kit

The screenshot shows the 'Add Installation Manager installation kits' page in the IBM WebSphere software interface. The page title is 'Add Installation Manager installation kit'. The interface includes a navigation menu on the left with options like 'Welcome', 'Jobs', 'Resources', 'Security', 'Environment', 'System administration', 'Users and Groups', and 'Troubleshooting'. The main content area is titled 'Installation Manager installation kits' and contains the following text: 'Installation Manager installation kits are required for application inst' and 'Installation Manager installation kits are stored. The list of Installation Manager'. Below this text is a text box labeled 'Installation Manager installation kits location' containing the path 'C:\WAS\profiles\JobMgr01\IMKits' and a 'Refresh' button. There is also a 'Preferences' section with 'Add...' and 'Delete' buttons. At the bottom, there is a table with one row showing an installed kit: 'agent.installer.linux.gtk.x86_1.4.3000.20110303_1846.zip'. The table has columns for 'Select' and 'Name'. The total number of kits is shown as 'Total 1'.

Before Installation Manager can be remotely installed to targets, add an Installation Manager installation kit of the corresponding platform.

From the Jobs section, click Installation Manager installation kits. Click Add to add an Installation Manager installation kit zip file or copy the zip file into the location specified in the Installation Manager installation kits location text box.

In this screen capture, an Linux installation kit is added.

Install IBM Installation Manager

The screenshot displays the IBM Installation Manager web interface. At the top, it shows 'WebSphere, software' and 'Welcome adm'. Below this, there's a navigation pane on the left with a 'View: All tasks' dropdown and a tree structure including 'Welcome', 'Jobs', 'Resources', 'Security', 'Environment', 'System administration', 'Users and Groups', and 'Troubleshooting'. The 'Jobs' section is expanded, showing sub-items like 'Submit', 'Status', 'Targets', 'Target resources', 'Target groups', and 'Installation Manager installation kits'. The main content area is titled 'Submit a job to the job manager' and contains the following text: 'Choose the type of job that you want to perform. Optionally provide a description for the job.' Below this, there are five steps: 'Step 1: Choose a job type' (highlighted with a blue arrow), 'Step 2: Choose job targets', 'Step 3: Specify job parameters', 'Step 4: Schedule the job', and 'Step 5: Review the summary and submit the job'. Under 'Step 1', there is a 'Choose a job type' section with a 'Job type' dropdown menu set to 'Install IBM Installation Manager' and a 'Description' text box containing 'installIM'. A 'Next' button is located at the bottom of the main content area.

To install IBM Installation Manager on a target, from the Jobs section, click Submit. From the Job type dropdown list, select Install IBM Installation Manager and click Next.

Select targets

Submit a job to the job manager

Choose the targets to use. Targets can be either a target group or a list of one or more target names. If enabled on a target, then the saved authentication information for the target is used. Otherwise, you can provide authentication parameters. If a user name is not provided, then the current console user ID is used. If authentication parameters are entered, they are used for all targets and take precedence over the saved authentication associated with the host.

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 job targets

Job type: Install IBM Installation Manager

Target groups

-- No groups --

Target names

wasvm044

Select a target by typing its name into the text box and click Add. To select multiple targets, click Find and a query can be setup to find multiple targets.
Click Next.

Input the job parameters

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: Install IBM Installation Manager

The path and file name of Installation Manager kit

Installation Manager agent data location

Installation Manager installation directory

Installation action
 Install based on login credentials

Skip prerequisite checking
 I accept the terms in the license agreements

Previous Next Cancel

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For the Install IBM Installation Manager job, there are six parameters.

The path and file name of Installation Manager kit – This field can be left blank and CIM will select the latest installation kit that is suitable for the target platform.

Installation Manager agent data location – This field can be left blank and the default location is used.

Installation Manager installation directory - This field can be left blank and the default location will be used.

Installation action – Select Install based on login credentials

Skip prerequisite checking – Leave this unchecked

I accept the terms in the license agreements – Check this checkbox

Click Next to continue.

Schedule job

Submit a job to the job manager

Schedule the job by specifying when the job is available, when the job expires, if the job is to rerun after a period of time, and what email address is to receive notification when the job is done. Jobs are scheduled for availability and expiration relative to the time of the machine on which the job manager resides.

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

Schedule the job

Job type: Install IBM Installation Manager

Notification

Email addresses

Initial Availability

Specify when this job is first available.

Make the job available now.

Schedule availability

Date (MM/dd/yyyy) Time (HH:mm:ss)

 / / : : :

Expiration

Specify when this job is no longer available.

Use default expiration - 1 days.

Expire the job based on a date

Date (MM/dd/yyyy) Time (HH:mm:ss)

 / / : : :

Expire the job based on a duration

Expire after

 minutes

Job Availability Interval

Jobs can run repeatedly based on an interval. Specify the interval that the job is available.

Availability interval

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Centralized Installation Manager
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The job can be scheduled to run at a specific time or can be repeated. Scheduling is optional.

Click Next to continue.

Review job parameters

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.

<ul style="list-style-type: none"> Step 1: Choose a job type Step 2: Choose job targets Step 3: Specify job parameters Step 4: Schedule the job <li style="color: yellow;">→ Step 5: Review the summary and submit the job 	<div style="background-color: #4F81BD; color: white; padding: 5px; border: 1px solid black;"> Review the summary and submit the job </div> <p>Summary of actions:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #4F81BD; color: white;">Options</th> <th style="background-color: #4F81BD; color: white;">Values</th> </tr> </thead> <tbody> <tr> <td>Job type</td> <td>Install IBM Installation Manager</td> </tr> <tr> <td>Description</td> <td>installIM</td> </tr> <tr> <td>Target names</td> <td>wasvm044</td> </tr> <tr> <td>Initial availability</td> <td>Make the job available now.</td> </tr> <tr> <td>Expiration</td> <td>Use the default expiration.</td> </tr> <tr> <td>Installation action</td> <td>Install based on login credentials</td> </tr> <tr> <td>Skip prerequisite checking</td> <td>FALSE</td> </tr> <tr> <td>I accept the terms in the license agreements</td> <td>TRUE</td> </tr> </tbody> </table>	Options	Values	Job type	Install IBM Installation Manager	Description	installIM	Target names	wasvm044	Initial availability	Make the job available now.	Expiration	Use the default expiration.	Installation action	Install based on login credentials	Skip prerequisite checking	FALSE	I accept the terms in the license agreements	TRUE
Options	Values																		
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Expiration	Use the default expiration.																		
Installation action	Install based on login credentials																		
Skip prerequisite checking	FALSE																		
I accept the terms in the license agreements	TRUE																		

Review job parameters and click Finish to submit the job.

Job status

Job status

Job status

This panel shows the status of submitted jobs with a status summary. It provides links to view status of the targets 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"/>	130245263851697537	installIM	Active	04/10/2011 12:23:58	04/11/2011 12:23:58	↓
Total 1						

Wait for a few minutes and click the refresh icon in the Status Summary column to see the latest status or click the job ID to see the details.

Target resources

WebSphere. software

View: All tasks

Cell=clarinetJobMgrCell03, Profile=JobMgr01

Target resources

Target resources are applications, servers, and clusters to be managed. Set the find parameters to limit the search results and explore the resources that are available.

Find

Preferences

Resources	Quantity
InstallationManager/InstallationManager	1
Total	1

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Centralized Installation Manager

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From the Jobs section, click Target resources to see the target resources. Installation Manager has been successfully installed on the target.

Other CIM jobs

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

Next

Choose a job type

Job type

Collect file

Collect file

Distribute file

Add or search for Installation Manager agent data locations

Install IBM Installation Manager

Install SSH public key

Inventory

Manage offerings

Manage profiles

Remove file

Run command on remote host

Status

Test connection

Uninstall IBM Installation Manager

Update IBM Installation Manager

To install WebSphere Application Server, select Manage offerings.

To create a profile, select Manage profiles.

Summary

- CIM can drive IBM Installation Manager
- Install WebSphere Application Server version 8 and its supplementary products
- Support job scheduling
- No limitation of cell boundary
- Better scalability

To summarize, centralized installation manager in WebSphere Application Server version 8 works with IBM Installation Manager to install WebSphere Application Server version 8 and its supplementary products to remote targets. Centralized installation manager is accessible from job manager. Unlike CIM version 7 in the deployment manager, CIM version 8 is not limited by the boundary of a cell. It also supports job scheduling and have better scalability.



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