IBM

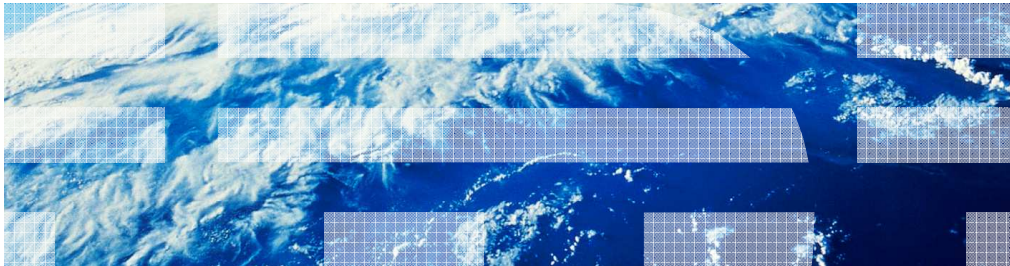# IBM WebSphere Application Server V8

Centralized Installation Manager
(including new changes in fixpack 1)

WebSphere software

This presentation describes support for the centralized installation manager included in IBM WebSphere Application Server V8. It has been updated to include the new changes in the fixpack 1.

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Centralized Installation Manager

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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

What's new in fixpack 1

Supported platforms and software

A demonstration

Register a target

Install IBM Installation Manager

And finally, a Summary of this presentation

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

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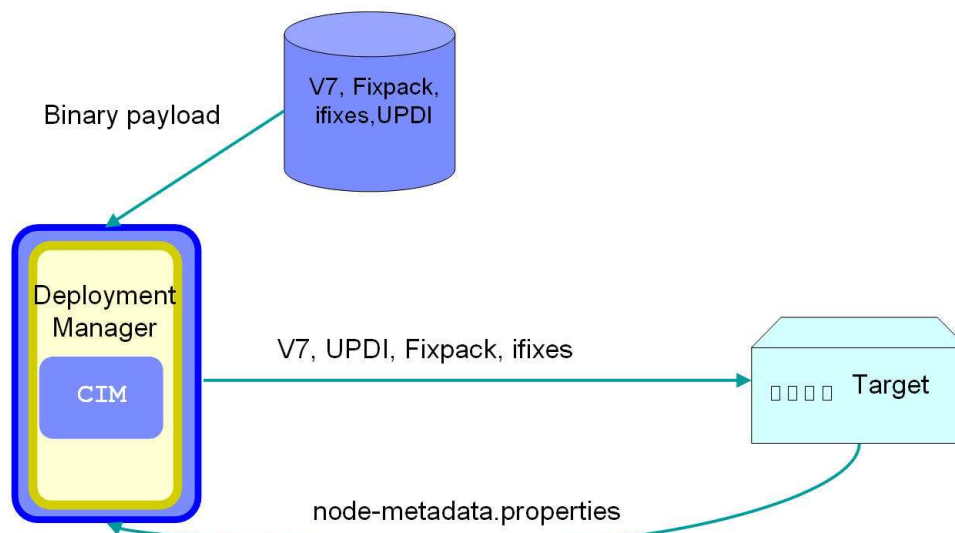
Centralized installation manager was first introduced in WebSphere Virtual Enterprise version 6.1. It was able to remotely install WebSphere Virtual Enterprise version 6.1 and apply maintenance of WebSphere Virtual Enterprise and WebSphere Application Server. Centralized installation manager can be accessed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

Binary payload

V7, Fixpack, ifixes,UPDI

Deployment Manager

CIM

V7, UPDI, Fixpack, ifixes

Target

node-metadata.properties

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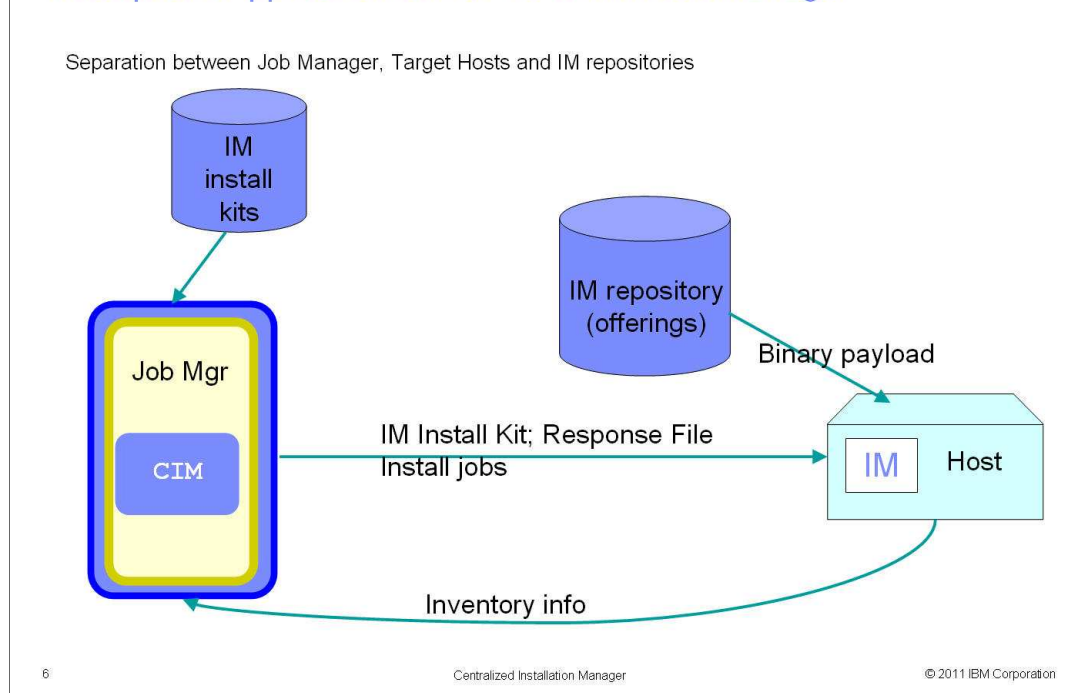
In WebSphere Application Server version 8, CIM has been integrated into the Job Manager. It was represented as a blue rectangle on the left side. The Installation Manager repository was separated from the server. The server, which was the Job Manager, only contained the Installation Manager installation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

First, a new host was registered 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 pulled 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

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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.

What is new in fixpack 1 (V8.0.0.1)

- Added sudo support for Linux, AIX, Solaris and HP-UX hosts

- Setup is required on each host before using sudo option to connect

- Typical usage scenario
    - A large customer has a group of system administrators
    - Use a common ID (e.g. websphere) to install and maintain WebSphere Application Server
    - Direct login with the common ID is disabled
    - Each administrator login using his/her own user ID
    - Switch user to websphere using sudo
    - sudo logs who has switched user

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In WebSphere Application Server V8 fixpack 1, CIM has introduced the support of using sudo to connect to Linux, AIX, Solaris and HP-UX hosts. To switch user using sudo, you must be given permissions in the sudoers file on each host. For the setup instructions, see the IBM WebSphere Application Server V8 InfoCenter.

The following is a typical usage scenario of sudo. A large customer has a group of system administrators. WebSphere Application Server is installed and maintained by a common user ID (e.g. websphere). If the administrators share the same user ID and password, it will be difficult to trace who did what. If each administrator logs in using his/her own ID and use sudo to switch to the common user ID, sudo can log who has switched user.

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

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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

Demo

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This section demonstrates the use of the Centralized Installation Manager.

Centralized Installation Manager in 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	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.

Register a new host

First, register a new target to the Job Manager.

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

Provide this 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

Since V8.0.0.1, sudo is support for Linux, AIX, Solaris and HP-UX hosts. To use sudo, check the Use sudo check box. If the sudo user name is not specified, the default is root. If the sudo password is not specified, the user's password is used.

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

Targets   ? _

Targets > **wasvm044**

This panel shows the properties defined for the target being viewed.

General Properties

✱ Target name

wasvm044

Target properties

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

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

Add Installation Manager installation kit

Installation Manager installation kits

Installation Manager installation kits are required for application inst
Manager installation kits are stored. The list of Installation Manager

Installation Manager installation kits location

C:\WAS\profiles\JobMgr01\IMKits

Select | Name
agent.installer.linux.gtk.x86_1.4.3000.20110303_1846.zip

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, a Linux installation kit is added.

Install IBM Installation Manager

IBM

WebSphere. software   Welcome adm

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

Cell=clarinetJobMgrCell03, Profile=JobMgr01

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
Install IBM Installation Manager

Description
installIM

Next

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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

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 is 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 check box

Click Next to continue.

Schedule job

Submit a job to the job manager

Schedule the job by specifying when the job 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
Run once

Previous   Next   Cancel

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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 and click Finish to submit the job.

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

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

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

Centralized Installation Manager

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 has better scalability.

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