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IBM® WebSphere® Everyplace® Deployment for Windows and Linux Version 6

Platform Management



@business on demand.

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This presentation introduces the platform management capabilities of IBM WebSphere Everyplace Deployment for Windows and Linux Version 6.

Goals

- Understand how to manage the client platform

The goal of this presentation is to understand how to manage the IBM WebSphere Everyplace Deployment for Windows and Linux Version 6 client platform.

Agenda

- Overview
- Standalone deployment
- Enterprise deployment and management

The agenda of this presentation is to provide an overview of platform management, explain the standalone deployment of software, and describe the enterprise deployment of software and management for the client platform

Section

Overview

Let's start with an overview of platform management.

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Platform Management

Interaction Services	Client
	Access Services
	Platform Management
	Managed Client Services

- Value
 - ▶ Enable “On Demand” management of applications
- Deployment options
 - ▶ Standalone
 - ▶ Enterprise
- Standards
 - ▶ Eclipse
 - ▶ OSGi
 - ▶ Open Mobile Alliance

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Platform Management installs, maintains, and configures applications and services on the client. There are two platform management services. The Update Manager enables end-users to directly install applications and components from standard Eclipse update sites onto the Workbench.

The Enterprise Management Agent enables an administrator to manage the client platform remotely by using a Device Management Server, which is provided by the server platform.

IBM WebSphere Everyplace Deployment Version 6 supports two options to deploy software to the client. Standalone deployment allows an end-user to install software onto their device through the Eclipse Update Manager. Enterprise deployment enables a System Administrator to install software onto multiple devices by using the Enterprise Management Agent and a Device Management Server.

Section

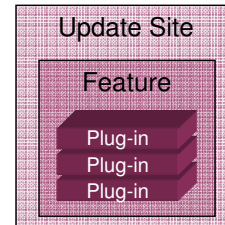
Standalone Deployment

Next, let's cover standalone deployment of software to the client platform.

Eclipse Update Manager

Install UI Mgmt UI
Eclipse Update Manager


- Developers package components as plug-ins
- Deployers package components into Features
- Features published to Update Sites
- Features installed from Update Sites using the Update Manager
- End-user can manage software for their client via Install or Application Management UI
 - ▶ Install software from local file system or remote site
 - ▶ Install, disable, uninstall features

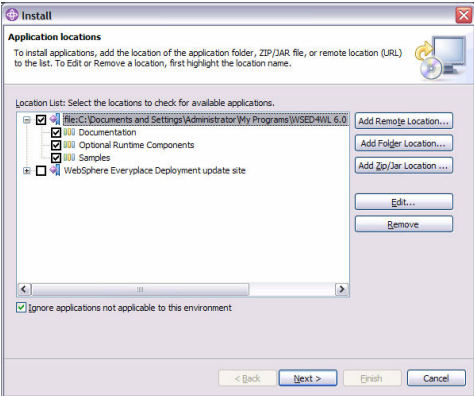


In IBM WebSphere Everyplace Deployment Version 6, developers package software components as Eclipse plug-ins. Solution Deployers then package these plug-ins into installable Eclipse Features consisting of one or more plug-ins and optionally other Features. They then publish these Features to an Eclipse Update Site. End-users can use the installation user interface with the Update Manager to install these Features from an Update Site onto their client. Furthermore, end-users can use the management user interface to disable and uninstall Features that are installed on their client.

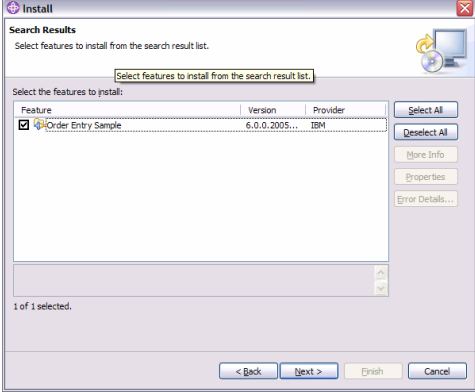
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Application Install User Interface





Select Application > Install






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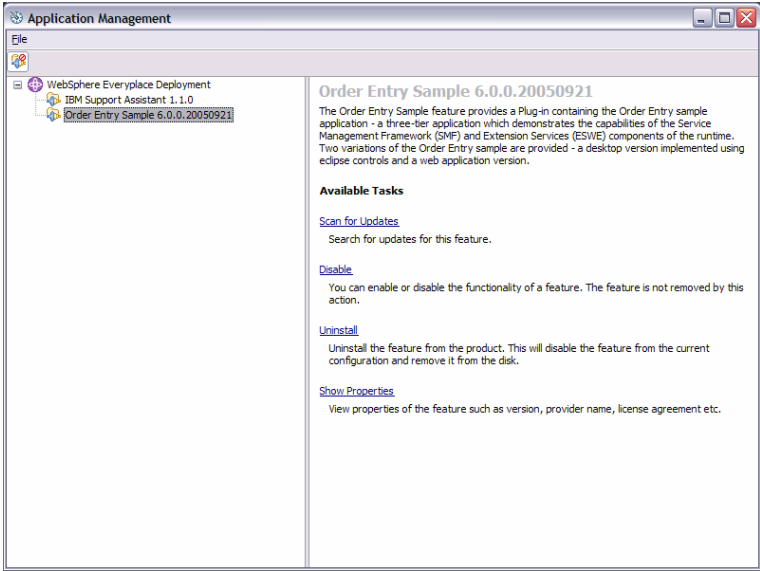
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This slide shows the application install user interface. Launch the client workbench, select Application, and then select Install.

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Application Management User Interface



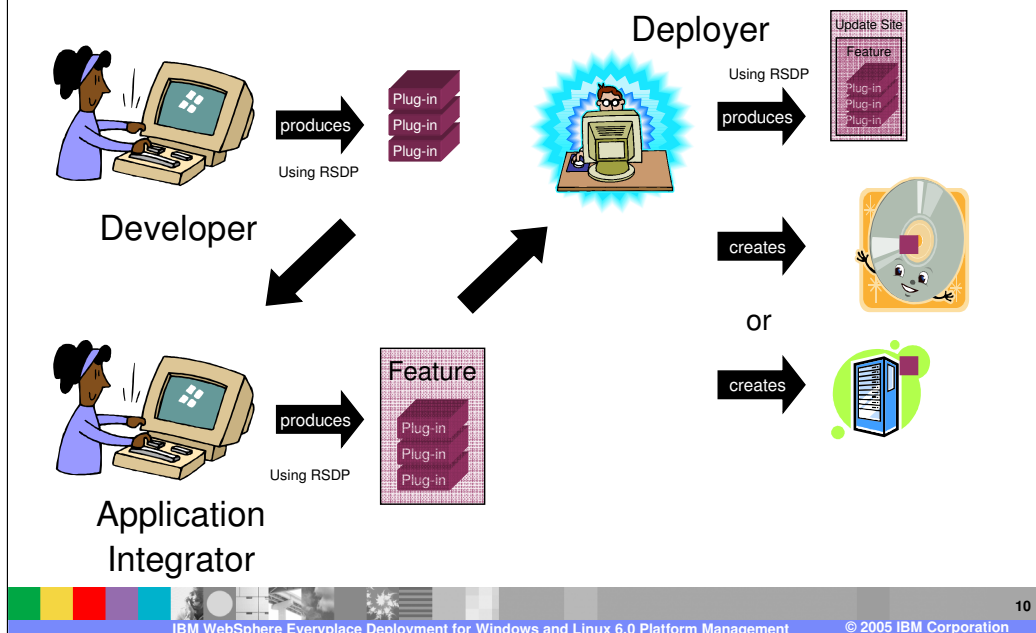


Select Application > Application Management

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This slide shows the application management user interface. Launch the client workbench, select Application, and then select Application Management.

Standalone Deployment



Let's now walk through the process of standalone deployment. The Developer uses the Rational Software Development Platform (RSDP) to create one or more plug-ins for their software components. They may either use the Plug-in Project wizard in the Plug-in Development Environment (PDE) or the Client Services Project wizard in the Bundle Tools to create the plug-ins.

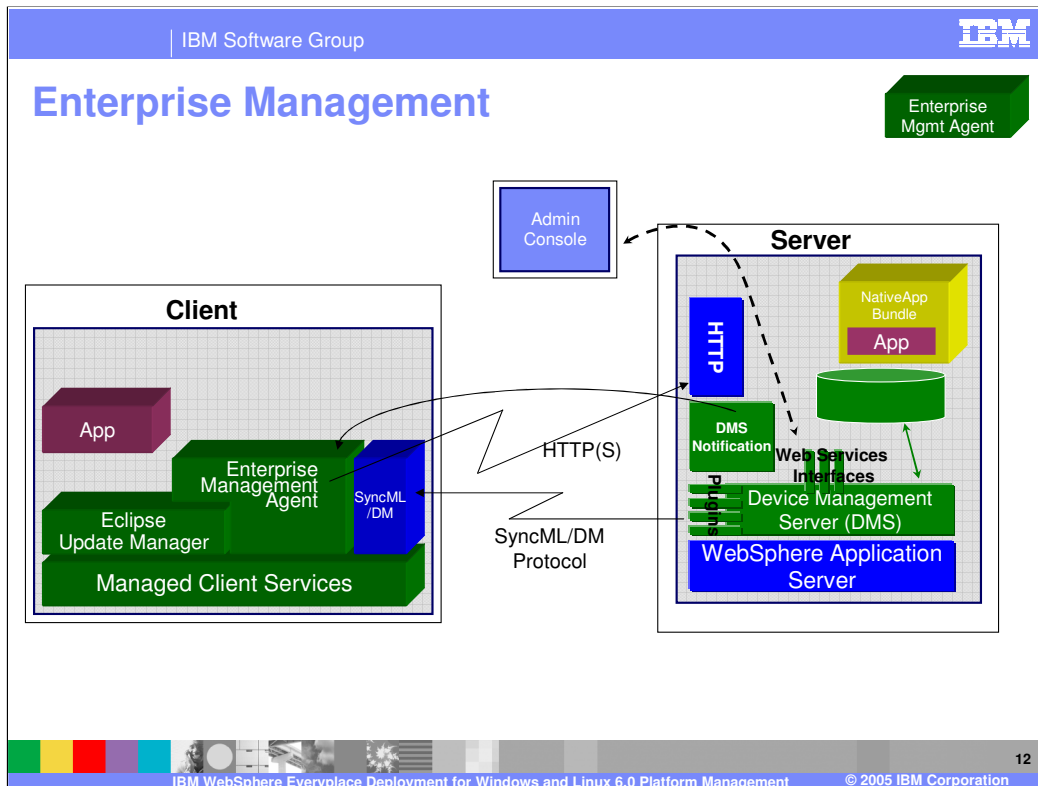
Next, the Application Integrator uses the Feature Project wizard in the PDE to integrate plug-ins into a Feature.

The Deployer then produces an Update Site that contains one or more Features. They can then create Update Sites on CD's or on the Web. End-users can then subsequently access these Update Sites from their client workbench to install Features onto their client platform.

Section

Enterprise Deployment and Management

Finally, let's explore enterprise deployment of software and management for the client platform.



The Enterprise Management Agent works cooperatively with the Device Management Server provided by the IBM WebSphere Everyplace Deployment Version 6 server to perform management operations. The agent and server use the SyncML/DM protocol defined by the Open Mobile Alliance to communicate management requests. A System Administrator uses the Device Management (Admin) Console to schedule management jobs for devices that include software installation, update, and configuration. When installing and updating software components, the management system determines which components are already on the device and then installs only the missing components based on information about the dependencies among all the requested components (i.e. bundles). The Device Management Server can also notify the Agent about management jobs. When the Agent receives a management job to install components, the Agent uses HTTP/HTTP(S) to pull the necessary components from the Device Management Server. Next, let's discuss Enterprise Management in more detail.

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Enterprise Management Agent

Update
Manager
Enterprise
Management
Agent

- Java agent running on the client
- SyncML/DM protocol used between agent and DM Server
- Agent can be configured for periodic polling of the DM Server
- DM Server can notify the agent to connect
 - HTTP Service must be configured
 - Listen on address other than localhost (e.g. ALL)
 - Use a static port (e.g. 8777)
- Provides OSGi specific capabilities such as bundle control
- Provides platform inventory capabilities, enabling management of platform configuration
- Supports Win32/Linux native extensions for native software inventory, configuration, install, uninstall
- Supports secure connections with DM Server via SSL
- Uses Update Manager to install features from distributed update sites

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The Enterprise Management Agent is written in Java and runs on the Managed Client Services provided by the client platform. The agent uses the SyncML/DM protocol to communicate with the Device Management Server to perform management jobs. The agent can be configured to periodically poll the Device Management Server for jobs. However, the Device Management Server can also notify the agent to connect and then perform a management job (i.e. install software). The agent provides OSGi-specific specific capabilities supported by Managed Client Services, such as bundle control, and provides inventory capabilities so a System Administrator can manage the configuration of the client platform.

The agent supports native extensions to manage native software on Windows and Linux clients. These extensions support Install, Uninstall, Status, Start, Stop, and gathering information from STDOUT/STDERR.

SSL is also enabled to secure the connection between the Enterprise Management Agent and the Device Management Server.

The Device Management Server only deploys bundles – not Update Sites. Therefore, an Update Site must be packaged and deployed in a NativeAppBundle (we will explain this topic in more detail later in this presentation). When the agent receives a NativeAppBundle, the agent extracts the Update Site from the bundle and uses Update Manager to install the Features in the Update Site onto the client platform.

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Enterprise Management Agent (continued)

- Configuration
 - ▶ During install
 - ▶ After install using one of these options
 - Locally by using Preference Page
 - Remotely by using DM Console to communicate with Enterprise Management Agent via DMS
 - Locally or remotely by using Web browser to open configuration servlet hosted in the Web Container running the service
- When configuring using Preference Page, user will receive warning
- When Enterprise Management Agent enabled, Install and Application Management UI for Update Manager disabled

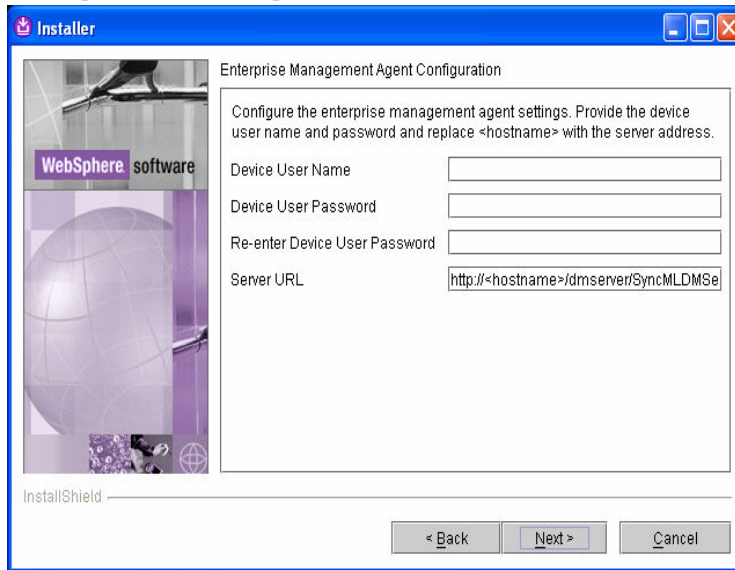
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You can configure the Enterprise Management Agent either during or after installation of the client. You are prompted to configure the agent while installing the client platform and, if you choose to do so, you can use a Preferences Page to provide the information necessary to connect the agent to a Device Management Server. You may also configure the agent after installing the client by using one of the following options.

1. An end-user can configure the agent locally from the client workbench by selecting File -> Preferences -> Enterprise Management Agent and then use the Preferences Page to configure the agent.
2. A System Administrator can remotely configure the agent by using the Device Management Console to configure the agent via the Device Management Server.
3. A System Administrator can locally or remotely configure the agent by using a Web browser to open a configuration servlet that is hosted by the Web container running the client service. When the IBM WebSphere Everyplace Deployment for Windows and Linux Version 6 client is installed as a system management service, the Enterprise Management Agent Servlet is the only way to configure and control the Enterprise Management Agent.

If you choose to enable the Enterprise Management Agent, the end-user will no longer have control over installing, updating, or uninstalling features so please check with your Systems Administrator before you enable the agent.

Enterprise Management Agent Install Configuration Page



The screenshot shows a Windows installer window titled "Installer" with a blue title bar. The main content area is titled "Enterprise Management Agent Configuration" and contains the following text: "Configure the enterprise management agent settings. Provide the device user name and password and replace <hostname> with the server address." Below this text are four input fields: "Device User Name", "Device User Password", "Re-enter Device User Password", and "Server URL". The "Server URL" field contains the text "http://<hostname>/dmserver/SyncMLDMSel". At the bottom of the window are three buttons: "< Back", "Next >", and "Cancel". The "Next >" button is highlighted. In the bottom left corner of the window, there is a small graphic with the text "WebSphere software" and "InstallShield".

This slide shows the Enterprise Management Agent Configuration page which is displayed during installation of the client.

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Enterprise Management Agent Runtime Preference Page

Preferences
Page

The screenshot shows the 'Enterprise Management Agent Runtime Preference Page' in a client workbench. The page is titled 'Enterprise Management Agent' and contains the following fields and options:

- Enable Enterprise Management Agent
- Device User Name:
- Device User Password:
- Reenter Device User Password:
- Server Passwords (Optional):
- Reenter Server Password:
- Server IP Address: (Radio buttons for HTTP and HTTPS)
- URL: (Placeholder: http:// <Server Address>/dmserver/Synch/DMServiceAuthRequired)
- Polling Configuration:
 - Polling Interval: 04:00
 - Polling start time: 02:00
 - Polling end time: 02:00
 - Enable Poll at Start Up
 -

Below the preference page, a warning dialog box is displayed with the following text:

Warning: If you enable the Enterprise Management Agent you will have no control over the installation, updating, or uninstalling of features. Once enabled the Enterprise Management Agent can not be disabled without assistance from your system administrator. Are you sure you want to enable the Enterprise Management Agent?

Buttons: Yes, No

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This slide shows the Enterprise Management Agent Configuration page which is displayed in the client workbench after you have installed the client. To display this page, launch the client workbench and select File -> Preferences -> Enterprise Management Agent. If you choose to enable the Enterprise Management Agent, you will be prompted with the warning shown on this slide. If you enable the Enterprise Management Agent, the end-user will no longer have control over installing, updating, or uninstalling features so please check with your Systems Administrator before you enable the agent.

Enterprise Management Agent System Management Installation

- Configuration during installation using same configuration page as runtime
- Configuration pages hosted on Web Container running in the service
- Entries added to Start menu (on Windows) to launch browser to view servlet



You can install the client platform to run as a system management service. This configuration enables a system administrator to manage the entire system with the platform's management agent that communicates with the Device Management Server. In this configuration, there is no user interface to interact with the platform. Configuration of the management agent settings is accomplished either during the installation process or afterwards by using an agent configuration servlet that you access from a browser.

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Enterprise Management Agent Configuration Servlet

Configuration Servlet

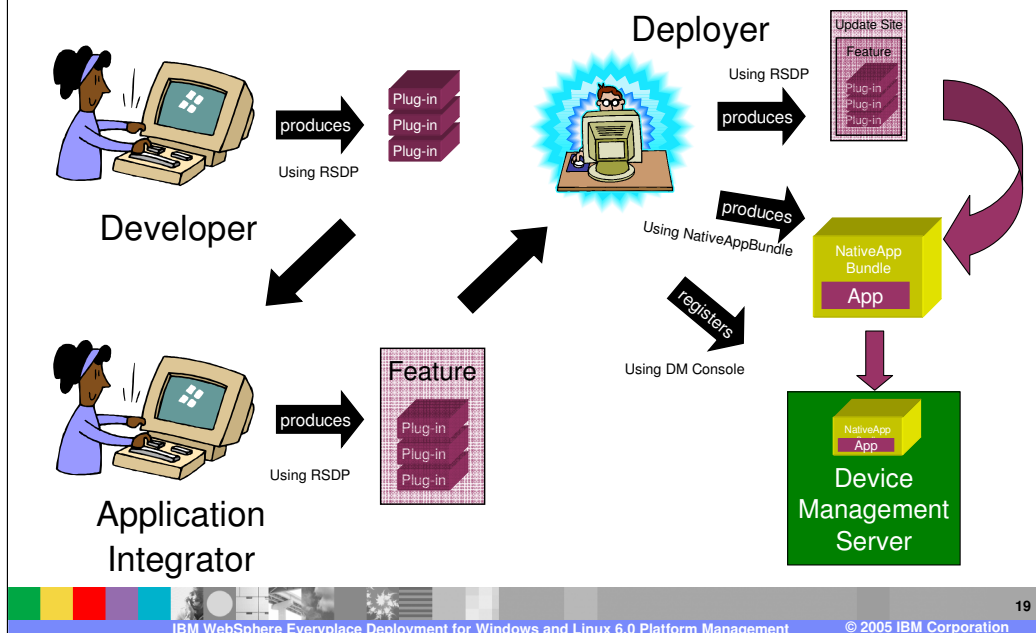
The screenshot displays the 'Edit Account Configuration' page. The table below shows the current configuration parameters:

Parameter	Value
SyncML/DM account ID	SampleAccount
Device user name	<input type="text"/>
Device user password	<input type="password"/>
Server password	<input type="password"/>
Address type	https
Server address	<input type="text"/>
DM server path	<input type="text"/>

Additional options include a checked checkbox for 'Default account' and buttons for 'Update Account' and 'Delete Account'.

This slide shows how the initial web page provided by the configuration servlet.

Enterprise Deployment



Let's now walk through the process of Enterprise deployment. The Developer and Application Integrator perform the same steps as in Standalone Deployment. The Deployer then produces an Update Site that contains one or more Features. However, now the Deployer uses the NativeAppBundle tool to produce a NativeAppBundle that contains an Update Site. Next, the Deployer uses the Device Management Console to register the NativeAppBundle with the Device Management Server. The System Administrator can subsequently use the console to schedule deployment of this NativeAppBundle to one or more clients. The Enterprise Management Agent on a receiving client extracts the Update Site from the NativeAppBundle and invokes the local Update Manager to install the Update Site, and its Features and plug-ins, onto the client platform.

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