



Lotus Expeditor 6.1 Education

IBM® Lotus® Expeditor 6.1 Server

Using Device Manager to manage the Expeditor Client

Lotus software



@business on demand software

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Hello, and welcome to this overview of using the Device Manager to manage the IBM Lotus Expeditor 6.1 Client.

Introduction

The Device Manager server in Lotus Expeditor can be used to manage the software and configuration for a variety of versions of the Expeditor client. Specific run-times/platforms supported include:

- Expeditor 6.1 client versions including:
 - Windows® 32-bit devices (XP and 2003)
 - Linux® x86 devices (Redhat and SUSE)
 - Windows Mobile 5 and Windows Mobile 2003 for Pocket PC
- WebSphere Everyplace® Deployment V6.0 clients
- Workplace™ Client Technology Micro Edition V5.7.1
 - <http://www-306.ibm.com/software/wireless/wctme/features.html>
 - Pocket PC 2003
- Other platforms that can run the OSGi device agent (may require custom support engagement with IBM)

The Lotus Expeditor 6.1 Device Manager, or DMS, provides a flexible solution for managing devices that is independent of connection type or device capabilities.

DMS provides device class support for Windows 32 desktops, Linux desktops, Windows Mobile 2003 devices, and client environments running the OSGi device agent, such as Workplace Client Technology Micro Edition 5.7.1 or 5.7.2.

Client management support

- Lotus Expeditor and WebSphere Everyplace Deployment client management
 - Configuration and Software Deployment
 - Native Software Installation
- Win32[®] and Linux extensions
 - Expanded inventory
 - Registry retrieval and editing

Management for the Lotus Expeditor clients is provided for the client run-time. Configuration and software deployment is provided within the run-time.

Limited capabilities for native software installation are provided, and intended for delivering content associated with custom applications such as images and data files.

Additional operating system platform management and inventory features are available in the Win32 and Linux derivatives of the Expeditor client.

Expanded inventory management is available for native hardware and software. Registry retrieval and editing is possible on Windows 32-bit platforms. These functions are intended for support of custom application deployment and configuration, not for general operating system or native application management.

Eclipse and OSGi-related Device Classes in Device Manager

- Win32
- Linux
- Eclipse
- OSGi

Several device classes in Device Manager are related to management of the Lotus expeditor clients and share many common components and functions.

The specific device classes related to Expeditor client management include:

- Win32 for managing Windows 32 desktops,
- Linux for managing Linux desktops,
- Eclipse for managing Expeditor for devices,
- and OSGi for managing other client environments running the OSGi device agent.

The OSGi support is device neutral, which enables management of any platform capable of running the core OSGi device agent.

Management interfaces

- Console
- Administration Commands
- Administration API

Device Manager provides three management interfaces for managing jobs, devices, servers, software, and queries.

- The Device Manager console provides a graphical user interface.
- The Device Manager Administration Commands provide a set of command line operations,
- and the Administration API provides a set of web **services** that can be used by other applications.

Job types in device manager for managing the Expeditor client

High-level job types

- Inventory Collection
- Software Distribution
- Software Removal
- Native Bundle Software Distribution
- Software List Updates
- Bundle Control
- Run Command
- Device Configuration

“Building-block” job types

- Custom Command
- Command Script
- Node Discovery

Eclipse Management

- Eclipse Feature Control
- Eclipse Software Distribution
- Eclipse Feature Software Removal
- Eclipse Preferences Retrieval
- Eclipse Preferences Editing
- Eclipse Features Inventory
- Eclipse Software Site Registration

Configuration Management

- Properties Retrieval
- Properties Editing
- Client configuration and run-time properties inventory

Device Manager provides several categories of jobs for managing the Expeditor clients. The categories are:

- high-level jobs such as software distribution and removal
- building block jobs, such as command script jobs
- Eclipse management which includes **jobs** specific to managing the Eclipse platform
- And, Configuration management, which includes jobs for retrieving and setting software configuration properties

We will go more in depth on the various device manager jobs available, on subsequent slides.

Software distribution and feature control jobs

Key features include:

- Automatic Prerequisite Resolution
- Prerequisite Resolution Engine
- API/CLI command for adding an Eclipse update site:
`dmaddeclipse -su http://somesite.somewhere/eclipse/updatesite`

Software distribution and feature control jobs are used to install one or more software features or bundles into the client.

Automatic prerequisite resolution is used to resolve: Eclipse features, OSGi R4 bundles, services, packages and other resource requirements. Requested features or bundles and their prerequisites are distributed to the **device** only when they have not already been installed on the device.

Prerequisite resolution also works in conjunction with the Eclipse Update Manager and Resolver engine to provide similar function utilizing a central management server. The engine allows for the delivery of prerequisites across multiple Eclipse update sites. If a prerequisite is missing, feedback is provided in the job progress. **Use** of the prerequisite engine is optional for Feature Control jobs.

Device Manager provides a **convenience API/CLI** command for registering a complete Eclipse update site. Running the **dmadd eclipse site** command automatically registers all features and plug-ins available at that site.

Example site registration

The screenshot shows the Device Manager console with a tree view on the left and a table of software components. The tree view includes Jobs, Device Classes, Devices, Servers, Software (selected), and Queries. The table lists various software components with their names, versions, and types.

Software Name	Version	Software Type
com.ibm.tivoli.dms.cvt.TC_R4_Feature1HasPlugin1	1.0.0	EclipseFeature
com.ibm.tivoli.dms.cvt.TC_R4_FeatureHasFragment1	1.1.1	EclipseFeature
com.ibm.tivoli.dms.cvt.TC_R4_FeatureHasUIPlugin	2.2.2	EclipseFeature
com.ibm.tivoli.dms.CVT.TC_R4_Fragment1	1.1.1	OSGi bundle
com.ibm.tivoli.dms.CVT.TC_R4_FragmentHost	1.1.1	OSGi bundle
com.ibm.tivoli.dms.cvt.TC_R4_Plugin1	1.0.0	OSGi bundle
com.ibm.tivoli.dms.cvt.TC_R4_StandAlonePlugin	0.0.1	OSGi bundle
com.ibm.tivoli.dms.cvt.TC_R4_StandAlonePlugin-1	0.0.1	OSGi bundle
com.ibm.tivoli.dms.cvt.TC_R4_UI_Plugin	2.2.2	OSGi bundle
feature1	1.0.0	EclipseFeature
fragment1	1.0.0	OSGi bundle
HelloWorldPlugin1	1.0.0	OSGi bundle
ReallySimpleFeature	1.0.0	EclipseFeature
SimpleBundle	1.0.1	OSGi bundle
TC_R4_FeatureForADK	1.0.0	EclipseFeature
TC_R4_PluginForADK	1.0.0	OSGi bundle

9 of 16 selected

This slide shows an example of the Device Manager console after an Eclipse update site registration is completed. All features and plug-ins available at the site are automatically registered in the Device Manager database and are shown in the console software list.

Software distribution and feature control jobs: Additional functions

- “Out of Band” Software Distribution
- Checkpoint/Restart Support
- Auto-Start
- Prerequisite Testing
- Software Distribution Package Signing
 - ▶ Bundle Installation Only

Device Manager uses “out of band” software distribution, which means all file transfers occur directly between the client and the package server using HTTP or HTTPS. This frees up the management server to perform other work.

If the transfer of files is interrupted by a loss of network connection, checkpoint and restart support ensures the file transfer is continued from where it left off once the connection is reestablished.

Bundle auto-start can be specified with the distribution job.

Feature control jobs provide a “verify only” option to test whether prerequisites can be satisfied at a single Eclipse update site. Device manager also provides a command, `dmlssw`, which can be used to test prerequisites against a repository or particular client.

Device Manager provides a security feature called Software Distribution Package Signing. This feature ensures the content of the OSGi bundles has not been modified between initial registration time and the actual delivery to the device. At software registration time, the Device Manager server saves the URL of the software package and a MD5 checksum of the software package in the database. At distribution time, the Device Manager server sends the URL and MD5 checksum to the device agent. The agent verifies the checksum against the actual package. If there's a mismatch, the install is not attempted. This is not available for feature installations due to the use of the Eclipse Update Manager.

Native software distribution jobs

- NativeAppBundle Tool
- NativeAppBundle Operations
- NativeAppBundle Wrapper
- NativeAppBundle Removal

Native software distribution jobs are used to send “native” software content to the device.

The NativeAppBundle tool can be used to wrap a native application, such as file system content, in an OSGi bundle for subsequent distribution.

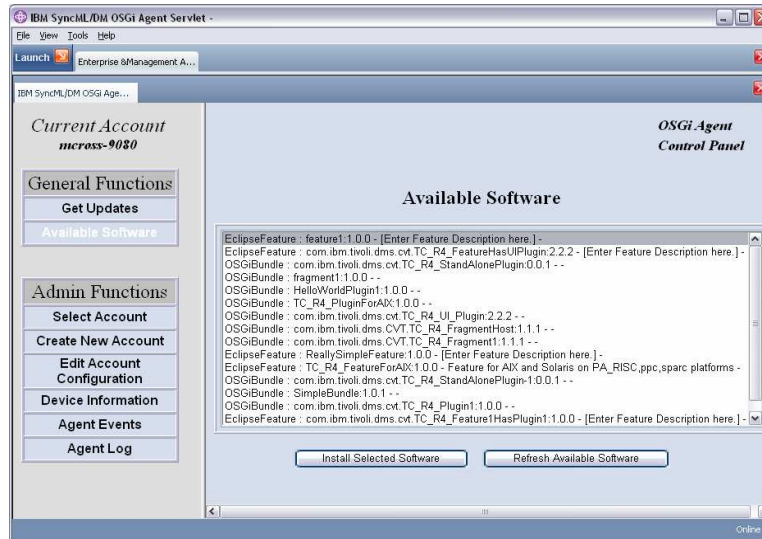
A native software distribution job can perform operations such as laying down files or directories on the local file system and launching installers or executables.

The NativeAppBundle wrapper makes the package appear as a normal OSGi bundle, but has special bundle activation and manifest definitions that are used at client run-time during installation in order to install native content. A small bundle without the native image remains resident on the OSGi system. This enables the deployed native applications to show up in the OSGi bundle inventory.

On native packages that have an appropriate uninstall command specified, the SoftwareRemoval and BundleControl jobs can be used to uninstall the native application.

The native application bundle tool is shipped on the Expeditor Client media.

Software distribution - User pull sample user interface



An API is provided to enable applications running on the device agent run-time to get information from the server about what software is available for distribution. The API also enables the application to select one of these bundles to be distributed to the client, along with any required pre-requisites.

This functionality is demonstrated here by the standard GUI component of the device agent. This same functionality could be utilized by a custom User Interface for integration within another application.

Bundle control and software removal jobs

- Multiple Sequenced Bundle Control Steps
- Supported Actions
 - ▶ Start
 - ▶ Stop
 - ▶ Uninstall

Bundle control jobs are used to control the state and operation of bundles.

Multiple sequenced bundle control steps are supported.

Supported actions include starting, stopping and uninstalling a bundle.

The uninstall actions are also mapped to the Software Removal job type, as it shares an implementation with Bundle Control jobs.

Inventory of eclipse features, preferences and properties

- Eclipse Features
- Eclipse Local Sites
- Eclipse Preferences
- Client Properties

Eclipse Inventory Collection jobs collect information about the set and state of installed features, preferences, and properties on the client.

Eclipse feature information collected, includes: feature id, name, version, install site, provider and state.

Information about local Eclipse update sites can be collected, including site key and local installation path.

A Preferences Retrieval job can be used to obtain Eclipse preferences data, such as preference name, scope, type and value. These preferences can be modified using a Preferences Editing job.

Client properties are obtained using a Properties Retrieval job. Property name, type and value can be viewed. These properties can be edited using a Properties Editing job.

Example Eclipse feature inventory

Inventory

Device name = ED4WL-SMBIOS:L3B8034-1A73A481482411CB9B12BFD949E8F187-Micah Cross-1152900448546
Device class = Win32

Device Name	Eclipse feature ID	Eclipse feature name	Eclipse feature version	Install site	Provider
ED4WL-SMBIO...	com.ibm.db2e.feature	DB2 Everyplace Client	8.2.1.5-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.eswe.prefer...	Configuration Admin Pr...	6.1.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.langware.v5.d...	English(United States)	5.3.1.9-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.langware.v5.f...	IBM LanguageWare En...	5.3.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.logging.ict.fea...	IBM Commons Logging	1.1.1.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.micro.bridge...	IBM WebSphere Enterp...	2.0.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.micro.feature...	IBM WebSphere Enterp...	2.0.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.mobileservice...	Cloudscape Client Sync	8.2.1.6-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.mobileservice...	DB2 Everyplace Client...	8.2.1.6-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.mqe.feature	MQ Everyplace	2.0.2.4-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.mqe.jms.featu...	MQ Everyplace JMS Su...	2.0.2.4-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.mqt.feature	MQ Telemetry Transport	2.0.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.osg.service.c...	Configuration Admin S...	6.1.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.osg.service.ht...	HTTP Service	6.1.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.osg.service.lo...	Log Service	6.1.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.osg.service.m...	Metatype	6.1.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.osg.service.u...	User Admin Service	6.1.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.osg.servlet.os...	Enterprise Managemen...	1.8.0.20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.osg.webapp.f...	Web Application Comp...	1.2.0.0-20060711	file:/C:/wed...	IBM
ED4WL-SMBIO...	com.ibm.portal.cal.featu...	CAI feature	1.0.0.0-20060711	file:/C:/wed...	IBM

View Details

Submit Job Close

This slide shows an example of an Eclipse Feature Inventory. All Eclipse features for the device are listed along with identifying information.

Example Eclipse preferences inventory

Device name = ED4WL-SMBIOS:L3B8034-1A73A481482411CB9B12BFD949E8F187-Micah Cross-1152900448546
Device class = Win32

Device Name	Path	Scope	Type	Value
ED4WL-SMBIO...	com.ibm.rcp.management/org.eclipse.core.internal.preferences.osgi/org...	default	chr	200
ED4WL-SMBIO...	org.eclipse.core.internal.preferences.osgi/org...	configur...	chr	
ED4WL-SMBIO...	org.eclipse.core.internal.preferences.osgi/org...	configur...	chr	
ED4WL-SMBIO...	org.eclipse.core.internal.preferences.osgi/org...	configur...	chr	
ED4WL-SMBIO...	org.eclipse.core.internal.preferences.osgi/org...	configur...	chr	
ED4WL-SMBIO...	org.eclipse.core.internal.preferences.osgi/org...	configur...	chr	
ED4WL-SMBIO...	com.ibm.rcp.accounts.com.ibm.rcp.accounts.A...	default	chr	com.ibm.rcp.accounts.wed...
ED4WL-SMBIO...	com.ibm.rcp.locationmanager/antipode	default	chr	Offline
ED4WL-SMBIO...	com.ibm.rcp.locationmanager/currentLocation	default	chr	Online
ED4WL-SMBIO...	com.ibm.rcp.net.http/CONNECTION_TIMEOUT	default	chr	60000
ED4WL-SMBIO...	com.ibm.rcp.net.http/FACTORY_TIMEOUT	default	chr	60000
ED4WL-SMBIO...	com.ibm.rcp.net.http/SOCKET_TIMEOUT	default	chr	60000
ED4WL-SMBIO...	com.ibm.rcp.personality.framework/DEFAULT_...	default	chr	com.ibm.rcp.platform.perso...
ED4WL-SMBIO...	com.ibm.rcp.platform.personality/FILTERED_P...	default	chr	*
ED4WL-SMBIO...	com.ibm.rcp.platform.personality/RESTORE_T...	default	chr	NONE
ED4WL-SMBIO...	com.ibm.rcp.platform/portalEnabled	default	chr	false
ED4WL-SMBIO...	com.ibm.rcp.platform/portalServerAddress	default	chr	
ED4WL-SMBIO...	com.ibm.rcp.security.auth.ui/ssoAllowed	default	chr	true
ED4WL-SMBIO...	com.ibm.rcp.security.auth/ui/ssoEnabled	default	chr	true
ED4WL-SMBIO...	com.ibm.rcp.security.auth/callbackHandler	default	chr	
ED4WL-SMBIO...	com.ibm.rcp.security.auth/defaultLoginContext...	default	chr	defaultLoginContextProvider
ED4WL-SMBIO...	com.ibm.rcp.security.auth/loginConfigFile	default	chr	C:\Documents and Settings...

This slide shows the Eclipse Preferences Inventory screen. These are obtained from an Eclipse Preferences Retrieval Job.

Example client properties inventory

Device name = ED4WL-SMBIOS.L3B8034-1A73A481482411CB9B12BFD949E8F187-Micah Cross-1152900448546
Device class = Win32

Device Name	Path	Type	Value
ED4WL-SMBIO...	./config.ini/eclipse.buildId	chr	build20060711-0600
ED4WL-SMBIO...	./config.ini/eclipse.exitOnError	chr	false
ED4WL-SMBIO...	./config.ini/osgi.bundles	chr	org.eclipse.equinox.common@...
ED4WL-SMBIO...	./config.ini/osgi.bundles.defaultStartLevel	chr	10
ED4WL-SMBIO...	./config.ini/osgi.parentClassLoader	chr	ext
ED4WL-SMBIO...	./config.ini/osgi.splashPath	chr	platform:/base/_rcp/eclipse/plu...
ED4WL-SMBIO...	./config.ini/osgi.startLevel	chr	15
ED4WL-SMBIO...	./rcpinstall.properties/Dcom.ibm.pvc.osgiagent.core.logf...	chr	c:\wed61rcp
ED4WL-SMBIO...	./rcpinstall.properties/Dcom.ibm.pvc.webcontainer.port	chr	8777
ED4WL-SMBIO...	./rcpinstall.properties/Declipse.registry.nulltoken	chr	true
ED4WL-SMBIO...	./rcpinstall.properties/Djava.protocol.handler.pkgs	chr	com.ibm.net.ssl.www.protocol
ED4WL-SMBIO...	./rcpinstall.properties/Djava.util.logging.config.class	chr	com.ibm.rcp.core.internal.logge...
ED4WL-SMBIO...	./rcpinstall.properties/Dosgi.framework.extensions	chr	com.ibm.rcp.core.logger.frame...
ED4WL-SMBIO...	./rcpinstall.properties/Dosgi.hook.configurators.exclude	chr	org.eclipse.core.runtime.interna...
ED4WL-SMBIO...	./rcpinstall.properties/Dosgi.parentClassLoader	chr	ext
ED4WL-SMBIO...	./rcpinstall.properties/Dosgi.splashPath	chr	platform:/base/_rcp/eclipse/plu...
ED4WL-SMBIO...	./rcpinstall.properties/level	chr	WARNING
ED4WL-SMBIO...	./rcpinstall.properties/SystemErr.level	chr	INFO
ED4WL-SMBIO...	./rcpinstall.properties/SystemOut.level	chr	INFO
ED4WL-SMBIO...	./rcpinstall.properties/bootclasspath.append	chr	C:\wed61rcp/eclipse/plugins/co...
ED4WL-SMBIO...	./rcpinstall.properties/com.ibm.rcp.core.internal.logger.b...	chr	WARNING

View Details

Submit Job Close

The client properties screen is shown here. These values are obtained from a Properties Retrieval Job.

Example Eclipse preferences editing

The screenshot shows a dialog box titled "Submit Job: Job Parameters" with a scrollable list of job steps. Two steps are visible:

Step 1

- Scope: instance
- User Defined Scope Value
- Example Text: /myUserDef
- Operation: Add or replace node
- Node: h.ibm.rcp.managedsettings/UpdateIntervalInMin
- Example Text: /org.eclipse.update.core
- Value: 720

Step 2

- Scope: instance
- User Defined Scope Value
- Example Text: /myUserDef
- Operation: Add or replace node
- Node: pm.ibm.rcp.managedsettings.provider.file-weight
- Example Text: /org.eclipse.update.core

Buttons: Back, Next, Cancel, Help

Eclipse preferences can be created or configured using a job. This slide shows an example of an Eclipse Preferences Editing job.

Inventory jobs - OSGi bundles and associated inventory

- Bundle Table
- Package Table
- Service Table
- Resource Table

Inventory jobs can be used to collect information about the set and state of installed OSGi bundles and services in the OSGi run-time.

The bundle table shows information about the bundle including the bundle name, version, description, vendor and bundle state.

The package table provides the name and version of the packages.

Service names are contained in the service table.

Finally, resource names and values can be viewed from the resource table.

Inventory jobs: Example OSGi bundle inventory

Inventory

Device name = ED4WL-SMBIOS:L3B8034-1A73A481482411CB9B12BFD949E8F187-Micah Cross-1152900448546
Device class = Win32

Computer System Memory Table	Dev...	State	Description	Name	Symbolic name	Vendor	Version
Eclipse Feature Advanced	ED4WL...	RESOLVED		Eclipse ...	org.eclipse.core.contenttype.niBidi;sing...	Eclipse...	3.2.0.v20...
Eclipse Local Sites	ED4WL...	RESOLVED		Eclipse ...	org.eclipse.ui.forms	Eclipse...	3.2.0.v20...
Eclipse Preferences	ED4WL...	ACTIVE		Eclipse ...	org.eclipse.core.jobs; singleton=true	Eclipse...	3.2.0.v20...
Properties	ED4WL...	RESOLVED		Eclipse ...	org.eclipse.core.jobs.niBidi; singleton=t...	Eclipse...	3.2.0.v20...
File Header Table	ED4WL...	RESOLVED		Eclipse ...	org.eclipse.emf	Eclipse...	2.2.0.v20...
Hard Disk/Storage View	ED4WL...	ACTIVE		Eclipse ...	com.ibm.rcp.prefs.eclipse.dmi; singleton...	IBM	6.1.0.0-2...
Installed Files View	ED4WL...	ACTIVE		Eclipse ...	org.eclipse.equinox.preferences; single...	Eclipse...	3.2.0.v20...
Installed Partition Table	ED4WL...	RESOLVED		Eclipse ...	org.eclipse.equinox.preferences.niBidi; ...	Eclipse...	3.2.0.v20...
IPX Address Table	ED4WL...	ACTIVE		Eclipse ...	org.eclipse.ui; singleton=true	Eclipse...	3.2.0.v20...
IP Address Table	ED4WL...	RESOLVED		Ecore t...	org.eclipse.emf.mapping.ecore2ecore; ...	Eclipse...	2.2.0.v20...
.JVM System Properties	ED4WL...	RESOLVED		Ecore t...	org.eclipse.emf.mapping.ecore2xml; si...	Eclipse...	2.2.0.v20...
Memory Modules Table	ED4WL...	RESOLVED		Embed...	com.ibm.pvc.tbncontainer; singleton=true	IBM	6.1.0.0-2...
Modem View	ED4WL...	RESOLVED		Embed...	com.ibm.pvc.tbncontainer.j2se; singleto...	IBM	6.1.0.0-2...
Mouse View	ED4WL...	ACTIVE		Enterpri...	com.ibm.pvc.ejb	IBM	2.0.0.200...
Network Adapter Table	ED4WL...	ACTIVE		Enterpri...	com.ibm.osg.service.osgiagent; singlet...	IBM	1.8.0.0-2...
Device Agent Configuration	ED4WL...	RESOLVED		Enterpri...	com.ibm.pvc.osgiagent.extension; singl...	IBM	6.1.0.0-2...
OSGi Bundle Table	ED4WL...	ACTIVE		Enterpri...	com.ibm.tivoli.agentext.win32.x86; singl...	IBM	1.8.0.200...
OSGi Packages Table	ED4WL...	ACTIVE		Enterpri...	com.ibm.pvc.osgiagent.ui; singleton=tr...	IBM	6.1.0.0-2...
OSGi Resources Table	ED4WL...	ACTIVE		Enterpri...	com.ibm.osg.servlet.osgiagentservlet; ...	IBM	1.8.0.200...
OSGi Services Table	ED4WL...	ACTIVE		Event A...	org.eclipse.equinox.event	Eclipse...	1.0.0.v20...

View Details

Submit Job Close

This slide shows an example of the OSGi Bundle Inventory view. Identifying information is displayed for each bundle.

Inventory jobs - Win32 and Linux-specific function

- Win32 and Linux Inventory Information
- Additional Win32-specific Inventory Information

Inventory jobs have some Windows 32 and Linux specific functions. They can be used to collect information about the set of native software, hardware and other information on the machine. This can include registered software, file scans, SMBIOS information, OS version, and hardware information.

Also, on Windows 32 devices, information such as Windows services, user information, patch information, and registry entries is available.

Inventory jobs - Sample Win32 registered software

Device name = ED4WL-SMBIOS:KPTPLDA-UNKNOWN_UUID-SYSTEM-1120153141724
Device class = Win32

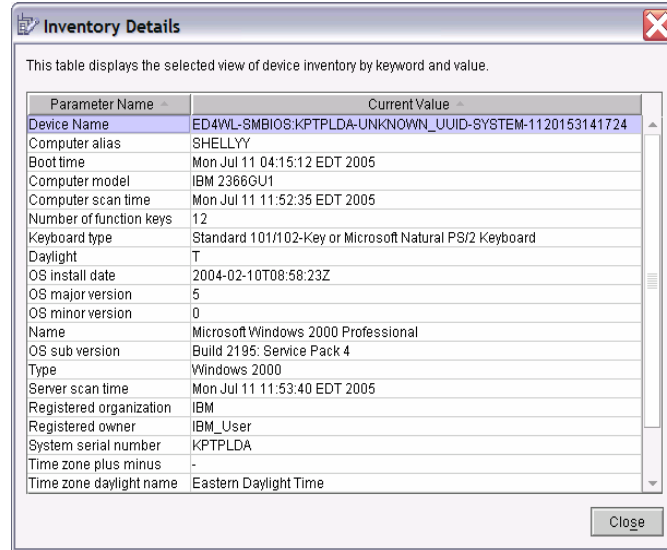
Application Packages View	File path	Package name	Version	Publisher
Computer Table	ED...	Tivoli Storage Manager Client	05.01.0515	Tivoli
Computer System Memory Table	ED...	VNC 4.0 Beta 4	4.0b4	RealVNC Ltd.
File Header Table	ED...	Viewpoint Manager (Remove Only)		
Hard Disk/Storage View	ED...	Viewpoint Media Player		
Installed Files View	ED...	Viewpoint Toolbar (Remove Only)		
Installed Partition Table	ED...	Visual SlickEdit 8.0		
IPX Address Table	ED...	WebFldrs	9.50.7522	Microsoft Corporation
IP Address Table	ED...	WildTangent Web Driver		
Memory Modules Table	ED... C:\Program Fil...	WinPcap 3.0		Politecnico di Torino
Modem View	ED... C:\Program Fil...	WinSCP 3.7.1	3.7.1	Martin Prikryl
Mouse View	ED... C:\WINZIP\	WinZip	8.1 SR-1 (5266)	WinZip Computing, Inc.
Network Adapter Table	ED...	Windows 2000 Hotfix - KB329115	20031024.155236	Microsoft Corporation
OSGi Bundle Table	ED...	Windows 2000 Hotfix - KB820888	20030804.152521	Microsoft Corporation
OSGi Packages Table	ED...	Windows 2000 Hotfix - KB822831	20030811.114034	Microsoft Corporation
OSGi Resources Table	ED...	Windows 2000 Hotfix - KB823182	20030818.121409	Microsoft Corporation
OSGi Services Table				

View Details

Submit Job Close

This view shows an example of a Windows 32 client inventory job. The registered software on the device, along with path, version and publisher information is shown in table form.

Inventory jobs - Sample computer OS/system inventory



This table displays the selected view of device inventory by keyword and value.

Parameter Name	Current Value
Device Name	ED4WL-SMBIOS:KPTPLDA-UNKNOWN_UUID-SYSTEM-1120153141724
Computer alias	SHELLYY
Boot time	Mon Jul 11 04:15:12 EDT 2005
Computer model	IBM 2366GU1
Computer scan time	Mon Jul 11 11:52:35 EDT 2005
Number of function keys	12
Keyboard type	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
Daylight	T
OS install date	2004-02-10T08:58:23Z
OS major version	5
OS minor version	0
Name	Microsoft Windows 2000 Professional
OS sub version	Build 2195: Service Pack 4
Type	Windows 2000
Server scan time	Mon Jul 11 11:53:40 EDT 2005
Registered organization	IBM
Registered owner	IBM_User
System serial number	KPTPLDA
Time zone plus minus	-
Time zone daylight name	Eastern Daylight Time

Close

This slide shows the OS System Inventory detailed view of an Inventory job. Information about the operating system and machine is displayed.

Inventory jobs - Sample Win32 services inventory

The screenshot shows the 'Inventory' application window. At the top, it displays the device name and class: 'Device name = ED4WL-SMBIOS:KPN7735-01D21241E1C87D11B48F0DE922B32B36-micah_cross-1121254551422' and 'Device class = Win32'. Below this, there are several viewable tables. The 'Service Information Table' is selected, displaying a list of services with columns for Description, Display Name, and Path. The visible services include Error Reporting Service, Ethernet Packet Service, Event Log, Fast User Switching Compatibility, HTTP SSL, Help and Support, Human Interface Device Access, Hummingbird Inetd, IBM Everyplace Client for Win32, IBM HTTP Administration 1.3.28, IBM HTTP Administration 6.0, IBM HTTP Server 1.3.28, IBM HTTP Server 6.0, IBM Rational Agent Controller, and IBM WebSphere Application Server V5.

Description	Display Name	Path	Na
... Allows error reporting for services and...	Error Reporting Service	C:\W... ER...	
...	Ethernet Packet Service	C:\W... npa...	
... Enables event log messages issued ...	Event Log	C:\W... Eve...	
... Provides management for application...	Fast User Switching Compatibility	C:\W... Fas...	
... This service implements the secure h...	HTTP SSL	C:\W... HT...	
... Enables Help and Support Center to r...	Help and Support	C:\W... hel...	
... Enables generic input access to Hum...	Human Interface Device Access	C:\W... Hid...	
...	Hummingbird Inetd	C:\W... HC...	
... IBM Everyplace Client for Win32	IBM Everyplace Client	C:\XP... Eve...	
... IBM_HTTP_SERVER/1.3.28.1 Apach...	IBM HTTP Administration 1.3.28	^C:\W... IBM...	
... IBM_HTTP_Server/6.0 Apache/2.0.47 ...	IBM HTTP Administration 6.0	^C:\W... IBM...	
... IBM_HTTP_SERVER/1.3.28.1 Apach...	IBM HTTP Server 1.3.28	^C:\W... IBM...	
... IBM_HTTP_Server/6.0 Apache/2.0.47 ...	IBM HTTP Server 6.0	^C:\W... IBM...	
...	IBM Rational Agent Controller	C:\XP... IBM...	
... Controls the running of an IBM WebS...	IBM WebSphere Application Server V5 ...	^C:\W... IBM...	

Windows 32 services can be viewed from the Service Information Table on the Inventory screen.

Inventory results

- Asset and state tracking
- Job / device target filtering

Inventory results can be used for several potential applications, including asset or state tracking and job or device target filtering.

Automated customized scans can be scheduled to ease the burden of asset and state tracking. Inventory results can be used to create reports or automatic job submissions, depending on the scenario.

Any field data available through inventory can be used for mass device and job targeting.

An example would be patching a particular feature version on clients with an older version. Enrollment characteristics can be used to target unknown devices that match certain criteria.

Node discovery job

- Traverses Management Tree
- Search Depth
- Stored in Inventory Results

A node discovery job recursively finds sub-nodes on the target devices based upon a target URI.

All the discovered sub-nodes are collected from the device and sent to the Device Manager server. The results can be stored in the Device Manager database. The search depth can be specified.

Jobs can be submitted that utilize the data collected by the node discovery job.

Device configuration job

- Device Specific Parameters
- Parameter Modification

For every device, there are configuration parameters that are specific to that device. The configuration parameters identify the device with a device ID, manufacturer, model, and other parameters. The values for the configuration parameters are set for a device, a group of devices in the same device class, or all devices in the device class.

An administrator can modify the values of the configuration parameters using a Device Configuration job.

Device agent configuration

Submit Job: Job Parameters

DM Account
Device Agent Configuration

Group 1

Action: Modify Remove

Default account ID

Temporary file location

Example Text: C:\MyTempDir

Poll on interval: False

Polling interval

Example Text: hh:mm - 2:20

Polling start time

Example Text: hh:mm - 16:30

Polling end time

Example Text: hh:mm - 7:45

Poll on startup: False

Back Next Cancel Help

This slide shows an example of the device agent configuration screen. Device agent parameters can be modified using this view.

Run command job

- Run Device Commands
- Examples
 - ▶ Launch Installation
 - ▶ Capture Command Line Output

A run command job provides the ability to run a command on the device. The device agent sends status messages to standard output and standard error so appropriate administrative actions can occur. Jobs can be set to fail on non-zero return codes.

Examples of run command jobs include launching an installation and capturing command line output.

Job progress

- Types of job progress information
 - ▶ Informational, warning, or error messages
- Methods for obtaining job progress
- Job progress summary
- Call-back feature

Information can be displayed about the progress of a job as it runs, or attempts to run, on its target devices.

This information includes any informational, warning, or error messages logged about the job processing on a target device.

This information can be obtained using the Device Manager console, the administration commands, and the Administration API.

A job progress summary for any job can also be displayed. The summary is most useful in understanding the progress of jobs submitted to multiple devices; that is, jobs submitted to a device class or to more than one device.

A call-back feature from the Device Manager server to the device agent is provided, so job events, such as when Device Manager starts processing a job, job completion status, and job expiration, can be monitored. The job events can be posted to a Java Message Service topic or with an HTTP GET command.

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