IBM WebSphere Application Server

WebSphere customization toolbox group

WebSphere software

© 2011 IBM Corporation
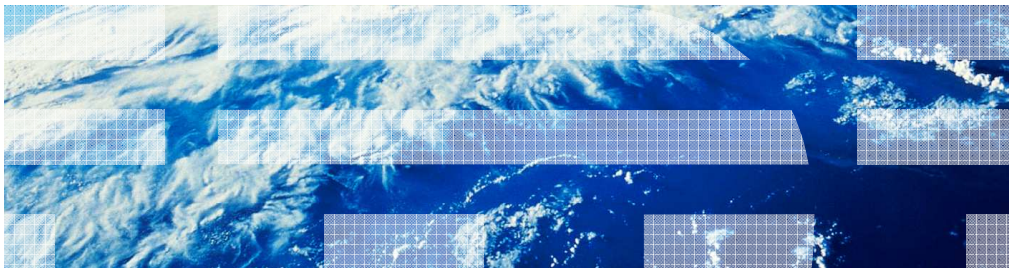
This presentation describes the WebSphere customization toolbox.

Table of contents

- WebSphere customization toolbox (WCT) framework GUI
- Profile management tool (PMT) GUI
- Plug-in configuration tool (PCT) GUI
- Postinstaller

WebSphere customization toolbox group

The material is split into three presentations. First the WCT framework is covered. Two of the tools – PMT and PCT – are covered in other presentations.

WebSphere customization tool framework GUI

- WebSphere customization toolbox (WCT) overview
- Supported platforms
- Tools contained in WCT framework
- Installing WCT – Options
- Launching WCT
- Command line variation
- WCT facts, restrictions, etc.
- WCT diagnostics
- Reference – WCT information center links

WebSphere customization toolbox group

This presentation starts with an overview of the WCT framework. Then the platforms supported are covered. Some salient facts about WCT working will follow. Then the WCT diagnostic files are covered. Finally important references on WCT from Information Center are listed.

WCT framework overview

- WebSphere customization toolbox is commonly abbreviated to WCT

- Container framework for tools for customizing various parts of WebSphere Application Server environment

- WCT existed in V7 but with a vastly smaller function – only for configuring z/OS application servers. In V8 a new plug-in configuration tool (hereafter PCT) has been introduced and other tools that existed earlier have been incorporated into the WCT group of tools

- WCT comes in two offerings
  - Included as apart of a WebSphere Application Server install (hereafter embedded WCT)
  - As a stand-alone offering (hereafter stand-alone WCT)
  - Each offering wraps various combinations of each tool on different platforms

- Standalone WCT is accompanied by a command line version

WebSphere customization toolbox group   © 2011 IBM Corporation

WebSphere Customization tools is more frequently referred by its abbreviation WCT.

WCT is basically a container framework that holds various tools that are used for configuring a WebSphere Application Server environment. WCT existed in V7 but with a vastly smaller function, namely for configuring z/OS application servers. All of the tools contained in WCT of V7 are carried forward plus a new tool – the plug-ins configuration tool (PCT hereafter) is offered.

WCT comes as an independent stand-alone offering; in addition to being embedded into WebSphere Application Server. Tools that get wrapped into WCT framework are different in the stand-alone and embedded offerings.

WCT supported platforms

- Embedded WebSphere customization toolbox (WCT)
  – Comes with WebSphere Application Server, available on all architectures wherever WebSphere Application Server is supported
  – New for V8: GUI support on AIX 64 bit in addition to existing V7 platforms
  – Platforms: Windows (32 and 64), Linux on x86 (32 and 64), Linux on Power PC (32 and 64), Linux on s390 (32 and 64), Solaris Sparc, AIX (32 and 64)
- Standalone WCT
  – Comes as its own product offering
  – Regardless of 32 or 64 bit base operating system stand-alone WCT operates as a 32 bit component on a 32 bit JDK
  – Platforms: HPUX, Windows , Linux on x86 , Linux on Power, Linux on s390 , Solaris (Sparc and x86), AIX
- A URL to further details of platforms supported is provided in the references slide

WebSphere customization toolbox group

Embedded WCT comes as a part of WebSphere Application Server. Therefore, it gets installed on all architectures wherever WebSphere Application Server is supported. V8 for the first time adds GUI support on AIX 64 bit. The platforms covered are shown here.

Standalone WCT is available on several platforms. Note even on 64 bit systems, stand-alone WCT operates as a 32 bit component with a 32 bit JDK.

Framework overview – Tools contained in WCT framework

- Standalone WebSphere customization toolbox (WCT)
  – z/OS profile management tool (zPMT)
  – z/OS migration management tool (zMMT)
  – Web server plug-ins configuration tool (PCT)
  – Remote Installation Tool for IBM I
- Embedded WebSphere customization toolbox (WCT)
  – Profile management tool (PMT)
  – Configuration migration tool (CMT)

6   WebSphere customization toolbox group   © 2011 IBM Corporation

The tools contained in the WCT framework differ for the two offerings of WCT.

In the stand-alone WCT are four tools: z/OS profile management tool, z/OS migration management tool, web server plug-ins configuration tool, and remote installation tool for IBM i.

For embedded WCT, two tools are provided: the profile management tool and the configuration migration tool.

Tools contained in WCT by operating systems

- Embedded WebSphere customization toolbox (WCT)
  – always same – Profile management tool (PMT) and configuration migration tool (CMT)

- Standalone WebSphere customization toolbox (WCT)
  – z/OS profile management tool: Intel based Windows and Linux
  – z/OS migration management tool: Intel based Windows and Linux
  – remote installation tool for IBM i: Windows
  – Web server plug-ins configuration tool: Everywhere

- Note: In this presentation, the focus is on the distributed system tools and those that are associated with configuration of new servers. Tools grouped into this presentation are plug-in configuration tool (PCT) and profile management tool (PMT).

With embedded WCT there are always two tools – The profile management tool and the configuration migration tool.

With stand-alone WCT the z/OS profile management tool and z/OS migration management tool on Intel based Windows and Linux systems are included, and the web server plug-ins configuration tool is included everywhere.

Note that in this presentation, the focus is on the distributed system tools and those that are associated with configuration of new servers. From the above list the tools being covered in two separate presentations will be PCT and PMT. The other tools will be part of presentations of other areas of WebSphere Application Server.

## Installing WCT – Options, how to install WCT?

- First Installation Manager (IM) needs to be installed.
  IM then is used to install WebSphere customization toolbox (WCT)

- Selective tool installs. Each underlying tool that WCT wraps is a choice that can
  be selected individually during install.

WebSphere customization toolbox group

First of all Installation Manager (IM) needs to be installed. IM then can be used to install WCT by pointing to a WCT repository.

Installation of WCT offers selective tool installations. Each underlying tool that WCT wraps is a choice that can be selected individually during installation as shown in the image on the next slide.
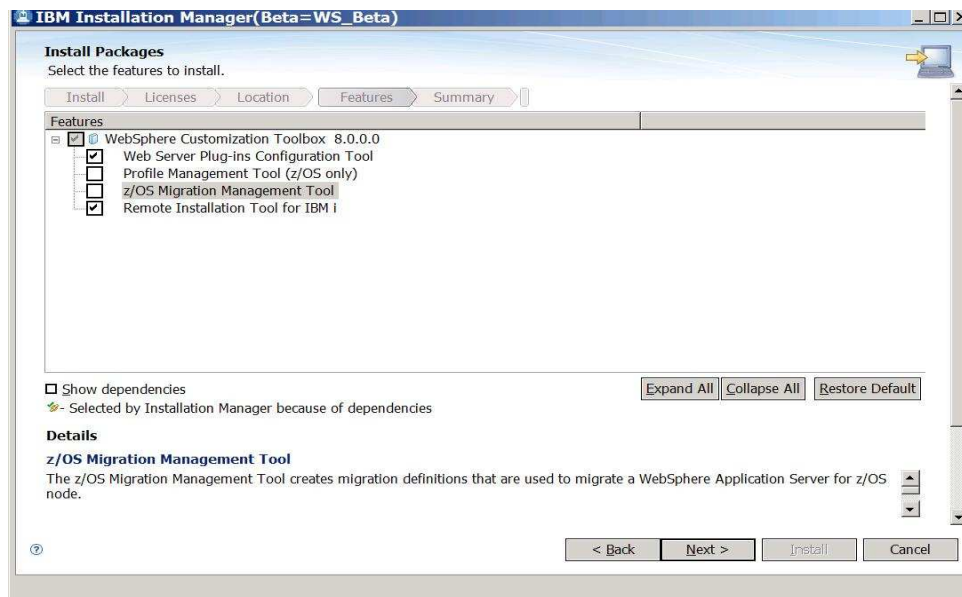
Selective tool installation

This slide shows the choice made to select two out of four possible tools for WCT during installation. In the image, you see that only PCT and the remote installation tool for IBM I out of four possible tools are selected.

Launching WCT

- During installation on Windows and Linux systems, a start menu shortcut is created, which can be used to launch WCT
- On all supported platforms a shell script can be used to launch WCT – wct.sh|wct.bat
  - Standalone: `<WCT-INSTALL-HOME>\WCT\wct.bat(sh)`
  - Embedded: `<WAS_INSTALL-HOME>\bin\ProfileManagement\WCT\wct.bat(sh)`
- A `pmt.bat(sh)` shell script is provided for compatibility with earlier releases, but it is deprecated in V8

10   WebSphere customization toolbox group   © 2011 IBM Corporation

On Windows and Linux systems, WCT can be launched from the Start Menu. The startup launch command is WebSphere Customization Toolbox.

On all platforms a shell script, either wct.sh or wct.bat, is also provided to start WCT. For compatibility with previous WebSphere Application Server versions a pmt.sh script is also provided.

The locations of the shell scripts are shown here.

Command line variation

- WebSphere customization toolbox (WCT) stand-alone only also comes in a command line version.

- Command line arguments are documented in the Information Center at
  http://fred.raleigh.ibm.com:8180/help/index.jsp?topic=/com.ibm.websphere.installation.nd.doc/info/ae/ae/tins_wctcl_using.html

- An Example:
  ```
  wctcmd.bat -tool pct -createDefinitionLocation  -defLocName WCTCmdTest2 -
  defLocPathname I:\WAS8\Plugins -response C:\Temp\response.wct.txt
  ```

- The user of the command line option is currently plug-in configuration tool (PCT). More details on command line is covered in the PCT command line presentation

11   WebSphere customization toolbox group   © 2011 IBM Corporation

The Command line is for when scripting is preferred over GUI. The command line is documented in the Information Center at the link shown here.

An example of command line invocation with PCT tool is also shown.

Miscellaneous but important facts – Workspace, metadata, restrictions

- WebSphere customization toolbox is an eclipse application
- WCT maintains a repository to store its metadata
- Repository location is tied to the user who has launched WCT and located at
  - Windows: `C:\Documents and Settings\Administrator\AppData\Local\IBM\WebSphere`
  - UNIX: `/root/.ibm/WebSphere/AppServer/`
- Multiple launches of WCT allowed as long as no workspace collision
- AIX 64 Bit (embedded) requires GTK as a prerequisite.
  GTK stands for GNU GUI Tool Kit from the GNU project. GTK can be installed directly by the user or by installing Firefox the GTK is automatically installed, because GTK is a prerequisite for GTK

WCT is an Eclipse application with Eclipse plug-ins added to extend and customize Eclipse. Therefore, it uses Eclipse artifacts – such as Eclipse's workspace, directory structure, and so on.

WCT Maintains a repository to store its metadata. The repository location is tied to the user ID used to launch WCT and located as shown on this slide. Multiple launches of WCT are allowed as long as workspaces do not collide, which means they must be different user IDs. Therefore, two different users can launch WCT from the same installation location without conflict.

The AIX 64 Bit embedded version requires GTK (GNU Toolkit) as a prerequisite. GTK comes built in with Firefox, although it is possible to preinstall GTK on its own.

WCT diagnostics (1 of 2)

- WCT generates diagnostic data that is stored within the eclipse workspace area.
- The following set of files can be checked for diagnostics.
- Eclipse log file: `<workspaceHome>/.metadata/.log`
- WCT Stdout file: `<workspaceHome>/.metadata/.plug-ins/com.ibm.ws.pmt.tools/wct.out`
- WCT Stderr file: `<workspaceHome>/.metadata/.plugins/com.ibm.ws.pmt.tools/wct.err`
- WCT Trace file: `<workspaceHome>/.metadata/.plugins/com.ibm.ws.pmt.tools/wct.log`

WebSphere customization toolbox group   © 2011 IBM Corporation

WCT generates diagnostic data that is stored within four files that are located in the eclipse workspace area. These files are the Eclipse log file, where messages from Eclipse are written; the standard out file, where messages that are directed at System.out are written; the standard error file, where messages that are directed at System.err are written; and the WCT Trace file, where messages that are logged by wct logging system are written.
The first log file you want to check is the wct.log.

WCT diagnostics (2 of 2)

- Additional tracing can be triggered into the wct.log file by performing these steps:
  - For stand-alone:
    - Create a file named `<wctInstallRoot>/WCT/properties/wct.properties`
  - For embedded:
    - Create a file named `<WAS_HOME>/properties/wct.properties`
  - Place this statement in the file:
    `LOG_LEVEL=7`

- Restart the WCT

- Note that a very large wct.log file is generated. Therefore, do not run the WCT a long time with tracing set at this level. Normally there is no need to perform this step unless instructed by IBM support.

WebSphere customization toolbox group

Additional tracing can be obtained from the WebSphere customization toolbox in the wct.log file by creating a file named wct.properties in one of the locations specified here. Place the statement LOG_LEVEL=7 in the file and restart the WCT for the additional tracing to be effective.

Note that a very large wct.log file is generated so do not run the WCT a long time with tracing set at this level. Normally there is no need to do this unless instructed by IBM support.

Reference – WCT information center links

- WCT installation:
  http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=/com.ibm.websphere.installation.nd.doc/info/ae/ae/tins_wct.html

- WCT command line:
  http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=/com.ibm.websphere.installation.nd.doc/info/ae/ae/tins_wctcl_using.html

- Selective installation and uninstallation of tools in WCT:
  http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=/com.ibm.websphere.installation.nd.doc/info/ae/ae/tins_modify_wct.html

- AIX 64 Bit GTK Prerequisite:
  http://fred.raleigh.ibm.com:8180/help/index.jsp?topic=/com.ibm.websphere.installation.express.doc/info/exp/ae/tins_aixsetup.html

- Platforms supported
  http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=/com.ibm.websphere.installation.nd.iseries.doc/info/iseriesnd/ae/rtop_reqs.html

15　　　　　WebSphere customization toolbox group　　　　　© 2011 IBM Corporation

This slide lists links from Information Center that contains information in this presentation and beyond it.

Summary

- WebSphere customization tools group
  - Profile management tool
  - Plug-ins configuration tool and postinstaller
  - Command-line tools

WebSphere customization toolbox group

In summary, the WCT group of tools for WebSphere Application Server 8.0.0 was presented. The WebSphere Customization Tools (WCT) framework GUI, the plug-ins configuration tool, and the profile management tool are described in other presentations. A sequence of user scenarios for the various tools was also covered.

Feedback

Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?

- Did it help you solve a problem or answer a question?

- Do you have suggestions for improvements?

Click to send email feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_WASv8_WCT.ppt

This module is also available in PDF format at: ../WASv8_WCT.pdf

17   WebSphere customization toolbox group   © 2011 IBM Corporation

You can help improve the quality of IBM Education Assistant content by providing feedback.

Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, AIX, WebSphere, and z/OS are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "Copyright and trademark information" at http://www.ibm.com/legal/copytrade.shtml

Intel, are trademarks or registered trademarks of Intel Corporation in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Windows, and the Windows logo are registered trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, or service names may be trademarks or service marks of others.

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2011. All rights reserved.