

HP Configuration Management

Solutions for Servers

for the Windows® operating system

Software Version: 5.00

Windows Terminal Server and Citrix Support Guide

Manufacturing Part Number: T3424-90157

Document Release Date: October 2007

Software Release Date: April 2007



i n v e n t

Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notices

© Copyright 2005-2007 Hewlett-Packard Development Company, L.P.

Trademark Notices

Linux is a registered trademark of Linus Torvalds.

Microsoft®, Windows®, and Windows® XP are U.S. registered trademarks of Microsoft Corporation.

OpenLDAP is a registered trademark of the OpenLDAP Foundation.

Acknowledgements

PREBOOT EXECUTION ENVIRONMENT (PXE) SERVER

Copyright © 1996-1999 Intel Corporation.

TFTP SERVER

Copyright © 1983, 1993

The Regents of the University of California.

OpenLDAP

Copyright 1999-2001 The OpenLDAP Foundation, Redwood City, California, USA.

Portions Copyright © 1992-1996 Regents of the University of Michigan.

OpenSSL License

Copyright © 1998-2001 The OpenSSLProject.

Original SSLeay License
Copyright © 1995-1998 Eric Young (eay@cryptsoft.com)

DHTML Calendar
Copyright Mihai Bazon, 2002, 2003

Documentation Updates

This guide's title page contains the following identifying information:

- Software Version number, which indicates the software version
- Document release date, which changes each time the document is updated
- Software release date, which indicates the release date of this version of the software

To check for recent updates or to verify that you are using the most recent edition, visit the following URL:

ovweb.external.hp.com/lpe/doc_serv/

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

You can visit the HP Software support web site at:

www.hp.com/go/hpsoftwaresupport

This Web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract.

To find more information about access levels, go to:

http://h20230.www2.hp.com/new_access_levels.jsp

To register for an HP Passport ID, go to:

<http://h20229.www2.hp.com/passport-registration.html>

Contents

1	Introduction	9
	About this Guide.....	9
	Who this Guide is for	9
	What this Guide is about.....	9
2	Support for Windows Terminal Server and Citrix.....	11
	Database Additions	11
	Installing the CM Server Management Agent	11
	Publishing the Applications and Scripts.....	13
	Preparing the Service.....	15
	Deploying the Service.....	21
	Running Exit Methods.....	21
A	Product Name Changes	23
	Index	25

1 Introduction

About this Guide

Who this Guide is for

This book is for systems administrators who want to use Configuration Management (CM) to deploy applications to Windows Terminal Servers.



To use this feature, you must own a Server LTU for CM.

What this Guide is about

This guide describes:

- Classes in the HP Configuration Management Configuration Server Database (CM Configuration Server Database) for using this component.
- Installation of files needed to run the Terminal Server component of the HP Configuration Management Server Management Agent (CM Server Management Agent).
- Publishing details for Terminal Server Applications.
- Deployment procedures

Windows Terminal Services is a thin-client server. With Terminal Services, the processing of one or more applications is moved completely off of a user's desktop and onto a centralized server. Only screen, mouse, and keyboard information is passed between the agent and the server.

The Terminal Services component of the CM Server Management Agent provides the ability to install and manage applications in a Windows Terminal Server environment for applications to be run by Windows Terminal Server agents, and for applications to be run locally on the Windows Terminal server.

As part of the application deployment process, the CM agent automatically manages the Install and Execute modes in which a Windows Terminal Server

can install and maintain applications. Before installing or updating an application, the CM Server Management Agent will query the Windows Terminal Server for active sessions, prompt users to logoff, and, if needed, disconnect user sessions. Upon completion of the installation, the Windows Terminal Server is brought back online to accept incoming user sessions.

2 Support for Windows Terminal Server and Citrix

Database Additions


Two classes have been added to the CM Configuration Server Database to manage Windows Terminal Server applications. The two classes are:

- **WTS App Comp Scripts (WTSACS)**
Use an instance in this class to configure application compatibility scripts. For more information on this class, see [Table 1](#) on page 16.
- **WTS Control (WTSCTRL)**
Use instances in this class to describe some behaviors you may need for the application. For more information on this class, see [Table 2](#) on page 17.

Installing the CM Server Management Agent

In addition to the two new classes in the CM Configuration Server Database, you must install the CM Server Management Agent on your target device.

The directions shown below are for installation through the HP Configuration Management Portal (CM Portal) 5.00. These screens and instructions may change in future versions. Refer to the *HP Configuration Management Portal Installation and Configuration Guide* for additional information.

 To use this feature, you must own a Server LTU for HP Configuration Management.

To install the CM Server Management Agent from the CM Portal

- 1 Select the option to install the “Remotely Installable Agent Modules” when you install the CM Portal.

- 2 Use the CM Portal Install CM agent task to begin the installation process.
- 3 In the Product section of the CM Portal CM agent Ops screen, select Server Management.

Product

Application Manager:	<input checked="" type="checkbox"/>
Application Self-Service Manager:	<input type="checkbox"/>
Inventory Manager:	<input type="checkbox"/>
OS Manager:	<input type="checkbox"/>
Patch Manager:	<input type="checkbox"/>
Server Management:	<input checked="" type="checkbox"/>

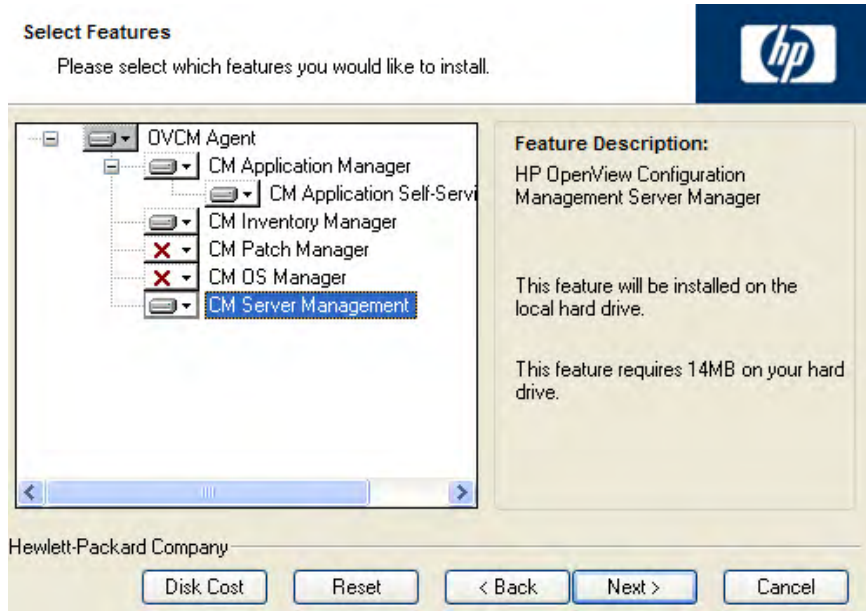
- 4 Complete the remaining information in the CM agent-Opts screen.
- 5 Schedule the installation and submit the job.



If the CM Portal Agent is not already installed on the agent computer, it will be installed as part of the CM Server Management Agent installation.

To install from the installation media for Windows Agents

Navigate to the appropriate subdirectory for your operating system on the Configuration Management (CM) 5.00 installation media. Double-click `setup.exe`. When prompted, select the **Server Management** feature.



To use the `install.ini` file for CM Server Management Agents for Windows

- In the [PROPERTIES] section of the `install.ini` file, add the following line: `ADDLOCAL=NVDINSTALLSVR`

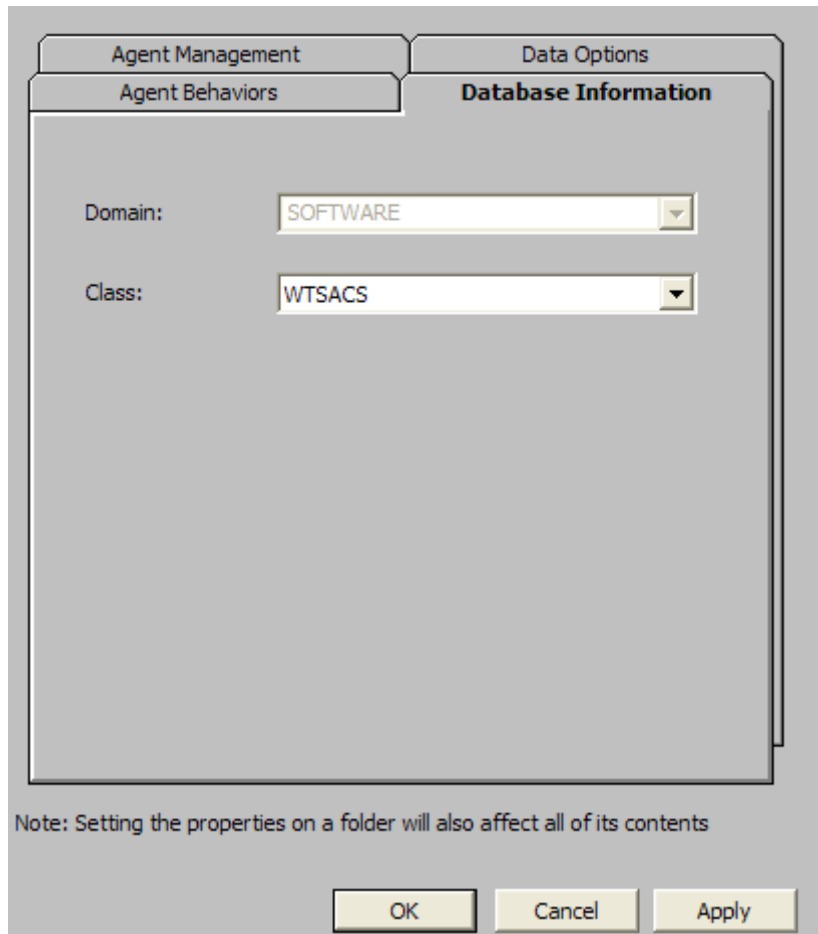
After installing the CM Server Management Agent, you will need to assign the appropriate services to the managed devices.

Publishing the Applications and Scripts

Windows Terminal Server and Citrix applications are usually composed of two elements: the application and the application compatibility scripts. To use the CM Server Management Agent to manage Windows Terminal Server and Citrix applications, you must publish both elements. First, use the CM Administrator Packager (CM Admin Packager) to publish the application as you would any other application. Refer to the *CM Application Manager and Application Self-service Manager Guide* for more information on publishing applications. Then, follow the procedure below to publish and prepare the application compatibility scripts. Publish each script separately.

To publish application compatibility scripts

- 1 Use Component Selection Mode in the CM Admin Packager to publish the application compatibility scripts (ACS) into the WTSACS Class. To do this, when you reach the Files tab, expand to the location of the ACS file. Right-click the ACS file and select **Properties**.
- 2 Click the **Database Information** tab.
- 3 From the Class drop-down list, select **WTSACS**.



- 4 Finish the packaging session, and exit CM Admin Packager.
- 5 Complete the procedure for each ACS. An instance will be created in the WTSACS Class. After the instance has been created, use the CM Administrator Configuration Server Database Editor (CM Admin CSDB Editor) to configure its attributes as shown in the next section.

Preparing the Service

After you have packaged the application and its scripts, you must now prepare the service for deployment. During this process, you will need to create a Service Group to deploy the Server Application. See the instructions in the *HP Configuration Management Administrator User Guide* before beginning this procedure. To completely prepare the service, you will need to:

- Configure the WTS App Comp Scripts (WTSACS) instance.
- Configure the WTS Control (WTSCTRL) instance.
- Create a Service.
- Assign the Service.

Task 1 Configuring the WTSACS Instance

Edit instances in the WTSACS Class to specify the type of application compatibility script.

To configure the WTSACS instance

- 1 Use the CM Admin CSDB Editor to navigate to the PRIMARY.SOFTWARE.WTSACS instance you want to configure.
- 2 Right-click the instance and select **Edit Instance**.
- 3 Use [Table 1](#) on page 16 to set the attributes for the application compatibility script. Keep in mind the following:
 - For an ACS Install script, set the TYPE to I, and ZCREATE to &(WTSACS.LOCATION)&(WTSACS.ZRSCCFIL).
 - For an ACS Uninstall script, set the TYPE to U, and BDELETE to &(WTSACS.LOCATION)&(WTSACS.ZRSCCFIL)..
 - For an ACS Logon script, set the TYPE to L.
- 4 Click **OK** to accept the new values.
- 5 Click **Yes** to confirm the changes.

Table 1 WTSACS Class attributes

Attribute	Description
ZRSCNAME	Resource Name Default: &ZRSCCFIL
ZRSCCFIL	Resource File Name
ZRSCVRFY	Verify Resource File on Connect Default: Y
ZRSCRASH	DOS File Attribute [R/A/S/H]
ZRSCSTYP	Server File Type [BINARY/TEXT] Default: BINARY
TYPE	Install, Logon, Uninstall [I/L/U] <ul style="list-style-type: none"> • Set to I for Install script. • Set to L for a logon script. • Set to U for an Uninstall Script.
ZRSCDATE	Resource Date Stamp – from Promote
ZRSCTIME	Resource Time Stamp – from Promote
ZRSCSIZE	Resource Size – from Promote
ZCMPSIZE	Compressed File Size
ZRSCCSTA	Client File Status Default: 999
ZRSCPRI	Create Sequence Priority Default: 50
ZCREATE	Method to Install Resource Set this attribute for the Install ACS to &ZRSCCFIL so this script is run at service installation.
ZDELETE	Method to De-Install Resource Set this to the method to run when the resource is deleted. Default: RADREMF
BDELETE	Method Before Delete Set this attribute for the Uninstall ACS to &ZRSCCFIL so this script is run at service removal.
NAME	Friendly name of the instance

Attribute	Description
LOCATION	Location of the application compatibility script Default: &(ZMASTER.ZLIBDRV)&(ZMASTER.ZLIBDIR)
ZSTOP000	Stop Expression Default: /(EDMGETV(ZCONFIG,WTSSRVR)='Y') Note: The export deck may have this configured incorrectly with a period in place of the comma. Check to be sure it is shown as above.

Task 2 Configuring the WTSCTRL Instance

Use instances in the WTSCTRL Class to specify if you require logoffs for application events, the type of install, and timeout settings if needed

To configure the WTSCTRL instance

- 1 Use the CM Admin CSDB Editor to navigate to the WTSCTRL Class in the SOFTWARE domain.
- 2 Right-click **WTSCTRL** and select **New Instance**.
- 3 Type in a display name and an instance name.
- 4 Click **OK**.
- 5 Right-click the new instance and select **Edit Instance**.
- 6 Using [Table 2](#) below, to set logoff behaviors and timeouts.
- 7 Click **OK** to accept the new values.
- 8 Click **Yes** to confirm the changes.

Table 2 WTSCTRL Class attributes

Attribute	Description
WTSTYPE	Install/Execute Mode [I/E] <ul style="list-style-type: none"> • Set to E to install files natively on the Windows Terminal Server such as applications that an administrator may use specifically on the server. • Set to I for an application that will be used by the Windows Terminal Server's clients. Default: E

Attribute	Description
LI	Logoff for Install [Y/N] Specify Y to logoff for application installation. Default: N
LU	Logoff for Update [Y/N] Specify Y to logoff for application update. Default: Y
LR	Logoff for Repair [Y/N] Specify Y to logoff for application repair. Default: Y
LD	Logoff for Delete [Y/N] Specify Y to logoff for application removal. Default: Y
TO	Disconnect Time Out (minutes) Specify in minutes how long the Windows Terminal Server should wait before disconnecting any users from the server. A warning message will appear on the Windows Terminal Server showing how long before the logoff will occur. Default: 15
RW	Rewarn of Logoff at (minutes) Specify when you want a second warning to appear that the Server will be logged off. Default: 2
NAME	Friendly Name
WTSOPTNS	WTS Logoff Settings. Do not modify. Composite concatenated logoff field to flow down to the client. Default: LI=&(LI),LU=&(LU),LR=&(LR),LD=&(LD), TO=&(TO),RW=&(RW)

After publishing the script and defining any special behaviors, you are ready to create the service.

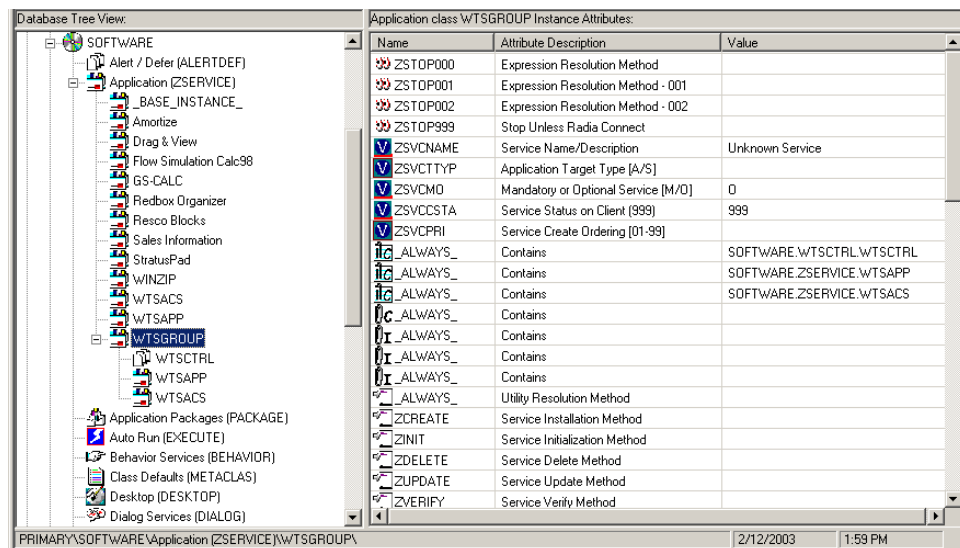
Task 3 Creating the Service

After configuring the WTSACS and WTSCTRL instances, you need to create services for the WTSACS instance and the original application package. Then, the two services and the WTSCTRL instance will become part of a Service Group. Refer to the *Service Groups* section in the *CM Admin User Guide* before completing this procedure.

To create a service for the Windows Terminal or Citrix Server

- 1 Create a Service Group for the application using the CM Admin CSDB Editor.
- 2 Set the ZSVCGRP attribute on the Service Group to D for dependent. Refer to the *CM Admin User Guide* for information about adding this variable and using Service Groups.
- 3 Create Application (ZSERVICE) instances for the application and the WTSACS instance.
- 4 Connect the WTSCTRL instance and the services created in Step 3 of this procedure to the Service Group instance in the following order:
 - WTSCTRL instance
 - Main application Service
 - WTSACS Service

In the example shown below, we created a Service Group called WTSGROUP. Next, we connected the WTSCTRL instance, and the services for WTSAPP and WTSACS, in that order.



The services in a Service Group will install in “visual order”. This means, from the top downward as connected to the Service Group. Services in a Service Group do not honor the settings in ZSVCPRI.

Task 4 Assigning the Service

To simplify entitlement of the Windows Terminal or Citrix Server applications, you may want to create a user specifically for the applications. Use the CM Admin CSDB Editor to create a user with the same name as the Windows Terminal or Citrix Server.

To assign the service

- 1 Create a user in the USER class in the POLICY Domain called WTSSERVER.
- 2 Connect the Server Application’s ZSERVICE instance to the WTSSERVER.

Deploying the Service

RADSVMAN.EXE is the module responsible for managing Server Applications. RADSVMAN completes the following tasks:

- 1 Changes the Windows Terminal Server to Execute mode.
- 2 Downloads necessary data.
- 3 Installs sever applications. These applications have the WTSTYPE attribute of the WTSCTRL instance set to E.
- 4 Changes the Windows Terminal Server to Install mode.
- 5 Installs agent applications. These applications have the WTSTYPE attribute of the WTSCTRL instance set to I.
- 6 Switches back to Execute mode.

Run RADSVMAN through a Scheduling (TIMER) instance or from the command line on the Windows Terminal Server. In the example below, the applications are assigned to a user based on the computer name.

```
radsvman ip=<IP_ address>, uid=$MACHINE
```

RADSVMAN accepts the same parameters as RADSKMAN. For more information on RADSKMAN, see the *CM Application Manager and Application Self-service Manager Installation and Configuration Guide*.

Running Exit Methods

You may need to run a method either before or after installing applications. Use SVRBEXIT (Before Exit Point method) to specify a method to run *before* installing applications, and use SVRAEXIT (After Exit Point method) to specify a method to run *after* installing applications. These attributes must be present in the RADSETUP agent object to run. You can add them in any of the following ways:

- Add the variables before installation in the install.ini.
- Use the CM Administrator Agent Explorer (CM Admin Agent Explorer) to manually add them to the RADSETUP object on the agent computer.
- If you are using Client Operation Profiles, add SVRBEXIT and SVRAEXIT as variables to the CLIENT.SETTINGS Class.

A Product Name Changes

If you have used Radia in the past, and are not yet familiar with the newly rebranded HP terms and product names, Table 3 below will help you identify naming changes that have been applied to the Radia brand.

Table 3 Product Name and Term Changes

New Name/Term	Old Name/Term
CM agents	Radia clients
CM Server Management Agent	Radia Server Management Client
HP Configuration Management	Radia
HP Configuration Management Administrator	Radia Administrator Workstation
HP Configuration Management Admin CSDB Editor	Radia System Explorer
HP Configuration Management Admin Packager	Radia Packager
HP Configuration Management Application Manager	Radia Application Manager
HP Configuration Management Configuration Server	Radia Configuration Server
HP Configuration Management Configuration Server Database	Configuration Server Database, Radia Database
HP Configuration Management Portal	Radia Management Portal
HP Configuration Management Solutions for Servers	Radia Server Management

Index

&

&ZRSCCFIL, 16

A

ACS. *See* application compatibility scripts

After Exit Point method, 21

application compatibility scripts, 13
publishing, 14

assigning the service, 20

B

BDELETE attribute, 16

Before Exit Point method, 21

C

Client File Status, 16

CM Portal

installing CM Server Management Agent, 11

CM Server Management Agent

installing, 11

Terminal Server component, 9

Component Selection Mode, 14

Compressed File Size, 16

copyright notices, 2

Create Sequence Priority, 16

creating a service, 19

customer support, 5

D

deploying the service, 21

Disconnect Time Out, 18

documentation updates, 4

DOS File Attribute, 16

E

Execute mode, 9

exit methods, running, 21

F

Friendly Name, 18

I

Install mode, 9

Install/Execute Mode, 17

installing

CM Server Management Agent, 11

L

LD attribute, 18

legal notices

copyright, 2

restricted rights, 2

warranty, 2

LI attribute, 18

LOCATION attribute, 17

Logoff for Delete, 18

Logoff for Install, 18

Logoff for Repair, 18

Logoff for Update, 18

LR attribute, 18

LU attribute, 18

M

Method Before Delete, 16

Method to De-Install Resource, 16

Method to Install Resource, 16

N

NAME attribute, 16, 18

R

RADREMF, 16

RADSETUP object, 21

RADSKMAN, 21

RADSVMAN, 21

Resource Date Stamp, 16

Resource File Name, 16

Resource Name, 16

Resource Size, 16

Resource Time Stamp, 16

restricted rights legend, 2

Rewarn of Logoff, 18

running exit methods, 21

RW attribute, 18

S

Scheduling instance, 21

Server File Type, 16

service

- assigning, 20

- creating, 19

- deploying, 21

- preparing for deployment, 15

Service Group, 19

- creating, 15, 19

Service Group instance, 19

Stop Expression, 17

support, 5

SVRAEXIT, 21

SVRBEXIT, 21

T

technical support, 5

TIMER instance, 21

TO attribute, 18

TYPE attribute, 16

U

updates to doc, 4

V

Verify Resource File on Connect, 16

W

warranty, 2

WTS App Comp Scripts Class, 11

WTS Control Class, 11

WTS Logoff Settings, 18

WTSACS Class, 11

- attributes, 16

- configuring, 15

WTSACS instance

- configuring, 15

WTSCTRL Class, 11

- attributes, 17

- configuring, 17

WTSCTRL instance

- configuring, 17

WTSOPTNS attribute, 18

WTSSERVER, 20

WTSTYPE attribute, 17, 21

Z

ZCMPsize attribute, 16

ZCREATE attribute, 16

ZDELETE attribute, 16

ZRSCCFIL attribute, 16

ZRSCCSTA attribute, 16

ZRSCDATE attribute, 16
ZRSCNAME attribute, 16
ZRSCPRI attribute, 16
ZRSCRASH attribute, 16
ZRSCSIZE attribute, 16

ZRSCSTYP attribute, 16
ZRSCTIME attribute, 16
ZRSCVRFY attribute, 16
ZSTOP000 attribute, 17
ZSVCPRI, 20

