

# Deploying BusinessObjects Enterprise Web Applications using wdeploy 2.2

#### **Overview**

wdeploy is a command-line tool for JSP environments that you can use to deploy BusinessObjects web applications.

wdeploy allows you to deploy application resources in two modes:

- in standalone mode, by deploying all the web application's resources together on the web application server
- in distributed mode, by separating the application's dynamic and static resources, and then deploying static resources to the web server, and dynamic resources to the web application server

wdeploy is ANT-based with some Javascript helpers.

NOTE	Although this white paper addresses both UNIX and Windows deployment environ-
	ments, it uses Windows notation for all paths, directory and file names.

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#### Introduction

wdeploy can do any or all of the following:

- list all the available, installed applications listed in your BusinessObjects Enterprise \$INSTALLDIR\deployment\apps directory
- deploy all the available BusinessObjects web applications that you have installed
- build all the available web applications you have installed
- create the resources and configuration files required for a specified application and then deploy the application
- deploy an application whose resources and configuration files have been prepared for deployment

In line with BusinessObjects Enterprise version XI Release 2 terminology, this white paper uses the term *web application server* instead of the term *application server* used through version 6.x.

See the README file for specific information or known issues.

# Web applications deployed by wdeploy

wdeploy processes the following BusinessObjects web applications:

Applications	Corresponding WAR files
InfoView	desktop.war, as well as afhelp.war if Performance Management is installed (EPM is included in desk- top.war and afhelp.war contains the online help)
Crystal connector	webcompadapter.war
BusinessObjects Enterprise Administration Launchpad, administrative tools, and the Central Management Console (CMC)	jsfadmin.war and admin.war Needs webcompadapter.war to work.
Crystal Reports Explorer	adhoc.war Needs webcompadapter.war to work.
OLAP Intelligence	Only supported on Windows, AIX and Solaris. styles.war and analysishelp.war (help files) Needs webcompadapter.war to work.
Web Services	dswsbobje.war On WebLogic, Web Services have to be deployed manually. See the Web Services release notes at: http://support.businessobjects.com/documentation/product_guides/default.asp

NOTE	wdeploy is used to deploy Business Objects web applications and customized
	web applications developed with Developer Suite.

#### Standalone web application server support

wdeploy supports the following web application servers:

- Sun Java Application Server 8.1
- Tomcat 5
- WebLogic 8.1 or 9.2
- WebSphere 5.1 or 6.0

## Distributed web server/web application server support

In distributed deployments, wdeploy supports the following web/web application server configurations:

- Apache 2/Tomcat 5 or WebLogic 8.1 or 9.2 or WebSphere 5.1 or 6.0
- IHS/WebSphere 5.1 or 6.0
- Sun Java System Web Server 6/ Tomcat 5 or WebLogic 8.1 or 9.2 or WebSphere 5.1 or 6.0 or Sun Java Application Server 8.1

NOTE

In the following, Apache and IHS web servers are both specified as "apache".

#### Requirements for use

On Windows, you must set the JAVA\_HOME variable environment to the installed JDK directory (at least, version 1.4).

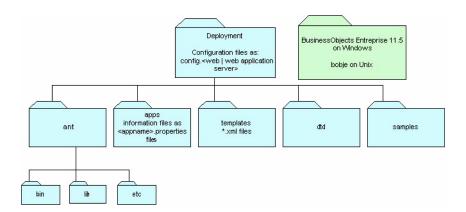
On UNIX platforms, if that variable is not set, wdeploy uses the variable used by the application server, when the target application server is Sun Java application server, WebLogic or WebSphere.

To use wdeploy to deploy BusinessObjects web applications on web application servers, an administration instance of the web application server must be started because wdeploy uses the administration tool of each of the web application server (except Tomcat). For information, see the documentation for your web application server.

#### Installing wdeploy

To install wdeploy, unzip the wdeploy package into the BusinessObjects Enterprise installation directory.

"deployment" directory is created at the same level as the "bobje" folder on Unix and "BusinessObjects Entreprise 11.5" on Windows. This directory contains the following:



- the **ant** subdirectory, which contains the customized ANT distribution
- the apps subdirectory, containing the descriptors for supported web applications
- the dtd subdirectory, which contains DTD for the Servlet 2.3 deployment descriptor
- the **samples** subdirectory, containing a sample descriptor for custom applications
- the **templates** subdirectory, which contains various files required by wdeploy
- a set of config.\* files, describing the default values of various web application servers and web servers
- a set of XML files, which constitute wdeploy itself
- the wdeploy.bat and wdeploy shell script, which are the front end to the wdeploy application
- a README file, describing wdeploy options

# Where wdeploy stores information

#### **Deployment information for applications**

The deployment information for specific applications is stored in the \$INSTALLDIR\deployment\apps\<application>.properties files.

The <application>.properties files contain the following parameters:

Parameter	Description
appvdir	Context root of the application <b>Mandatory</b> .
addtoclasspath	Line to add to the classpath of the web application server <b>Optional.</b>
addtolibpath	Line to add to the libpath of the web application server <b>Optional.</b>

buildfile	Name of an XML file containing additional configuration information, such as the example in the \$INSTALLDIR\deployment\samples directory. <b>Optional</b> .	
warfile	Name of the application WAR file present in war_dir or win_war_dir.  Mandatory.	
zipfile	Name of the static resource file for the application present in war_dir <b>Optional</b> .	
dont_split_content	Boolean. False by default or true. Indicates that the application does not support static and dynamic content separation. When "true" in distributed mode, static content is distributed in the Web Server and static plus dynamic content are distributed in the web application server. On WebSphere 5.1 or WebSphere 6 web application server, [FileServingServlet] is enabled. <b>Optional</b>	
file_limit_reached	For Sun Java Application Server 8, WebSphere 5.1 and WebSphere 6. Boolean, false by default, or true. Indicates that the content to deploy on the application server contains more than 65535 files.	
war_dir	On Unix and Windows: Name of the directory that contains the war file.  Optional. By default the war file is stored at: \$INSTALL-DIR\bobje\entreprise115\java\applications	
win_war_dir	On Windows: Name of the directory that contains the war file. win_war_dir has priority over win_war directory. <b>Optional</b> . By default the war file is stored at: \$INSTALLDIR\Businessobjects Entreprise 11.5\java\applications	
wdeploy.prop.count	Number of properties to set in the target application server. The default value is 0. <b>Optional</b>	
wdeploy.prop#.name	Name of the property to set in the target application server. "#" corresponds to the wdeploy.prop.count value. See [infoview.properties]. <b>Optional.</b> .	
wdeploy.prop#.value	Value of the property to set in the target application server. "#" corresponds to the wdeploy.prop.count value. See [infoview.properties]. <b>Optional</b> .	
wdeploy.prop#.applies_to	A list of supported platforms that supports the prop# property. "#" corresponds to the wdeploy.prop.count value.  Supported platforms are: solaris_sparc, aix_rs6000, hpux_pa-risc, linux_x86 and win32_x86. The list is separated by spaces. By default the list is empty that corresponds to all the platforms. When the platform that holds the application server is not in the list, the property is not set in the application server's configuration. See [styles.properties] file. <b>Optional</b>	

#### Web and web application server configuration options

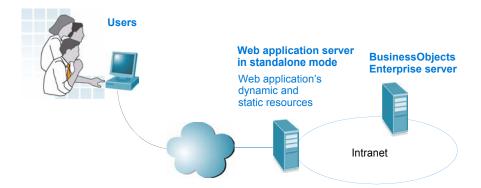
Configuration information for the web and web application servers used in your BusinessObjects Enterprise deployment is stored in the config.<a href="web/web/applicationserver">web/web application server</a>> files in the \$INSTALLDIR\deployment directory.

# Wdeploy deployment modes

wdeploy allows you to deploy all BusinessObjects Enterprise web application resources in a centralized WAR file on the web application server, or to extract the static resources and deploy them instead on the web server.

#### Standalone mode

Deploying web applications' static and dynamic resources bundled in their WAR file on the web application server is known as standalone mode.



#### Standalone web deployment, with no separate web server

This makes deployment simpler, but performance may suffer, as every type of transaction, even those requiring static content only, is handled through the web application server.

#### How to deploy in standalone mode

To deploy a web application in standalone mode on the web application server, simply run wdeploy on the web application server machine.

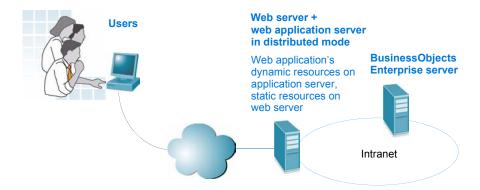
#### **Distributed mode**

In distributed deployments, web applications' dynamic resources are deployed on the web application server, and their static resources are deployed on the web server.

# How to deploy when web and web application servers are on same machine

- 1. Run wdeploy on the web application server to extract dynamic resources. Make sure that the as\_mode property is set to "distributed" mode, either in the wdeploy command line, or in the web application server's config.\* file.
- 2. Run wdeploy to extract static resources for the web server, generate ZIP file and unzip it.

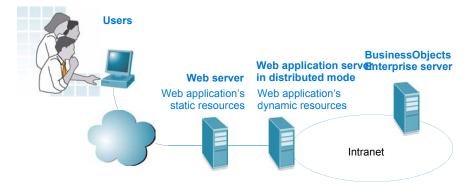
These instructions can be launched in one or two command line (s).



Distributed web deployment with web and web application servers on same machine

# How to deploy when web and web application servers are on distinct machines

- 1. Run wdeploy on the web application server machine. Make sure that the as\_mode property is set to "distributed", either in the wdeploy command line, or in the web application server's config.\* file.
- 2. Run wdeploy to extract static resources for the web server (located on another machine) and generate .zip file.
- 3. Copy ZIP file on the web server machine and unzip it.



Distributed web deployment with web and web application servers on different machines

# **About Web Component Adapter (WCA)**

The Web Component Adapter (WCA) is an application that runs on either your Java web application server or IIS. The WCA hosts web components, allowing Business Objects Entreprise Central Management Console to communicate with the web application server.

This bridge is installed with Business Objects Entreprise using the custom install option.

wdeploy must be run in the directory where WCA has been installed.

# Before running wdeploy

#### Make sure you have enough disk space

Before you run wdeploy on the web application server machine, make sure you have enough disk space for the deployment of the web applications.

To be safe, you should have 1.2 GB available in your workdir.

## Describe your web and/or web application server

Before running wdeploy, you must describe your web or web application server installation in a config.<a href="mailto:web\_application\_server\_type">web\_application\_server\_type</a> or config.<a href="mailto:web\_server\_type">web\_server\_type</a> file.

The following sample configuration files, which you must modify manually to match your configuration, are located in the \$INSTALLDIR\deployment directory:

- config.sunone8
- config.weblogic81
- config.weblogic9
- · config.websphere
- config.websphere6
- · config.apache
- config.tomcat
- config.iplanet

# **Using wdeploy**

#### The weploy command line

The wdeploy command line can contain three types of parameters:

- a web or web application server type
- one or more properties (optional depending on your deployment and how you use wdeploy)
- an action (corresponding to an ANT target)

It looks like this (all in a single line):

wdeploy <web or web application server type> [-Dproperty>]\*
<action>

#### For example:

cd \$INSTALLDIR\deployment

wdeploy tomcat -Das\_mode=distributed -Das\_dir=/opt/tomcat -Das\_instance=localhost -Dws\_type=apache -Dws\_dir=/opt/apache -Dconnector\_type=tomcat -Dwork\_dir=/tmp/wdeploy -DAPP=infoview deploy

Parameter	Short name	Description
<web application="" or="" server="" type="" web=""></web>	Web/Web application server	The type of web or web application server you're using. For more details, see "The Web/Web Application Server parameter" on page 12.
<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	Property	Web application deployment parameter. You can use as many properties as you require. You can set properties in your web or web application server's config.* file instead of in the wdeploy command line if you want. For more detail, see "Properties" on page 13.
<action></action>	action	Action to be taken. Possible actions on machines hosting web application servers are:  Iistapps  deployall  buildall  buildwar  predeploy *  deployoll *  deploy only *  deployonly all  * these actions can also be run on the web server when web and web application servers are on the same machine. For complete information, see "Action reference" on page 16.

## Ways of using wdeploy

You can use wdeploy in the following ways:

- By manually modifying the config.\* file for your web and/or web application server(s), and then running wdeploy. Business Objects recommends this option.
- By using the wdeploy command line only.

In both cases, you must use the wdeploy command line, but in the first case, it requires fewer parameters.

# Modifying the configuration file, and then using the command line

Business Objects recommends that you manually modify the \$INSTALLDIR\deployment\config.\* file for the web or web application server you are using, and then run wdeploy.

In this scenario, you set both the required web/web application server information required by wdeploy, as well as all of the properties required by your deployment. As a result, when you run wdeploy, you need only include the web/web application server, an application name (APP property) if required, and an action. (You don't need to specify an application if you are using the deployall or buildall action.)

#### For example:

```
cd $INSTALLDIR\deployment
wdeploy websphere -DAPP=infoview predeploy
```

Once you have made your changes in the appropriate web or web application server config.\* file, run wdeploy on the same machine.

If you are deploying web applications in distributed mode, you must make the changes in the config.\* file for both the web and web application servers, and then run wdeploy for the web application server as well as the web server on the machine(s) on which they are hosted.

#### Using the command line only

You can define all the settings and actions for the deployment of your web applications, then execute those actions using the wdeploy command line only.

To use the wdeploy command line:

- 1. In the DOS window, or at the command line, navigate to the \$INSTALLDIR\deployment directory.
- Type the wdeploy command line.
  - Add as many properties (property=value) as required for your deployment.
  - Enter valid values for each parameter, making sure that every parameter requiring spaces or special characters (such as file locations) is wrapped in double quotes.

#### For example, in standalone mode (all in one line):

wdeploy sunone8 -Das\_mode=standalone -Das\_dir=/opt/
SUNWappserver -Das\_instance=domain1 -Das\_admin\_port=4848
-Das\_admin\_username=admin -Das\_admin\_password=password
-Dwork\_dir=/tmp/wdeploy -DAPP=infoview deploy

#### For example, in distributed mode (all in one line):

wdeploy tomcat -Das\_mode=distributed -Das\_dir=/opt/tomcat
-Das\_instance=localhost -Dws\_type=apache -Dws\_dir=/opt/
apache -Dconnector\_type=tomcat -Dwork\_dir=/tmp/wdeploy
-DAPP=infoview deploy

3. Press the Return key.

# After running wdeploy

After deploying your web applications on the web or web application server using wdeploy, you should restart the web or web application server to take the modifications into account.

# Wdeploy parameter reference

This section contains:

- "The Web/Web Application Server parameter" on page 12
- "Properties" on page 13
- "Action reference" on page 16

#### The Web/Web Application Server parameter

When wdeploy is installed in the \$INSTALLDIR\deployment folder, it comes with a separate config.\* file for each supported web or web application server.

The value you enter for this parameter must exactly match the extension of the configuration file corresponding to your web or web application server. If it is not an exact match, wdeploy will not be able to find the file. Business Objects suggests you browse the \$INSTALLDIR\deployment folder for the precise name of the file used for your application server.

For this version, available configuration files are:

- config.sunone8
- config.weblogic81
- config.weblogic9
- · config.websphere
- config.websphere 6
- config.apache
- config.tomcat
- config.iplanet

#### **Properties**

This parameter defines properties that are specific to your deployment. These settings are stored in the config.\* files in \$INSTALLDIR\deployment.

To define any of these properties, type, without spaces:

-D<value from Property column>=<value from Values column>

You can define as many properties as you want in the command line, separating them with a space, as long as the properties don't contradict each other.

#### Properties you must set

If your web application server is running in distributed mode, you must specify this by setting the as\_mode property to "distributed" either in your web application server's config.\* file or in the wdeploy command line.

If the web server is on the same machine as the web application server, you must specify the type of web server and its installation directory on the machine, using respectively the ws\_type and ws\_dir properties.

You must define the connector-type property if you are running wdeploy on a web server machine.

#### Additional required properties

You may also be required to set other properties pertaining to either the action or the type of web application server you're using.

- Each property is described in detail in the table in the following section.
- The properties required with each wdeploy action are described in "Action reference" on page 16.

The properties required for specific web and web application servers are described in the following files, all located in the \$INSTALLDIR\deployment directory:

- the config.\* file for each web or web application server
- the wdeploy README file

# **Properties reference**

The following table lists the available properties for wdeploy.

There are further properties not documented in this document, see the README file.

Property	Values	Description
APP	adhoc admin afhelp analysishelp dswsbobje infoview jsfadmin styles webcompadapter	Specific web application, taken from the name of the <app>.properties file located in the web application server machine's \$INSTALL-DIR\deployment\apps folder.</app>
work_dir	<directory></directory>	Directory in which wdeploy creates and deletes temporary directories (typically when it splits the static and dynamic content of an application), and stores the results of the predeploy action.  By default, this is \$INSTALLDIR\deployment\workdir.
as_mode	standalone distributed	Type of web application deployment (see "Wdeploy deployment modes" on page 6). If the web server is not on the same machine as the web application server, you must at least specify the type of web server, using the ws_type property.
as_dir	<directory></directory>	For all web application servers except WebLogic, installation directory of the web application server. For WebLogic, the directory containing the startWeblogic.sh file.
as_instance	<instance name=""></instance>	Name of the web application server instance currently used.
as_admin_port	<port number=""></port>	Required for WebLogic and Sun Java Application Server only. The port for administration of the application server.
as_admin_username	<user name=""></user>	Required for WebLogic and Sun Java Application Server only. User name for administration of the application server.
as_admin_password	<password></password>	Required for WebLogic and Sun Java Application Server only. Password for administration of the application server.
as_admin_is_secure	true false	Required for Sun Java Application Server only. Indicates whether or not wdeploy must use this option on the asadmin's command line.

Property	Values	Description
as_service_name	<service name=""></service>	For Tomcat only. When Tomcat is installed as a service, name of the windows service .Startup parameters are also modified for the service.
enforce_file_limit	true false	For Sun Java Application Server, WebSphere 5.1 and WebSphere 6. Indicates wdeploy whether or not the Application Server encounter issues loading application that contains more than 65535 files.
as_virtual_host	<virtual host="" name=""></virtual>	For WebSphere 5.1 and 6 only. The virtual host to which the application must be bound.
connector_type	<connector type=""></connector>	For Apache and Sun Java System Web Server. The type of connector to configure.
ws_type	<web server="" type=""></web>	The type of web server to deploy to, in distributed mode.
deployment_dir	<directory></directory>	In distributed mode, the directory for the web server under which wdeploy creates a subdirectory matching the application name, and in which the ZIP files containing the application's static resources will be unzipped. wdeploy will then create a virtual directory in the web application server mapping the subdirectory to a URL.
ws_dir	<directory></directory>	The web server installation directory. Use this in distributed mode only.
connector_name	<connector name=""></connector>	Required for Sun Java System Web Server only.  The name of the object that describes the connector service in the [obj.conf] file.
ws_instance	<instance name=""></instance>	For WebSphere 6 only. The name of the web server where the application is installed, in distributed mode.
XMLRegName	<name></name>	For Weblogic 9 only. The name of the XML registry created and assigned to the application server instance.
XMLRegDocBuilderFactory	<class name=""></class>	For WebLogic 9 only. The name of the classe in the XML registry that handles document building.
XMLRegSAXParserFactory	<class name=""></class>	For WebLogic 9 only. The name of the classe in the XML registry that handles XML parsing.
XMLRegTransformerFactory	<class name=""></class>	For WebLogic 9 only. The name of the classe in the XML registry that handles document transformation.

## **Action reference**

The Action parameter defines wdeploy's sequence of actions. Here is a summary of these actions, each of which is covered in more detail below:

Action	Description	Required properties
Action	Description  Deploys a predeployed application (see description above). deploy = predeploy + deployonly	Required properties  Generic properties:  APP (the application name)  as_mode (standalone or distributed, by default standalone)  For web server deployment:  web or web application server type> is "apache" or "iplanet"  connector_type (the web server to connect to)  deployment_dir (the directory to copy static content)  ws_dir (the directory that contains the web server)
	deployonly	For web server deployment: <web application="" or="" server="" type="" web=""> is "apache" or "iplanet"</web>
		1 1 1
		ws_dir (the directory that contains the web server)
		connector_name (for Sun Java System Web Server (iplanet), the name of the object that describes the connector in the configuration file
		Note: Properties for web application server deployment and for web application server and web server deployment are described on the following pages.

Action	Description	Required properties
deploy	Deploys a predeployed application (see description above). deploy = predeploy + deployonly	For web application server deployment: <web application="" or="" server="" type="" web=""> is a web application server  • as_dir (installation directory of the application server)  • as_admin_port (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the port to connect the web application server to deploy the</web>
		<ul> <li>application)</li> <li>as_admin_username (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the username to connect the web application server to deploy the application)</li> <li>as_admin_password (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the password to connect the web application server to deploy the application)</li> </ul>
		<ul> <li>as_admin_is_secure (for Sun Java Application Server 8, asadmin requires secure)</li> <li>as_service_name (for Tomcat, if Tomcat is installed as a service)</li> </ul>
		<ul> <li>enforce_file_limit (for Sun Java Application Server 8, WebSphere 5.1, WebSphere 6)</li> </ul>
		as_instance (the instance of the web application server to deploy the application)
		as_virtual_host (for WebSphere 5.1 and WebSphere 6, the virtual host to link the application to)
		ws_instance (for WebSphere 6, in distributed mode, the web server instance that serves the requests)

Action	Description	Required properties
deploy	Deploys a predeployed	For web application server and web server deployment:
	application	as_dir (installation directory of the application server)
		as_admin_port (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the port to connect the web application server to deploy the application)
		as_admin_username (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the username to connect the web application server to deploy the application)
		as_admin_password (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the password to connect the web application server to deploy the application)
		as_admin_is_secure (for Sun Java Application Server 8n asadmin requires secure)
		as_service_name (for Tomcat, if Tomcat is installed as a service)
		• enforce_file_limit (for Sun Java Application Server 8, WebSphere 5.1, WebSphere 6)
		ws_type (the type of the web server: apache or iplanet)
		as_instance (the instance of the web application server to deploy the application)
		• as_virtual_host (for WebSphere 5.1 and WebSphere 6, the virtual host to link the application to)
		ws_instance (for WebSphere 6, in distributed mode, the web server instance that serves the requests)
		deployment_dir (the directory to copy static content)
		ws_dir (the directory that contains the web server)
		connector_name (for iplanet, the name of the object that describes the connector in the configuration file)

Action	Description	Required properties
deployall	Deploys all wdeploy's supported, installed applications described in the \$INSTALL-DIR\deployment\apps directory.  If you're deploying in standalone mode, or the web server is running on the application server machine, running wdeploy on the application server will also deploy the applications' static resources and perform the configuration required for the servers to work correctly with the web application.  If your web server is running on a separate machine, however, you will need to run wdeploy with the deployall action on the web server as well.	Generic property  • as_mode (standalone by default, or distributed)  For web server deployment, for web application server deployment and for web application server and web server deployment: Properties are the same as deploy action, documented above.
listapps	Lists all the available, installed applications described in the \$INSTALLDIR\deployment\apps directory.	

Action	Description	Required properties
predeploy	An intermediate step between the buildwar and deploy actions, creates all the resources and the configuration files required for the specified application.  After you have invoked this action, everything is ready for the application's deployment to take place.  Use this option if you want to review precisely what is going to be deployed in the web application server, or if you want to deploy manually.	<ul> <li>Generic properties:</li> <li>APP (the name of the application)</li> <li>as_mode(standalone or distributed, by default standalone)</li> <li>For web server deployment:</li> <li>web or web application server type&gt; is "apache" or "iplanet"</li> <li>connector_type (the web server to connect to)</li> <li>deployment_dir (the directory to copy static content)</li> <li>connector_name (for Sun Java System Web Server (iplanet), the name of the object that describes the connector in the configuration file</li> <li>For web application server deployment:</li> <li>web or web application server type&gt; is a web application server</li> <li>as_dir (installation directory of the application server)</li> <li>as_virtual_host (for WebSphere 5.1 and WebSphere 6, the virtual host to link the application Server 8, WebSphere 5.1 and WebSphere 6)</li> <li>For web and web application server deployment:</li> <li>web or web application server type&gt; is a web application server</li> <li>as_dir (installation directory of the application server</li> <li>as_dir (installation directory of the application server)</li> <li>as_virtual_host (for WebSphere 5.1 and WebSphere 6, the virtual host to link the application to)</li> <li>ws_type (the type of the web server: apache or iplanet)</li> <li>deployment_dir (the directory to copy static content)</li> <li>deployment_dir (the directory to copy static content)</li> <li>connector_name (for iplanet, the name of the object that describes the connector in the configuration file)</li> <li>enforce_file_limit, for Sun Java Application Server 8, WebSphere 5.1 and WebSphere 6)</li> </ul>

Action	Description	Required properties
predeployall	Builds all resources WAR, ZIP files, etc., and configura- tion files required for all specified applications.	Generic property
		as_mode (standalone or distributed, by default standalone)
	predeployall can be followed by deployall.	For web server deployment, for web application server deployment and for web application server and web server deployment: Properties are the same as predeploy action, documented above.
deployonly	Loads files in web application server, config files, etc., unzips ZIP files on the web server, etc.	Generic properties:
		APP (application name)
		as_mode (standalone by default or distributed)
		For web server deployment: <web application="" or="" server="" type="" web=""> is "apache" or "iplanet"</web>
		deployment_dir (the directory to copy static content)
		ws_dir (the directory that contains the web server)
		For web application server deployment: <web application="" or="" server="" type="" web=""> is a web application server</web>
		as_dir (installation directory of the application server)
		as_admin_port (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the port to connect the web application server to deploy the application)
		as_admin_username (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the username to connect the web application server to deploy the application)
		as_admin_password (for Sun Java Application Server 8, WebLogic 8.1 and WebLogic 9.2, the password to connect the web application server to deploy the application)
		as_admin_is_secure (for Sun Java Application Server 8, asadmin requires secure.)
		as_service_name (for Tomcat, if Tomcat is installed as a service.)
		as_instance (the instance of the web application server to deploy the application)
		ws_instance (for WebSphere 6, in distributed mode, the web server instance that serves the requests)

Action	Description	Required properties
deployonly		For web application server and web server deployment:
		as_dir (installation directory of the application server)
		as_admin_port (for Sun Java Application Server 8, WebLogic81 and WebLogic9, the port to connect the web application server to deploy the application)
		as_admin_username (for Sun Java Application Server 8, WebLogic81 and WebLogic9, the username to connect the web application server to deploy the application)
		as_admin_password (for Sun Java Application Server 8, WebLogic81 and WebLogic9, the password to connect the web application server to deploy the application)
		as_admin_is_secure (for Sun Java Application Server 8n asadmin requires secure)
		as_service_name (for Tomcat, if Tomcat is installed as a service)
		as_instance (the instance of the web application server to deploy the application)
		ws_type (the type of the web server: apache or iplanet)
		• ws_instance (for WebSphere 6, in distributed mode, the web server instance that serves the requests)
		deployment_dir (the directory to copy static content)
		ws_dir (the directory that contains the web server)
deployonly-		Generic property
all		as_mode (standalone by default or distributed)
		For web server deployment, for web application server deployment and for web application server and web server deployment: Properties are the same as deploy action, documented above.
buildall	Deprecated Builds all the wdeploy-sup- ported, installed applications described in the \$INSTALL- DIR\deployment\apps directory	Generic properties
		as_mode (standalone by default or distributed)
		ws_type (if you are running wdeploy on a machine hosting the web server and as_mode is distributed)
		as_virtual_host (if you are running wdeploy on WebSphere)

Action	Description	Required properties
buildwar	Deprecated. Creates the resources for the specified application. Generated WAR files are stored in the directory designated by the war_dir property.	<ul> <li>APP</li> <li>as_mode</li> <li>ws_type (if you are running wdeploy on a machine hosting the web server and as_mode is distributed)</li> <li>as_virtual_host (if you are running wdeploy on WebSphere)</li> </ul>