



# Deploying Managed ArcGIS® 9.2 Setups

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# Deploying Managed ArcGIS 9.2 Setups

## An ESRI Technical Paper

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# Deploying Managed ArcGIS 9.2 Setups

The ability to distribute software to many users or computers from a centralized location has become a requirement for many administrators. An administrator using a software deployment method, such as Microsoft® Group Policy software deployment or Systems Management Server (SMS), manages the setups, allocating them to users or computers based on their needs. The software, of predetermined properties, is installed without the administrator physically visiting each machine. An administrator will also use software deployment tools to control a user's environment. This enables the administrator to prevent users from installing unauthorized software or from removing files that an installed software application still requires.

The deployment of software using Group Policy requires an Active Directory® environment. An Active Directory environment consists of a domain controller—Windows® 2000 or Windows Server™ 2003—to manage the domain and numerous clients—Windows 2000 Professional or Windows XP Professional. Group Policy includes a software installation extension that enables the domain controller to manage setups that can be assigned to users or computers or can be published to users. These setups must be created with Microsoft Windows Installer (MSI) technology. A deployment package is created that can be customized using a Transform (.mst) file. The Transform file can be used to specify the installation type, software seat, installation directory, and license manager, as required. Once a package is deployed, either assigned or published, it is displayed in the Add/Remove Programs dialog box. An authorized user launches the setup from Add New Programs. Packages can be set to Always install with elevated privileges, enabling the Windows Installer to run as the local machine's System account. For more information on Group Policy software deployment, see [www.microsoft.com](http://www.microsoft.com).

Software deployed using SMS can be distributed to all Windows operating systems using the software distribution feature. Software deployment with SMS allows distribution of software to computers without having to physically visit the location of the computers. A package is created that contains a program. For ESRI® ArcGIS® 9.2, the .msi file is bundled with the msixec command-line parameters to create a package. The package is then distributed to collections, which are computers or groups of users. Once a package has been distributed, SMS client machines are alerted, and the user can choose to install the package immediately or schedule a time for installation. Packages can be run with administrative rights even if the user who is logged on does not have administrative rights and whether or not a user is logged on to the machine. For more information on SMS, see <http://www.microsoft.com/smsserver/default.asp>.

ArcGIS 9.2 setups can be installed on many machines by deploying the .msi file directly. Any software deployment method that supports installation using a .msi file can be used to deploy ArcGIS 9.2 setups. This paper documents the deployment of ArcGIS 9.2 setups using Active Directory's Group Policy and SMS. The deployment examples consider deployment in a secure lockdown environment as well as deployment by users with administrative control to their machines.

## **Software Deployment Using Active Directory and Group Policy**

The following ArcGIS 9.2 setups are supported for standard MSI deployment in both a lockdown environment (user installing does not have administrator privileges) as well as an environment where the user installing does have administrator privileges. **Note:** If installing in a lockdown environment, a Group Policy must be set for the Windows Installer to Always install as elevated.

- ArcGIS Desktop.
- ArcInfo® Workstation.
- ArcGIS Engine Runtime.
- ArcGIS Engine Developer Kits.
- ArcReader™.
- ArcGIS Server for the Java™ Platform—A user with administrative privileges must run the postinstallation setup.
- ArcGIS Server for the Microsoft .NET Framework—A user with administrative privileges must run the postinstallation setup.
- ArcIMS®—A user with administrative privileges must run the postinstallation setup.
- ArcIMS Web Application Development Framework (ADF™) for the Java Platform.
- ArcIMS Web ADF for the Microsoft .NET Framework.
- ArcView® Single Use—A user with administrative privileges must register the software.
- ArcEditor™ Single Use—A user with administrative privileges must register the software.
- ArcGIS Desktop Developer Kits.

## ***Additional System Requirements***

In addition to your machine being correctly configured for Active Directory service, the following are also required:

- All ArcGIS products that are not of the same version must be uninstalled before installing ArcGIS 9.2 products.
- All system requirements for products and their features must be met. See the ESRI support site for the latest system requirements. If the system requirements for a feature specified to be installed have not been met, the setup will not fail but the feature will not be installed (e.g., .NET features).
- Microsoft Windows Installer version 3.1 must be installed on the machine.
- Microsoft Data Access Components (MDAC) 2.5 or higher must be installed on the machine.
- The machine's System account must have full control of the system drive and the drive to which you will be installing.

- If installing as an administrator, the user logged on must have administrator privileges. Some ArcGIS 9.2 postinstallation setups can only be run with administrator privileges.
- If installing ArcInfo Workstation using the Workstation .msi file, ArcGIS Desktop must also be installed on this machine. The Workstation .msi file does not update system files.
- ArcReader stand alone should not be installed on a machine that has the ArcGIS Desktop ArcReader feature already installed.
- If deploying the software in a lockdown environment—users do not have administrator privileges—you will need to modify the Group Policy so that the Windows Installer is set to Always install with elevated privileges (both user and computer configuration).

### ***Suggestions***

- It is recommended that you use either one of these methods to deploy from a server location.
  1. If you will also be deploying service packs using Active Directory and Group Policy, you should perform an admin installation on the server and deploy to your clients from there. You can perform an admin installation using the standard msiexec command-line parameter `msiexec /a <location of ArcGIS setup>\setup.msi`. For service pack deployment, you will patch the admin install on the server, then redeploy the package to your clients. See the section *Deploying ArcGIS 9.2 Service Packs Using Active Directory and Group Policy* for more information.
  2. Copy the entire contents of the installation media to your server machine for deployment. At a minimum the following files should exist on the server machine for the deployment packages (if applicable, some files or folders may not exist for some setups): .msi file, .cab file(s), .ini file, install.htm, Documentation folder, and Support folder. You cannot copy just the .msi file from the installation media to your server machine for deployment; other associated files are also required.
- The domain controller should be used to uninstall ArcGIS. When the software is deployed per user and many different users install it, using the Add/Remove Programs dialog box to uninstall will remove all the files and registry keys for this product, but the software shortcuts will remain on the machine for other users. This may confuse users when their shortcuts fail to work because the files have been uninstalled. The Add/Remove Programs dialog box for these users will also suggest that the product is still installed on the machine. To avoid these issues, uninstall using Group Policy. When the software is deployed per machine, the Control Panel's Add/Remove Programs dialog box does not enable you to remove the software unless you have administrative privileges; using Group Policy to manage the uninstall of the software will uninstall with elevated privileges for all users.
- You will need to use a Transform file (.mst) to set the installation directory to a location other than the default.

See the following ESRI Knowledge Base documents, located on the [ESRI support site](#), for information on creating transform files for ArcGIS products:

- For ArcGIS Desktop, see [KB26751](#).
- For ArcGIS Desktop Developer Kits and ArcGIS Engine Developer Kits, see [KB28797](#).
- For ArcInfo Workstation, see [KB28813](#).
- For ArcGIS Engine, ArcReader, and ArcGIS Server, see [KB28791](#).

### ***Known Issues***

- When performing an admin installation of ArcGIS Engine Java Help, you cannot install to a directory structure that contains more than 25 characters (including the \). Some Java files are located in a directory structure that would exceed the Windows 256-character limit. If the Windows character limit is exceeded, you will receive installation error 1335. This will also occur when performing an admin installation of ArcGIS Server for the Java Platform and ArcGIS Engine Software Developer Kit (SDK) for Java to a directory structure that contains more than 42 characters (including the \). There are two workarounds for this issue: you can either perform an admin installation to a directory structure that does not exceed the above limits, or you can perform an admin installation at the command line with the additional parameter of `SHORTFILENAMES=TRUE`; for example, `msiexec /a <location of setup>\setup.msi /qb TARGETDIR=<desired installation location> SHORTFILENAMES=TRUE`.
- Software deployment using Group Policy requires the use of transforms to customize a setup. The creation of transforms should replicate the selection of features in the Add/Remove dialog box. If you want to create a transform that adds an installation feature to an existing setup, that transform must include the features that are already installed on the machine and the feature you would like to add. If you do not include the already installed features, they will be uninstalled while the added feature and its associated features are installed.
- If you are deploying ArcInfo Workstation, the default workspace directory is `C:\Workspace`. If you use the default workspace directory or you specify a different workspace directory, the user must have write permissions to that directory. If the user does not have write permissions to the workspace directory, ArcInfo Workstation applications will fail to open.
- This following known issue applies to an installation from CD media only, not an installation from DVD media. If you are planning on deploying ArcInfo Workstation, you must first perform a network installation of ArcInfo Workstation on a server to install `Workstation.msi`. You will then deploy `Workstation.msi` to your users. The ArcInfo Workstation setup spans two CDs; you cannot run `setup.msi`—located on the CD—without being prompted for CD #2. Installing a network installation of ArcInfo Workstation enables the `.msi` file to be deployed without prompting for the source location of CD #2. You do not have to perform a network installation for any other supported setups or for Workstation installed from the DVD media. For other products that span more than one CD, you do not have to perform an admin to deploy `setup.msi`. The other setups have been designed so that you can copy the contents of both CDs to your server and deploy `setup.msi` directly.

- For ArcGIS Desktop, you can only switch between software product types using the Desktop Administrator, which requires administrative privileges.
- If installing any of the ArcGIS Desktop Developer Kits, ArcGIS Desktop must already be installed on the same machine.
- If installing any of the ArcGIS Engine Developer Kits, either ArcGIS Engine Runtime or ArcGIS Desktop must already be installed on the same machine.
- If you choose to assign an ArcGIS setup package to a user, it will perform the same as a published package. Assigning an ArcGIS setup to a user will not add a shortcut to your desktop, and the setup will not autoinstall by file extension activation. The setup will be added to the Add New Programs dialog box.

### Deploying ArcGIS 9.2 Service Packs Using Active Directory and Group Policy

Service packs are released as .msp files. A .msp file cannot be directly deployed as a package using Group Policy software deployment. To deploy a .msp file, follow these steps:

1. Apply the .msp file to the admin installation using the following command line:  
`msiexec /a <location of ArcGIS admin installation>\setup.msi /p <location of ArcGIS service pack>\<patchname>.msp`
2. Redeploy the ArcGIS package.
  - Select the package in the Group Policy > Software Settings > Software installation.
  - Right-click the package and click All tasks > Redeploy application.
  - Click Yes to the message, confirming that you want to redeploy the application.
3. Redeployment of the application occurs on the next logon or reboot, depending on how the application was deployed (user-based deployment or computer-based deployment).

### Suggestion

For more information on applying patches to an admin installation, see the [Microsoft Knowledge Base Article 226936](#).

### Software Deployment Using SMS

The ArcGIS 9.2 setups below are supported for deployment using SMS in both a lockdown environment (user installing does not have administrator privileges) as well as an environment where the user installing does have administrator privileges. **Note:** If the user performing the installation does not have administrative permissions, the package must be deployed using Run with administrative rights.

- ArcGIS Desktop.
- ArcInfo Workstation.
- ArcGIS Engine Runtime.
- ArcGIS Engine Developer Kits.
- ArcReader.

- ArcGIS Server for the Java Platform—A user with administrative privileges must run the postinstallation setup.
- ArcGIS Server for the Microsoft .NET Framework—A user with administrative privileges must run the postinstallation setup.
- ArcIMS—A user with administrative privileges must run the postinstallation setup.
- ArcIMS Web ADF for the Java Platform.
- ArcIMS Web ADF for the Microsoft .NET Framework.
- ArcView Single Use—A user with administrative privileges must register the software, or a separate package must be created to run the registration executable with administrative rights. See the section Registering ArcView (Single Use) or ArcEditor (Single Use) below for details.
- ArcEditor Single Use—A user with administrative privileges must register the software, or a separate package must be created to run the registration executable with administrative rights. See the section Registering ArcView (Single Use) or ArcEditor (Single Use) below for details.
- ArcGIS Desktop Developer Kits.

### Registering ArcView (Single Use) or ArcEditor (Single Use)

To perform registration of ArcView/ArcEditor (Single Use) as a user without administrative privileges, create a new SMS package that runs RegisterFixed92.exe using Run with administrative rights. RegisterFixed92.exe should be run from the ArcGIS Installation directory\bin with the following command line: RegisterFixed92.exe /s /LIF=<location of registration file>\<name of registration file>.esu9 For example: C:\Program Files\ArcGIS\bin\RegisterFixed92.exe /s /LIF=D:\RegFiles\registration.esu9

The /s parameter can be used to run this registration tool silently. The registration file (.esu9) cannot be in a location with spaces.

**Note:** You cannot run RegisterFixed9.2.exe directly from the command line as a user without administrative rights. If you do not have administrator privileges, you must create an SMS package and deploy the package using Run with administrative rights.

### Additional System Requirements

In addition to your machine being correctly configured as an SMS client, the following are also required:

- All ArcGIS products that are not of the same version must be uninstalled before installing ArcGIS products.
- All system requirements for products and their features must be met. See the ESRI support site for the latest system requirements. If the system requirements for a feature specified to be installed have not been met, the setup will not fail but the feature will not be installed (e.g., .NET features).
- Microsoft Windows Installer version 3.1 must be installed on the machine.
- MDAC 2.5 or higher must be installed on the machine.

- The machine's System account must have full control of the system drive and the drive to which you will be installing.
- If installing ArcInfo Workstation using the Workstation .msi file, ArcGIS Desktop must also be installed on this machine. The Workstation .msi file does not update system files.
- If installing any of the ArcGIS Desktop Developer Kits, ArcGIS Desktop must already be installed on the same machine.
- If installing any of the ArcGIS Engine Developer Kits, either ArcGIS Engine Runtime or ArcGIS Desktop must already be installed on the same machine.
- ArcReader stand alone should not be installed on a machine that has the ArcGIS Desktop ArcReader feature already installed.
- To install ArcView concurrent use (from the ArcView Concurrent Use media) using SMS, you must include SOFTWARE\_CLASS=Viewer in the command line.

### ***Suggestions***

- It is recommended that you use either one of these methods to deploy from a server location.
  1. Perform an admin installation on the server machine. You can perform an admin install using the standard msixec command-line parameter `msiexec /a <location of setup.msi>`.
  2. Copy the entire contents of the installation media to your server machine for deployment. At a minimum the following files should exist on the server machine for the deployment packages (if applicable, some files or folders may not exist for some setups): .msi file, .cab file(s), .ini file, install.htm, Documentation folder, and Support folder. You cannot copy just the .msi file from the installation media to your server machine for deployment; other associated files are also required.
- When the software is deployed, the Control Panel's Add/Remove Programs dialog box does not enable you to remove the software unless you have administrative privileges; using SMS to manage the uninstall of the software will uninstall with elevated privileges for all users. To uninstall with SMS, create a new package using the `msiexec /x uninstall` command and specify the package to Run with administrative rights.

### ***Known Issues***

- When performing an admin installation of ArcGIS Engine Java Help, you cannot install to a directory structure that contains more than 25 characters (including the \). Some Java files are located in a directory structure that would exceed the Windows 256-character limit. If the Windows character limit is exceeded, you will receive installation error 1335. This will also occur when performing an admin installation of ArcGIS Server for the Java Platform and ArcGIS Engine SDK for Java to a directory structure that contains more than 42 characters (including the \). There are two workarounds for this issue: you can either perform an admin installation to a directory structure that does not exceed the above limits, or you can perform an admin installation at the command line with the additional parameter of `SHORTFILENAMES=TRUE`; for example, `msiexec /a <location of setup>\setup.msi /qb TARGETDIR=<desired installation location> SHORTFILENAMES=TRUE`.

- If you are deploying ArcInfo Workstation, the default workspace directory is C:\Workspace. If you use the default Workspace directory or you specify a different Workspace directory, the user must have write permissions to that directory. If the user does not have write permissions to the Workspace directory, ArcInfo Workstation applications will fail to open.
- This following known issue applies to an installation from CD media only, not an installation from DVD media. If you are planning on deploying ArcInfo Workstation, you must first perform a network installation of ArcInfo Workstation on a server to install Workstation.msi. You will then deploy Workstation.msi to your users. The ArcInfo Workstation setup spans two CDs; you cannot run setup.msi—located on the CD—without being prompted for CD #2. Installing a network installation of ArcInfo Workstation enables the .msi file to be deployed without prompting for the source location of CD #2. You do not have to perform a network installation for any other supported setups or for Workstation installed from the DVD media. In these cases, setup.msi can be directly deployed.
- For ArcGIS Desktop, you can only switch between software product types using the Desktop Administrator, which requires administrative privileges.

## MSI Command-Line Parameters

Standard MSI command-line parameters are used to deploy the software. See [http://msdn.microsoft.com/library/default.asp?url=/library/en-us/msi/setup/command\\_line\\_options.asp](http://msdn.microsoft.com/library/default.asp?url=/library/en-us/msi/setup/command_line_options.asp) for MSI command-line options.

Common msixec command-line parameters include

- /i to install
- /x to uninstall
- /qb to display a basic user interface only (e.g., a progress bar)
- /qn to install with no user interface

The MSI commands specific to ArcGIS products are specified in the topics below. The feature names provided are for ArcGIS 9.2.

### *ArcGIS Desktop*

The following are the command-line switches to execute the ArcGIS Desktop .msi file directly. Use these with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
ESRI_LICENSE_HOST=	Hostname	Yes	Yes	Machine name of license manager.
SOFTWARE_CLASS=	Viewer	Yes	Yes	Installs ArcGIS Desktop as ArcView.
	Editor			Installs ArcGIS Desktop as ArcEditor.
	Professional			Installs ArcGIS Desktop as ArcInfo.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR		Yes	No	ArcGIS Desktop installation location. If not specified, the installation location is C:\Program Files\ArcGIS.
INSTALLDIR1		Yes	No	Python™ installation location. If these features are required and this value is not specified, the default location is C:\Python24.

Specify installation features as follows:

The **ADDLOCAL** command-line parameter can be used to install specific features. If you want to perform a complete installation, use **ADDLOCAL=ALL**. If you want to perform a typical installation, omit the **ADDLOCAL** command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

**ADDLOCAL feature** (Each feature name must be specified; for example, you cannot use **ADDLOCAL=Applications** to install all application subfeatures.)

#### Applications

ArcMap

ArcCatalog

ArcReader

#### Miscellaneous features

TabletPC\_Support

Python

.NET\_Support

#### Extensions

Ext\_3D\_Analyst

ArcScan

**Extensions (continued)**

DataInterop

GeostatisticalAnalyst

Maplex

ArcMap\_Publishing\_Extension

NetworkAnalyst

Schematics

SpatialAnalyst

Survey\_Analyst

TrackingAnalyst

**Styles and templates**

ArcInfoTemplates

Civic\_Business

Civic\_CADD\_GIS\_Center

Civic\_CADD\_GIS\_Center\_SDS200

Civic\_Civic

Civic\_CrimeAnalysis

Civic\_Dimension

Civic\_Hazmat

Civic\_Ordnance\_Survey

Civic\_PublicSigns

Civic\_RealEstate

Civic\_Survey

Civic\_Transportation

Civic\_Utilities

Civic\_Water\_WasteWater

Natural\_Caves

**Styles and templates (continued)**

Natural\_Conservation

Natural\_Environmental

Natural\_Forestry

Natural\_Geology24K

Natural\_Mining

Natural\_Petroleum

Natural\_Petroleum\_UK

Natural\_SoilEuro

Natural\_Weather

TemplateConservationLandscape

TemplateLandscapeClassic

TemplateLandscapeModernInset

TemplateGeneral

TemplateIndustry

TemplateLandscapeModern

TemplateLetterLandscape

TemplateLetterPortrait

TemplateMilitaryPortrait

TemplatePortraitClassic

TemplatePortraitModern

TemplatePortraitModernInset

TemplateUSA

TemplateUtility

TemplateWorld

***ArcView (Single Use)  
or ArcEditor (Single Use)***

The following are the command-line switches to execute the ArcView or ArcEditor .msi file directly. Use these with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcView or ArcEditor installation location. If not specified, the installation location is C:\Program Files\ArcGIS.
INSTALLDIR1			No	Python installation location. If these features are required and this value is not specified, the default location is C:\Python24.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

**ADDLOCAL feature** (Each feature name must be specified; for example, you cannot use ADDLOCAL=Applications to install all application subfeatures.)

**Applications**

ArcMap

ArcCatalog

ArcReader

**Miscellaneous features**

TabletPC\_Support

.NET\_Support

Python

**Extensions**

Ext\_3D\_Analyst

ArcScan

DataInterop

**Extensions (continued)**

GeostatisticalAnalyst

Maplex

ArcMap\_Publishing\_Extension

NetworkAnalyst

Schematics

SpatialAnalyst

Survey\_Analyst

TrackingAnalyst

**Styles and templates**

ArcInfoTemplates

Civic\_Business

Civic\_CADD\_GIS\_Center

Civic\_CADD\_GIS\_Center\_SDS200

Civic\_Civic

Civic\_CrimeAnalysis

Civic\_Dimension

Civic\_Hazmat

Civic\_Ordnance\_Survey

Civic\_PublicSigns

Civic\_RealEstate

Civic\_Survey

Civic\_Transportation

Civic\_Uilities

Civic\_Water\_WasteWater

Natural\_Caves

Natural\_Conservation

Natural\_Environmental

Styles and templates (continued)
Natural_Forestry
Natural_Geology24K
Natural_Mining
Natural_Petroleum
Natural_Petroleum_UK
Natural_SoilEuro
Natural_Weather
TemplateConservationLandscape
TemplateLandscapeClassic
TemplateLandscapeModernInset
TemplateGeneral
TemplateIndustry
TemplateLandscapeModern
TemplateLetterLandscape
TemplateLetterPortrait
TemplateMilitaryPortrait
TemplatePortraitClassic
TemplatePortraitModern
TemplatePortraitModernInset
TemplateUSA
TemplateUtility
TemplateWorld

***ArcInfo Workstation***

The following are the command-line switches to execute the ArcInfo Workstation .msi file directly. Use these with the standard msiexec commands as required.

Parameter	Value	Case Sensitive	Required	Description
LICENSESERVER=	Hostname	No	Yes	Machine name of license manager.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcInfo Workstation installation location. If not specified, the installation location is \ArcGIS.
WORKSPACE			No	The ArcInfo Workspace location. If not specified, the default location is C:\Workspace.

Specify installation features as follows:

The **ADDLOCAL** command-line parameter can be used to install specific features. If you want to perform a complete installation, use **ADDLOCAL=ALL**. If you want to perform a typical installation, omit the **ADDLOCAL** command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

**ADDLOCAL feature** (Each feature name must be specified; for example, you cannot use **ADDLOCAL=Applications** to install all application subfeatures.)

#### CoreArcInfo

ARC

Plotters

Database\_Integrators

ArcDoc

ArcTools

#### CoreArcInfoExtensions

TIN

ArcScan

ArcPress

#### CoreArcInfoExtensions

Network

ArcStorm

<b>CoreArcInfoExtensions (continued)</b>
COGO
ArcGrid
<b>DataConverters</b>
Data_Converter_ADS
Data_Converter_ARCS57
Data_Converter_DFAD
Data_Converter_DIGEST
Data_Converter_DLG
Data_Converter_DTED
Data_Converter_DXF
Data_Converter_ETAK
Data_Converter_GBF_TO_DIME
Data_Converter_GIRAS
Data_Converter_GRID
Data_Converter_GRID_to_ArcInfo
Data_Converter_Graphics_file_to_icon
Data_Converter_IGDS
Data_Converter_IGES
Data_Converter_IMAGE_to_IMAGE
Data_Converter_MOSS
Data_Converter_SDTS
Data_Converter_SLF
Data_Converter_TIGER
Data_Converter_VPF
<b>ArcInfoDeveloperTools</b>
Arc_ActiveX_Automation_Server
ArcEdit_ActiveX_Control

ArcInfoDeveloperTools (continued)
ArcGrid_ActiveX_Control
ArcPlot_ActiveX_Control
Arc_Bean_for_Java
ArcEdit_Bean_for_Java
ArcGrid_Bean_for_Java
ArcPlot_Bean_for_Java
ODE_Tools

**ArcIMS** The following is the command-line switch to execute the ArcIMS .msi file directly. Use this with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcIMS installation location. If not specified, the installation location is C:\Program Files\ArcGIS.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

ADDLOCAL feature
ActiveX_Applications
ActiveX_Connector
Application_Server
ArcMap_Server
ArcMap_Server_Sample
Author
ColdFusion_Applications

<b>ADDLOCAL feature (continued)</b>
ColdFusion_Connector
CSW_Connector
Designer
Developer_Solutions
Docs
HTML_and_Java_Viewers
OAI_CLIENT
OAI_CONNECTOR
Samples
SDE_Administrator
Servlet_Connector
Samples
Server_Components
Service_Administrator
Spatial_Server
Tutorial_Data
WFS_Connector
WMS_Connector
Z3950_Connector

***ArcGIS Server for the Java Platform***

The following are the command-line switches to execute the ArcGIS Server for the Java Platform .msi file directly. Use these with the standard msixec commands as required.

<b>Parameter</b>	<b>Value</b>	<b>Case Sensitive</b>	<b>Required</b>	<b>Description</b>
INSTALLDIR			No	ArcGIS Server installation location. If not specified, the installation location is C:\Program Files\ArcGIS.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR1			No	Python installation location. If these features are required and this value is not specified, the default location is C:\Python24.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

ADDLOCAL feature
Server_object_container
Server_object_manager
Python
Application_Developer_Framework

### *ArcGIS Server for the Microsoft .NET Framework*

The following are the command-line switches to execute the ArcGIS Server for the Microsoft .NET Framework .msi file directly. Use these with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcGIS Server .NET ADF installation location. If not specified, the installation location is C:\Program Files\ArcGIS.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR1			No	Python installation location. If these features are required and this value is not specified, the default location is C:\Python24.
ESRI_RESTART_IIS=	FALSE	Yes	No	This property, when set to TRUE, automatically restarts Internet Information Server (IIS). By default, this property is set to FALSE. FALSE specifies that IIS is not automatically started for you. For ESRI_RESTART_IIS=FALSE to work, ESRI_ASPNET_REGISTER must be set to FALSE.
ESRI_ASPNET_REGISTER=	TRUE	Yes	No	This property, when set to TRUE, will automatically register ASP.NET 2.0 with Microsoft IIS. By default, this property is set to TRUE.
ESRI_WEBAPPS_INSTANCE=	<Instance Name>	Yes	No	The field <Instance name> can be replaced by the name of the ArcGIS Server instance you want to create. If this command-line parameter is not specified, the default instance name is ArcGIS.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

ADDLOCAL feature
Server_object_container
Server_object_manager
Python
VS_NET_Integration
Mobile_ADF
Runtime
Web_ADF
Web_Applications
Software_Developer_Kit
VB_EXPRESS
VCS_Express
WEB_Express

### *ArcIMS Web ADF for the Java Platform*

The following is the command-line switch to execute the ArcIMS Web ADF for the Java Platform .msi file directly. Use this with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcIMS Web ADF installation location. If not specified, the installation location is C:\Program Files\ArcGIS.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

ADDLOCAL feature
Web_Application_Developer_Framework
Java_Connector

***ArcIMS Web ADF  
for the Microsoft  
.NET Framework***

The following are the command-line switches to execute the ArcIMS Web ADF for the Microsoft .NET Framework .msi file directly. Use these with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcIMS Web ADF installation location. If not specified, the installation location is C:\Program Files\ArcGIS.
ESRI_RESTART_IIS=	FALSE	Yes	No	This property, when set to TRUE, automatically restarts IIS. By default, this property is set to FALSE. FALSE specifies that IIS is not automatically restarted for you. For ESRI_RESTART_IIS=FALSE to work, ESRI_ASPNET_
				REGISTER must be set to FALSE. Registering ASPNET automatically restarts IIS regardless of the value of ESRI_RESTART_IIS.

Parameter	Value	Case Sensitive	Required	Description
ESRI_ASPNET_REGISTER=	TRUE	Yes	No	This property, when set to TRUE, automatically registers ASP.NET 2.0 with IIS. By default, this property is set to TRUE.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

ADDLOCAL feature
Runtime
Software_Developer_Kit
Web_ADF
VB_EXPRESS
VCS_Express
WEB_Express
VS_.NET_Integration

### *ArcGIS Engine Runtime*

The following are the command-line switches to execute the ArcGIS Engine Runtime .msi file directly. Use these with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcGIS Engine Runtime installation location. If not specified, the installation location is C:\Program Files\ArcGIS.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR1			No	Python installation location. If these features are required and this value is not specified, the default location is C:\Python24.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

ADDLOCAL feature
ArcEngine
JavaRuntime
DotNetRuntime
Python

**ArcReader**

The following is the command-line switch to execute the ArcReader .msi file directly. Use this with the standard msixec commands as required.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcReader installation location. If not specified, the installation location is C:\Program Files\ArcGIS.

Specify installation features as follows:

The ADDLOCAL command-line parameter can be used to install specific features. If you want to perform a complete installation, use ADDLOCAL=ALL. If you want to perform a typical installation, omit the ADDLOCAL command-line parameter, as a typical installation is performed by default. **Note:** All feature names are case sensitive.

ADDLOCAL feature
ArcReader

**ADDLOCAL feature (continued)**

Tutorial

Documentation

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The command-line parameters `INSTALLDIR` and `ADDLOCAL` can be used for all ArcGIS setups.

### Deploying ArcGIS 9.2 Service Packs Using SMS

Service packs are released as `.msp` files. There are two methods of deploying `.msp` files using SMS:

1. Apply the service pack `.msp` file to an admin installation, and deploy the patched `.msi` file.
2. Deploy the service pack `.msp` file separately from the `setup.msi`.

#### *To Apply the MSP File to an Admin Installation and Deploy the Patched MSI File*

The admin installation is performed on the server machine:

1. Perform an admin installation using `msiexec /a <location of setup.msi>\setup.msi`.
2. Patch the admin using `msiexec /a <location of the admin installation>\setup.msi /p <location of the .msp file>\<patchname>.msp`.
3. Create an SMS package using the patched `.msi` file and deploy it.

#### *To Deploy the Service Pack MSP File Directly*

The service pack `.msp` file can be directly deployed using SMS. The setup for the ArcGIS product must have already been deployed and installed on the client machine.

1. Copy the `.msp` file to the server machine.
2. Create a package to deploy the `.msp` file. The following command-line parameter should be used: `msiexec /p <location of .msp file>\<patchname>.msp REINSTALL=ALL REINSTALLMODE=omus`.

`REINSTALLMODE` must always be equal to `omus`.

`REINSTALL` can be equal to `ALL` to reinstall all features already installed, or you can specify individual features (same feature names as `ADDLOCAL`).

3. Deploy the `.msp` package.

### Summary

Successful deployment requires good planning and implementation of your system environment. To successfully deploy an MSI package, you should have a solid understanding of your chosen software deployment method. This technical paper does not attempt to introduce you to, or educate you on, the usage of SMS or Group Policy. An in-depth understanding of your chosen deployment method is required. For more information on the Windows Installer, transform files, `.msp` files, SMS, Group Policy, or Active Directory, see [www.microsoft.com](http://www.microsoft.com).



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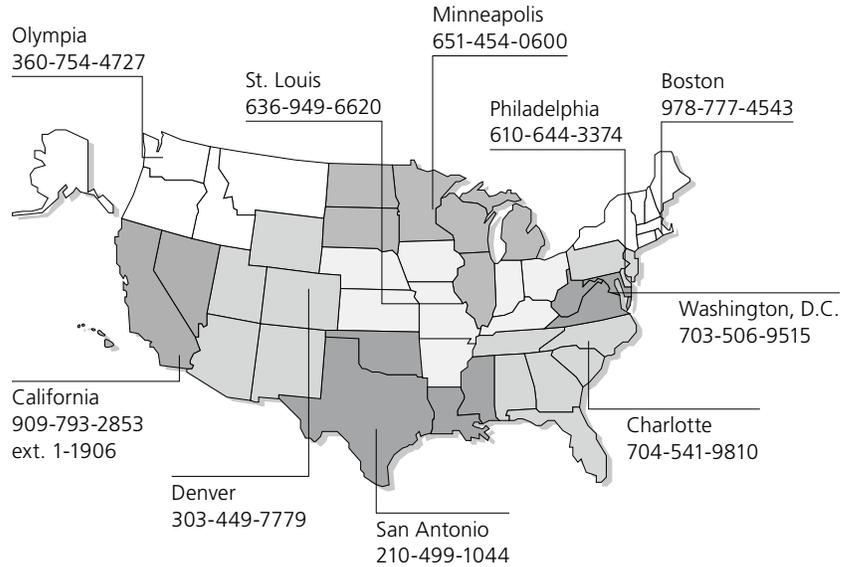
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