



Deploying Managed ArcGIS® 9 Setups

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Deploying Managed ArcGIS 9 Setups

An ESRI Technical Paper

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Deploying Managed ArcGIS 9 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.

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, the .msi file is bundled with the msiexec 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 setups can be installed on many machines by deploying the .msi file directly. Any software deployment method that supports installation using an .msi file can be used

to deploy ArcGIS 9 setups. This paper documents the deployment of ArcGIS 9 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 and 9.1 setups are supported for standard MSI deployment, assuming the user installing them has administrator privileges.

- ArcGIS Desktop
- ArcInfo® Workstation
- ArcGIS Engine Runtime
- ArcGIS Engine Developer Kit
- ArcReader™
- ArcGIS Server
- ArcGIS Server Java™ Application Development Framework (ADF)
- ArcGIS Server .NET ADF
- ArcIMS®
- ArcView® Single Use
- ArcEditor™ Single Use
- ArcGIS Desktop Developer Kit
- ESRI Software Documentation Library

The following ArcGIS 9 setups are also supported for deployment in a lockdown environment (user installing does not have administrator privileges).

- ArcGIS Desktop
- ArcInfo Workstation
- ArcGIS Engine Runtime
- ArcReader

The following ArcGIS 9.1 setups are also supported for deployment in a lockdown environment (user installing does not have administrator privileges).

- ArcGIS Desktop
- ArcInfo Workstation
- ArcGIS Engine Runtime
- ArcGIS Engine Developer Kit
- ArcReader
- ArcGIS Server
- ArcGIS Server Java ADF
- ArcGIS Desktop Developer Kit
- ESRI Software Documentation Library

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 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 2.0 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 setups can only be deployed to a user 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 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 Service Packs Using Active Directory and Group Policy*, for more information.
 2. Copy the entire contents of the CD 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 CD 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.
 - **ArcGIS Desktop**—The default installation directory is C:\Program Files\ArcGIS. To install to a different location, follow the steps below. This example uses Wise for Windows Installer to create the transform.
 1. In MSI Script, under Normal Installation mode, view the Custom Actions in the Execute Immediate sequence.
 2. Locate the following custom action: Call Custom DLL from Destination [SourceDir]Support\AiSetup.dll Function RemovedDirAndReset [ESRI_APPEND_ARCGIS]
 3. Above this custom action, add a Set Directory custom action.
 4. Name the custom action, set the Directory to INSTALLDIR, and set the Directory Value to the installation location (e.g., [WindowsVolume]\Desktop).
 - **ArcInfo Workstation**—The default installation directory is C:\ArcGIS\arcexe9x. To install to another location, follow the steps below. This example uses Wise for Windows Installer to create the transform.
 1. In Setup Editor, create a new Property called INSTALLDIR.
 2. The value of this INSTALLDIR property is the installation location where you want ArcInfo Workstation to be installed (e.g., C:\Workstation9).

Known Issues

- When performing an admin installation of ArcGIS Server, ArcGIS Engine Developer Kit, or ArcGIS Server Java ADF, you cannot install to a directory structure that contains more than 28 characters (including the \). Some Java samples are located in a directory structure that would exceed the Windows 256-character limit. If the Windows character limit is exceeded, file names will be truncated. When a client performs an installation from this admin location or a service pack is applied to this admin location, the installation will result in an error because it cannot find the correct file (because the file name has been truncated).
- 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 deploying the setup per user rather than per machine, the License Manager registry key for any subsequent user that installs will be incorrect. The License Manager will be specified as @@<License Manager> instead of @<License Manager>. To correct this, an administrator will need to log in and change the License Manager registry key to remove the additional @ or use the Desktop Administrator to remove the @. If only one user is installing, this is not an issue. Another workaround for this issue is for the administrator to set up a new environment variable on each of these machines. The environment variable is ARCGIS_LICENSE_FILE=@<license manager machine name>. This environment variable will specify the license manager to be used by each of the machines, regardless of what the registry key states. This environment variable would only have to be set once, so you would not have to keep resetting the registry key after each additional user installs on the machine.
- 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.
- 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. 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.
- 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 Service Packs Using Active Directory and Group Policy

Service packs are released as .msp files. An .msp file cannot be directly deployed as a package using Group Policy software deployment. To deploy an .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 setups below are supported for deployment using SMS. **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 Kit.
- ArcReader.
- ArcGIS Desktop Developer Kit.
- ESRI Software Documentation Library.
- ArcGIS Server .NET ADF.
- ArcGIS Server Java ADF.
- ArcGIS Server—A user with administrative privileges must run the postinstallation setup.
- ArcIMS—A user with administrative privileges must run the postinstallation setup.
- 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.

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 RegisterFixed9.exe using Run with administrative rights. RegisterFixed9.exe should be run from the ArcGIS Installation directory\bin with the following command line: RegisterFixed9.exe /LIF=<location of registration file>\<name of registration file>.esu9 For example: C:\Program Files\ArcGIS\bin\RegisterFixed9.exe /LIF=D:\RegFiles\registration.esu9

Note: You cannot run RegisterFixed9.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 2.0 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 ArcGIS Desktop Developer Kit, 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 CD) 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 msixec /a <location of setup.msi>.

2. Copy the entire contents of the CD 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 CD 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 Server, ArcGIS Engine Developer Kit, or ArcGIS Server Java ADF, you cannot install to a directory structure that contains more than 28 characters (including the \). Some Java samples are located in a directory structure that would exceed the Windows 256-character limit. If the Windows character limit is exceeded, file names will be truncated. When a client performs an installation from this admin location or a service pack is applied to this admin location, the installation will result in an error because it cannot find the correct file (because the file name has been truncated).
- 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.
- If you are planning on deploying ArcInfo Workstation, you must first perform a network installation of ArcInfo Workstation on the server to install Workstation.msi. You will then deploy Workstation.msi to your users. The ArcInfo Workstation setup spans two CDs; you cannot run the setup.msi file—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. You do not have to perform a network installation for any other supported setups. 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://www.microsoft.com/windowsxp/home/using/productdoc/en/default.asp?url=/WINDOWSXP/home/using/productdoc/en/sag_WinInstall_Command_Line_Syntax.asp for MSI command-line options.

Common msiexec 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 9.1. To obtain feature names for an earlier release of ArcGIS, see the Install Guide for the product you are installing.

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
INSTALLDIR		Yes	No	ArcGIS Desktop installation location. If not specified, the installation location is C:\Program Files\ArcGIS.

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR1		Yes	No	Python™ and Win32 extension installation location. If these features are required and this value is not specified, the default location is C:\Python21.

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

Miscellaneous features (continued)

.NET_Support

Extensions

Ext_3D_Analyst

ArcScan™

DataInterop

GeostatisticalAnalyst

Maplex

ArcMap_Publishing_Extension

NetworkAnalyst

Schematics

SpatialAnalyst

Survey_Analyst

TrackingAnalyst

Styles and Templates

ArcInfoTemplates

Styles and Templates (continued)

ArcInfoStyles

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

Styles and Templates (continued)

Natural_Caves

Natural_Conservation

Natural_Environmental

Natural_Forestry

Natural_Geology24K

Natural_Mining

Natural_Petroleum

Natural_Petroleum_UK

Natural_SoilEuro

Natural_Weather

TemplateConservationLandscape

TemplateLandscapeClassic

TemplateLandscapeModernInset

TemplateGeneral
TemplateIndustry
Styles and Templates (continued)
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.
Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR1			No	Python and Win32 extension installation location. If these features are required and this value is not specified, the default location is C:\Python21.

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

GeostatisticalAnalyst

Maplex

ArcMap_Publishing_Extension

NetworkAnalyst

Schematics

SpatialAnalyst

Survey_Analyst

TrackingAnalyst

Styles and Templates

ArcInfoTemplates

ArcInfoStyles

Styles and Templates (continued)

Civic_Business

CivicAndBusiness

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
Styles and Templates (continued)
Civic_Water_WasteWater
Natural_Caves
Natural_Conservation
Natural_Environmental
Natural_Forestry
Natural_Geology24K
Natural_Mining
Natural_Petroleum
Natural_Petroleum_UK
NaturalResources
Natural_SoilEuro
Natural_Weather
TemplateConservationLandscape

TemplateLandscapeClassic

TemplateLandscapeModernInset

Styles and Templates (continued)

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
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

CoreArcInfo (continued)

ArcDoc™

ArcTools™

CoreArcInfoExtensions

TIN

ArcScan

ArcPress™

Network

ArcStorm™

COGO

ArcGrid™

DataConverters

Data_Converter_ADS

Data_Converter_ARCS57

Data_Converter_DFAD

Data_Converter_DIGEST

Data_Converter_DLG

Data_Converter_DTED

Data_Converter_DXF

Data_Converter_ETAK

DataConverters (continued)

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

ArcInfoDeveloperTools

Arc_ActiveX_Automation_Server

ArcEdit_ActiveX_Control

ArcGrid_ActiveX_Control

ArcPlot_ActiveX_Control

Arc_Bean_for_Java

ArcInfoDeveloperTools (continued)
ArcEdit_Bean_for_Java
ArcGrid_Bean_for_Java
ArcPlot_Bean_for_Java
ODE_Tools

ArcIMS The following are the command-line switches to execute the ArcIMS .msi file directly. Use these 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
.NET_Link
.NET_Link_Sample
ActiveX_Applications
ActiveX_Connector

ADDLOCAL feature (continued)

Application_Server

Application_Server_Connectors

ArcMap_Server

ArcMap_Server_Sample

ColdFusion_Applications

ColdFusion_Connector

CSW_Connector

Docs

Gazetteer_Data

HTML_and_Java_Viewers

Java_and_JSP_Applications

Java_Connector

Manager

Metadata_Explorer

Metadata_Explorer_App

Metadata_Explorer_Sample

OAI_CLIENT

OAI_CONNECTOR

Samples

ADDLOCAL feature (continued)
SDE_Administrator
Servlet_Connector
SerConverter
Spatial_Server
Tutorial_Data
WFS_Connector
WMS_Connector
Z3950_Connector

ArcGIS Server

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

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcGIS Server 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

Server

Server_object_container

SOC_DotNet

SOC_Java

Server_object_manager

Software_Developer_Kit

Software_Developer_Kit_COM

Software_Developer_Kit_.NET

SDK_Java

Addins

CPlusPlus

VB

ArcGIS_Developer_Samples

***ArcGIS Server .NET
Application
Developer
Framework***

The following are the command-line switches to execute the ArcGIS Server .NET ADF .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.

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
DotNET_ADF
Runtime
Developer_Kit
VS_Integration
Developer_Help
ArcGIS_Developer_Samples

**ArcGIS Server Java
Application
Developer
Framework**

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

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcGIS Server Java 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
Java_ADF
Runtime
Software_Developer_Kit
Developer_Resources
Samples

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.

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

ArcReader The following are the command-line switches to execute the ArcReader .msi file directly. Use these 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
Tutorial
Documentation
DotNetRuntime
TabletPC_Support

***ArcGIS Desktop
Developer Kit***

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

Parameter	Value	Case Sensitive	Required	Description
INSTALLDIR			No	ArcGIS Desktop Developer Kit 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
C
DotNet
Software_Developer_Kit
VB
Samples
COM
AddIns

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

Deploying ArcGIS 9 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.