ArcGIS® Migration FAQ

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ArcGIS Migration FAQ

This document answers the most common questions regarding migrating from ArcGIS® 8.3 to ArcGIS 9.0 or 9.1. Migration issues between ArcGIS 9.0 and 9.1 are also discussed. This document is divided into the following sections:

- Migrating Maps
- Migrating Data
- Migrating Custom Applications
- Migrating ArcGIS Server
- Migrating ArcIMS

Migrating Maps

- Can I open ArcGIS 8.3 map documents in ArcGIS 9.0 and/or 9.1?

  - All ArcGIS 8.3 map documents or documents from earlier versions of ArcGIS can be opened in either ArcGIS 9.0 or 9.1. However, if you save the document with ArcGIS 9.0 or 9.1 software, even if you did not change anything, the document will no longer be usable in ArcGIS 8.3.

- Can I open ArcGIS 9.0 documents in ArcGIS 9.1?

  - There have been no changes in the document structure from ArcGIS 9.0 to 9.1, so map documents from either version can be opened, saved, and reopened in either version.

- How do I make ArcGIS 9.1 map documents usable by ArcGIS 8.3?

  - The new Save A Copy functionality for map documents added at ArcGIS 9.1 is designed to allow map documents to be saved to the ArcGIS 8.3 format. It is important to note that the Save A Copy functionality is only for map documents and does not include the saving of data referenced by the map document into a format usable by ArcGIS 8.3. Anything in your map document that references functionality not available in ArcGIS 8.3 (such as the Maplex™ for ArcGIS extension and JPEG 2000 image format) will either not be saved to the document or will be converted to functionality compatible with ArcGIS 8.3. For instance, Maplex for ArcGIS properties in a map will be converted to ESRI® Standard Label Engine properties when saved to ArcGIS 8.3. When you run the Save A Copy command in ArcGIS 9.1 and select an ArcMap™ 8.3 document as your output option, you will be presented with a dialog box listing the layers that will not be usable in ArcGIS 8.3 because they reference data that is not compatible with ArcGIS 8.3. For information on saving your data to the ArcGIS 8.3 format, see Knowledge Base article 26998 (http://support.esri.com/index.cfm?fa= knowledgebase.techarticles.articleShow&d=26998).

■ If the Save A Copy format does not save my data, then what is its purpose?

● The Save A Copy functionality is designed for those organizations migrating from ArcGIS 8.3 to 9.1 in a stepwise process. The client machines are usually migrated first, so there would be users running the ArcGIS 9.1 software pointing to ArcGIS 8.3 geodatabases. These users would be able to save their documents and share them with ArcGIS 8.3 users since the documents would only reference ArcGIS 8.3 data.

■ Ever since ArcGIS 8.3 Service Pack 3, my linear referencing events do not seem to be dynamically updating with the data. How do I fix this?

● With service pack 3 for ArcGIS 8.3, performance of linear referencing display and query was improved by caching the display. An event layer relies on the events fired by the geodatabase object model to know when to update its cache. If the event table is edited by an application that causes the geodatabase events to be fired, for example, ArcMap, the event layer recognizes the changes and the cache is updated. If the event table is being edited by software that does not cause the geodatabase events to be fired, for example, SQL*Plus®, the client application does not recognize that changes have been made and uses cached event data. Caching and Route Events in Knowledge Base article 25846 has more information on how to change this behavior (http://support.esri.com/index.cfm?fa=knowledgebase.techarticles.articleShow&d=25846).

ArcIMS® ArcMap Server also leverages this caching mechanism. For more information on event layers in ArcIMS ArcMap Server see Knowledge Base article 28223 (http://support.esri.com/index.cfm?fa=knowledgebase.techarticles.articleShow&d=28223).

Migrating Data

Simple Data Migration

■ Do I need to do anything to migrate my shapefile and coverage data?

● No. Shapefile and coverage data remain unchanged with ArcGIS 9.1. All existing map documents and applications will continue to work normally with this data.

Geodatabase Migration

■ What is the recommended path for migrating geodatabases and applications from ArcGIS 8.3 to 9.0?

● Upgrade the software on all client machines.

● Upgrade the software on all server machines.

● Upgrade the geodatabase.

♦ Personal geodatabase—In ArcCatalog™, open the properties of the geodatabase and click Upgrade Personal Geodatabase.

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♦ Multiuser geodatabase—Use the ArcSDE® postinstallation tools or the SDESETUP<RDBMS> command.

● Run additional processes for upgrading annotation and rasters.

● Recompile all custom ArcObjects™ applications.

■ How do I migrate my geodatabase annotation from ArcGIS 8.3 to 9.0?

● ArcGIS 9.0 has significant improvements for annotation features. See What's New in ArcGIS Desktop (http://downloads.esri.com/support/documentation/ao_/725Whats_New_In_ArcGIS_Desktop_90.pdf) for more information on the capabilities of ArcGIS 9.0 and migration strategies.

■ Does migration of geodatabase annotation change at ArcGIS 9.1?

● Slightly. With ArcGIS 9.0, geodatabase annotation cannot be versioned for the migration to take place. With ArcGIS 9.1, the Update Annotation Feature Class tool in the ArcToolbox™ Data Management ToolsFeature Class toolset can now be used on versioned feature classes. The option to Populate Attribute Fields must be unchecked. The schema of the feature class will be updated in this case, but the new annotation fields will not be populated. Attribute values for a feature will remain blank until the feature is edited.

■ Does Save As support saving geodatabases?

● No. Save As only works with map documents (MXDs), scene documents (SXDs), and layers (LYRs). However, you can move data between geodatabase release versions by copying the feature classes to a geodatabase that was built in the previous version. For more information see http://support.esri.com/index.cfm?fa=knowledgebase.techarticles.articleShow&d=26998.

■ Can I display and query my ArcGIS 8.3 geodatabase in ArcGIS 9.0?

● Yes. ArcGIS 9.0 can display and query an ArcGIS 8.3 geodatabase if you are using a three-tier connection. You will not be able to connect an ArcGIS 9.0 client to an ArcGIS 8.3 multiuser geodatabase using direct connect.

Multiuser Geodatabase Migration

■ How can I upgrade my geodatabase raster data format from ArcGIS 8.3 to ArcGIS 9.0?

● A technical paper outlines the paths for upgrading geodatabase raster data from ArcGIS 8.3 to ArcGIS 9.0. It covers raster datasets, embedded raster catalogs, and referenced raster catalogs. In most cases, reloading the data to ArcSDE is not required when upgrading from ArcGIS 8.x to ArcGIS 9.0. To view this technical paper, visit http://support.esri.com/index.cfm?fa=knowledgebase.whitepapers.viewPaper&PID=43&MetaID=884.

■ What are the issues for migrating direct connects from ArcGIS 8.3 to 9.x.?

● If using ArcSDE direct connect, the version of ArcGIS Desktop must be the same as the geodatabase version. This means that if you are using ArcGIS 8.3 Desktop and you use direct connect, when you upgrade to ArcGIS 9.x, you will not be able to connect to your geodatabase until you run the ArcGIS 9.x version of SDESETUP<DBMS> on your geodatabase to bring the geodatabase up to the ArcGIS 9.x version. Then ArcGIS 9.x Desktop can use direct connect to the ArcGIS 9.x geodatabase. This makes upgrading a bit trickier than if using only the ArcSDE application server (which does allow ArcGIS 9.x clients to connect to ArcGIS 8.3 geodatabases). This is because direct connect is still ArcSDE. It is just built as a DLL, and the gsrvr work is now done in the process space of the client rather than as an executable running for the user's connection on the server machine. So, as an ArcGIS 8.3 gsrvr (application server) would not work on an ArcGIS 9.x geodatabase, it follows that an ArcGIS 8.3 direct connect will not work on an ArcGIS 9.x geodatabase.

■ Why should I consider migrating to the ArcSDE single database model with Microsoft® SQL Server?

● ArcSDE 9.x for SQL Server now includes a single database model (it is no longer necessary for the geodatabase metadata tables and user tables to be stored in separate databases). Whether you should migrate to this new model depends on how comfortable you are with two databases and whether you have all their administration worked out. If you are comfortable with your current implementation, then there is probably no compelling reason to switch. However, we do encourage new users to go with the single spatial database model. Following are some pros and cons of the multidatabase model for customers contemplating the switch.

♦ Pros

◊ Manage each database as a separate geodatabase—no shared versioning tables, no overhead of cross-database queries, and no overhead of managing distributed transactions between databases.

◊ Backups can be managed on a database-by-database basis.

◊ Security is implemented at the database level.

◊ Data is physically and logically separated on a single instance of SQL Server.

◊ There are separate versioning models per geodatabase.

♦ Cons

◊ Limit cross-database querying and joining from a single connection.

Migrating Custom Applications

■ How do I migrate my ArcObjects code from ArcGIS 8.3 to 9.0?

● The [Migrating from 8.3 to 9.0](#) help topic on the ESRI Developer Network (EDN℠) outlines this process ([http://edndoc.esri.com/arcobjects/9.1/default.asp?URL=/arcobjects/9.1/ArcGISDevHelp/TechnicalDocuments/Migrating/Migratingfrom83to90.htm](#)).

■ Why do my Visual Basic® modeless forms no longer work with ArcGIS 9.x?

● For performance reasons, with ArcGIS 9.x, Visual Basic for Applications (VBA) is not automatically initialized when ArcGIS applications start up. Deferring the initialization of VBA when an ArcGIS application starts can cause modeless forms implemented in Visual Basic ActiveX® DLLs to fail. There are several solutions to this issue outlined in the [Using modeless Visual Basic dialogs in ArcGIS](#) help topic on the ESRI Developer Network ([http://edndoc.esri.com/arcobjects/9.1/default.asp?URL=/arcobjects/9.1/ArcGISDevHelp/TechnicalDocuments/ModelessVBDialogs.htm](#)).

■ Do ArcObjects applications created with ArcGIS 9.0 need to be modified to work with ArcGIS 9.1?

● In most cases, no. Small changes made to Motif® widgets, Java™ visual components, and the ArcGIS Server Java Application Development Framework (ADF) could require slight changes. See the [Migrating from 9.0 to 9.1](#) help topic on the ESRI Developer Network for more information ([http://edndoc.esri.com/arcobjects/9.1/default.asp?URL=/arcobjects/9.1/ArcGISDevHelp/TechnicalDocuments/Migrating/Migratingfrom90to91.htm](#)).

■ What's new for developers with ArcGIS 9.1?

● Several changes have been made to the type libraries, ArcGIS controls, and developer tools. For more information, see the [What's New at 9.1 for ArcGIS Developers](#) help topic on the ESRI Developer Network ([http://edndoc.esri.com/arcobjects/9.1/default.asp?URL=/arcobjects/9.1/ArcGISDevHelp/WhatsNewAt9_1.htm](#)).

■ What has changed for .NET development from ArcGIS 8.3 to 9.0?

● See the [Migrating .NET code from ArcGIS 8.3 to 9.0](#) help topic on the ESRI Developer Network ([http://edndoc.esri.com/arcobjects/9.1/default.asp?URL=/arcobjects/9.1/ArcGISDevHelp/TechnicalDocuments/Migrating/MigratingDotNetCode.htm](#)).

■ How have the type libraries changed between ArcGIS 8.3 and ArcGIS 9.0?

● There were significant changes to the type libraries with ArcGIS 9.0. Most of these changes are new types exposing the new functionality, but there were also a significant number of types that were removed or hidden. For a complete list, see

the Type Changes between ArcGIS 8.3 and ArcGIS 9.0 help topic on the ESRI Developer Network (http://edndoc.esri.com/arcobjects/9.0/default.asp?URL=/ arcobjects/9.0/ArcGISDevHelp/TechnicalDocuments/Migrating/ Diff83And9.htm).

■ How have the type libraries changed between ArcGIS 9.0 and ArcGIS 9.1?

● Most of the type changes between ArcGIS 9.0 and 9.1 were centered on the extensions: ArcGIS Network Analyst, ArcGIS Schematics, ArcGIS 3D Analyst™, ArcGIS Spatial Analyst, and so on. However, there were some small changes to the core libraries (examples include Geoprocessing and WMS layer support). For a complete list, see the Type Changes between ArcGIS 9.0 and ArcGIS 9.1 help topic on the ESRI Developer Network (http://edndoc. esri.com/arcobjects/9.1/default.asp?URL=/arcobjects/9.1/ArcGISDevHelp/ TechnicalDocuments/Migrating/Diff90And91.htm).

■ What helper utilities exist?

● Various tools are available to help you migrate your source code to work with ArcGIS 9.x. These tools were used internally by ESRI to update the ArcGIS Developer samples for ArcGIS 9.x.

♦ Visual Basic 6—The Visual Basic 6 Code Converter add-in will automatically do the following to the currently loaded Visual Basic project and all contained code modules:

◊ Remove the ESRI Object Library entry from the project's references.

◊ Replace all occurrences of esriCore in the source code with the appropriate library name. For example, Set pPoly = New esriCore.Polygon will be replaced by Set pPoly = New esriGeometry.Polygon.

◊ Add all the required new references to the project according to object types found in the code, even if they are not prefixed by the library name. For example, if Dim pPoly As IPolygon is found, then a reference to esriGeometry is added.

◊ Compile the project.

The Visual Basic 6 Code Converter add-in can also be run in batch mode, allowing many VB projects to be converted in one process. When it finds any problems with the automatic conversion, these problems are logged and reported upon completion, allowing manual inspection and correction.

♦ .NET—The .NET Code Converter add-in for C# or Visual Basic .NET solutions operates in a similar manner to the Visual Basic 6 add-in.

♦ Library Locator—The Library Locator is a utility for finding the type library that contains a specified interface, coclass, enumeration, or structure. You can also get this information from the ArcGIS Developer Help.

♦ Visual Basic 6 Automatic References add-in—The Visual Basic 6 Automatic References add-in is useful for quickly adding type library references to a project.

Migrating ArcGIS Server

■ Are there any major issues upgrading from ArcGIS 9.0 Server to ArcGIS 9.1 Server?

● No. Upgrading to ArcGIS 9.1 Server from ArcGIS 9.0 Server is very straightforward. A simple uninstall-reinstall will upgrade the software without the need to change any configuration files or rebuild server objects.

■ Will my ArcGIS 9.0 MXDs work with an ArcGIS 9.1 Server install?

● Yes. This is true for both Windows® and UNIX®, provided that the paths to the data are still valid.

■ Will my ArcGIS 9.0 Server ADF applications work with an ArcGIS 9.1 Server install?

● Yes, but only for the .NET ADF. There are issues with the Java ADF that are documented in Knowledge Base article 28222 (http://support.esri.com/index.cfm?fa=knowledgebase.techarticles.articleShow&d=28222).

Migrating ArcIMS

■ Are there any known issues migrating an HTML Viewer application from ArcIMS 9.0 to 9.1?

● There are two known issues. You may get an error when opening an HTML Viewer that says "AxlParser: acetate layer—'coords' not found in POINT". The fix for this problem is described in Knowledge Base article 26811. You may also have a problem with geocoding. The fix for this problem is covered in Knowledge Base article 26954. Otherwise, an HTML Viewer created in ArcIMS 4.0.1 or 9.0 should work in ArcIMS 9.1 without any additional modifications. These two issues were fixed in ArcIMS 9.1.

Article 26811
● http://support.esri.com/index.cfm?fa=knowledgebase.techArticles.articleShow&d=26811

Article 26954
● http://support.esri.com/index.cfm?fa=knowledgebase.techArticles.articleShow&d=26954

■ Are there any known issues migrating the Java Standard Viewer or Java Custom Viewer from ArcIMS 9.0 to 9.1?

- At ArcIMS 9.1, the Java Viewers do not automatically prompt a download of the Java 2 Runtime Environment (JRE). Instead of prompting the download, the Java Custom Viewer shows the error message "No JDK 1.3 Support for APPLET!!" The Java Standard Viewer shows a blank screen. For more information, see Knowledge Base article 28943 (http://support.esri.com/index.cfm?fa= knowledgebase.techArticles.articleShow&d=28943).

■ Are there any known issues migrating applications from ArcIMS 9.0 to ArcIMS 9.1 using the ActiveX Connector, ColdFusion® Connector, Java Connector, or .NET Link?

- No. There are no known issues migrating applications using any of these connectors.

■ Are there any known issues migrating the Metadata Explorer or Advanced Metadata Explorer from ArcIMS 9.0 to 9.1?

- Yes. Metadata services have undergone many changes. The clients must be modified to work with these changes. Because the changes were extensive, it is recommended to start with an ArcIMS 9.1 version of the application and reapply your customizations.

■ Are there any changes in ArcXML™ that would affect ArcIMS 9.1 applications?

- No, except for the metadata elements.

■ If I upgrade ArcIMS to 9.1, must I also upgrade ArcSDE?

- No, except if you are using metadata services. ArcIMS 9.1 is backward compatible with earlier versions of ArcSDE. If you are using metadata services, you must update both ArcIMS and ArcSDE.

■ Are there any known issues migrating the Java Standard Viewer or Java Custom Viewer from ArcIMS 9.0 to 9.1?

- Yes. The JRE security model changed beginning with JRE 1.4.2_01. ArcIMS 9.1 is using JRE 1.4.2_06. If in ArcIMS 9.1, you use a Java Standard or Java Custom Viewer that was originally created in ArcIMS 9.0 or earlier, you may find that the viewer is much slower or appears to hang. This is not always the case but is a possibility. More information on this problem is available at http://support.esri.com/index.cfm?fa=knowledgebase.techarticles. articleShow&d=26940.