

1.0 About Autodesk MapGuide Enterprise

1.1 What is Autodesk MapGuide Enterprise?

Autodesk MapGuide® Enterprise is Autodesk's new web mapping platform that allows developers to rapidly develop and deploy valuable spatial applications. It works with the latest PHP, .NET, and Java™ tools to quickly build powerful applications for Windows or Linux server environments.

Developers can also easily publish spatial views internally, over the web, or using Autodesk's DWF viewing technology for offline portability. Applications built using Autodesk MapGuide Enterprise give customers, internal teams, and the public a faster, easier, and more flexible way to query, analyze, and view critical spatial information.

1.2 What are some of the features of Autodesk MapGuide Enterprise?

MapGuide Enterprise lets users develop and deploy web-based applications that provide distributed usage of centralized spatial and design data.

MapGuide Enterprise features include:

- Linux and Microsoft Windows platform support
- Server-side programming and application delivery using PHP, ASP.NET or Java/JSP
- Plug in access for new data sources without requiring a recompile of the core server
- Support for simultaneous connections (parallel or simultaneous queries) to multiple database servers, residing locally or on Unix or Windows systems accessible via the network.
- A built in access-based security model to support delivery of your data or application to authorized users only
- Scalability: Servers can be added to provide specific services, such as raster map rendering. Takes full advantage of multiprocessor architectures.
- Choice of two viewing tools supporting either vector-based or raster based maps
- Support for portable viewing applications using "disconnected" mode
- Opportunity to customize viewing using the DWF Viewer API

1.3 Is this open source software?

No, Autodesk MapGuide Enterprise is the commercial version based on an active open source project, MapGuide Open Source, available at www.mapserverfoundation.org.

1.4 What's the difference between the commercial and open source versions?

Both versions share the majority of core functionality. The open source version benefits from the general characteristics of collaborative software development: multiple contributors, faster innovation, and low cost of ownership.

The commercial version offers the following added value:

- **Additional quality assurance.** Autodesk MapGuide Enterprise is the "certified" version of the open source software, and has been subjected to commercial test engineering processes by Autodesk.

- **Commercial-grade support.** Organizations hosting mission-critical applications need more support than an open source community can typically offer. These organizations can choose from different levels of support offered by Autodesk.
- **Connectivity to Oracle and SQL Server.** Organizations using commercial-grade database systems will benefit from robust access to their data stores.
- **Third-party components,** such as the Mentor coordinate system make application development easier and give customers greater compatibility with other Autodesk products that share those components.
- **Localized versions.** Autodesk MapGuide Enterprise is available in English, Spanish, French, German, Italian and Japanese. While localized versions may be available through open source, the commercial versions will have undergone Autodesk's software testing procedures and be available with commercial support.

1.5 Who can use MapGuide Enterprise?

MapGuide Enterprise benefits any organization that needs to integrate and distribute maps and spatial information inside or outside their organization. MapGuide Enterprise helps users develop, manage, and distribute GIS (geographical information systems) and design applications on the Internet or an intranet, broadening access to crucial geospatial and digital design data.

1.6 What is Autodesk MapGuide Studio?

Autodesk MapGuide Studio is the authoring environment designed for Autodesk MapGuide Enterprise. It handles all aspects of integrating and preparing geospatial data for distribution on the Internet. Modeled after popular web development tools, Studio provides a unified environment that enables you to rapidly create spatial applications using a developer-friendly interface.

1.7 What are some of the features of Autodesk MapGuide Studio?

Autodesk MapGuide Studio provides a developer-friendly authoring environment that puts files and resources close at hand, and provides the ability to preview the application you're creating it. Key features include:

- The ability to perform all aspects of authoring a site, from uploading data files and connecting to databases to creating maps, remotely over the web.
- Automatically create thematic rules based on attributes in the geo-spatial data.
- Preview each resource as it is being created including layers, maps, and the viewer layout.
- The ability to load a number of common file formats, including SDF, SHP, DWG, and raster.
- Intuitive .NET-compatible API to allow automation of common tasks such as load, move, rename, delete, etc.
- Management of server-side resources from altering access permissions to defining OpenGeospatial meta-data.
- Integrate business logic written in PHP, ASP.NET, or Java directly into the application and preview it within Studio.

- Create a single application that works with both the DWF-based viewer and the AJAX viewer.
- Creation and management of symbol libraries

2.0 Technical Information

2.1 What are the system requirements for Autodesk MapGuide Enterprise?

Viewer

Autodesk MapGuide Enterprise offers two viewer technologies: A DWF™-based viewer and an AJAX viewer.

- The DWF-based viewer supports Windows 98 SE, Windows 2000 (SP2), Windows XP Professional and Home Edition, and Internet Explorer 5.01 and later.
- The AJAX viewer uses Asynchronous JavaScript and XML to deliver maps and spatial data to the browser. It does not require a plug-in and supports most browsers, including Internet Explorer, and Firefox™.

Server

- Linux: Red Hat Enterprise ES 3.0
- Windows: Windows Server 2003 and Windows 2000

Windows XP Professional may be used for demonstration purposes, but it is not a supported server platform. IIS on XP supports a very limited number of HTTP connections, and is not recommended for this reason. Apache is the recommended web server if you choose to use Windows XP for demonstration purposes.

Web Servers

- Apache HTTP Server 2.0
- Microsoft IIS 5.0 on Windows 2000
- Microsoft IIS 6.0 on Windows Server 2003
- Tomcat Servlet engine version 5.5.9

Scripting Languages

- PHP 5.0.5
- .NET 2.0
- Java Development Kit 1.5.0

There is 100% consistency among the API calls for each language.

2.2 What spatial data formats are supported?

Using Feature Data Object (FDO) data access technology, Autodesk MapGuide Enterprise takes advantage of data from:

- Oracle (9i R2, and 10g R1 and R2)
- Microsoft SQL Server
- ArcSDE™ 9 on Oracle and SQL Server
- SDF+
- MySQL

- ESRI® ArcView™ SHP
- ODBC
- WMS/WFS
- Multiple raster formats

2.3 What is FDO?

Feature Data Object (FDO) is an API that enables Autodesk MapGuide Enterprise to read data in an external geospatial data repository such as Oracle® Spatial.

2.4 What is SDF+?

SDF+ is an Autodesk term that identifies the next generation/version of the SDF format. SDF (Spatial Data File) is an Autodesk file format that is used to store GIS features. Today, an SDF file contains primarily a list of features (points, polylines, and polygons). In addition to the geometry coordinate data, each feature has these three attributes: name, key, and URL entry. SDF supports a mechanism that allows a feature to be quickly “looked up” based on either its key or its spatial location.

SDF+ supports general attributes beyond the three specific attributes supported by SDF. The *.sdf* file extension will continue to be used for new SDF+ files.

2.5 Can Autodesk MapGuide Enterprise use SDF 2.x files?

Yes. The Autodesk MapGuide 6.5 server supports/reads SDF version 2.x. The Autodesk MapGuide Enterprise server supports/reads SDF version 3.0. To use SDF 2.x data files in Autodesk MapGuide Enterprise, you can use Studio to convert the SDF from 2.x to 3.0, and then upload the SDF file to the Server.

2.6 Can Autodesk MapGuide Enterprise publish DWG files?

Yes. DWG files are transformed on-the-fly to either DWF or SDF+ by Studio and uploaded to the Server.

2.7 What level of interoperability can I expect between Autodesk Map 3D and Autodesk MapGuide Enterprise?

You can easily share Autodesk Map® 3D DWG files with Autodesk MapGuide Enterprise, including Display Manager maps. Use Autodesk MapGuide Enterprise Studio to publish the Autodesk Map 3D DWG file as a DWF or SDF+ file. If you are publishing to DWF format, you need to supply some information regarding which Display Manager elements or maps should be used for stylizing the DWG file. If you are publishing to SDF+, the style definition is translated (as much as possible) to the Autodesk MapGuide Enterprise Server style equivalents.

2.8 Does Autodesk MapGuide Enterprise support ColdFusion?

Macromedia ColdFusion is one of many development tools that can be used with Autodesk MapGuide Enterprise. Many MapGuide users have used ColdFusion to build reporting or other functions into their MapGuide application. Those users who are familiar with ColdFusion can continue to use it. Other available programming languages offer several advantages that are worth considering.

3.0 About DWF

3.1 What's a DWF file?

DWF™ files are vector-based files that enable you to pan, zoom, turn layers on and off, and plot from within a web browser or DWF-enabled application.

DWF allows non-technical users to easily view and print 2D and 3D drawings, maps, and models. Only DWF is purpose-built for distributing CAD and GIS files so the fidelity and intelligence of maps and designs can be communicated securely, including layers, scale and object properties. Often at 1/10 the size of other formats, DWF files are easy to distribute, post and share online.

3.2 What's the Autodesk DWF Viewer?

Autodesk® DWF™ Viewer is a lightweight viewing application available at no charge that enables users to share maps and designs electronically. Built around the DWF file format, DWF Viewer enables users to view and print complex maps, drawing, and models.

Autodesk DWF Viewer is available as both a stand-alone application and an ActiveX® control embedded in Microsoft Internet Explorer. Autodesk MapGuide Enterprise can use the DWF Viewer to display and print maps and spatial information. The AJAX Viewer option provided by Autodesk MapGuide Enterprise does not include or require the DWF Viewer.

3.3 Why is DWF format important?

The use of DWF format with Autodesk MapGuide Enterprise provides

- High-quality printing and plotting of maps
- Offline map viewing capabilities
- Printing of multi-sheet map books

4.0 About Open Source

4.1 What's the background?

In November 2006 Autodesk joined forces with several leading members of the open source web mapping community to advance open source web mapping technology. The groups working together to launch and sponsor this effort include DM Solutions Group, the University of Minnesota MapServer Project, the MapServer Technical Steering Committee and Autodesk.

Together, this team formed the MapServer Foundation to support ongoing development of open web mapping technologies.

In addition, Autodesk contributed their new map server product (previously code named "Tux") to the open source community under the name "MapGuide Open Source", to be made available from the MapServer Foundation.

4.2 Why did Autodesk make MapGuide Open Source available as open source?

Our customers have been demanding:

- Faster innovation of our web mapping solutions
- More frequent software releases
- Lower cost of ownership

Autodesk wanted to help make map serving technologies more readily available for widespread adoption. Our conclusion was that partnering with the existing MapServer community and open sourcing our next-generation web mapping platform was the best approach.

4.3 Who does MapGuide Open Source appeal to the most?

MapGuide Open Source is of particular interest to:

- Organizations using proprietary web mapping technology who feel trapped or are unhappy with ongoing support costs
- Government agencies that are turning to, or mandated to use open source technology and are seeking a more open architecture for their geospatial solutions
- Utilities and communications companies already using Linux and other open source technology to drive down their costs
- Universities, non-profit organizations, and small businesses who can't afford commercial software.

4.4 Has Autodesk made other software available through open source?

Yes. In addition to MapGuide Open Source, we have open sourced:

- Our FDO (feature data objects) technology, which provides a powerful API for accessing any type of spatial information.
- Several FDO “providers” – to provide access to specific files and databases such as SDF, SHP, ESRI® ArcSDE™, WFS/WMS, ODBC, PostGIS, and MySQL®.

4.5 Is DWF™ software also available as open source?

DWF™ files are vector-based files that enable you to pan, zoom, turn layers on and off, and plot from within a web browser or DWF-enabled application.

While not included as pure open source, the DWF format is an open format. Autodesk publishes a toolkit that allows developers to build applications that read or write multi-sheet 2D or 3D drawings in DWF format. Portions of the DWF Toolkit are also included in MapGuide Enterprise software, but the DWF format will continue to be managed by Autodesk.

The toolkit is available as a free download with a simple license for developers that want to support DWF capabilities as part of their application. For more information on the DWF Toolkit, please go to www.autodesk.com/dwftoolkit.

5.0 About Autodesk MapGuide

5.1 How is Autodesk MapGuide Enterprise different from Autodesk MapGuide?

Autodesk MapGuide can perform a subset of what Autodesk MapGuide Enterprise can do. MapGuide Enterprise is a different product, providing a new architecture, different programming language support and viewing options, improved data access methods, and broader platform support. Some of the notable technical differences:

- The server component of Autodesk MapGuide Enterprise runs on Linux as well as Windows. (Autodesk MapGuide Server runs only on Windows.)
- Applications are written using PHP, ASP.NET, or Java using a new API on the web tier instead of script code that calls the Autodesk MapGuide ActiveX control API on the client tier
- Viewing Autodesk MapGuide Enterprise applications is provided by a DWF-based viewer or HTML viewer that renders raster-based maps
- Feature geometry in Autodesk MapGuide Enterprise is sent “across the wire” using a DWF-compatible format instead of CGM (Computer Graphics Metafile).

- Use of new Feature Data Object (FDO) technology provides access to a wide and expanding set of spatial and tabular data sources.

5.2 Will Autodesk MapGuide software continue to be available?

Yes! We have thousands of successful MapGuide customers worldwide that use MapGuide to deliver maps and design data. Although we don't currently plan to offer a successor version to the current version of Autodesk MapGuide, we do plan to continue selling Autodesk MapGuide software and subscription. Subscription customers will continue to receive support and software updates (patches and bug fixes) if and when available pursuant to the terms of the Autodesk Subscription Agreement.

5.3 Can Autodesk MapGuide applications run on Autodesk MapGuide Enterprise?

No. Because of fundamental differences in the product architectures and programming environments, existing Autodesk MapGuide applications need to be rewritten to run on Autodesk MapGuide Enterprise. It is not possible to automatically migrate existing Autodesk MapGuide applications to Autodesk MapGuide Enterprise.

5.4 Will existing Autodesk MapGuide customers on subscription get Autodesk MapGuide Enterprise?

Current MapGuide customers on subscription will be able to transfer to an Autodesk MapGuide Enterprise subscription at no incremental cost. If they want to transfer during the subscription term, Autodesk will prorate the remaining term and apply this to the new Autodesk MapGuide Enterprise subscription.

5.5 What's the difference between Autodesk MapGuide, MapGuide Open Source and Autodesk MapGuide Enterprise?

	Autodesk MapGuide 6.5	MapGuide Open Source	Autodesk MapGuide Enterprise 2007
Operating System Support	Windows	Windows, Linux	Windows, Linux
Development Environment	Cold Fusion, JavaScript, XML	PHP, .NET, Java (JSP)	PHP, .NET, Java (JSP)
Supported Data Sources	SDF, DWG, ESRI ArcInfo Coverage, Intergraph DGN, MapInfo Interchange (.mif and .mid), ESRI Atlas BNA, Comma-separated values (CSV), DXF™ files, Oracle, Microsoft® Access, numerous raster formats, and OLE DB– and ODBC-compatible databases	FDO Technology, basic “providers” – WFS, WMS, SDF, SHP, ArcSDE, MySQL, raster support	Additional FDO providers – Oracle Spatial, SQL Server, numerous raster formats
Support	From Autodesk and partners	Available from the community	Available from Autodesk and partners
Localization	English, French, Italian, German, Japanese	English, Japanese	English, French, Italian, German, Japanese
Viewing Options	ActiveX control, or Java-based viewer (works on Mac OS X and Sun)	DWF-based viewing of vector maps or pure viewing of raster maps using AJAX	DWF-based viewing of vector maps or pure viewing of raster maps using AJAX
Licensing/Pricing	Per server, per processor, per named user	Open source	Commercial
Coordinate System Support	Coordinate System Mapping Library (CS-MAP) from Mentor Software	PROJ.4 - Cartographic Projections Library	Coordinate System Mapping Library (CS-MAP) from Mentor Software
Authoring Tools	Symbol Manager, Raster Workshop, Dynamic Authoring Toolkit, SDF Loader	Autodesk MapGuide Studio	Autodesk MapGuide Studio

5.6 What resources are available to help Autodesk MapGuide users migrate to Autodesk MapGuide Enterprise?

To meet the unique needs of migrating existing Autodesk MapGuide applications to Autodesk MapGuide Enterprise, the following tools and programs are available:

- **MWF/MWX and data migration tool:** This tool enables users to convert existing map definitions to the new structure.
- **Migration website:** To help developers migrate, this website illustrates how typical features are implemented in the current release and how they are implemented in Autodesk MapGuide Enterprise. This includes code samples, documentation, and a sample application.
- **ADN support:** The Autodesk Developer Network support team not only supports both Autodesk MapGuide and Autodesk MapGuide Enterprise but also supports developers on migration issues and implementation. This support is available to customers and partners who are part of the Autodesk Developer Network (ADN).
- **ADN training:** In addition to ongoing migration support, ADN provides a class to educate partners and customers on how to migrate applications and migration issues.



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