



DAP Administrator 12.6

Manual



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Manual release date: June-24-15.

Please send comments or questions to info@geosoft.com

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Chapter 1: Introduction to Geosoft's DAP Server

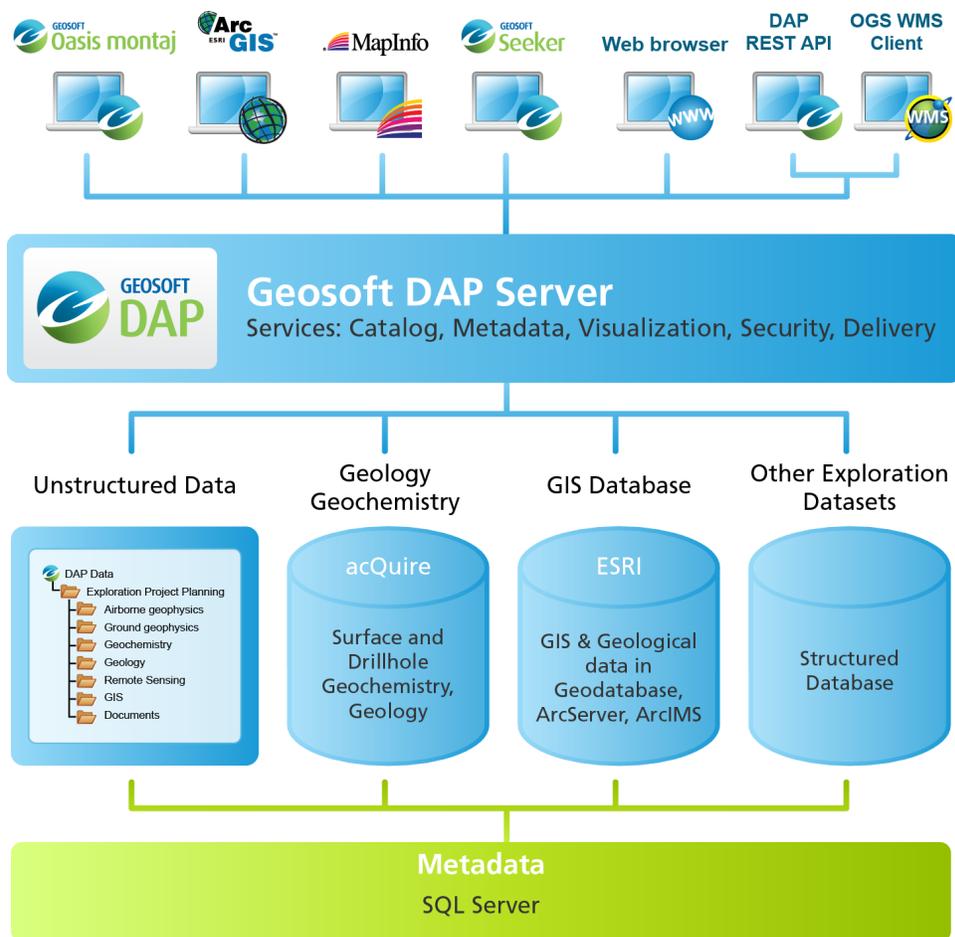
Introduction

Geosoft DAP™ (Geosoft Data Access Protocol) is a family of Geosoft server and client services that enable geoscientists to find spatial and other data for use in their projects. These technologies include three fundamental components:

- • Verifying and publishing of all available spatial and other data resources that might be relevant within an organization. This includes data stored in a managed file system in the many common formats (grids, images, raw data, and documents), data and metadata stored in Relational Database Management Systems (RDBMS), spatial data stored in RDBMS systems (such as acQuire), and data stored in corporate archiving systems.
- Searching for and evaluating data that may be relevant to a project at hand. This involves spatial and context searches for data by area of interest, dataset type, and full metadata evaluation to determine the value of each dataset for a particular use. It also involves quickly previewing the content of selected datasets.
- Retrieval of the selected data, which may be windowed to the area of interest, re-projected to an appropriate coordinate system, re-sampled to an appropriate scale, and transformed into a format that can be used. This also includes simple retrieval of documents and reports that support the data and can be viewed in native formats (such as DOC and PDF files).

Technology Overview

The core component of Geosoft DAP is a server technology that connects networked users to back-end spatial data stores, which is illustrated in the following diagram.



DAP should be installed on a server computer that meets the minimum software and hardware requirements provided by Geosoft. The data files are stored in a managed file system and the associated data catalog and metadata are stored in a SQL Server database. DAP responds to requests for data stored in the catalog and managed file system. Professionals who need to find and use data will use their preferred applications, such as Oasis montaj, ArcMap, or MapInfo. Data can also be browsed and retrieved using a web application. Alternatively, other applications can use Geosoft REST API to deliver data to their own specific workflows.

For hardware and software requirements, see <http://www.geosoft.com/products/server-system-requirements>.

For performance reasons, DAP creates and maintains cache files that store certain information about all the published data, and provides for optimal browsing and searching performance.

DAP Server Architecture

The Geosoft DAP Server:

- is a web application, and an ISAPI (Internet Server Application Programming Interface) extension
- runs in IIS
- uses an HTTP REST like protocol to communicate with DAP client applications

- › provides data and metadata to data consumers
- › provides the following services:
 - › Area of Interest (AOI) and metadata search
 - › Preview of the data
 - › Security services integrated with Active Directory
 - › Preview and download of metadata
 - › Extraction of data

User Workflow

The DAP Data Manager may use Geosoft Metadata Editor, Oasis montaj, or ArcMap to review data and perform certain data preparation tasks. A DAP Data Manager administers the DAP Server and data catalog using the DAP Administrator web application through a web browser.

A typical data management workflow might involve accepting a package of project data and metadata to be permanently stored in the corporate data centre and made available to a professional team. The DAP Data Manager first verifies that the data quality standards are met, coordinate systems are correctly defined, and data formats meet corporate and DAP standards. The approved data is then uploaded to the DAP Server using the Metadata Editor or directly to the Incoming folder, at which time the data is further verified and then finally cataloged by the DAP Administrator Portal service. This verification and cataloging process adds the data to the DAP Managed Exploration Information Repository and updates the catalog database. The data can then be published and made available to all approved users.

Technology Limitations

The Geosoft DAP technologies are evolving to support more and more dataset types and environments.

The following important limitations should be understood and accepted before implementing a Geosoft DAP data distribution solution:

- › Geosoft DAP takes advantage of the wide variety of data formats supported by Geosoft core technologies. If one of your data formats is not supported, Geosoft DAP can distribute your data as a document of unknown type. Processes for georeferencing the data can be established. However, if data windowing and data re-projection is required, your data must be converted to a Geosoft-supported spatial format.
- › Geosoft DAP technologies are designed for, and tested in, environments that support up to 25 concurrent users. Should you require a larger number of concurrent users, Geosoft can work with you to develop usability benchmarks, design data storage, and server scaling strategies to meet your requirements.
- › Geosoft DAP has been developed using Microsoft technologies and is installed and tested on Microsoft IIS servers. Geosoft DAP cannot be installed on UNIX servers.
- › Geosoft DAP is intended as a data cataloging and data distribution solution; not a data archiving solution. Geosoft DAP can be configured to connect to existing archiving solutions, but such a configuration should be discussed with Geosoft Professional Services.

Geosoft DAP Server Licenses

Along with the basic license that is required to use the Geosoft's DAP Server core technology, five extensions are available:

Security Extension

Security features include support for Microsoft Active Directory (AD). All data can be secured on a dataset-by-dataset basis.

Esri Integration Extension

The Esri Integration extension enhances exploration project workflow by enabling the integration of Esri LYR files and ArcGIS Map Services. An OEM version of ArcGIS Server 10.1 needs to be installed separately and licensed through the DAP Server.

ESRI Integration - Image Service Extension

This extension is required to publish raster datasets as an image service using ArcGIS Image Services Integration.

acQUIRE Integration Extension

Data stored in a corporate acQUIRE database can be verified and published. acQUIRE SEL files are supported for point or hole datasets.

ECW Extension

The ECW extension is required to support extraction of ERMapper ECW and JPEG 2000 image files larger than 500 MB each in size before compression.

Max Datasets

This extension is required if you will be cataloging more than 15,000 datasets. A DAP server instance with this extension supports up to 220,000 datasets

Chapter 2: DAP Administrator Settings

DAP Administrator is a web application and a Windows service used to manage and administer your DAP Server and data catalog.

- The DAP Administration web application is written in Python, using the django framework, and runs in Apache (not IIS). Apache, Python and django are installed as part of the DAP Administration Service installation process.
- The Geosoft DAP Administration Service is a Windows service that is responsible for a couple of actions. It starts the Apache web server and accesses required Geosoft underlying technologies. It also starts the processes that are responsible for data verification and cataloging.

After successfully installing the DAP Administrator web application and service, certain steps must be taken to prepare the DAP Server for active use. Each DAP Server managed by DAP Administrator requires its own configuration.

1. Log in to the DAP Administrator web application.
2. Click on **Settings**.

Most Settings are modified during implementation. Some Settings may be modified later on, as required.

Settings are grouped into the following categories:

- General Information
- Security
- Hierarchy
- Structured Metadata Query
- Disclaimers and Stylesheets
- Dataset Types

These settings are described below.

General Information

These settings can be modified and updated as required by the DAP Data Manager.

The screenshot shows a web interface for configuring DAP settings. It is divided into two main sections: 'Contact Information' and 'DAP Server'.

Contact Information:

- Name:** Geosoft DAP Data Manager
- Phone number:** +1 (416) 369-0111
- E-mail:** dap@geosoft.com
- An **Update** button is located below the E-mail field.

DAP Server:

- Name:** Geosoft DAP Data Server (with an **Update** button)
- Browser map:** world.map (with an **Upload** button)
- Use Bing Maps**
- Region list:** aoi_region.csv (with an **Upload** button)

The following should be set for a DAP Server.

Contact Information and DAP Server information is stored into the DAP Catalog database [DefaultSettings] table, and can be maintained by the DAP Data Manager in the DAP Administrator Settings page.

Contact Information includes Name, Phone number, and E-mail. These fields will be blank when a DAP Server is installed, and will remain blank until values are entered. Once values are entered you can't revert to blank values because blank values are not permitted to be saved. Therefore, modify all fields in order to update the values in the DAP Catalog database. The entries can be updated at any time.



DAP Server information includes Name, Browser map and Region list. Here is a description of each field.

Name: This is the name of the DAP Server as viewed in DAP client applications.

Browser map: The Geosoft Map file that will be used as the Browser Map in DAP client applications. The extents and coordinate system of the browser map should be sufficient to cover the extents of all datasets that will be published by the DAP Server. If the map includes raster groups, such as a Geosoft Grid, then the map must be a packed map file.

Alternatively, Bing Maps aerial imagery may be used as the Seeker browser map. The checkbox, Use Bing Maps, will put an entry in the DAP Catalog database [DefaultSettings] table, browserMapBing True.

- This is supported by licensed versions of Oasis montaj 7.5, Target 7.5, and Extensions for ArcGIS 3.5 and above. The user will be required to sign in with a Geosoft ID. If the user is not signed in, they will get the default Oasis montaj browser map.

A supported license is required. Users of the Oasis montaj Viewer or Geosoft plug-ins will get the default browser map.

If the **Use Bing Maps** option is checked, the DAP Data Manager should still provide a browser map. This will be used by pre-7.5 clients, unlicensed and web clients. It is also used to specify the DAP Server extents.

This feature has the same requirements as Oasis montaj. A high-speed internet connection is ideal, but not required. There is no browser requirement in Seeker except for the requirements for viewing metadata.

Region list: The Region List is displayed in DAP client applications. It is loaded from a CSV file and stored in the [DefaultSettings] table in the DAP Catalog database. The *aoi_region.csv* that may be observed in the Managed Exploration Information Repository is a cached output from the *aoi [RegionList]* table in the database. This cache is regenerated every time the DAP Server is started. You can add a region in the table directly instead of reloading the CSV, if desired.

Security

The Security tab will appear if the DAP Server is licensed for this extension.

User verification: If selected, this option means that user login credentials are used for Seeker to access the DAP Server. Flamingo users will be required to enter their Active Directory name and password.

Security groups: The DAP Data Manager can create DAP Security Groups and include Active Directory groups or users. These security groups can be applied to single or multiple datasets. The User verification checkbox must be selected to activate dataset security.

Default DAP Security Group: The DAP Data Manager can select one group to be the default security group. This group will be automatically assigned extract permissions to all new datasets that are uploaded to the DAP Server. By default, no security groups are applied to new datasets on upload. If no group is selected as the default then no users will have permission to the datasets. Security will have to be manually applied to permit access.

If the default security group is modified, the changes will be applied to all datasets with this setting.

See the "DAP Security Model" Technical Note on Geosoft's website for more details.

Hierarchy

The term Hierarchy refers to the virtual folders used to display datasets in a dataset tree view in a DAP client application. These virtual folders can be defined on individual or groups of datasets in the Dataset Properties.

The folder hierarchy can be defined using two different methods:

From metadata: The folder structure presented in the DAP client application is created from metadata fields that have been added to the Structured Metadata Query settings.

User specified: The folder structure presented in the DAP client application is created from the folders used in the uploading of the data, from the Metadata Editor upload process, or in the dataset properties options. The folder level may be renamed to something more descriptive.

During the implementation process, the hierarchy is set to use either "From metadata" or "User specified". Extreme care should be taken when considering switching between these two options.

Structured Metadata Query

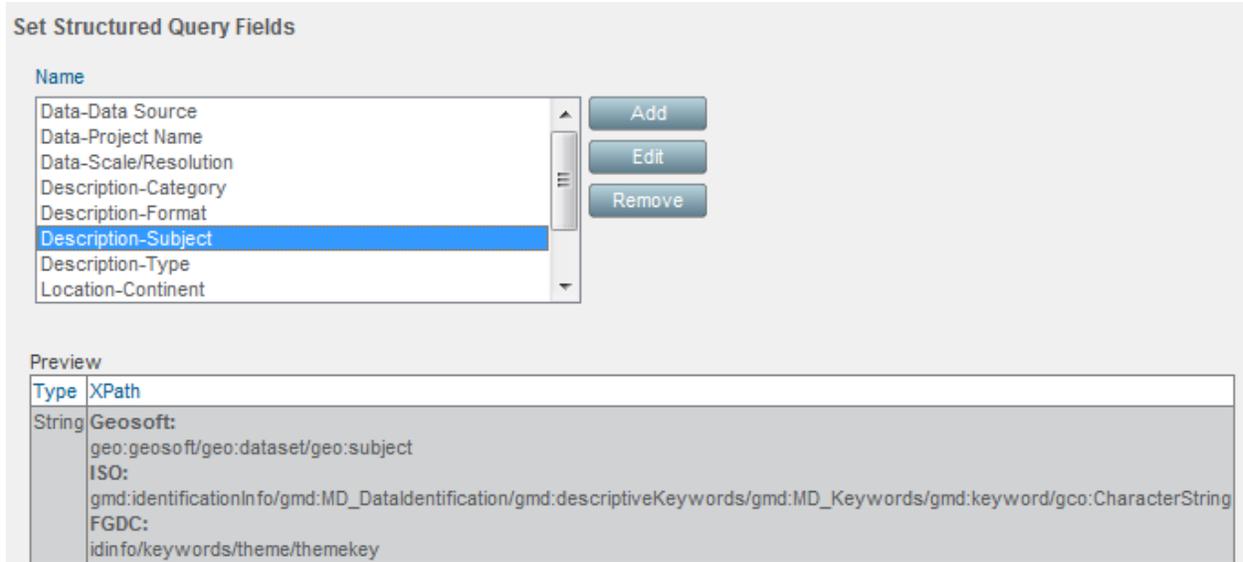
DAP Server supports the ability in Seeker or Flamingo to search for data using specific metadata fields in addition to the Text Search. This can refine the data search on large corporate data repositories quickly and effectively, and realize the value of the investment in metadata capture.

Specify the tags that will be used to populate the Structured Metadata Query with values from designated metadata fields that will populate the list of values in the DAP client *Advanced Search* options.

These fields and values are also available to be used for the Metadata Hierarchy.



Only string fields can be used in the Metadata Hierarchy.



The Structured Metadata Query fields should be configured before data is added to the Data Folder. Structured Metadata Query fields for published datasets are not updated automatically by the DAP Administrator service. When new fields are added, the index must be rebuilt.

Working with Structured Metadata Query

The following list of best practices has been provided to assist in ensuring that your structured metadata queries provide the optimal results:

- Use metadata fields that make use of pick lists, such as subject, category, project name, data creator, and data formats.
- Keep the list of metadata fields short; no more than a dozen is optimal.
- Do not use the title, description/abstract fields. The list of titles equals to the number of datasets on the DAP Server, which is too large to be displayed in Seeker or a web browser.
- Do not use continent, country and province/state metadata fields. They work in the similar way as the area of interest. These fields are also available using the full text search.
- Do not use the metadata fields with yes/no (0 or 1) values.

Queries formed in the Advanced Search tab in Seeker are applied to all servers that share the same metadata field names.

Disclaimers and Stylesheets

The DAP Data Manager can add (and remove) Disclaimers and Metadata Stylesheets, and also designate the default disclaimer and stylesheet that will be used in the *Dataset Properties* unless otherwise specified.

The 'default' disclaimer or stylesheet is the active entry displayed in the Settings list. The (Use default) option for Disclaimer and Metadata in the Dataset Properties means that the DAP Data Manager does not need to individually change the disclaimer or stylesheet on the dataset when the disclaimer or the stylesheet content is updated.

The screenshot shows two sections in a light gray panel. The first section, titled "Disclaimer", has a dropdown menu with "None" selected and two buttons labeled "Add" and "Remove". The second section, titled "Metadata Stylesheet", has a dropdown menu with "Geosoft" selected and a list of options: "Geosoft", "Geosoft - FGDC", "Geosoft - ISO 19139", and "None". It also has "Add" and "Remove" buttons.



The disclaimer and stylesheet files are stored in the storage folder, which is dependent on where your implementer installed it (generally defined during the DAP server installation). An example of a location can be:

<C:\DAP managed\storage\stylesheet>

<C:\DAP managed\storage\disclaimer>

Dataset Types

Only datasets with extensions that appear in the *Spatial Dataset Types* and *Document Dataset Types* tables will be verified from the Incoming folder.

This section shows you how to view supported Spatial Dataset Types and how to add new Document Dataset Types. See "Supported Dataset Types" (http://www.geosoft.com/products/server-system-requirements#data_formats) for the list of supported file types and the characteristics for each type.

The DAP Data Manager can review the list of DAP-supported Spatial Dataset Types. Spatial Dataset Types supported in DAP cannot be removed in the *Settings* page. The Dataset Type is a property of the dataset and can only be edited in the database. This property should not generally be modified except in specific circumstances. DAP Data Managers should contact DAP Support before modifying this property.

Dataset Logic

DAP uses the following method to logically determine when separate files belong to the same dataset when they are uploaded.

Associated File Extensions - Certain file types can represent a group of files, each with the same name as the primary file but with a different extension. For example, Esri Shapefile datasets come in a set of files that relate to the primary file with extension .SHP.

Associated Directories - These directories must be located in a sub-folder accessed from the same location as the data file. The associated directory must have the same name as the data file.

The dataset file extension must first match the file extension in the Dataset Types list. Then, other files with the same root name and extensions that are listed as Associated Extensions are included with the dataset. This is also the case for when the second extension matches dataset extension, for example datasetname.DEF is associated with datasetname.ABC.

If there are other files with the same root name as the dataset, they will not be included with the dataset if:

- The file has its own xml file, e.g. if filename.MAP.XML exists, then the filename.MAP will not be associated with a filename.TAB.
- The file is listed as its own primary extension, e.g. filename.TIF will not be associated with filename.GDB.
- The file is an associated extension of another dataset, e.g. .DAT is associated with a .TAB file.
- The file has double extension equal to another primary extension, e.g. filename.JPG.GI will not be associated with filename.GRD.

In addition, an asterisk (*) can be used as a wildcard at the end of an associated extension, e.g. `<associated_file ext=".HGD*" />` in the Dataset Types list of associated files.

View the Spatial Dataset Type Table

To view the Spatial Dataset Types table:

1. In the DAP Administrator web application, click on the *Settings* page, then select **Dataset Types**.

The *Dataset Types* section is displayed.

2. Under Spatial Dataset Types, click **View**

The *Spatial Dataset Types* window is displayed.

The table in the window shows a list of the supported spatial dataset types.

Spatial Dataset Types		
Name	Extension	Qualifier
3DV	.geosoft_3dv	
acquire Drillhole Selection	.dapacquire_drillhole_selection	DRILLHOLE
acquire Point Selection	.dapacquire_point_selection	POINT
Adobe PDF	.pdf	Compressed
ArcGIS Shape File	.shp	SHP
Drillhole Project	.gdb	
ECW Image	.ecw	ECW
ERMapper ERS	.ers	ERM
ESRI Layer	.lyr	
ESRI Map Service	.geosoft_arc_map_service	
Geosoft Database	.gdb	
Geosoft Grid	.grd	GRD
Geosoft HyperGrid	.hgd	
Geosoft HyperMap	.hmap	
Geosoft HyperXYZ	.hxyz	
Geosoft Voxel	.geosoft_voxel	
Geosoft VOXI Model	.geosoft_voxi	
Geostring	.geosoft_string	
Geosurface	.geosoft_surface	
GM-SYS 2D	.geosoft_gmsys2d	
GM-SYS 3D	.geosoft_gmsys3d	
J2K JPEG 2000 Image	.j2k	ECW;t=j2k
JP2 JPEG 2000 Image	.jp2	ECW;t=jp2
JPEG Image	.jpg	IMG;t=jpg
MapInfo TAB File	.tab	TAB
Offline Dataset	.geosoft_offline	
PNG Image	.png	IMG;t=png
Project Package	.geosoft_project_zip	
RDBMS Connector	.geosoft_rdbms	
Targa Image	.tga	IMG;t=tga
Tiff Image	.tif	TIF
Vector Voxel	.geosoft_vectorvoxel	

Close

Adding Document Dataset Types

To enable cataloging of a dataset type that is not included in supported Spatial Dataset Types, you must add a mapping for this dataset type to the Document Dataset Types table.

Documents are files of any type that you want to make available for distribution in their native format. DAP does not need to understand the file format – it simply delivers the file as is to a DAP client.

Establishing a location or spatial extent enables the document to respond to spatial queries. Without spatial extent, the document will appear in all spatial queries as a "global dataset". In DAP Administrator you can add basic metadata and special information to a document. Metadata is stored in a file named after the document file with the extension .XML. See "Creating DAP Server Reporting" on page 48.

Documents cannot be rendered and will appear to the DAP client as a box outlining the spatial extents. You may choose a dataset that can be rendered to represent a document or dataset that cannot be rendered. In DAP this is called a Redirect Image. For example, a survey directory may contain many documents, but all of them could be represented by a single image related to the project. In this case, you may choose to use a grid file to represent visualization of the documents. See "Image Preview" on page 31.

To add a new Document Dataset Type:

1. In the DAP Administrator web application, click on the *Settings* page. The *Document Dataset Types* table is displayed.

Document Dataset Types

	Name	Extension	Qualifier	Associated Extensions	Associated Directories
<input type="checkbox"/>	Microsoft 1997 - 2003 Word Document	.doc			
<input type="checkbox"/>	Microsoft Word Document	.docx			
<input type="checkbox"/>	Geosoft Map	.map	Map		
<input type="checkbox"/>	Adobe PDF	.pdf	Compressed	.xxx	
<input type="checkbox"/>	Rich Text Document	.rtf			
<input type="checkbox"/>	Zip File	.zip			
<input type="checkbox"/>	Petrel Model	.PET			.PTD; DATA
<input type="checkbox"/>	Text	.txt			

2. Click **Add**.

The *Add Document Dataset Type* window is displayed.

3. In the *Name* field, enter a name for the new Document Dataset Type.
4. In the *Extension* field, enter the file extension for the new Document Dataset Type. Multiple entries should be entered with a ";" separator.
5. Optionally, enter a *Qualifier* and in the *Associated Extension* and *Associated Directories* fields, add any associated file or directory extensions, respectively, required for the new dataset type.
6. Click **Add**.

The *Add Document Dataset Type* window closes. The new Document Dataset Type appears in the *Document Dataset Types* table.

7. Select a *Document Dataset Type* in order to **Edit** or **Remove** it.

Datasets with associated extensions download a zip file containing all of the associated files when a user retrieves the dataset via their DAP client application (such as Seeker or Flamingo).

Update Connectors

Connectors to RDBMS database can refresh on a scheduled basis. This is useful for active project databases.

For information on the **Connector Updates** options, See "Creating Data Source Connectors" on page 39.

ArcGIS Image Services

Your DAP Server can publish raster datasets as an image service using ArcGIS Image Services Integration. Esri users who are familiar with accessing data as a service will be able to access the imagery in ArcMap without needing to download copies of the dataset.

An OEM ArcGIS Server installed with your DAP Portal service is required. Please contact your Geosoft Account Executive if you have questions about this.



Note: ArcGIS Server must include the Image Services extension to support the mosaic image services used by DAP.

To configure an Image Service:

1. Enter the Site URL. This is the address of the ArcGIS Server.



Note the ArcGIS server instance name must be set to the default 'arcgis'.

2. Enter the Admin Username for the ArcGIS Server.
3. Enter the Admin Password for the ArcGIS Server.
4. Click **Update**. If successful, a list of image services on the server will be shown in the Image Services list.

To create an image service:

1. Click **Create**.
2. Enter a Service name.
3. Optionally, enter a Summary and Description of the service.
4. Click **OK**.

The image service will be created. The image service will use the same coordinate system as used by the browser map registered on the DAP server. If the browser map is changed, existing image services are not modified.

To remove an existing image service:

1. Select the image service.
2. Click **Remove**.
3. A dialog will appear to confirm that you wish to delete the service. Click **Yes**.

The image service will be deleted.

To view the rasters included in an image service:

1. In *Settings > ArcGIS Image Services*, select the image service.
2. Click **View**.
3. When datasets have been added to an image service, a list of datasets in the selected service will be displayed.

Any number of Image Services containing one or more rasters can be created using published rasters from the DAP Server. Supported data types include:

- Geosoft Grid (.grd) -



Note: In order to support Geosoft Grid (.grd) files, the InstallGDALDriver.exe utility (found in the DAP Admin bin directory C:\Program Files (x86)\Geosoft\DAP Portal\service\bin) must be run during setup/upgrade.

- ER Mapper (*.ers)
- J2K JPEG 2000 Image (*.J2K)
- JP2 JPEG 2000 Image (*.JP2)
- JPEG Image (*.JPG)
- PNG Image (*.PNG)
- TIFF Image (*.TIF)



Note: Only one of type of data format (grid or image) should be added to a single image service as this affects the calculation of statistics. If grids and images are mixed, then one image type may appear in a uniform colour due to the numeric format of the data.

To add a raster to an image service:

1. Open the list of datasets in the Home page.
2. Select one or more published supported raster datasets. Multiple raster datasets can be combined in a mosaicked image service and consumed as one dataset.
3. ArcGIS Image Services will appear under *Dataset Properties*.

Dataset Properties
Exclude

General

Name: Cypress Hills

Size: 2041 KB

Loaded: 2014-08-21 12:39:52

Modified: 2014-08-21 12:39:52

Status: Published

Advanced

Qualifier: Convert to Document

Hierarchy: Edit

Disclaimer: Preview

Metadata

Stylesheet: Preview Edit

Image Preview

Default Image

Preview Set Redirect Set Coordinates

Security

Restrict access to datasets through group permissions

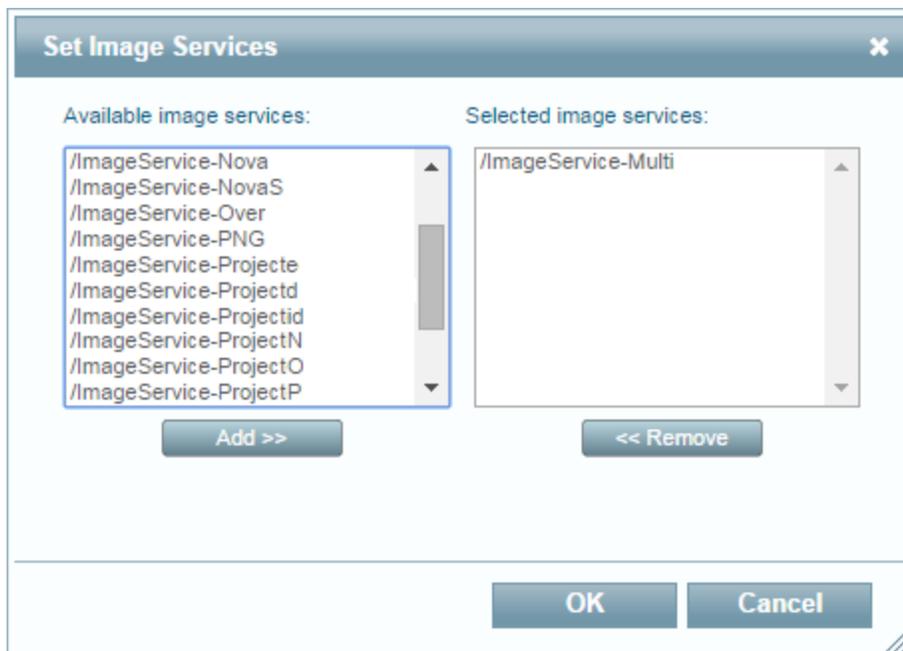
Set Security Clear Security

ArcGIS Image Services

Add/remove this dataset from ArcGIS Image Services

Set Image Services

4. Click **Set Image Services** and select one (or more) of the Available image services. Click **Add >>** to make this a Selected image service. The raster(s) will be added to the Selected image services.



- To remove a raster from a selected image service, select the image service and click **Remove >>**. The service will appear in the list of available image services.

Adding or removing datasets from an image service can be a time consuming process, so this is done on the server as a background task. DAP datasets may take some time to appear in an image service in ArcMap. Once a dataset has been successfully added or removed from an image service, a notification will appear in DAP Administrator. If an error occurs, more information can be found in the DAP Admin error log.

Utilities

The Utilities includes a simple tool to **Update Metadata**.



This option will run two existing command line functions: *RebuildPortalIndex* and *MetadataSync*. This is useful if the DAP Data Administrator is unable to run these tools from the DAP Server directly.

RebuildPortalIndex will update/generate full text search and structured metadata query database table items for faster searching. *MetadataSync* will synchronize the XML metadata with the SQL metadata database. A log file called *UpdateMetadataOutput_yyyy_mm_dd_xx_xx_xx_xx.txt* will be generated under the \Outgoing folder.

Chapter 3: Publishing Data on a DAP Server

The DAP Administrator enables you to manage data to be published or already published on your DAP Server. This includes the following:

1. Designing a hierarchy or folder structure within which your data will be presented. The hierarchy is similar to a file system in Windows Explorer.
2. Establishing rules for managing metadata and relating metadata entries to the published data files.
3. Preparing data to be published, this may be as simple as copying the data to the Incoming folder, or preparing optimizations for certain datasets and establishing appropriate metadata.



This task depends on the objectives you have for your DAP Server, and on the characteristics of specific datasets you publish.

4. Creating connector datasets such as acQuire data stored in a relational database (RDBMS).
5. Publishing the data, which may involve capturing the required metadata, setting up the required files, creating visualizations to support visual browsing of your data, and updating the DAP Server that is exposed to your data clients.
6. Managing your data catalog by adding new data, removing unwanted data, and updating certain dynamic dataset types.

Defining a Hierarchy

You need to design a logical hierarchy in which you want to present data to be published on your DAP Server. Using the tree view, DAP clients see data organized in a hierarchy of folders and sub folders. The hierarchy can be established using *Metadata* or using *User Specified* tags.

User Specified

If Hierarchy is set to use "User specified", then create a folder or folders in the DAP Server's incoming folder. The first folder under the Incoming folder will represent a hierarchy tag at level one. A subfolder under level one will represent a hierarchy tag at level two, and so on.



These hierarchy tags are only usable and visible in DAP Admin and DAP clients if a datasets has been verified and cataloged from within the hierarchy tag. Meaning, empty folders that have not had datasets uploaded to them will not be seen in DAP Admin or a DAP client.

We recommended limiting the hierarchy to between 4 to 6 tags.

Editing user defined hierarchies

When the *User Specified* hierarchy setting is applied, the hierarchy that will be presented through the DAP client is shown in the *Advanced Dataset Properties* for a single dataset or for multiple selected datasets with the same hierarchy values.

Advanced
 Qualifier:
 Convert to Document
 Hierarchy: Edit
 Disclaimer:
 Preview

- To make changes to the hierarchy for the select dataset(s), click **Edit**. The *Edit Hierarchy* dialog will display with the number of levels specified in the DAP Administrator Settings.

Edit Hierarchy

1 Level:	<input type="text" value="North America"/>	Add/Edit
Level 2:	<input type="text" value="Canada"/>	Add/Edit
Level 3:	<input type="text" value="Ontario"/>	Add/Edit
Level 4:	<input type="text" value="Red Lake"/>	Add/Edit
Level 5:	<input type="text" value="(none)"/>	Add/Edit

OK Cancel

You can select existing values from the pick list:

Edit Hierarchy

1 Level:	<input type="text" value="North America"/>	Add/Edit
Level 2:	<input type="text" value="Canada"/>	Add/Edit
Level 3:	<input type="text" value="Ontario"/>	Add/Edit
Level 4:	<input type="text" value="Red Lake"/>	Add/Edit
Level 5:	<input type="text" value="(none)"/>	Add/Edit

OK Cancel

- Using the **Add/Edit** button, you can modify existing values by selecting an existing value and entering a new value,

or add new values simply by entering a new value.



Once added associated hierarchy level values cannot be removed except via the DAP catalog database.

From Metadata

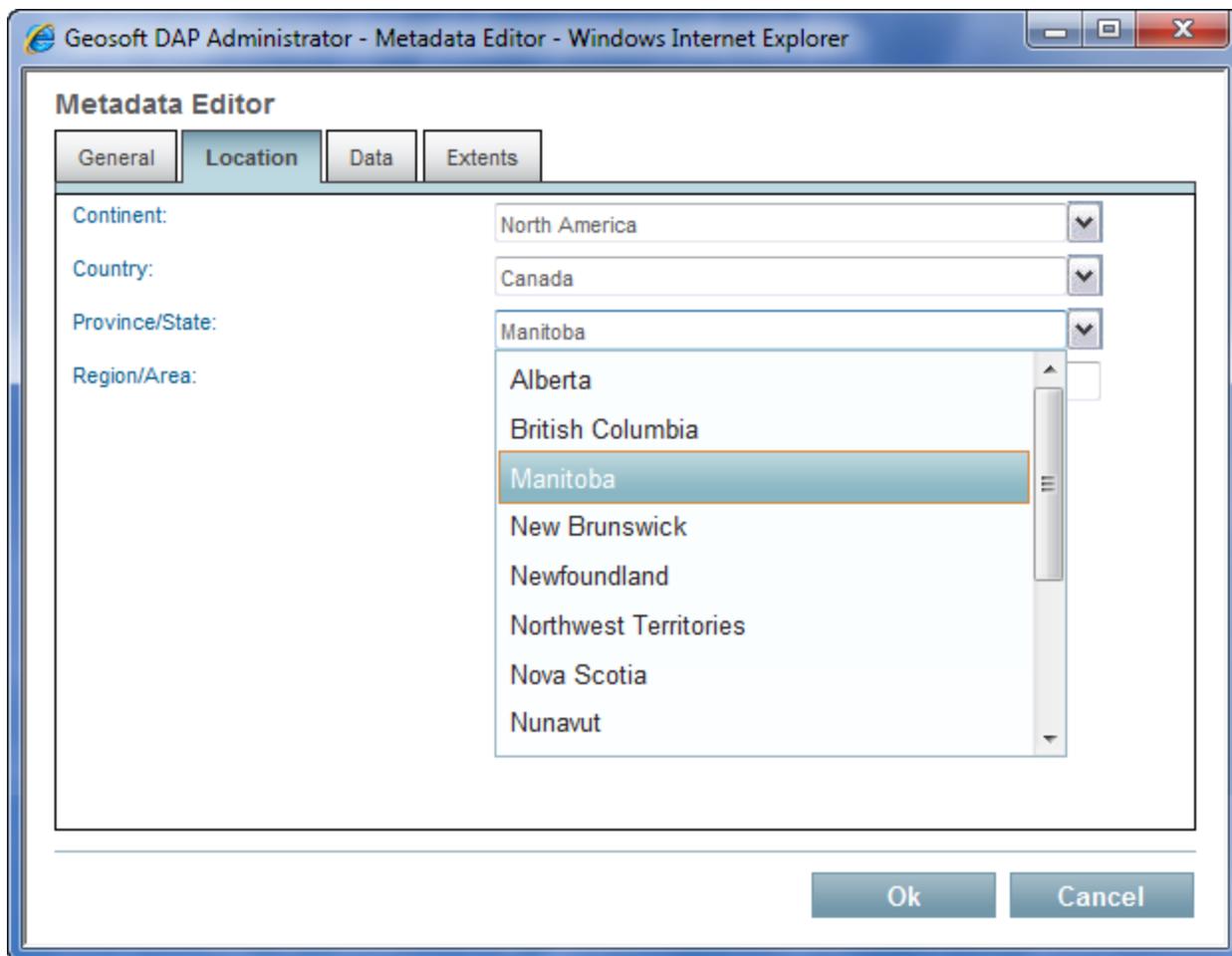
If Hierarchy is set to use "From metadata", then select values from the Structured Metadata Query list and order them as desired to define which metadata tag will represent levels one, two and so on. Using metadata as the hierarchy tags provides flexibility when wanting to modify the hierarchy as displayed in DAP clients.

Note that if you choose to use metadata as the hierarchy tags then you should be confident that all datasets have values for the Structured Metadata Query fields that you choose to use. See "Structured Metadata Query" on page 8.

Editing Metadata

- If your Geosoft Metadata Editor has been configured in the DAP Administrator web application, then the **Edit** button will be active when a single dataset is selected.

- The Metadata Editor will open. After making the required updates, click **OK** to save the changes.



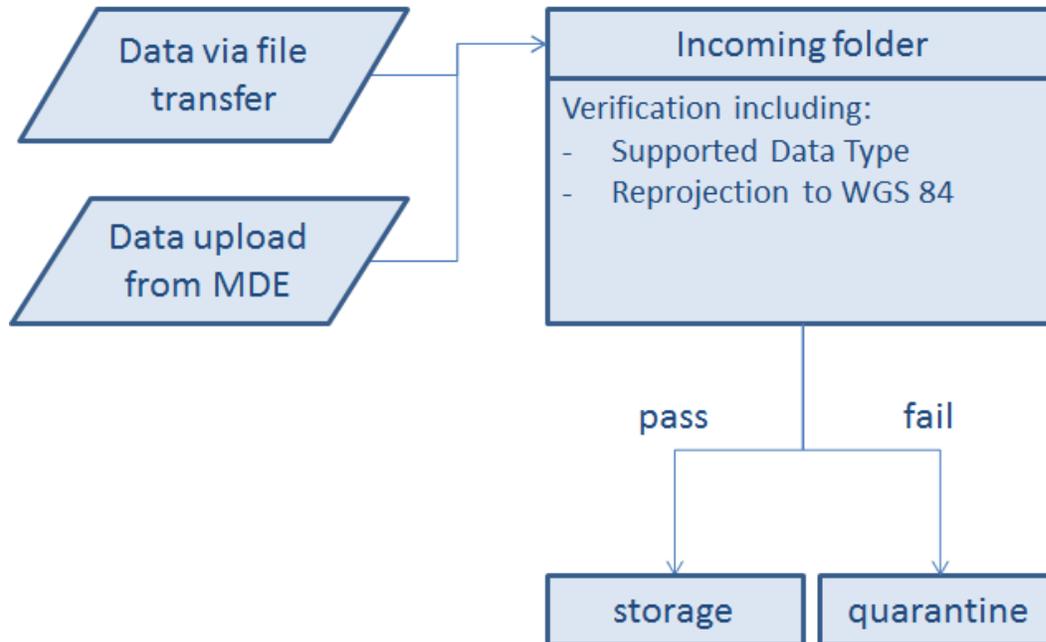
Uploading New Datasets

Datasets in the incoming folder are verified and uploaded into the Managed Exploration Information Repository.

Data may be added to the incoming folder using the Metadata Editor upload (recommended), or manually copied using Windows file copy (if the Metadata Editor is not part of your data process).

1. The incoming folder is monitored for new datasets. When a dataset is added to the incoming folder, the DAP Administrator service checks the datasets for changes every 5 minutes (this setting is configurable) to ensure that the complete dataset with all associated files has been completely uploaded. Associated files have the same name as the key dataset file and are in the same folder (e.g. mag.grd may have an associated file in the same folder called mag.grd.gi).
2. If there are changes, the system checks again in another five minutes. If after the second check, there have been no changes since the first check the system will upload the dataset.
3. Only dataset types defined in the Settings Dataset Types tables are recognized. Spatial datasets must have a valid coordinate system that can be reprojected into WGS84.
4. When the dataset is verified successfully, it is uploaded into the Managed Exploration Information Repository storage folder, and a record is added to the DAP Catalog database.

5. If there are any warnings or errors, these are reported in the DAP Administrator log file. If there is an error, the file or connector is not verified. If the dataset fails the verification process, then it is moved to the quarantine folder and will appear in the *Error* tab.



Depending on the dataset type, verifying a dataset may involve the following procedures:

- Reviewing the required metadata
- Checking for the required information – such as titles and coordinate systems, either directly in the datasets or in the metadata XML files
- Preparing fast-view images in the coordinate system of the browser map
- Preparing work files (such as a data cache) that may be required

A number of supporting files may be created for verified datasets including:

- `.cache` folder - A cache folder is automatically created for some dataset types including SHP and TAB files and warped images
- `.custom_info` - The `custom_info` file contains information for some datasets that cannot be stored in the SQL database catalog.
- `.image_info` - The `image_info` contains information used for the snapshot
- `.snap_shot` - A single 1600x1600 snapshot is used for dataset preview
- `.properties` - The `properties` file contains internal metadata object information and is used for extraction for some dataset types.
- `.spatial_image` - The `spatial_image` is a 128x256 bitmap used for large datasets with a dimension of > 7 degrees longitude

The datasets are then available for further preparation and publishing.

DAP Administrator Home

Administering datasets for publishing on a DAP Server is performed in the DAP Administrator web application Home page.

The Home page includes several tabs. The *All* tab is shown below:

The screenshot displays the DAP Administrator interface. At the top, there is a navigation bar with the Geosoft DAP logo, a search bar, and links for Home, Settings, Reports, and Help. The main content area is divided into two panels. The left panel, titled 'List of Datasets (18 of 18)', shows a table of datasets with columns for Name, Type, Modified, Size (KB), and Status. The right panel, titled 'Dataset Properties', shows details for the selected dataset 'Offline dataset.TIF', including General, Advanced, Metadata, Image Preview, and Security sections.

Name	Type	Modified	Size (KB)	Status
SQ00 3D-95116	Offline Dataset [geosoft_offline]	2014-02-03	746	Published
Magnetics	Geosoft Grid [.grd]	2014-02-03	4699	Published
Snapshot 2014-01-24-13-24-26.ECWX	Offline Dataset [geosoft_offline]	2014-01-24	25	Excluded
Offline dataset.TIF	Offline Dataset [geosoft_offline]	2013-12-27	32066	Excluded
Offline dataset	Offline Dataset [geosoft_offline]	2013-12-19	32066	Excluded
NWQMEP 3D Model	Zip File [.zip]	2013-12-18	28754	Published
SSL Bottle Tree 1	Zip File [.zip]	2013-12-18	43248	Published
OCA New Royal 2	Zip File [.zip]	2013-12-18	18918	Published
Uranium	Geosoft Grid [.grd]	2013-12-18	6352	Published
Total Count	Geosoft Grid [.grd]	2013-12-18	6185	Published
TMI	Geosoft Grid [.grd]	2013-12-18	4951	Published
Thorium	Geosoft Grid [.grd]	2013-12-18	6192	Published
Potassium	Geosoft Grid [.grd]	2013-12-18	6329	Published
DTM	Geosoft Grid [.grd]	2013-12-18	5560	Published
AGSS 1264_Rads	Geosoft Database [.gdb]	2013-12-18	36101	Published
AGSS 1264_Mag	Geosoft Database [.gdb]	2013-12-18	193278	Published
NWQ_3d_Model-new	Tiff Image [.tif]	2013-12-18	1294	Excluded
NWQ_3d_Model	Tiff Image [.tif]	2013-12-18	1307	Excluded

List of Datasets

The List of Datasets contains five tabs: *All*, *Verified*, *Published*, *Excluded*, and *Error*. The *All* tab shows all datasets in the DAP Catalog database. Other tabs in the List of Datasets organize the datasets according to the status of the dataset.

- *All* - All datasets that exist in the DAP catalog can be listed here.
- *Verified* - New datasets that have been uploaded and passed the verification process. These datasets can be published or excluded as part of the data management workflow. Verified datasets meet the following criteria:
 - The dataset is in the list of supported Spatial Dataset Types or supported Document Dataset Types.
 - The dataset can be opened.
 - If spatial, the dataset must have a coordinate system, and can be reprojected into WGS84.

- *Published* - Datasets that have been published to the DAP Server.
- *Excluded* - Datasets that have been verified, but are not published and have been excluded by the DAP Data Manager.
- *Error* - Supported spatial dataset types that exhibit errors during the verification process will appear in the Errors tab.

By default, datasets are sorted by the date in the Modified column. The List of Datasets can be sorted in ascending or descending order by clicking on the field header. The Selection column is also sortable by clicking next to the **Select All** checkbox.

Each tab reports a number of datasets in the tab name. Within each tab, only lists up to 500 datasets can be displayed. If more than 500 datasets exist in a given tab, then a grouped dataset is displayed. The Number of Datasets in the list can be changed by the DAP Data Manager with the *Number of Datasets* selection. Fewer datasets can also be displayed by using the Search options to filter the list. This is described below in the Search and Advanced Search sections.

The screenshot shows the 'List of Datasets (544 of 544)' interface. At the top, there is a search bar with the text 'Search by dataset name' and a magnifying glass icon, followed by 'Advanced Search' and 'Clear Search' buttons. Below the search bar is a dropdown menu for 'Number of datasets:' set to 'All datasets'. Underneath are five tabs: 'All (544)', 'Verified (18)', 'Published (345)', 'Excluded (0)', and 'Error (181)'. The 'All (544)' tab is selected. Below the tabs is a table with two columns: 'Count' and 'Name'. The table contains one row with a checkbox, the count '544', and the name 'All datasets matching the current filter'.

Search

The Search tools are used to filter the List of Datasets to a smaller subset of the DAP Catalog. A Google-like search option searches the dataset name.

The *Search by dataset name* option above the List of Datasets provides an easy way to find a specific dataset that requires modifications to dataset properties or status.

The *Search by dataset name* box allows a free text search of all dataset names.



The dataset name as set in the metadata may be different from the physical file name. The name in the DatasetInformation table is the name that appears here. It can be different from the physical file name and the metadata title.

- To search, simply enter the text and click on the  button. Wildcards are not required. A search for "bath" will return all datasets with "bath" anywhere in the dataset name. Wildcard characters are not supported. The counts for the full *List of Datasets* and for each tab will be updated.

List of Datasets (9 of 348)

Number of datasets: **All datasets** ▼

All (9) | Verified (0) | **Published (9)** | Excluded (0) | Error (0)

<input type="checkbox"/>	Name	Type	Modified ▼	Size (KB)
<input type="checkbox"/>	bathymetry	Geosoft Database [.gdb]	2010-11-11	139096
<input type="checkbox"/>	bathy	Geosoft Grid [.grd]	2010-11-11	51
<input type="checkbox"/>	Oceania_topo_bath_s	Geosoft Grid [.grd]	2010-11-11	8834
<input type="checkbox"/>	Oceania_topo_bath	Geosoft Grid [.grd]	2010-11-11	7358
<input type="checkbox"/>	Oceania_topography_bathymetry	Geosoft Grid [.grd]	2010-11-11	52366
<input type="checkbox"/>	bath	Geosoft Grid [.grd]	2010-11-11	139096
<input type="checkbox"/>	Global Topography and Bathymetry	Geosoft Grid [.grd]	2007-12-07	93995
<input type="checkbox"/>	Bathymetry	Geosoft HyperXYZ [.hxyz]	2007-12-07	139096
<input type="checkbox"/>	Bathymetry_Inz	ArcGIS Shape File [.shp]	2007-10-19	1358

- Use the **Clear Search** button to show all datasets. This will remove criteria in the *Search by dataset name* field and the *Advanced Search* options.

Advanced Search

In addition to searching by Dataset name, several other options for identifying datasets for selection are available in the Advanced Search options, including:

Date - Search by modified date for recently uploaded datasets, or datasets modified within a specific date range. The Modified date will be updated if all or one of the files in the dataset are replaced or if the preview image is updated. In the case of dataset connectors, the Modified date also reflects when the dataset is refreshed from the data source.

Dataset type - Default supported spatial dataset types and custom added document dataset types are listed here. Use Ctrl to select and de-select multiple items or the Shift key to select a range.

Security group - Datasets can be identified according to what Security groups have permissions to those datasets. Changes can be made easily and published.

Hierarchy - Using hierarchy levels allows datasets to be searched based on the hierarchy tags as displayed in a DAP client. Whether using User Specified Hierarchy or Metadata Hierarchy, these selections allow the DAP Data Manager to identify all datasets that appear to the end user in a given folder structure. These options are also useful for a batch exclude or security update actions.

The Hierarchy search will filter subsequent levels according to the hierarchy associations. For example, if there is a Level 1 hierarchy for Canada, Nebraska will not appear in the Level 2 list of available selections.

Advanced Search [X]

Dataset name:

Date:

Dataset type:

- acQuire Drillhole Selection
- acQuire Point Selection
- Adobe PDF
- ArcGIS Shape File
- AutoCAD

Security group:

Hierarchy

Level 1: [v]

Level 2: [v]

Level 3: [v]

Level 4: [v]

Level 5: [v]

- Use the **Clear All** button to remove all search filters. This will remove criteria in the *Search by dataset name* field and the *Advanced Search* options.

Dataset Properties

The default property settings for a selected dataset can be viewed and modified in the *Dataset Properties* area to the right of the List of Datasets.

- Select and de-select a dataset by clicking anywhere on the dataset row. You can select and de-select multiple datasets not in succession by holding down the Ctrl key, similar to Windows Explorer file selection.

List of Datasets (757 of 757) Search by dataset name

Number of datasets: All datasets

All (757) **Verified (38)** Published (689) Excluded (0) Error (30)

<input type="checkbox"/>	Name	Type	Modified	Size (KB)
<input type="checkbox"/>	Sphinx_DEM_clip	Geosoft Grid [.grd]	2011-06-08	7600
<input type="checkbox"/>	Mag and EM	Geosoft Database [.gdb]	2011-06-08	39419
<input type="checkbox"/>	Bathymetry	Geosoft HyperXYZ [.hxyz]	2011-06-08	5100
<input checked="" type="checkbox"/>	bath	Geosoft Grid [.grd]	2011-06-08	105004
<input type="checkbox"/>	bathymetry	Geosoft Database [.gdb]	2011-06-08	28992
<input type="checkbox"/>	Mag and EM	Geosoft Database [.gdb]	2011-06-08	39419
<input type="checkbox"/>	Red_Lake_TMI_1VD	Geosoft Grid [.grd]	2011-05-27	81
<input type="checkbox"/>	Red_Lake_TMI	Geosoft Grid [.grd]	2011-05-27	81
<input type="checkbox"/>	Red_Lake_Gravity_1VD	Geosoft Grid [.grd]	2011-05-27	81
<input type="checkbox"/>	Red_Lake_Gravity	Geosoft Grid [.grd]	2011-05-27	76
<input type="checkbox"/>	Red Lake Basemap	Geosoft Map [.map]	2011-05-27	209
<input type="checkbox"/>	Red Lake Property	ArcGIS Shape File [.shp]	2011-05-27	4
<input type="checkbox"/>	Red Lake Project	Adobe PDF [.pdf]	2011-05-27	222
<input type="checkbox"/>	Red Lake Project Summary	Microsoft 1997 - 2003 Word Document [.doc]	2011-05-27	90
<input type="checkbox"/>	Stockton_SBA	Geosoft Grid [.grd]	2011-05-27	33
<input type="checkbox"/>	RES_UTM	Geosoft Grid [.grd]	2011-05-27	42
<input type="checkbox"/>	readme	Microsoft 1997 - 2003 Word Document [.doc]	2011-05-27	25

Dataset Properties

General

Name: bath

Size: 105003 KB

Loaded: 2011-06-08 09:44:10

Modified: 2011-06-08 09:44:10

Status: Verified

Advanced

Qualifier:

Hierarchy:

Disclaimer: (Use default)

Metadata

Stylesheet: (Use default)

Image Preview

Default image

General

The *General* properties (*Name*, *Size*, *Loaded*, *Modified*, and *Status*) are presented as read only.

General

Name: Tiahuanacu_Collar

Size: 252 KB

Loaded: 2011-05-20 13:42:53

Modified: 2011-05-12 11:37:37

Status: Published

Name: This is the Name of the dataset from the dataset or from the metadata, if applicable.

Size: The size of the dataset including associated files.

Loaded: The date and time that the dataset was uploaded to the Managed Exploration Information Repository.

Modified: Date and time a dataset was modified. Datasets are modified if part of the dataset is replaced.

Status: Status may be Verified, Published, Excluded, or Error.

If multiple datasets are selected in the List of Datasets, the General area will include a count of the number of datasets. Other Dataset Properties will be populated depending on the common properties of the datasets that are selected.

The *Size* uses the list of associated files to calculate the size. However, it does not examine and include datasets for all the data connections.



If more than 500 datasets are listed in any tab, a single record representing all datasets will be displayed. Selecting this record is the same as selecting multiple items.

- The **Copy Managed Path** button can be used to reference the physical location of the dataset in the Managed Exploration Data Repository. This is useful if the dataset needs to be added to an Esri Map Service.



Advanced

The *Advanced* section includes *Qualifier*, *Hierarchy*, and *Disclaimer* settings.

 A screenshot of the 'Advanced' tab in a software interface. The title 'Advanced' is in bold. Below it, there are three sections:

- Qualifier:** A text input field containing 'GRD'. To its right is a button labeled 'Convert to Document'.
- Hierarchy:** A text input field containing 'North America\Canada\Ontar'. To its right is a button labeled 'Edit'.
- Disclaimer:** A dropdown menu showing '(Use default)'. Below the dropdown is a button labeled 'Preview'.

Qualifier. Some datasets have a Qualifier that is related to the dataset type. The grid and picture types include a qualifier that tells DAP which DAT interface to use to read that data. On occasion, this may be modified for certain circumstances.

Files of certain types accept a text qualifier that further defines characteristics for connecting to and using these datasets. The use of qualifiers depends on the file type and on how Geosoft works with that file type. Grid and image files use qualifiers to define the format of the grid or image file, which can be different than implied by the actual file extension.

For example, white colour in a TIFF file is interpreted as a blank, and would appear transparent when visualized through DAP. If you would like a different colour to be nulled, you can use qualifier "TIFF;dummy=0,0,0", which will make the transparent colour black (dummy=red,green,blue, each in the range 0 to 255).

Convert to Document: Spatial dataset types have an option to **Convert to Document**.

The Type will continue to display the original dataset type, but the icon will appear as the document type.

Name	Type
JPG.a	JPEG Image [.jpg]
JPG.b	JPEG Image [.jpg]

The inherent coordinate system, if one exists, will not apply to the new document status, but the extents specified in the metadata will be used. This functionality is useful for publishing images, such as photos, that are not georeferenced, have local coordinate systems and fail verification. The dataset can also be reverted back to its original dataset type.

Hierarchy: If the Hierarchy Setting is User specified, then the hierarchy that is presented through a DAP client is shown here. If the hierarchy path is too long for the screen, the DAP Data Manager can preview the full path via a tool tip.

- Click **Edit** to review or modify the hierarchy values. If multiple datasets with common values are selected then the hierarchy for all selected datasets can be viewed or modified.

If Hierarchy is set to come from metadata, then the hierarchy cannot be viewed or edited here.

Disclaimer: A disclaimer or copyright notice that users can review through DAP clients and must acknowledge if downloading a dataset, can be set for a single dataset or multiple datasets.

- Selecting (**Use default**) will apply the Disclaimer that is selected in Settings. The disclaimer html file can also be previewed using the **Preview** button.

The screenshot shows the 'Advanced' section of a dialog box. It contains three rows of controls:

- Qualifier:** A text input field that is currently empty.
- Hierarchy:** A text input field containing the text 'World\Geography\' followed by an 'Edit' button.
- Disclaimer:** A dropdown menu with 'default_disclaimer' selected, and a 'Preview' button below it.

The Disclaimer option enables you to attach a copyright or disclaimer to a dataset or a selection of datasets. The DAP Administrator installation creates a folder named *disclaimer* in the DAP Storage folder.

The disclaimer folder includes a sample copyright/disclaimer file (default_disclaimer.html) in HTML format. You can create your own copyright/disclaimer HTML documents and upload them into the disclaimer folder via the DAP Administrator Settings. HTML disclaimer files are added to the Disclaimer file dropdown list on the Dataset Properties on the Home page, along with the option for *None* where no disclaimer is applied.

DAP client plug-ins in Oasis montaj, ArcMap and MapInfo display the copyright/disclaimer information associated with the dataset to be downloaded. However, older DAP client plug-ins ignore the disclaimer documents.

If multiple datasets are selected, common advanced properties will be displayed. Properties that are not common to the selected datasets will be blank..

Metadata

The Metadata section enables you to select a metadata stylesheet to be applied to a single dataset or a selection of datasets.

The screenshot shows the 'Metadata' section of a dialog box. It contains one row of controls:

- Stylesheet:** A dropdown menu with 'Geosoft' selected, and 'Preview' and 'Edit' buttons below it.

Stylesheet: The stylesheet that will be used to display the XML metadata through DAP clients is selected here.

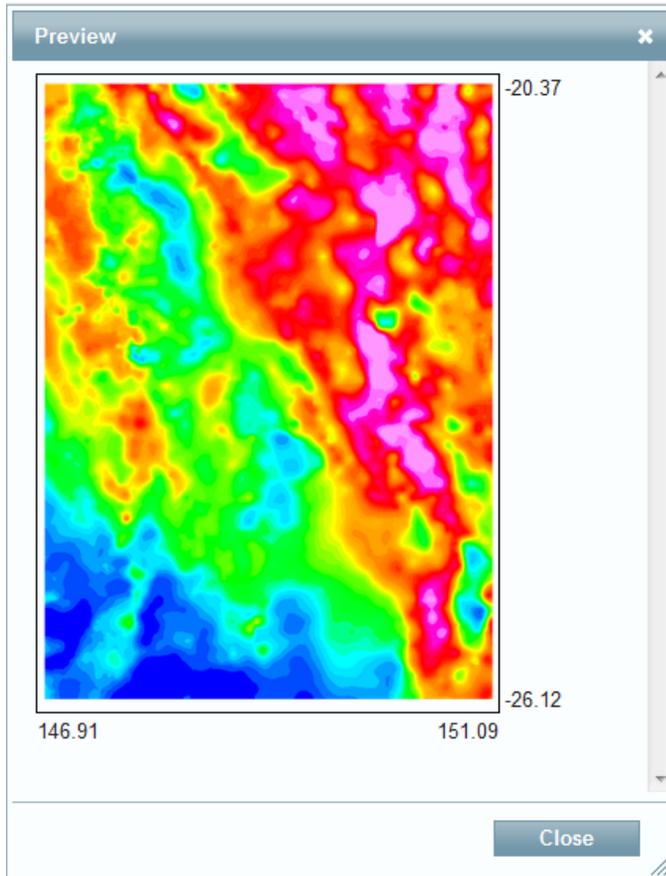
- Selecting (**Use default**) will apply the Stylesheet that is selected in the Settings. The metadata can also be previewed using the selected stylesheet using the **Preview** button.
- The **Edit** option is only available when a Geosoft Metadata Editor has been configured for DAP Administrator.

Image Preview

The Image Preview section is available for file datasets.

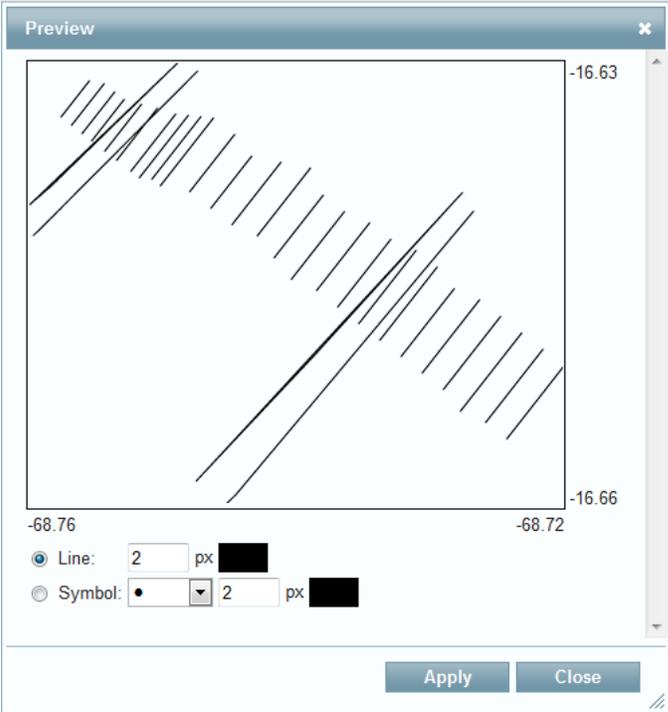


- Click **Preview** to see the snapshot image that will be presented to users via DAP client applications.



Picture file types are always rendered and delivered in an image format.

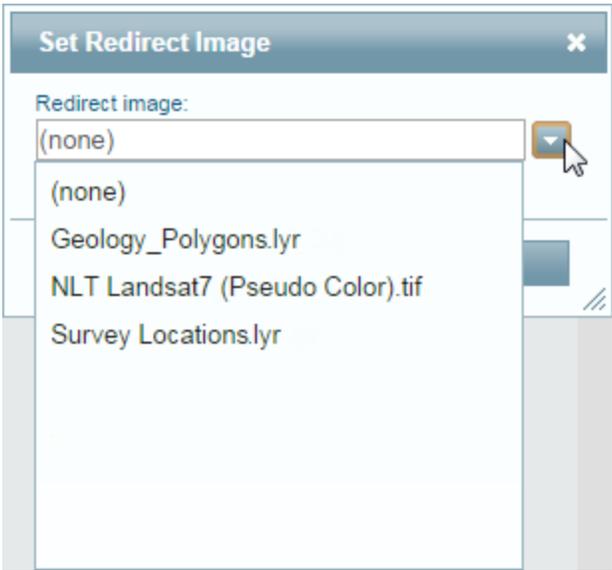
Rendering attributes are available for point datasets with symbol, size and colour and Geosoft Databases (GDB) as line with size and colour, or point with symbol, size and colour.



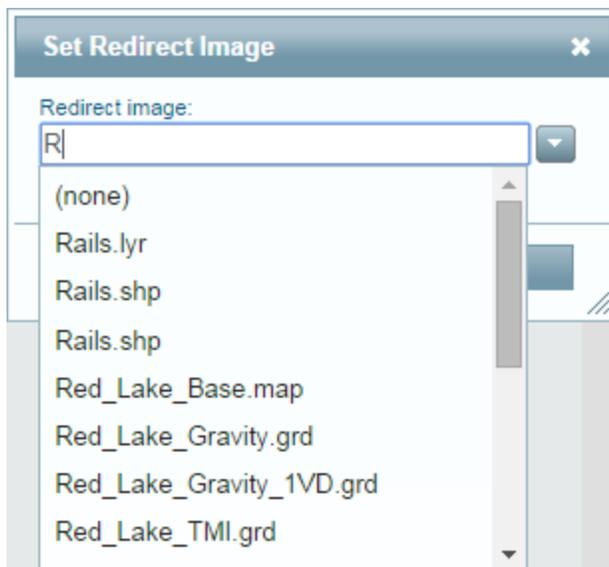
- **Set Redirect** allows the DAP Data Manager to specify another dataset that will be used as the preview image for a Published dataset.



The default list in the Set Redirect Image dialog will show all datasets with the same hierarchy as the selected dataset.



- Enter the first letter(s) of a redirect dataset name in the dialog to see a list of all datasets by name that are available to be used as a Redirect Image.



The dataset that is going to be used as a redirect image must pass the verification process. The status of the redirect dataset can be Verified, Published, or Excluded.

- **Set Coordinates** is used to set the extents for document dataset types.

Security

The Security section enables the DAP Data Manager to set the security permissions for a single dataset or selection of datasets.

The DAP Data Manager can create DAP Security Groups in the Settings page. Security may be managed on an Active Directory (AD) Group membership basis, rather than by individual user accounts, to simplify the maintenance of dataset permissions, or with Users so the DAP Data Manager has fine control over changes.

Use the **Settings | Security options** to create a new security group to be added to the DAP Security Groups window.

There are two options when editing security:

- *Set Security* - Edit the list of security groups that are already set on the dataset(s).
- *Clear Security* - Removes all security groups from the datasets so that you can have a clean slate and add a new group or group(s).

When changes are made to dataset security, the DAP Server must be updated for the changes to take effect.

Updating the DAP Server Catalog

On startup, the DAP Server will read the DAP Catalog SQL Server database and create a cache or index. The datasetInformation.cache and spatialimages.cache are stored in the Storage folder.

- Before logging out of the DAP Administrator web application, or as needed while making changes to Dataset Properties, use the green **Update DAP Server** button to reload the DAP Catalog SQL Server database changes to the DAP Server.



The DAP Data Manager will be reminded to perform this action if they logout.

The DAP Server will take approximately one minute to re-generate the DAP Server catalog cache files.



If Dataset Properties have been applied to a large number of datasets, these changes may not immediately be visible, but will appear when the database update is complete.

Publishing and Excluding Datasets

- Using the **Publish** and **Exclude** buttons at the top of the Dataset Properties, recently verified datasets can be Published or Excluded, published datasets can be Excluded, and excluded datasets can be Published.

Excluding Datasets

The Exclude option enables you to exclude selected data from future publishing or if the data is already published, it will be removed from the DAP Server.

To Exclude datasets from the DAP Catalog:

1. Select the dataset(s) in the *List of Datasets*.
2. In the *Dataset Properties*, click **Exclude**.

The dataset status is changed to Excluded and the dataset will appear in the Excluded tab. It will be removed from the catalog, the next time the DAP Server is updated.

Publishing Datasets

Before publishing datasets, it is expected that the Dataset Properties will be reviewed and modified as required. The Dataset Properties includes areas for General, Advanced, Metadata, Image Preview, and Security.

To publish a dataset:

1. Select the dataset(s) in the *List of Datasets*.
2. In the *Dataset Properties*, click **Publish**.

The dataset status is changed to Published and the dataset will appear in the Published tab. It will be added, or updated, the next time the DAP Server is updated.

Offline Datasets

An offline dataset is a placeholder for a dataset that is discoverable but not available for download. It is represented by a georeferenced image that can be previewed. Offline datasets can be useful for publishing references to very large or confidential datasets. Users can search for and find the dataset, see preview image and review metadata, but they will be unable to download the dataset. Instructions for retrieval such as contact information may be included in metadata or a customized ordering process may be available.

To create an offline dataset using the Geosoft Metadata Editor, click the *New Offline Dataset* menu and select a **GeoTIFF**. You can also directly modify the extension of the zipped preview image for the offline dataset by changing it from *.tif to *.geosoft_offline file and adding the .geosoft_offline file to the DAP incoming directory.

To create an offline dataset:

1. An offline dataset must be created from a GeoTIFF preview image. Rename the GeoTIFF file extension from *.tif to *.geosoft_offline.
2. In the Geosoft Metadata Editor, select **New Data Package** and select the .geosoft_offline file.
3. Fill out metadata fields, including instructions on how to obtain the data if required.
4. Submit the dataset to the DAP server to be verified and published.

Updating the DAP Server

Once data files and connectors have been prepared, they need to be published. The DAP Data Manager should trigger the *Update DAP Server* action to make published datasets visible in the DAP clients.

- If the item has not been published, or if it needs to be updated, the DAP Administrator service adds the item to the DAP Server cache files and search indexes.
- If the item has already been published, the DAP Server does a series of checks to see if this item needs to be updated.
- If the item is a connector, the DAP Server re-catalogs the item according to the connection rules (See "Creating Data Source Connectors" on page 39).
- If the item has been Excluded, it is ignored.

Once the updating process is complete, the DAP Server is notified that the catalog has been updated, and DAP clients will see the new published datasets in the catalog.

Setting the Coordinate System of Document Dataset Types

- The **Set Coordinates** options provide functionality to assign a coordinate system and extents to document dataset.

To set the coordinate system for datasets:

1. Select a dataset in the *List of Datasets*.
2. In the *Image Preview* section, click **Set Coordinates**.

The *Set Coordinate System* dialog will be displayed.

This dialog provides two methods to set coordinate system parameters and extents either manually by entering the parameters or by copying the parameters from an existing dataset.

3. Click **Copy from** to define the coordinate system and extents from an existing dataset when possible.

If manual entry is necessary, first define the type of coordinate system, Geographic (long, lat) or Projected (x,y).

- Unit and Projection method are disabled when the Geographic coordinate system is selected.

4. Using the dropdown lists, select *Unit*, *Datum* and *Projection method* (required for the Projected

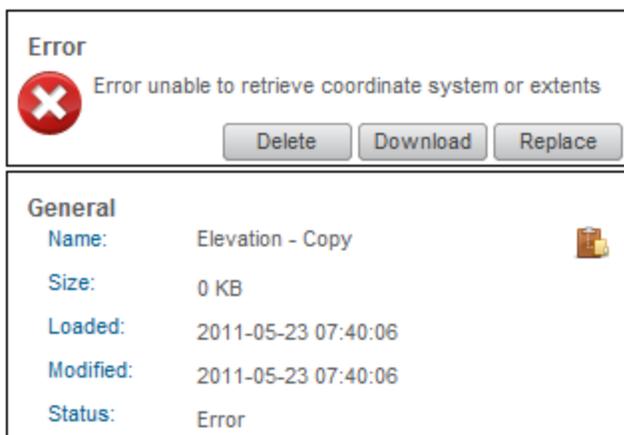
coordinate system) and *Local Datum* (optional).

5. Specify the Minimum and Maximum X and Y Extents.
6. Click **OK** to apply the coordinate system and extents to the selected datasets.

This option cannot be used to modify the coordinate system of a spatial dataset.

Errors

Datasets that fail the verification process are listed in the Error tab. The *Dataset Properties* area displays a message related to the cause of the error.



The DAP Data Manager can correct datasets with errors using Delete, Download, and Replace options.

- **Delete:** The delete button deletes the dataset and all related information from the DAP Catalog database and the managed file system. A confirmation message will appear.
 - ⚠ *Multiple datasets can be selected in any tab (All, Verified, Published, or Excluded) and deleted. When many datasets are selected, the delete task may take several minutes.*
- **Download:** The Download button will create a zip file of a complete dataset for downloading to the DAP Data Manager's local computer. The dataset can then be opened in an application such as Oasis montaj or ArcGIS, and modified to rectify the error.
- **Replace:** The Replace button allows the replacement of a dataset with a new dataset that has been uploaded to the "replacement" folder in the managed file system.

A DAP Data Manager may decide to download a dataset for modification and then replace it, or delete and re-upload the entire dataset as a new record.

- ⚠ *After a dataset is repaired, it may take several minutes for the changes to be observed in the DAP Administrator web application as the repaired dataset is verified.*

Chapter 4: Creating Data Source Connectors

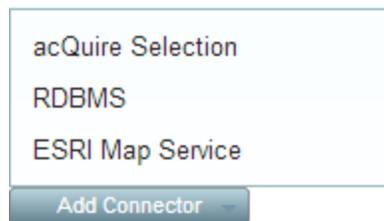
Some datasets, such as those from acQuire or RDBMS databases, are created with the use of a *Connector*. A Connector is a file that provides the connection information that enables DAP to connect to an external data source, or perform special actions as part of the publishing process.

Three types of Connectors can be added:

- ▶ *acQuire Selection* - For a connection to a point or hole dataset defined by an acQuire Selection file.
- ▶ *RDBMS* - For a generic connection to a table or view in a relational database, including Oracle databases.
- ▶ *Esri Map Service* - For a connection to an ArcGIS Server Map Service.

Connectors can be added from below the List of Datasets on the Home page, except when viewing the Error tab.

- ▶ Click the **Add Connector** button to select one of these connection types:



For more information on dataset types, see [Supported Dataset Types](#).

Adding an acQuire Connector

Some organizations store certain exploration drilling and point geochemical data in acQuire databases. Without DAP, geoscientists access this data by making a direct ODBC link to the data and using the acQuire tools embedded in their applications. For example, an ArcGIS user might extract data directly into ArcGIS for processing with the Geosoft Target for ArcGIS system. Such applications require a high-speed connection to the database server and cumbersome procedures used to establish and maintain direct ODBC database links on the client systems.

When a DAP Server is used to extract the data, DAP is responsible for windowing, re-projecting, and caching the data to meet the user's needs. This approach simplifies the client desktop configuration and enables accessing acQuire data over slower connections, such as a WAN, or remotely, using VPN over the Internet.

If you have an existing acQuire database hosted on Microsoft SQL Server, there are four steps required to connect and catalog the contents of the database through DAP:

1. Enable SQL Server authentication on the Microsoft SQL Server that hosts the acquire database so the SQL Server can accept a login ID and password for your database.
2. Create a login ID and password for your acquire database to use for this purpose.
3. Create an ODBC System Data Source Name (DSN) on the DAP Server and DAP Administrator computer.
4. Create a DAP acquire selection file to be used to catalog the acquire dataset on the DAP server.

Creating an acquire Selection Connector

DAP can be used to catalog drillhole or surface sample data stored in an acquire database. The key to this process is the acquire Selection (*.SEL) file, which enables DAP Data Managers to define the required fields and data for each Drillhole or Point Sample dataset.

To create an acquire Selection Connector for drillhole and point sample data:

1. From below the List of Datasets on the Home page, click the **Add Connector** button.
2. Select **acquire Selection** from the *Add Connector* menu.

The *Add acquire Selection Connector* dialog is displayed.

3. In the *Dataset name* field, type the name to appear in the DAP client for your data users.
Enter the required values for the acquire Connection Settings including the *DSN* from the server that is hosting the DAP Administrator application, and the *User name* and *Password* in the acquire SQL Server database.



User name and Password can be modified by editing the connector. Dataset name cannot be modified.

4. Select **Drillhole Selection** or **Point Sample Selection**, depending on the type of acquire

Selection (*.SEL) file that is being used.

5. **Browse** for the *Selection file* on your local machine.
6. Click **Add** and the acQuire database connection will be created and verified.

Once the connector is verified, it will appear in the *Verified* tab. Modify the Dataset Properties, including Hierarchy, Disclaimer, Metadata, and Stylesheet options. You can then publish the dataset.

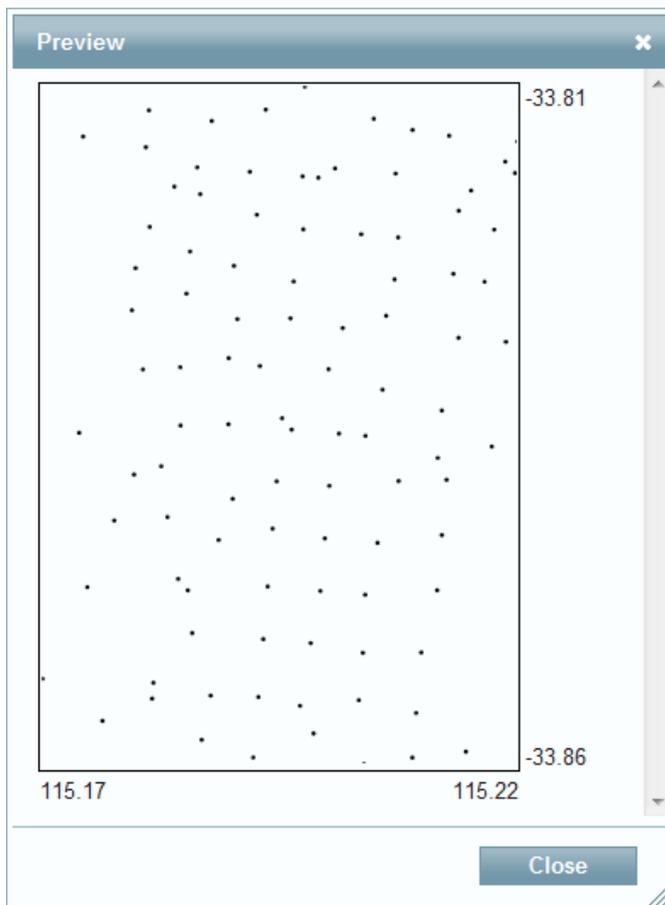


*You can edit the connection information contained in point datasets via the **Edit** button in the Dataset Properties panel for each dataset.*

The acQuire point sample dataset will be visible to your DAP clients as a point dataset type. DAP Administrator caches the point data as a Geosoft HXYZ file.

The acQuire drillhole dataset will be visible to your DAP clients as a Drillhole Project dataset type. DAP Administrator caches the data as a set of Geosoft GDB files.

Points and holes can be previewed in the DAP Administrator and will be available in DAP clients as well.



The connector should be updated as more samples or holes are added to the selected projects in acQuire, either manually using the **Update Connector** button, or regularly using the *Update connector automatically* option.

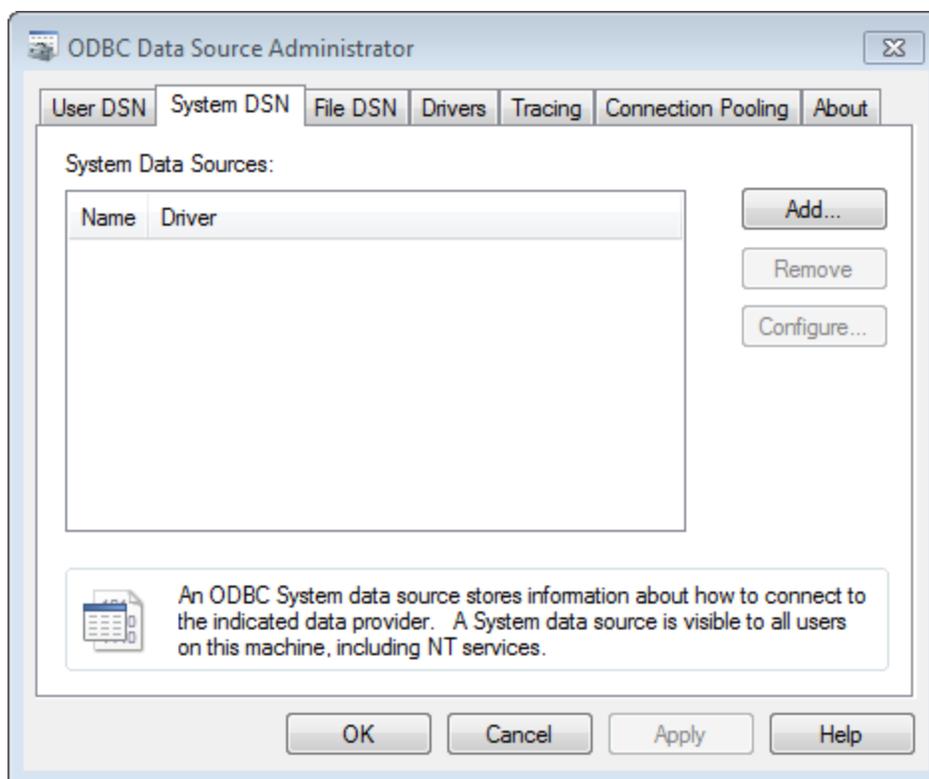
Creating an ODBC Connection

acquire connectors use an ODBC DSN to connect to the acquire database. The DSN must be a System DSN. Both Windows authentication and SQL authentication are supported. Windows authentication uses the user account that the Geosoft DAP Administrator Portal service is running under.

To create an ODBC connection to an acquire server:

1. Log in to the system that hosts the DAP server with administrator privileges.
2. From the `C:\Windows\SysWOW64\` folder, launch **odbcad32.exe**.
3. Select the **Data Sources (ODBC)** tool to add a new System DSN.

The *ODBC Data Source Administrator* dialog is displayed.

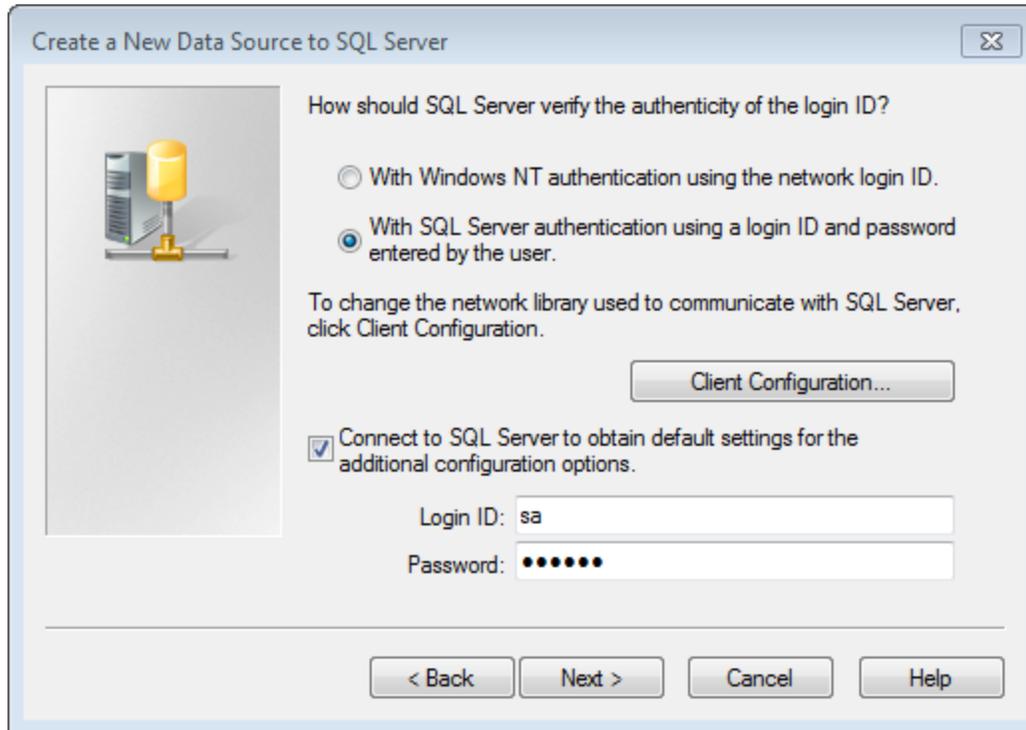


The connection must be a System DSN because the DAP server will access this connection using a different User ID, created specifically for the DAP server when it was installed.

4. Click **Add**.
5. In the next dialog, select the "SQL Server" driver to access your acquire database, and click on **Finish**. The system prompts you for a name for your data connection (this is the DSN name that you will need later), and a description.
6. Choose a meaningful name and description, and select the server computer that hosts the

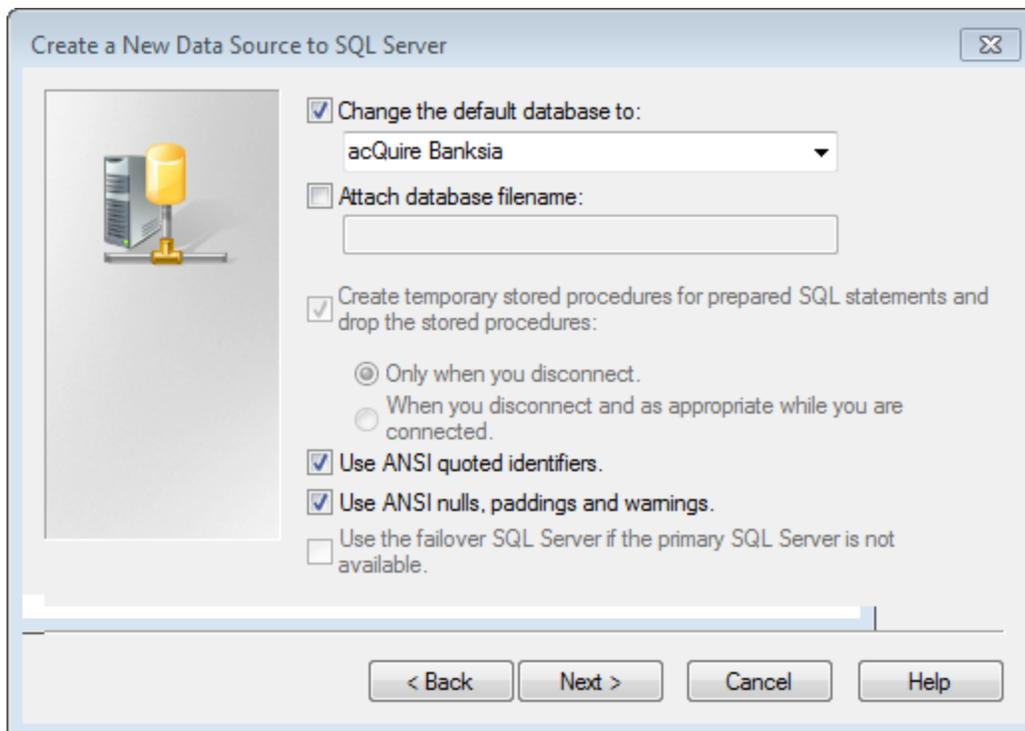
database. Make a note of the DSN name as you will use it in subsequent steps.

7. Click **Next**. The next dialog asks you how you want to authenticate the Login ID.



8. Choose the *SQL Server authentication using a login ID and password entered by the user* option.
9. Enter the SQL Server *Login ID* and *password* set in the *Enabling SQL Server Authentication* section. The DAP server will also use these parameters to connect to your data.
10. The DAP Server runs under its own user, and this is the only way it can connect to SQL Server.
11. Click **Next**.

The next dialog prompts you to choose the acQuire database name within SQL Server as the default database for this connection.



12. Select your database from the drop-down list. In the above example, the selected database is “acquire Banksia”.
13. Click **Next** and accept the defaults in the next dialog, then click **Finish** button to complete the connection.
14. Test your connection in the last dialog by clicking **Test Data Source**. Your data source will appear on the *System Data Sources* list.
15. Repeat the above process for all acquire databases you want to make available on your DAP Server.



If you are managing your DAP Server from a different computer on your network (which is the typical configuration), you must also establish an ODBC System DSN connection from your administration computer to the same acquire database. This connection will be used by DAP Administrator to manage the DAP catalog on the administration computer. You must use exactly the same DSN, Login ID, and password. Once the catalog is created, the DAP Server will access the acquire database through its own ODBC connection.

Creating an RDBMS Connector

RDBMS (Relational Database Management System) Connector publishes point data stored in relational databases using ODBC (Open DataBase Connectivity) DSN (Data Source Name) connections. The use of DSN connections enables publishing of point data from relational databases.



*To access ODBC, launch **odbc32.exe** located in the C:\Windows\SysWOW64 directory.*



The RDBMS Connector can be used with Access, SQL Server, and Oracle databases.

Point data must be from a database table or a SQL view which contains X, Y (and optionally Z) columns. Data in X and Y columns must be in a single geographic or projected coordinate system. The connector uses an ODBC DSN to connect to the database. The DSN must be a System DSN. For connections to a SQL database, both Windows authentication and SQL Server authentication are supported. Windows authentication uses the user account that the DAP Administrator service is running under. For MS Access databases, user name and password are not required. Oracle connectors use a Username and Password.

To Create an RDBMS Connector:

1. From below the List of Datasets on the Home page, click the **Add Connector** button.
2. Select **RDBMS** from the *Add Connector* menu.
3. The *Add RDBMS Connector* dialog is displayed.

4. Enter a *Dataset name* to represent the point data in the RDBMS database. This is the name that will be displayed in the DAP client interface.
5. In Database Settings, select a *DSN Name*. The DSN list provides all the System DSNs on the computer running DAP Administrator web application.
6. Select a *Table* or SQL View from the connected database. Move fields to be published from the

Available Columns list to the Selected Columns list. Selected Columns can also be re-ordered.

7. In the *X, Y, Z columns* fields, select X, Y and Z columns from the list of columns chosen above. (Z column is optional.)
8. In the *Coordinate system* section, select the coordinate system appropriate for the data in the X and Y columns.
9. Click **Add** and the RDBMS connector will be created and verified.



User name, Password, Table, columns and column order, and coordinate system can all be modified by editing the connector after it has been verified or excluded. Dataset name cannot be modified. To change the Dataset Name, create a new connector.

DAP Administrator caches the data as a Geosoft HXYZ file. The connector should be updated when the content of the database changes, either manually using the **Update Connector** button, or regularly using the *Update connector automatically* option. See "Updating Connectors" on page 47.

Creating an Esri Map Service Connector

To publish Esri Map Services, the DAP Server requires an Esri License component. The Esri Map Service connector contains the parameters for connecting to the ArcGIS Server and the Map Service.

To Create an Esri Map Service Connector:

1. From below the List of Datasets on the Home page, click the **Add Connector** button.
2. Select **Esri Map Service** from the *Add Connector* menu.
3. The *Add Esri Map Service Connector* dialog is displayed.

4. In the *Dataset name* field specify the name of the connector to create. This is also the name of the dataset shown in DAP client interfaces.
5. In the *Server* box specify the name of the ArcGIS Server computer or IP address.
6. Click **Retrieve List** to see a list of Map Services hosted by the ArcGIS Server. Select the name of the *Map Service* that you would like to publish.
7. Click **Add** to create the connector.

Support of Esri Map Services by DAP Client Applications

Esri Server Map Services - after being published through a DAP Server - can be searched, viewed and downloaded in all DAP client interfaces. The native data published by an ArcGIS Server Map Service is not downloadable; instead, a raster image showing the presentation of the data is extracted and saved to DAP client computers. The raster image is normally a GeoTIFF, and can be reprojected, reformatted and resampled.

Preview of an Esri Map Service is done on-the-fly by the DAP Server with the ArcGIS Server.

Updating Connectors

Connectors, especially connectors that cache point data, need to be updated as more data are added to the external data sources. This can be done in two ways.

1. Manually as required, using the **Update Connector** button in the *Dataset Properties* panel.

The screenshot shows the 'Connector' section of the 'Dataset Properties' panel. It includes a 'Dataset type' dropdown menu set to 'acquire Surface Selection' with an 'Edit' button to its right. Below that is a 'Qualifier' text input field containing the word 'SURFACE'. Underneath the qualifier is a checkbox labeled 'Update connector automatically', which is currently unchecked. At the bottom right of this section is a grey 'Update Connector' button.

2. Regularly using the **Update connector automatically** option in the *Dataset Properties* panel according to the update frequency (daily or weekly) specified in **Settings** page under *Dataset Types*.

This screenshot is identical to the one above, but the 'Update connector automatically' checkbox is now checked.

The screenshot shows the 'Connector Updates' panel. It features the text 'Automatically update connectors:' followed by a configuration area. This area includes the word 'every' followed by a dropdown menu set to 'Day', the word 'at', and another dropdown menu set to '12:00 am'.

Chapter 5: Creating DAP Server Reporting

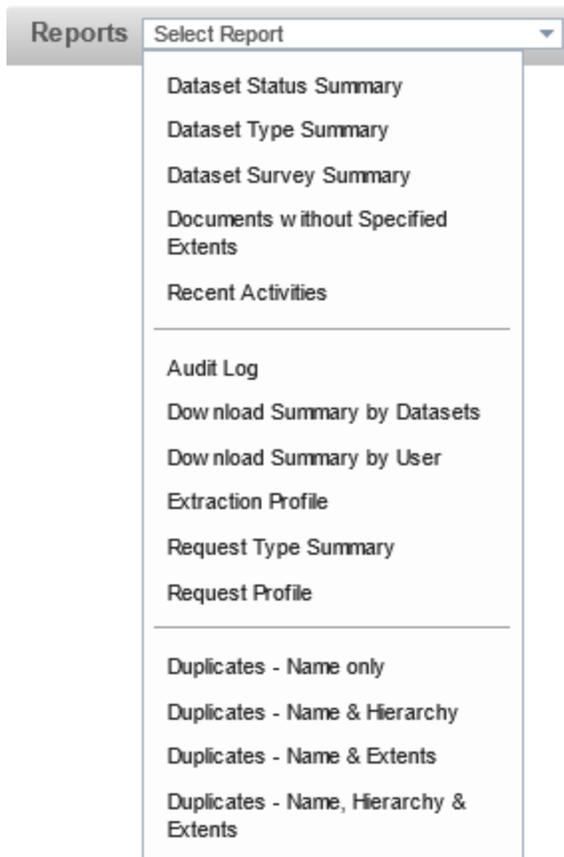
DAP Server Reports

A variety of DAP Server usage reports can be viewed in the Reports page of the DAP Administrator web application. A collection of reports is provided including reports on uploaded data and download activity:

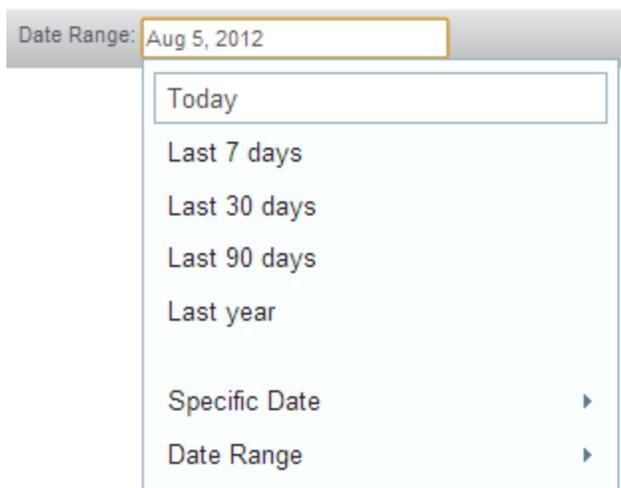
- Dataset Status Summary - Datasets are reported by status and count
- Dataset Type Summary - Datasets are reported by type and count
- Data Survey Summary - Datasets are reported by a specific metadata field such as primary theme or subject
- Documents without Specified Extents - All documents with global extents (without specified extents) are listed
- Recent Activities - Loaded datasets are reported by last 60 days, 30 days, last week and current day
- Audit Log - A detailed log of datasets downloaded in a specific time period
- Download Summary by Datasets - Downloaded datasets are reported by spatial dataset type
- Download Summary by User - Downloaded datasets are reported by "who downloaded"
- Extraction Profile - Downloaded datasets are displayed as a profile based on extraction date
- Request Type Summary - Summary of server requests types
- Request Profile - Requests on datasets are displayed as a profile
- Duplicates - Datasets with the same name and hierarchy and/or extents are listed here

To create a DAP Server report:

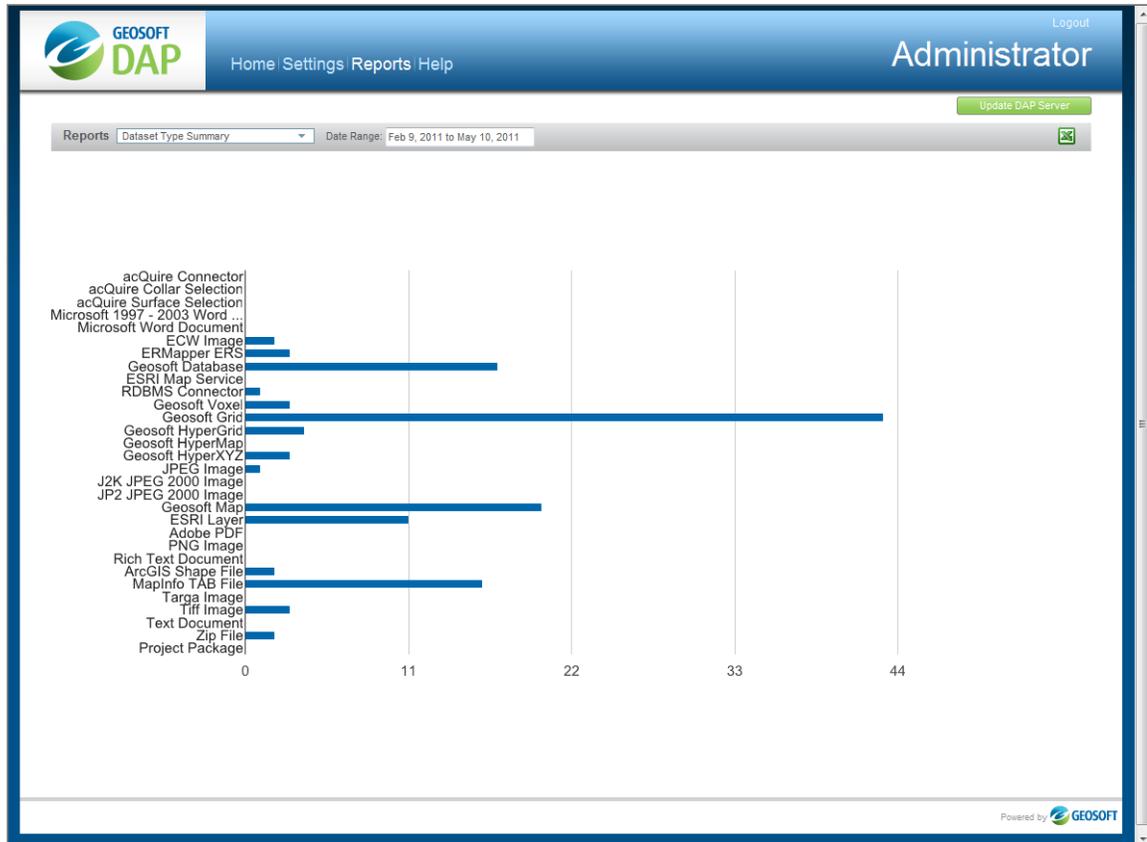
1. In the DAP Administrator web application, select the *Reports* page.
2. From the *Reports* dropdown list, select the required report.



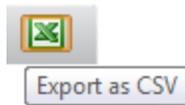
3. From the *Date Range* dropdown list, select the required timeframe.



4. The requested report is generated and displayed.



5. If needed, export a CSV of the report details.



Interactive Reports

Georeference DAP Documents

The results of the Documents without Specified Extents can be selected and the action to Georeference

DAP Documents can be applied using the Georeference DAP Documents button (). The coordinate system and extents is taken from the first spatial file (including, in priority order, Geosoft Grid, ER mapper ERS, Geosoft GDB, image, or other spatial dataset) with the same hierarchy as the document. A log of the documents processed successfully and failures, together with the spatial dataset used for each document processed is saved in the outgoing folder.

Update the DAP Server in order for DAP clients to see these changes.

Removing Duplicate Datasets

The results of the Duplicate reports can be selected and the action to Remove Duplicates can be applied

using the Remove Duplicate Dataset(s) button (). The name can be used to identify the datasets in the Dataset List. If the hierarchy is one of the duplicate criteria then this can also be used to find the duplicate datasets. The determination of which datasets are removed is based on the status.

- If one of the duplicates has been published, then this published dataset is not removed.
- If none of the duplicates are published but one is verified, then this verified dataset is not removed.
- If none of the duplicates are published or verified but one dataset has been excluded, then this excluded dataset is not removed.

Update the DAP Server in order for DAP clients to see these changes.

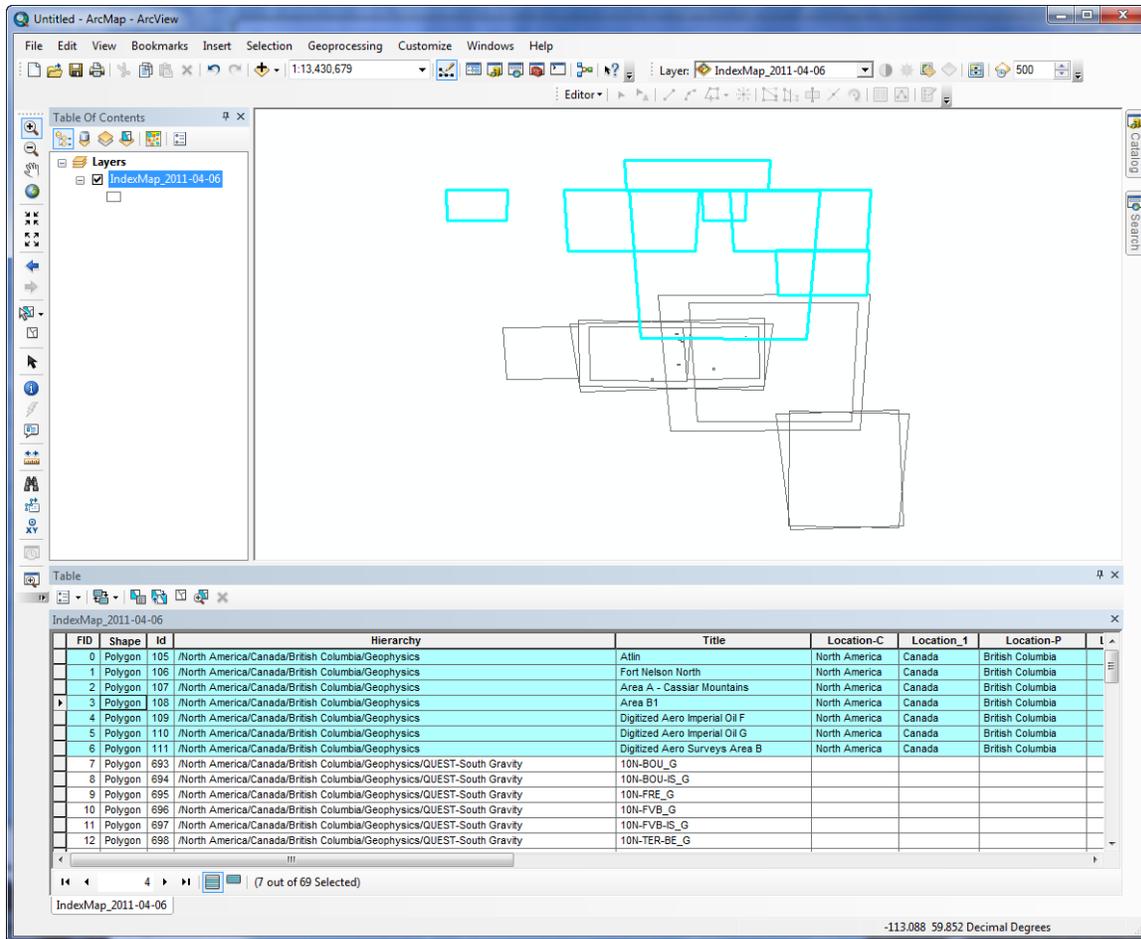
Dataset Outputs

Creating an Index Map

An index map is a query-able set of survey or dataset outlines with attributes. This function will create a shapefile of the selected datasets in the *List of Datasets*, as filtered by the Search options.

1. Use the **Advanced Search** to specify a subset of datasets.
2. Select the datasets to be included in the Index Map.
3. Click **Index Map**.
4. Specify a local location to save the shapefile.

The Index Map shapefile includes a polygon of the dataset bounding box and attributes defined by the metadata fields specified as part of the Structured Metadata Query.



The creation of an Index Map is a DAP Administrator task that is accessible only to the DAP Data Manager. The Index Map is not available to the end users through the DAP clients unless it is published as a DAP dataset.

Creating a DAP Administrator Data Package

Package is a DAP Administrator tool that can be used by the DAP Data Manager to extract a subset of data in the same folder hierarchy as seen in the DAP client. This can be useful to share data with users who don't have access to the DAP Server, such as contractors or consultants

1. Use the **Advanced Search** to specify the subset of datasets.
2. Select the datasets to be included in the Index Map.
3. Click **Package**.

A separate process will create a new file named "Package_yyyy-mm-dd_#.zip" in the outgoing folder of the DAP Data folder.

The files in the Data Package zip file will unzip based on the presentation hierarchy that an end user of a DAP client would see.