Personal Map Server

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1. Introduction

Welcome to the help library for the Personal Map Server for map authors. Personal Map Server allows you to publish maps on the Intranet / Internet fast and easily directly from your dekstop. This help system focuses primarily on using Personal Map Server configuration and management.

If you're new to Map Publisher Professional and Personal Map Server, you can start learning about the system now by reading the topics in the Application Overview.

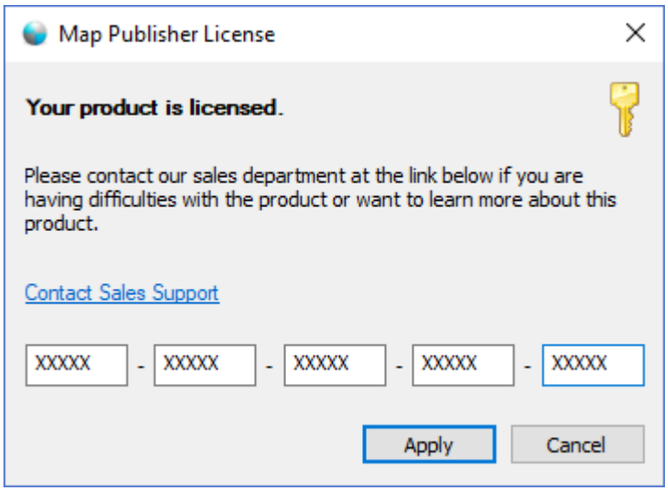
Using this Help

There are a number of ways to explore the information contained in this User Guide, depending on where you are and what you are looking for. The four major areas are:

- Application Overview
  Start here if you want to learn about what the product does and what features it contains.
- Desktop Application
  Read here if you want to know how to use the desktop product or to find out what a dialog, control or menu does.
- Server Application
  Read here if you want to learn about the server components and how to manage or configure them.
- How To
  Read here if you want to learn how to configure and deploy the service as a personal map server or shared map server or how to utilize Personal Map Server from Map Publisher Desktop application.

Licensing

Personal Map Server is feature of Map Publisher Professional and requires one license per installation.



- You can purchase Map Publisher Professional on our Web Site:
  https://www.lcic.xyz/products/purchase.html
- Read more about licensing Map Publisher Professional:
- https://www.lcic.xyz/products/licensing.html

Contact Information

- Map Publisher Professional Website
  https://www.lcic.xyz/products/axis
- Support Forums
  https://www.lcic.xyz/products/axis/forums

- Support Email
  support@lcic.xyz

2. Application Overview

Personal Map Server allows users to publish maps to client applications via WMS, WMTS, KML and XYZ tile service protocols using a lightweight http server. Users author maps using Map Publisher Desktop and then deploy them to the Personal Map Server so other map users on your Intranet / Internet can access them. Personal Map Server is primarly intended to be used on the Intranet and is an optional feature of the Map Publisher Desktop installation. For Enterprise Map Server deployments (Internet) it is highly recommended to use the Enterprise Map Server component of the Map Publisher Professional installation program. The Enterprise Map Server component runs under Microsoft IIS Server which is a robust http server and has many features that go beyond the scope of the Personal Map Server.

Personal Map Server has two main components. The components are:

- Map Desktop
- Map Server

The Map Server is an http server with several industry standard geospatial web services and the Desktop application is used to configure the server and view and or manage the log messages from the http server.

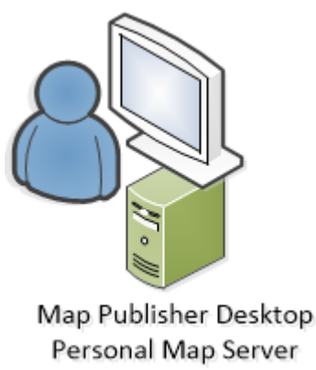
Map Desktop

Map Desktop is a simple GUI application that is installed with every instance of Personal Map Server. You can access it from one of the links that were installed on your desktop, start menu, Program Files folder or from the Map Publisher Desktop application.

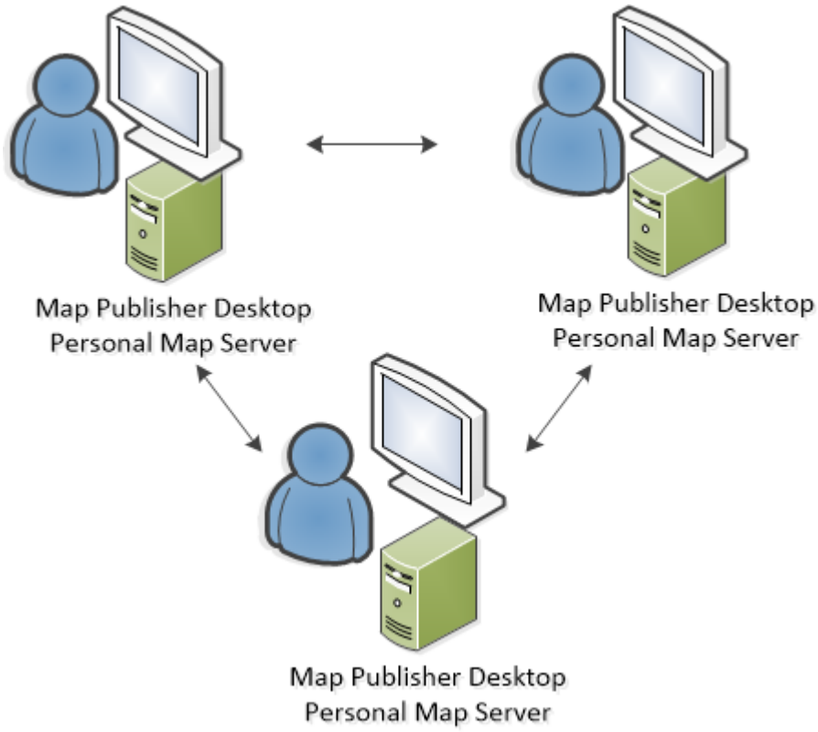
Map Server

Map Server is an http server that delivers map images and data via industry standard protocols so you can easily collaborate with other users on your network. The service is deployed on the same computer as Map Publisher Desktop and then referenced remotely using any application that can consume the insustry standard services which includes Map Publisher Desktop. The diagrams shown below illustrate different use-case scenarios:

Personal Map Server:



Shared Map Server:



To get started using Personal Map Server and determine what use-case scenario is best for you read the Desktop, Server and How To sections of this help guide. Additional information on how to use Map Publisher Desktop with Personal Map Server can be found in the Map Publisher Desktop help guide.

3. Using The Application

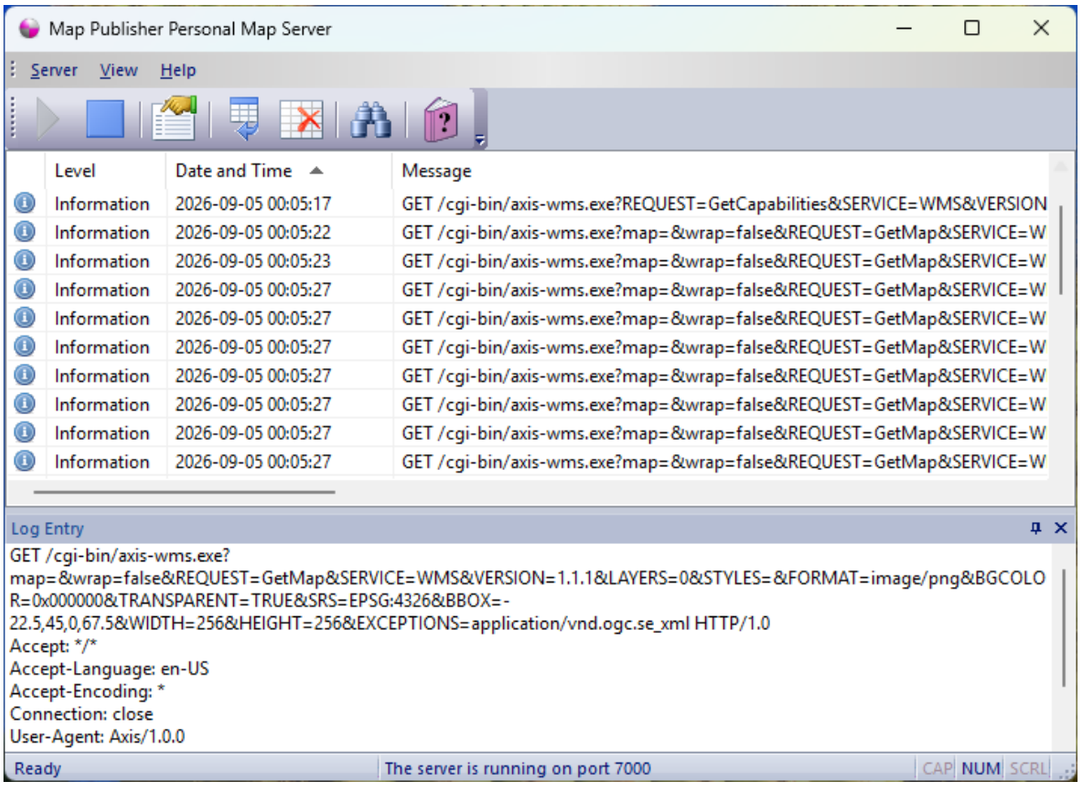
3.1 Desktop

3.1.1 Overview

Personal Map Server Desktop is a management application that allows you to control and manage the Personal Map Server application. The application is a simple GUI application that is installed with every instance of Personal Map Server. You can access it from one of the links that were installed on your desktop, start menu, Program Files folder or from the Map Publisher Desktop application. Use the Desktop application to stop, start, configure service properties and review event log entries. Visit the Desktop Control links below for more information.

Desktop Window

The screenshot below shows the Map Server Desktop Application Window:



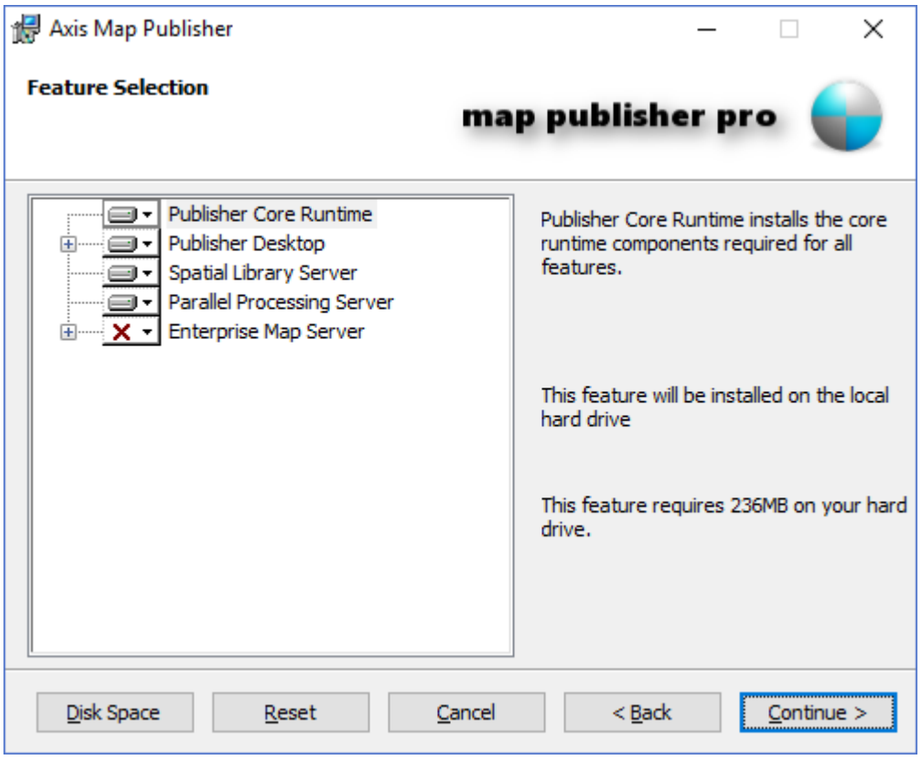
Desktop Controls

The application controls are:

- Menu
- Toolbar
- Log Entry List
- Log Entry Docking Window
- Properties Dialog
- Find Dialog
- About Dialog
- Status Bar

Desktop Restrictions

The Personal Map Server Desktop GUI application and the Personal Map Server Http Service are contained within the same executable file and therefore the Map Services will shutdown when the application window shuts down. This is the intended use because it is a personal server that is light weight. This means you cannot logoff your machine if you want the Map Server to continue running. Users that require a Map Server that will run even when all users are logged off the computer should deploy the Enterprise Map Server component that is part of the Map Publisher Professional installer package. The "Enterprise Map Server" option is typically disabled by default when installing Map Publisher Desktop as shown in the screenshot below:



The Enterprise Map Server component runs under Microsoft IIS Server which is a robust http server and has many features that go beyond the scope of the Personal Map Server.

3.1.2 Menu

The desktop menu control allows you to execute the features of the application by selecting the action you wish to perform with either the mouse or keyboard.

Desktop Menu



The popup menu items are:

- **File**
  - **Start**

    Starts the Personal Map Server Http Service.
  - **Stop**

    Stops the Personal Map Server Http Service.
  - **Properties**

    Displays the Properties Dialog window.
  - **Export**

    Exports the Log Entry List as a semi-colon delimited list of records in a text file.
  - **Delete Log Items**

    Deletes the Log Entries from the Log Entry List . This action cannot be undone.
  - **Find**

Displays the Find Dialog window that is used to find Log Entries that fully or partially match the search criteria.

- **Exit**

  Shuts down the services, exits the application and closes all windows.

- **View**
  - **Toolbars and Docking Widows**
    - **Server**

      Toggles the Server Toolbar on or off.

    - **Log Entry**

      Toggles the Log Entry Docking Window on or off.

    - **Customize**

      Displays the Customize Dialog window where you can customize the Menu and Toolbar options

  - **Status Bar**

    Toggles the Status Bar Window on or off.

- **Help**
  - **Help Guide**

    Displays the Help Window guide (this application) for the application where you can read about Personal Map Server and how to use it.

  - **About Personal Map Server**

    Displays the About Dialog window for the application where you can read about the manufacturer, copyright and find product links.

3.1.3 Toolbar

The desktop toolbar control allows you to execute the features of the application by selecting the action you wish to perform with the left mouse click.

Desktop Toolbar



The toolbar buttons are:

- **Start**

  Starts the Personal Map Server Http Service.

- **Stop**

  Stops the Personal Map Server Http Service.

- **Properties**

  Displays the Properties Dialog window.

- **Export**

  Exports the Log Entry List as a semi-colon delimited list of records in a text file.

- **Delete Log Items**

  Deletes the Log Entries from the Log Entry List . This action cannot be undone.

- **Find**

  Displays the Find Dialog window that is used to find Log Entries that fully or partially match the search criteria.

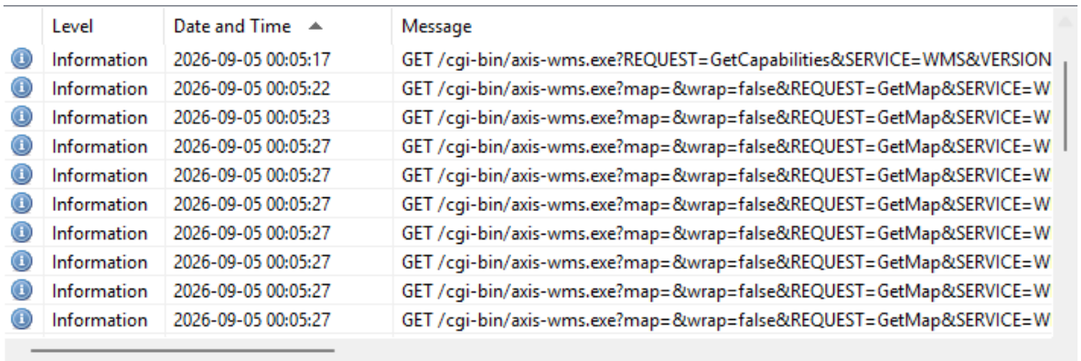
  

- Help Guide

  Displays the Help Window guide (this application) for the application where you can read about Personal Map Server and how to use it.

3.1.4 Log Entry List



	Level	Date and Time	Message
ⓘ	Information	2026-09-05 00:05:17	GET /cgi-bin/axis-wms.exe?REQUEST=GetCapabilities&SERVICE=WMS&VERSION
ⓘ	Information	2026-09-05 00:05:22	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:23	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:27	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:27	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:27	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:27	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:27	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:27	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W
ⓘ	Information	2026-09-05 00:05:27	GET /cgi-bin/axis-wms.exe?map=&wrap=false&REQUEST=GetMap&SERVICE=W

Log entries are generated by the Map Service and displayed in the Desktop Log Entry List control. The list can be sorted either ascending or descending per column by clicking on the column header. The list is cleared when the application is closed and cannot be recovered but you can export the log as a semi-colon delimited text file using the "Export" command from either the menu or the toolbar. There are four columns in the list and they are as follows:

The four column names from left to right are:

- **Icon**

  An icon that represents the level of the log entry to compliment the Level column

text description.

- **Level**

  A text description that represents the level of the log entry to compliment the Icon column. There are three possible Level description text messages matching the three possible icons. The three log levels are:

  - **Error**

    Log entries that are generated by the service that the user or system administrator should be concerned about and may mean the system is not working properly.

  - **Information**

    Log entries that are generated by the service that are informational to the user or system administrator and are a normal part of the operation.

  - **Warning**

    Log entries that are generated by the service that the user or system administrator should be advised of but may or maynot prevent the system from working properly.

- **Date and Time**

  The local system date and time the service generated the log entry in the form of YYYY-MM-DD HH:MM:SS.

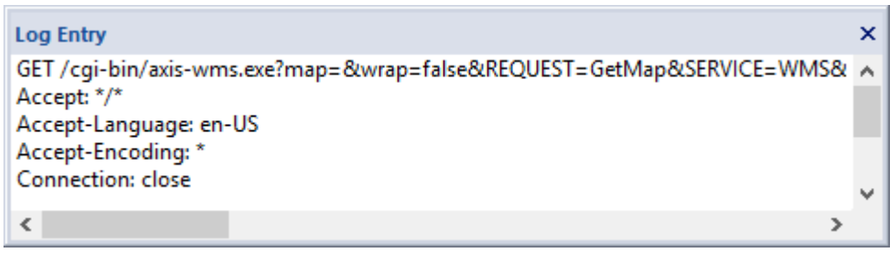
- **Message**

  A text description that describes what occured while the http services were processing the requests.

Desktop Log Entry List Actions

Using the Find Dialog window from the Menu or Toolbar control you can search for log entries that match text patterns, export log entries to a comma delimited text file and delete log entries from the Log Entry List . For more information please see Menu or Toolbar.

3.1.5 Log Entry Docking Window



Log entry messages are displayed in the Log Entry Docking Window when a row in the Log Entry List is selected by either a left mouse click or the up and down arrows on the keyboard. When the Log Entry List is exported using the Menu or Toolbar commands the Log Entry message text is included in the Log Entry row.

Desktop Log Entry Docking Window Actions

The Log Entry Docking Window is a detachable window that can be turned on or off, float, or attach to any side of the main application window. It can also fade away as a tab and fade back on mouse over of the tab. Use the *View->Toolbars and Docking Windows* Menu option to show or hide the Log Entry Docking Window.

3.1.6 Properties Dialog

The are four property pages in the dialog window:

- General Page

  Http Service properties such as host address, port, home directory, cgi-bin, default document and logging.

- Virtual Page

  Virtual Directory properties such as alias and directory path.

- Scripts Page

  Common Gateway Interface (CGI) and Fast Common Gateway Interface (FastCGI) executables.

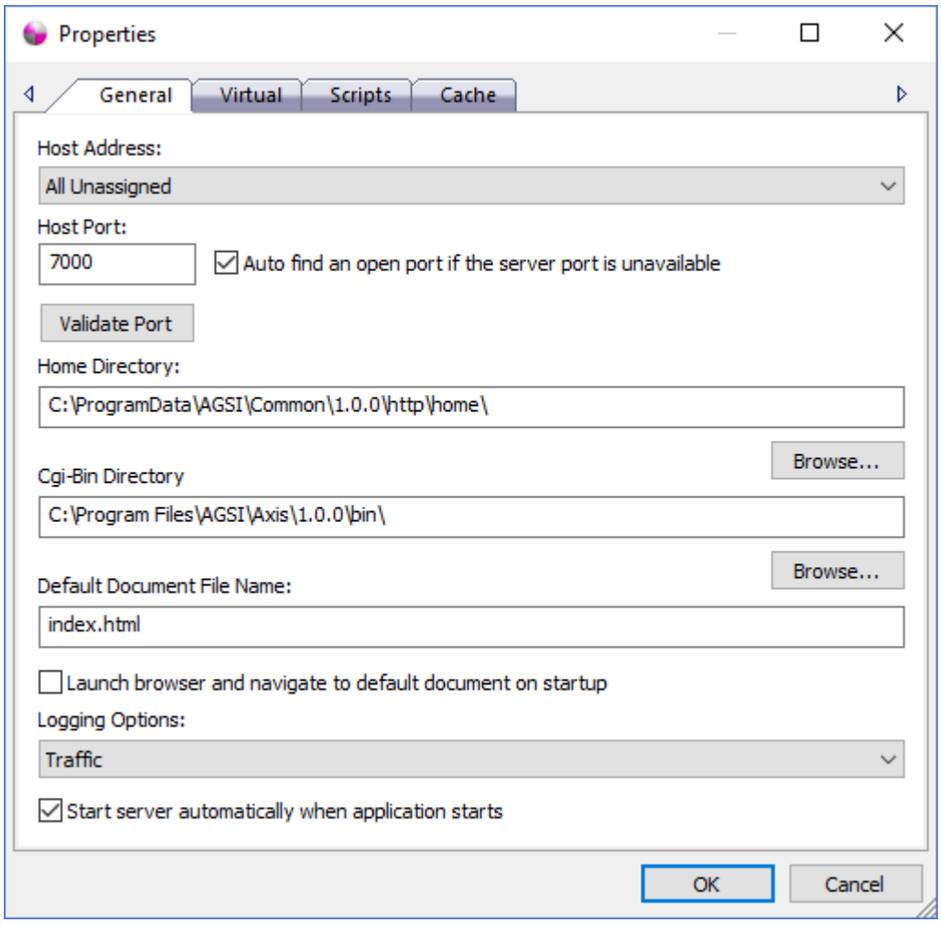
- Cache Page

  Tile cache properties such as cache enabled and cache directory path.

3.1.6.1 General Page

The desktop properties dialog window general page allows users to configure the behaviour of the Map Server Http Service.

Desktop Properties Dialog General



The dialog controls are:

- **Host Address**

  Specifies the host IP address that the server should accept http requests on. The drop down list displays the IP addresses for all network adaptors loaded on the

machine. Users can select a specific network adaptor address, 127.0.0.1 to only accept requests from the local computer or "All Unassigned" which will accept requests on any of the network adaptor IP addresses available.

- **Host Port**

  Specifies the host port number to accept http requests on. Valid port numbers range from 0 to 65535 but typically port numbers less than 1024 are reserved for special types of network services. Port 80 is the standard port number for most http servers but the Personal Map Server defaults to 7000 so not to conflict with any other potential services that may be running on the machine.

- **Auto find an open port if the server port is unavailable**

  Check this option if you want the http server to automatically find the next open port number to bind to on startup if the Host Port specified is already being used by another service. When the http service initializes the server will attempt to bind to the Host Port specified. If the port is unavailable the server will start checking additional ports by incrementing the Host Port number until it finds an open port or reaches the maximum port number of 65535.

- **Validate Port**

  The Validate Port button control attempts to bind to the port specified and validate that another service is not already using it. A message box window will be displayed alerting the user whether the port is available or not. If the server is already running when the button is clicked it will report that the port is already in use.

- **Home Directory**

  The Home Directory text box specifies a directory path where the root folder of the default website resources reside. This directory typically contains html, css, javascript, png, jpeg, sub-directories and other files that comprise a website. If a request is made to the IP address and port without any other directory or file name specified after it, such as "**http://127.0.0.1:7000 " ,** the http server will return the file contents of the file name specified in the "Default Document File Name" text box.

  Important Note: Please be aware that all files and folders under the "Home Directory" directory path will be available to any person or machine that can access the IP address while the http service is running so it is highly recomended that you don't place any sensitive or private files under that location. For further protection of Personal Map Server please refer to the help guide documentation for Microsoft Firewall Service on the Microsoft website. A Firewall allows and blocks access to IP Addresses, port numbers and protocols in a secure way to help ensure unwanted visitors don't access services they are not allowed to use.

- **Home Directory Browse**

  The Browse button located directly under the Home Directory text box displays a directory browse dialog window that allows the user to select a home directory path.

- **Cgi-Bin Directory**

  The Cgi-Bin Directory text box specifies a directory path where the root folder of the website scripts and executables reside. This directory contains exe files that dynamically produce html, css, javascript, png, jpeg and other website content on demand. Requests made to the Cgi-Bin, such as "**http://127.0.0.1:7000/cgi-bin/axis-xyz.exe/<map title>/0/0/0.png** " will execute the application specified and return the contents back to the requestor.

  Important Note: Please be aware that all executable files under the "Cgi-Bin Directory" directory path that are also specified on the Scripts Page of this dialog will be available for any person or machine that can access the IP address while the http service is running to execute. It is highly recomended that you don't place any executable files under that location if you don't want them to get invoked. For

further protection of Personal Map Server please refer to the help guide documentation for Microsoft Firewall Service on the Microsoft website. A Firewall allows and blocks access to IP Addresses, port numbers and protocols in a secure way to help ensure unwanted visitors don't access services they are not allowed to use.

- **Cgi-Bin Directory Browse**

  The Browse button located directly under the Cgi-Bin Directory text box displays a directory browse dialog window that allows the user to select a cgi-bin directory path.

- **Default Document File Name**

  The Default Document File Name text box specifies the file to be returned when a request to the http server does not specify the cgi-bin directory path or any other file or folder name. Typically the file name is something like index.html or default.html but it can be whatever file name you desire. This file must exist in the root of the Home Directory path.

- **Launch browser and navigate to default document on startup**

  Check this option if you want the Personal Map Server to attempt to launch your default web browser and navigate to the web page specified in the Default Document File Name text box when the http service is started. This is a convient feature when using the Auto find open port option so you don't have to type in the Host Address and Host Port number into the web browser address bar manually.

- **Logging Options**

  The logging option influences how the Personal Map Server logs its processing steps. The three possible logging options are Normal, Trafiic and Debug. Normal is recommended when the system is running under normal circumstances and the log entries will be limited with only high level information such as stop, start, warning and error messages. Traffic is much more verbose and will log events in more detail and should only be used when you want to get a picture of what is going on with your system but should be set back to Normal to avoid cluttering the log with useless information messages. Debug is the most verbose logging option and should be used to trouble shoot configuration and system problems.

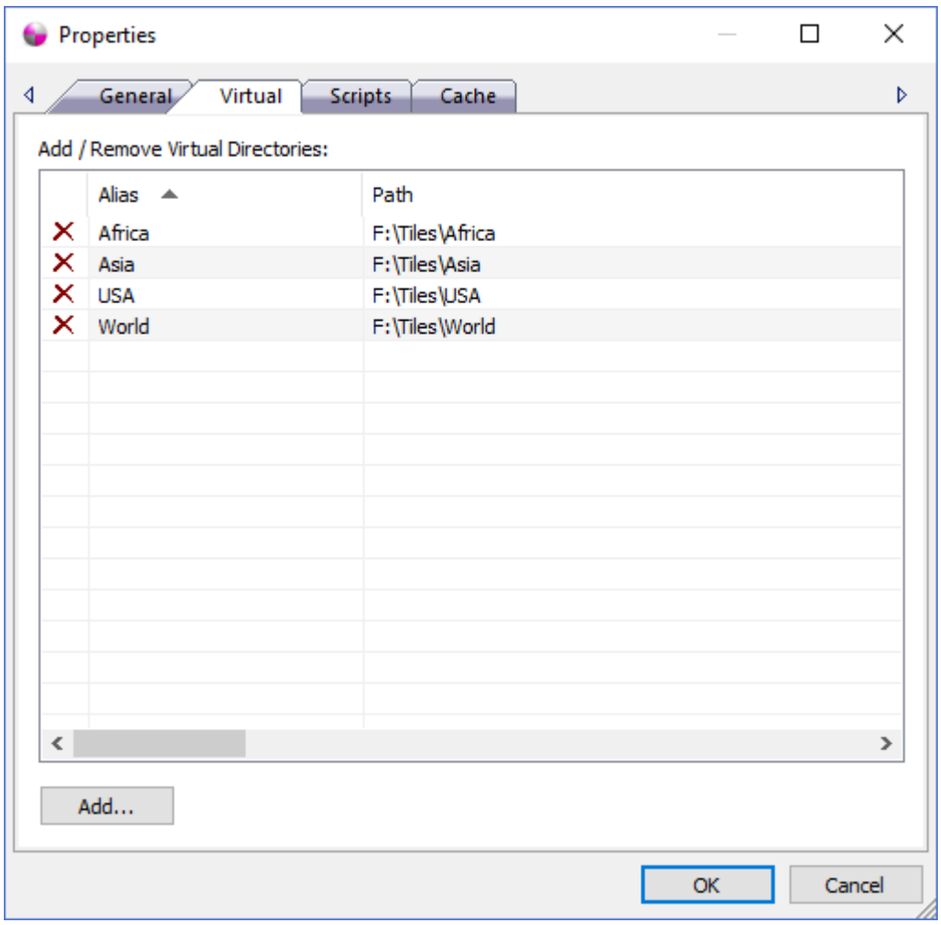
- **Start server automatically when application starts**

  Check this option if you want the http service to automatically start when the Personal Map Server Desktop application is started. This is a convience feature so the user doesn't have to start the service after the application starts.

3.1.6.2 Virtual Page

The desktop properties dialog window virtual page allows users to specify virtual directory alias names and directory paths. Virtual Directories behave like Home Directories where users can host additional websites like tile cache folders.

Desktop Properties Dialog Virtual



The dialog controls are:

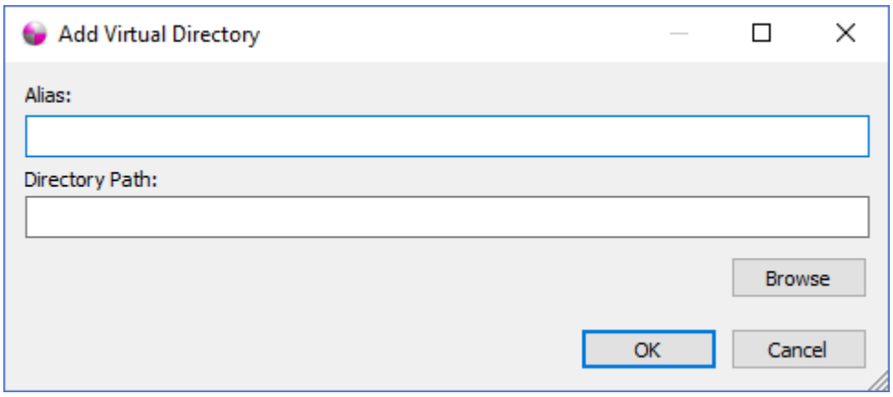
- **Add / Remove Virtual Directories**

  Displays a list of virtual directories that are made available when the http service is running. To request a virtual directory from a web browser address bar a user would specify an address like http://127.0.0.1:7000/Africa to request the default document that resides in the Path F:\Tiles\Africa. Users can sort the list ascending and descending by clicking on a column header and remove Virtual Directories from the list by clicking the red X icon in each row.

  Important Note: Please be aware that all files and folders under a "Virtual Directory" directory path will be available to any person or machine that can access the IP address while the http service is running so it is highly recomended that you don't place any sensitive or private files under that location. For further protection of Personal Map Server please refer to the help guide documentation for Microsoft Firewall Service on the Microsoft website. A Firewall allows and blocks access to IP Addresses, port numbers and protocols in a secure way to help ensure unwanted visitors don't access services they are not allowed to use.

- **Add...**

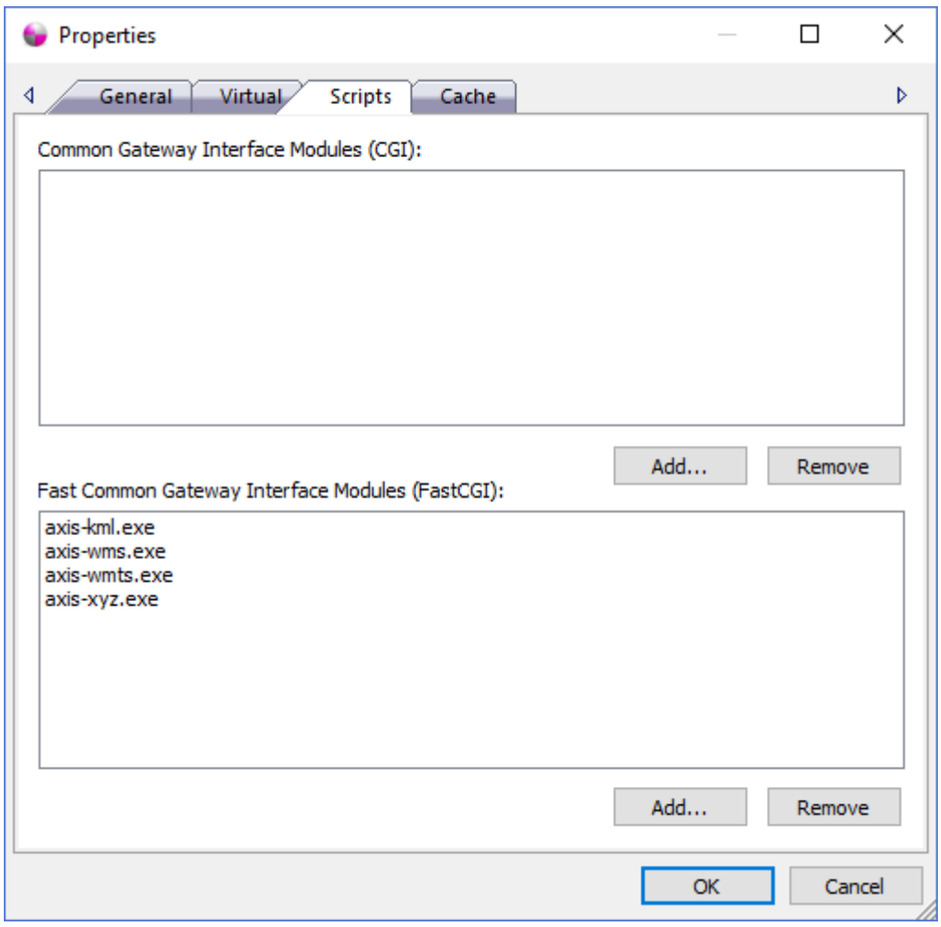
  When the Add... button is clicked the Add Virtual Directory Dialog window is displayed. The values of the Alias and Directory Path are added to the Virtual Directory list control when the OK button is clicked.



3.1.6.3 Scripts Page

The desktop properties dialog window scripts page allows users to specify CGI and FastCGI executable files that are allowed to execute in the Cgi-Bin directory while the http service is running. Common Gateway Interface (CGI) and Fast Common Gateway Interface (FastCGI) scripts are executables that produce dynamic website content on demand. Personal Map Server provides the FastCGI modules listed below as part of the Personal Map Server installation package depending on your feature selection. The modules listed below are responsible for the KML, WMS, WMTS and XYZ services that are available as part of this product.

Desktop Properties Dialog Scripts



The dialog controls are:

- **Common Gateway Interface Modules (CGI)**

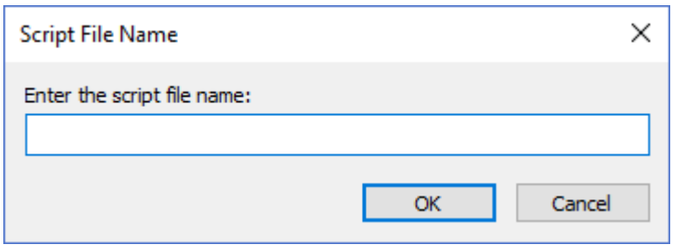
  Displays a list of CGI executable file names that exist in the Cgi-Bin Directory that are allowed to be executed while the http service is running. To request a CGI module from a web browser address bar a user would specify an address like **"http://127.0.0.1:7000/cgi-bin/<CGI MODULE NAME>"** to invoke the

process. CGI executable files must exist in the Cgi-Bin directory as specified on the General Page .

Important Note: Please be aware that all executable files under the "Cgi-Bin Directory" directory path that are also specified in the Common Gateway Interface Modules (CGI) list control above will be available for any person or machine that can access the IP address while the http service is running to execute. It is highly recomended that you don't place any executable files under that location if you don't want them to get invoked. For further protection of Personal Map Server please refer to the help guide documentation for Microsoft Firewall Service on the Microsoft website. A Firewall allows and blocks access to IP Addresses, port numbers and protocols in a secure way to help ensure unwanted visitors don't access services they are not allowed to use.

- **Common Gateway Interface Modules (CGI) - Add...**

  When the Add... button is clicked the Script File Name Dialog window is displayed. The file name specified in the text box is added to the Common Gateway Interface (CGI) list control when the OK button is clicked. The script file name must exist in the Cgi-Bin Directory specified on the General Page before adding it to the list.



- **Common Gateway Interface Modules (CGI) - Remove**

  When the Remove button is clicked the Script File Name that is selected in the Common Gateway Interface (CGI) list control is removed from the list and will no longer be available to service requests after the changes are saved and the http service is restarted. The CGI file name is removed from the list but it is not deleted or moved from the Cgi-Bin directory.

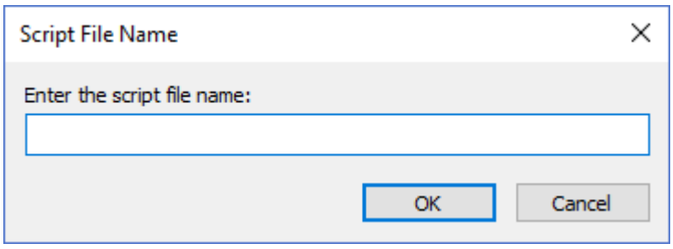
- **Fast Common Gateway Interface Modules (FastCGI)**

  Displays a list of FastCGI executable file names that exist in the Cgi-Bin Directory that are allowed to be executed while the http service is running. To request a FastCGI module from a web browser address bar a user would specify an address like "**http://127.0.0.1:7000/cgi-bin/<FastCGI MODULE NAME>"** to invoke the process. FastCGI executable files must exist in the Cgi-Bin directory as specified on the General Page .

  Important Note: Please be aware that all executable files under the "Cgi-Bin Directory" directory path that are also specified in the Fast Common Gateway Interface Modules (FastCGI) list control above will be available for any person or machine that can access the IP address while the http service is running to execute. It is highly recomended that you don't place any executable files under that location if you don't want them to get invoked. For further protection of Personal Map Server please refer to the help guide documentation for Microsoft Firewall Service on the Microsoft website. A Firewall allows and blocks access to IP Addresses, port numbers and protocols in a secure way to help ensure unwanted visitors don't access services they are not allowed to use.

- **Fast Common Gateway Interface Modules (CGI) - Add...**

  When the Add... button is clicked the Script File Name Dialog window is displayed. The file name specified in the text box is added to the Fast Common Gateway Interface (FastCGI) list control when the OK button is clicked. The script file name must exist in the Cgi-Bin Directory specified on the General Page before adding it to the list.



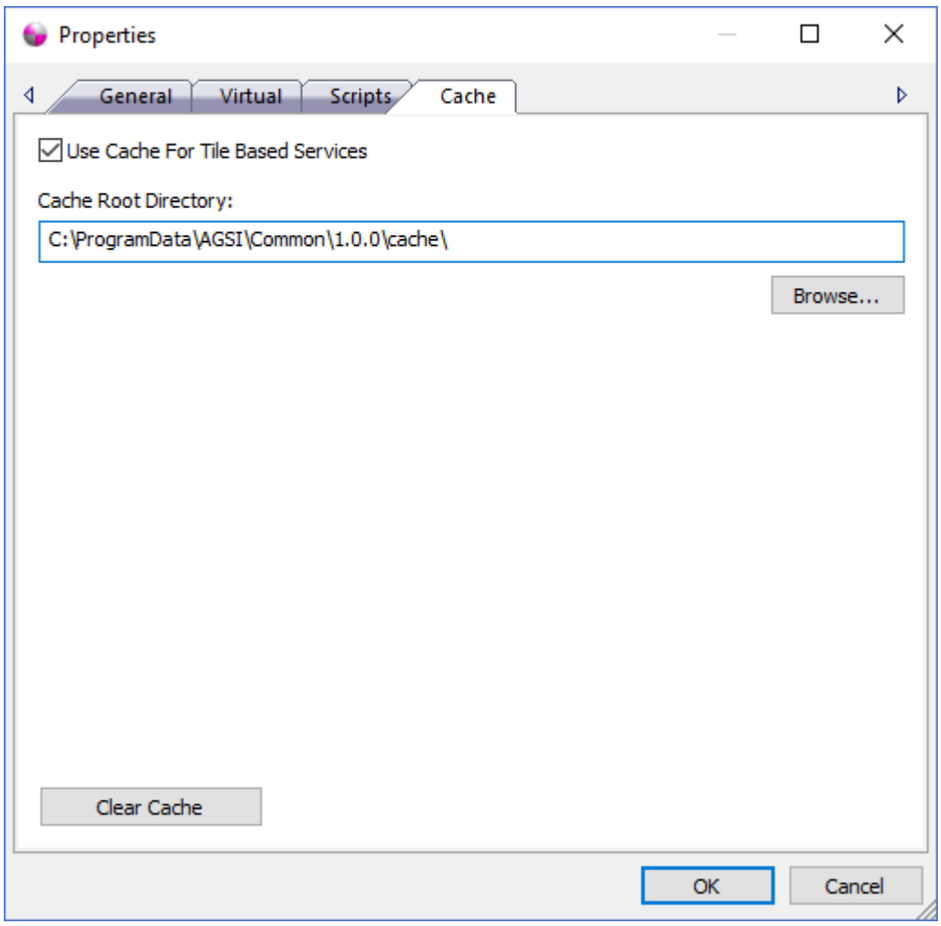
- **Fast Common Gateway Interface Modules (CGI) - Remove**

  When the Remove button is clicked the Script File Name that is selected in the Fast Common Gateway Interface (FastCGI) list control is removed from the list and will no longer be available to service requests after the changes are saved and the http service is restarted. The FastCGI file name is removed from the list but it is not deleted or moved from the Cgi-Bin directory.

3.1.6.4 Cache Page

The desktop properties dialog window cache page allows users to specify if tile based services provided by the CGI or FastCGI modules listed on the Scripts Page should use a file based cache to improve performance. Producing images from geospatial data on demand can be process intensive. Tile services can work faster and service more concurrent users if they save image tiles to disk so they can be reused for subsequent requests.

Desktop Properties Dialog Cache



The dialog controls are:

- **Use Cache For Tile Based Services**

  Check this option if you want tile based services to save imagery tiles to disk so they can be reused to service subsequent requests.

- **Cache Root Directory**

  The cache root directory path specifies the location where tile based services can store files like png and jpeg image tiles. Ideally the path should point to a directory located on fast disk to insure the best possible performance and scalability of the tile services. Tile services that cache tiles require READ and WRITE privileges for the cache root path to function properly.

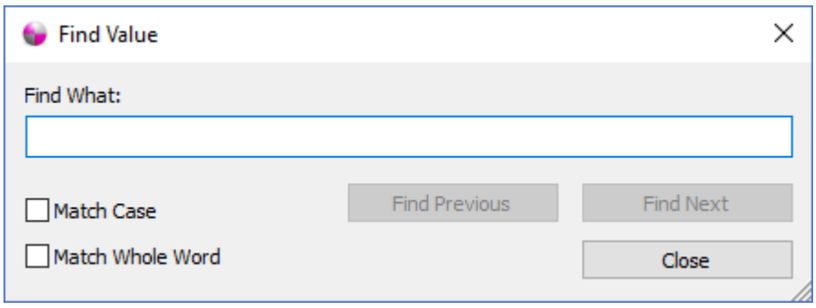
- **Cache Root Directory Browse**

  Launches a directory browse window to select the Cache Root Directory path.

- **Clear Cache**

  When the Clear Cache button is clicked all files and sub-directories located under the Cache Root Directory path will be permanently deleted. This action cannot be undone which means the tile based services will have to rebuild their caches which can have a performance cost.

3.1.7 Find Dialog



The dialog controls are:

- **Find What**

  The search criteria to look for in the Log Entry List control. The find operation searches all the columns of the list and the log entry message text for a potential match. The cells or row with a match are highlighted in the list. The list will automatically scroll to the selected row as the search progresses through the list.

- **Match Case**

  Specifies that any matches have the same case as the Find What text.

- **Match Whole Word**

  Specifies that any matches match the entire Find What text.

- **Find Previous**

  Moves the selection in the list to the next match, if one exists, moving up the list.

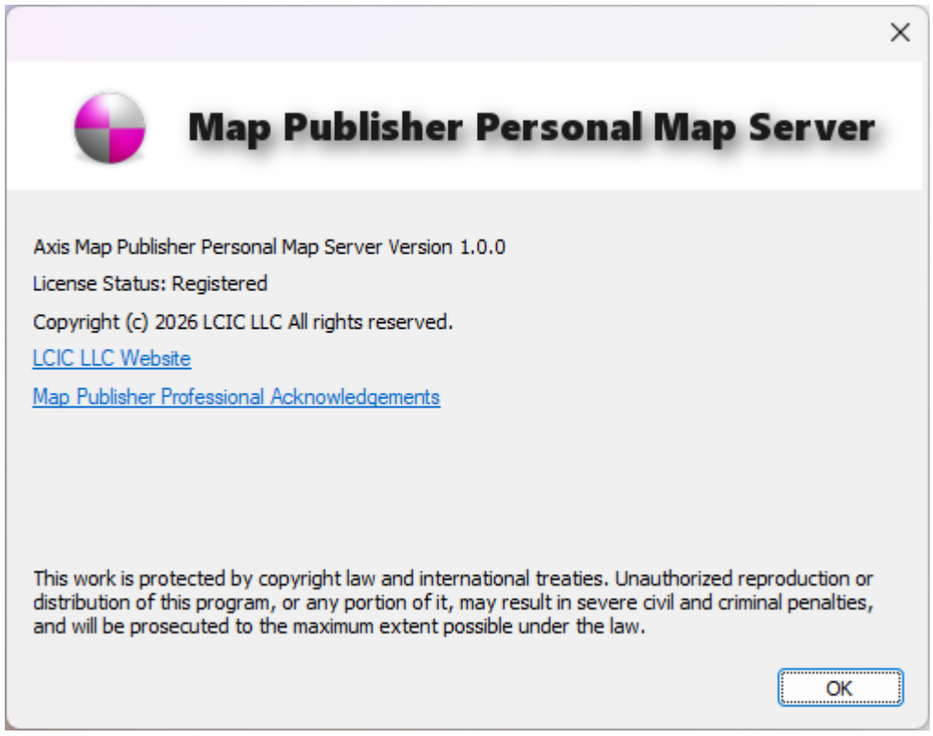
- **Find Next**

  Moves the selection in the list to the next match, if one exists, moving down the list.

- **Close**

  Closes the Find Dialog window.

3.1.8 About Dialog



The dialog controls are:

- **Product Name and Version**

  Specifies the name of the product and version.

- **License Status**

  Specifies the status of the license if in trial mode, expired or licensed.

- **Copyright**

  Specifies the copyright and manufacturer of the product.

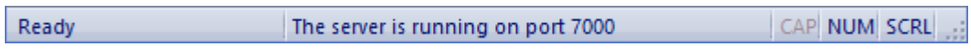
- **Links**

  Provides links to the manufacturer website for more information about products and software acknowlegments.

3.1.9 Status Bar

The desktop status bar window provides application status information for server status, mouse targets and keyboard key state.

Desktop Status Bar



The status bar panes are:

- **Mouse Target Control Text**

  Displays the control help tip when the mouse cursor is over a control such as a button or menu item.

- **Server Status**

  Displays the server as status as either started or stopped.

- **CAP Lock**

  Displays if the keyboard caps lock key is toggled on or off.

- **NUM Lock**

  Displays if the keyboard number lock key is toggled on or off.

- **SCRL Lock**

  Displays if the keyboard scroll lock key is toggled on or off.

Use the View->Toolbars and Docking Windows Menu option to show or hide the Status Bar Window.

3.2 Server

3.2.1 Overview

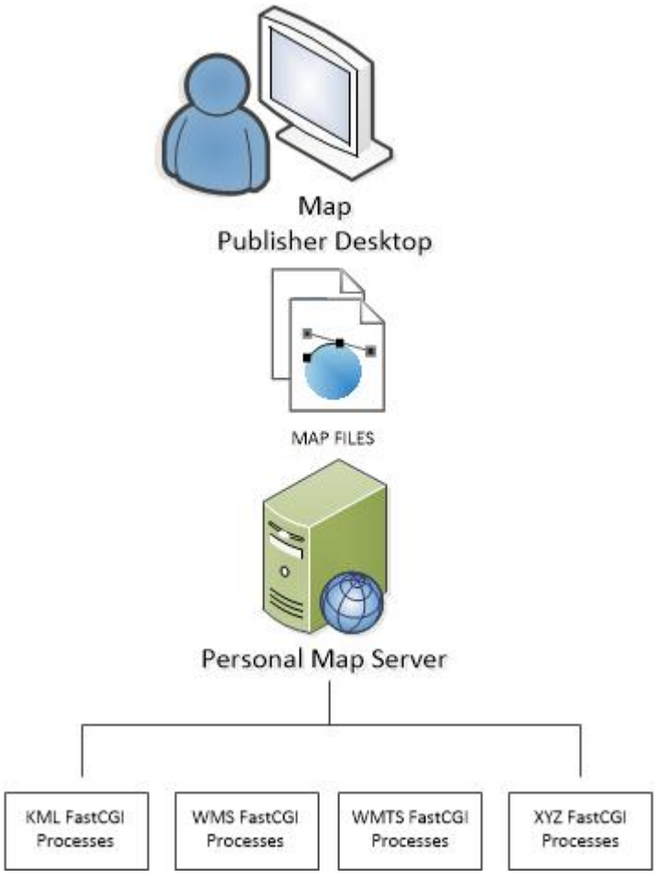
Personal Map Server is an http server that publishes maps and other geospatial content via industry standard protocols for geospatial desktop and server applications to consume and use. Map Authors use the Map Publisher Desktop application to build and style maps and then publish those maps to Personal Map Server so they can be shared via the Intranet / Internet with other users.

Http Server

At the core of Personal Map Server is an http server that conforms to the HTTP / 1.0 protocol standard. The http server is part of the Personal Map Server Desktop application and can only run only while the desktop application is open. This is intentional because Personal Map Server was designed to be an easy alternative to running a full blown http server like Microsoft IIS on every map authors workstation. The server is useful for previewing maps before they are published to Enterprise Map Server and to share content easily with other trusted users on the Intranet. The Enterprise Map Server component runs under Microsoft IIS Server which is a robust http server and has many features that go beyond the scope of the Personal Map Server.

The http server by itself is a fairly fast and scalable web server that can deliver static content (files) much like any other web server although it only supports the GET, POST and HEAD command which makes it pretty simple. The real power of Personal map Server is implemented in the FastCGI modules that come with the server and are described in more detail below. The FastCGI protocol is a fast, scalable and fault tolerant protocol that enables the http server to run as quickly and as stable as possible. The http server is responsible for controling the lifespans of the CGI and FastCGI modules and directing http traffic to the appropriate handler. Users can expand the functionality of the server by placing their own content and services under the http server Home, Cgi-Bin or Virtual Directory paths and the server will deliver or execute the content. There are four FastCGI map services that are responsible for delivering map content and they are listed below:

Map Services Diagram



Map Services List

- OGC Keyhole Markup Language Service (KML)

  An image tile service that deliveres KML and PNG or JPEG files that Google Earth, Google Maps and other applications and / or services that can consume KML formatted content.

- OGC Web Mapping Service (WMS)

  An image service that delivers XML and PNG or JPEG files to geospatial applications and services that can consume WMS services like ESRI ArcMap.

- OGC Web Map Tile Service (WMTS)

  A tiled image service that delivers XML and PNG or JPEG files to geospatial applications and services that can consume WMTS services like ESRI ArcMap.

- OSM Map Tile Service (XYZ)

  A tiled image service that delivers PNG or JPEG files to geospatial applications and services that can consume XYZ services like the web based OpenLayers map GUI application.

Note: OGC stands for Open Geospatial Consortium which is an international geospatial standards commitee. To learn more about the OGC please visit their website.

Note: OSM stands for Open Street Map which is a open repository of rasterized vector content. To learn more about the OSM please visit their website.

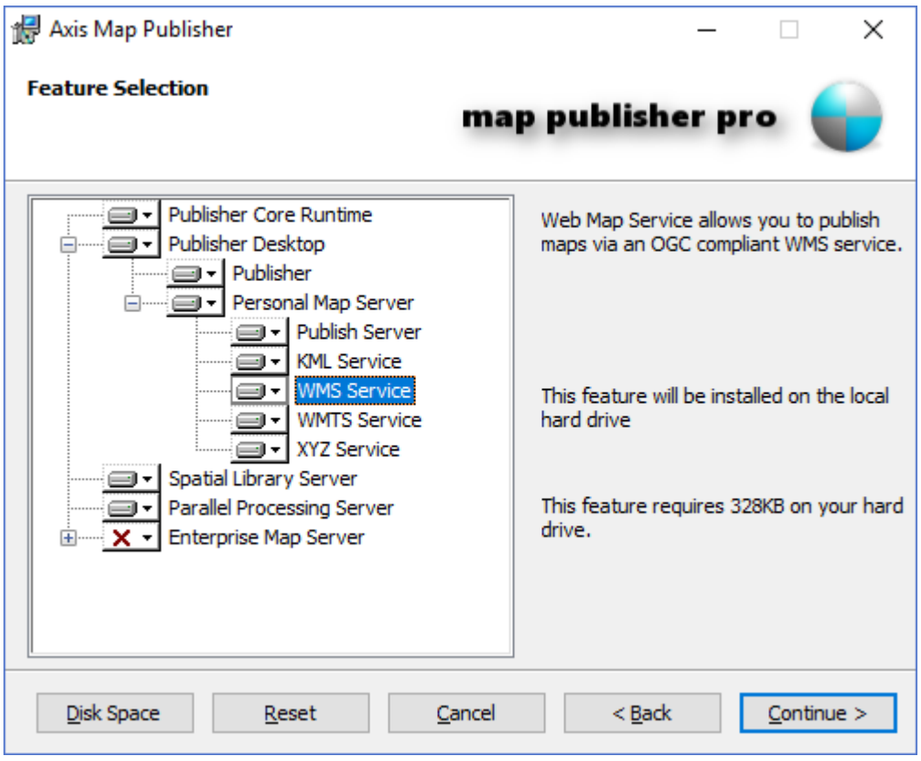
To read more about publishing maps and data via the KML, WMS, WMTS and XYZ service please refer to the help guide for Map Publisher Desktop.

3.2.2 WMS Service

The WMS service is a FastCGI process that runs under the http server and delivers map content as OGC compliant XML, PNG and JPEG files.

OGC Web Mapping Service (WMS)

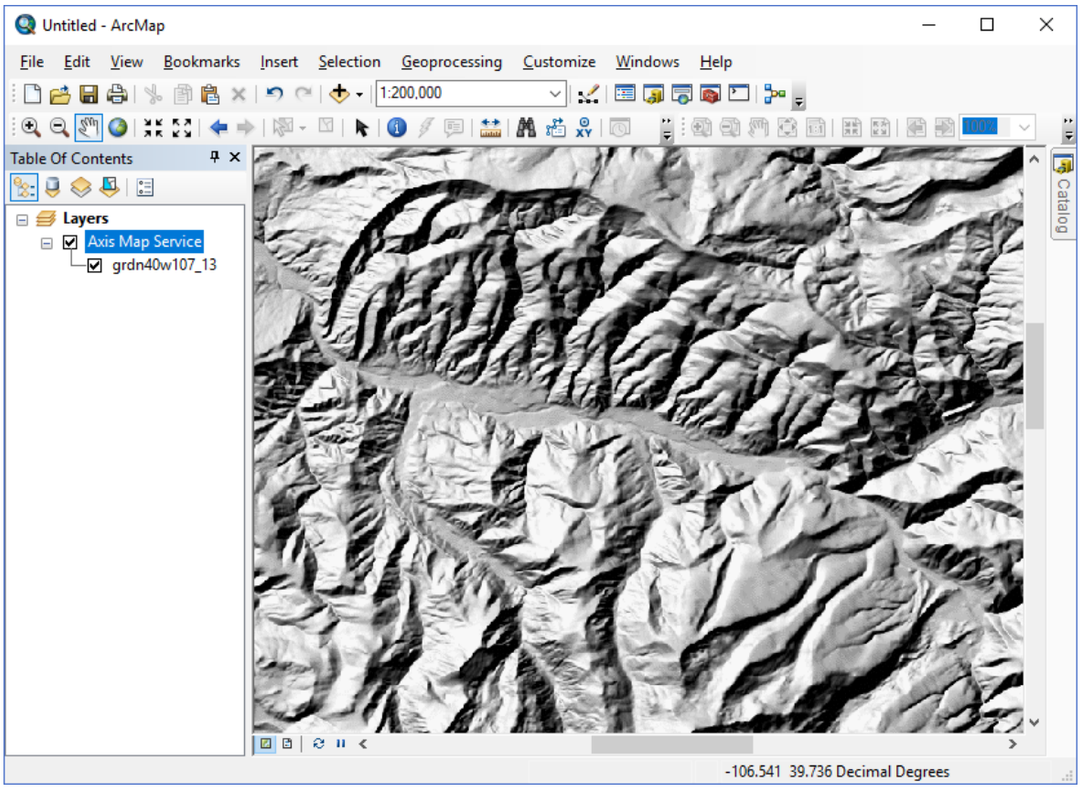
The WMS Service is a FastCGI service named" **axis-wms.exe** " and is located in the default Cgi-Bin directory post install. The WMS Service produces XML, PNG and JPEG files for each map that is published using the Map Publisher Desktop application. The WMS Service is installed as part of the Personal Map Server in the installer package as shown in the screenshot below:



OGC Web Mapping Service (WMS) Usage

Author and publish a map to the Personal Map Server using the Map Publisher Desktop application. To add a map to an OGC WMS compliant Desktop application use the url pattern "**http://HOST ADDRESS]:[HOST PORT]/cgi-bin/axis-wms.exe?map=[MAP TITLE]&** " in the desktop add WMS connection dialog. The parameter "[MAP TITLE]" at the begining is an extended feature of the WMS service that allows users to specify the Title of the map file they wish to use. If you leave that parameter blank the server will first look for a file named default.axis and return that map, otherwise it will return the map with a title that is first in an alphabetical list.

The screenshot below shows a 32 bit geotiff elevation dataset published using the Personal Map Server WMS service and rendered with ESRI ArcMap Desktop application using a server-side Hill Shade filter.



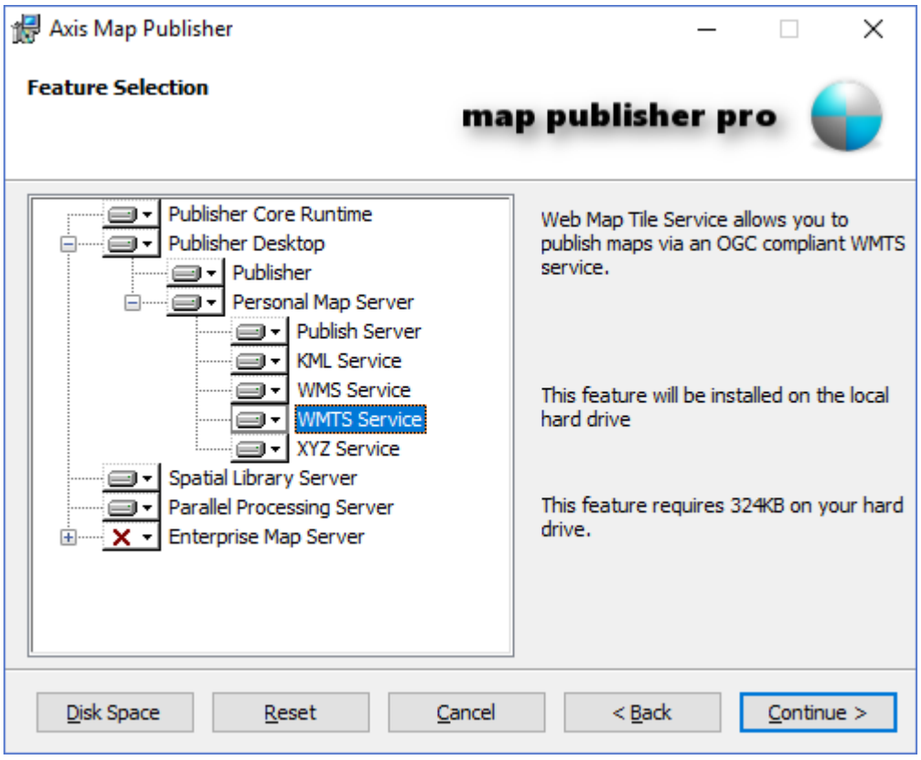
To learn more about authoring and publishing maps to Personal Map Server using Map Publisher Desktop please refer to the help guide included with Map Publisher Professional.

3.2.3 WMTS Service

The WMTS service is a FastCGI process that runs under the http server and delivers map content as OGC compliant XML, PNG and JPEG files.

OGC Web Map Tile Service (WMTS)

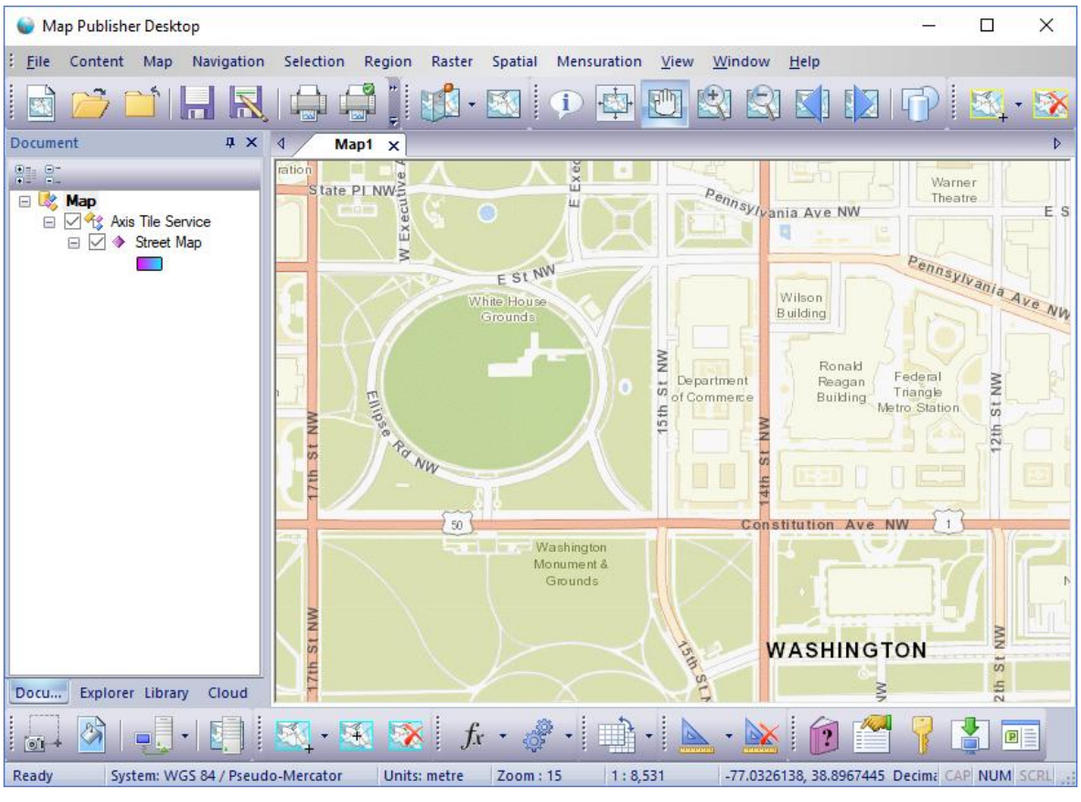
The WMTS Service is a FastCGI service named" **axis-wmts.exe** " and is located in the default Cgi-Bin directory post install. The WMTS Service produces XML, PNG and JPEG files for each map that is published using the Map Publisher Desktop application. The WMTS Service is installed as part of the Personal Map Server in the installer package as shown in the screenshot below:



OGC Web Map Tile Service (WMTS) Usage

Author and publish a map to the Personal Map Server using the Map Publisher Desktop application. To add a map to an OGC WMTS compliant Desktop application use the url pattern "**http://HOST ADDRESS]:[HOST PORT]/cgi-bin/axis-wmts.exe?map=[MAP TITLE]&** " in the desktop add WMTS connection dialog. The parameter "[MAP TITLE]" at the begining is an extended feature of the WMTS service that allows users to specify the Title of the map file they wish to use. If you leave that parameter blank the server will first look for a file named default.axis and return that map, otherwise it will return the map with a title that is first in an alphabetical list.

The screenshot below shows a street map published using the Personal Map Server WMTS service and rendered with the Map Publisher Desktop application.



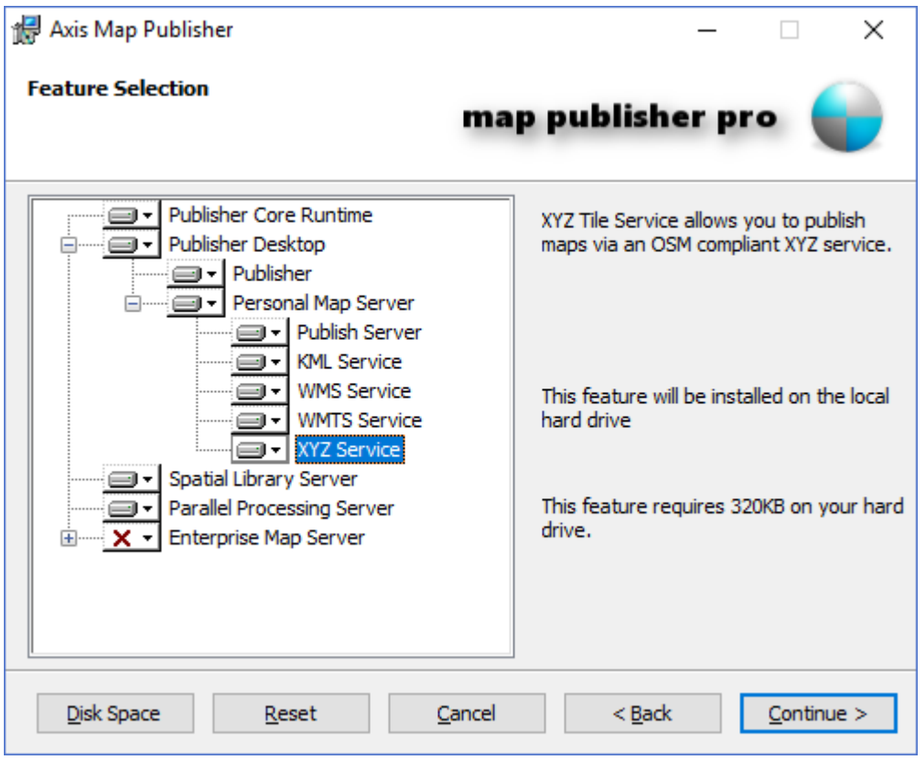
To learn more about authoring and publishing maps to Personal Map Server using Map Publisher Desktop please refer to the help guide included with Map Publisher Professional.

3.2.4 XYZ Service

The XYZ service is a FastCGI process that runs under the http server and delivers map content as PNG and JPEG files.

OSM Map Tile Service (XYZ)

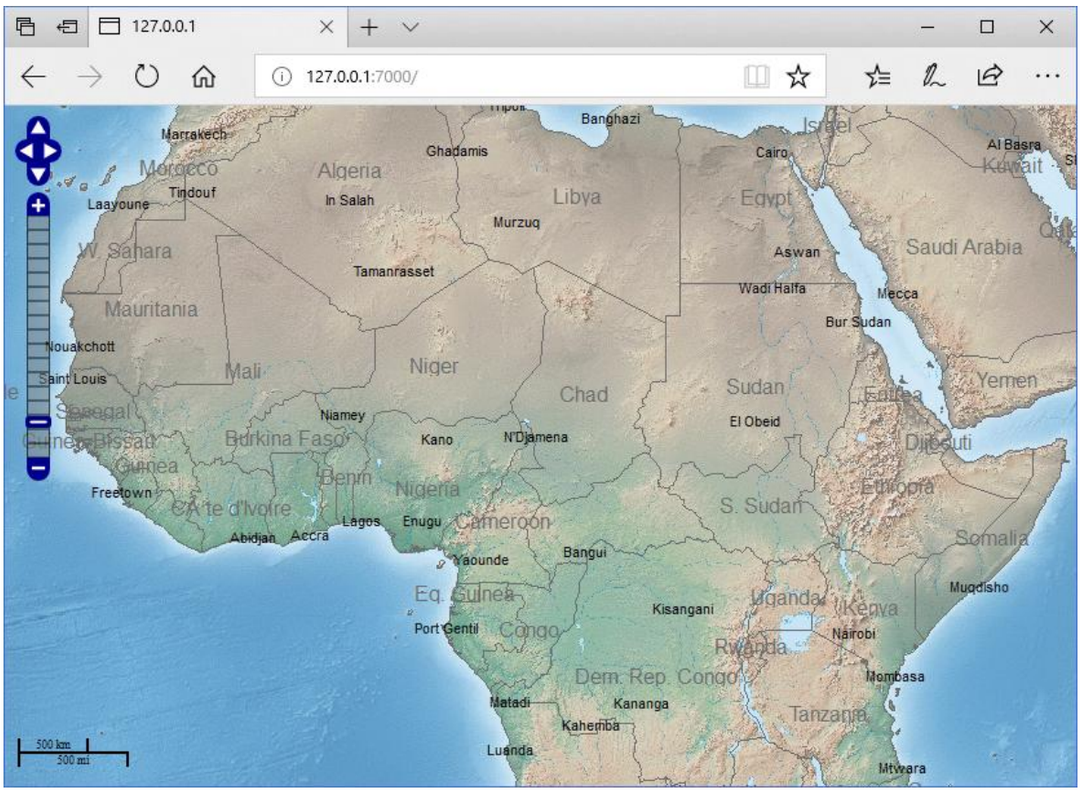
The XYZ Service is a FastCGI service named" **axis-xyz.exe** " and is located in the default Cgi-Bin directory post install. The XYZ Service produces PNG and JPEG files for each map that is published using the Map Publisher Desktop application. The XYZ Service is installed as part of the Personal Map Server in the installer package as shown in the screenshot below:



OSM Map Tile Service (XYZ) Usage

Author and publish a map to the Personal Map Server using the Map Publisher Desktop application. To add a map to an XYZ compliant Desktop application use the url pattern "**http://HOST ADDRESS]:[HOST PORT]/cgi-bin/axis-xyz.exe?map=[MAP TITLE]&** " in the desktop add XYZ connection dialog. The parameter "[MAP TITLE]" at the begining is an extended feature of the XYZ service that allows users to specify the Title of the map file they wish to use. If you leave that parameter blank the server will first look for a file named default.axis and return that map, otherwise it will return the map with a title that is first in an alphabetical list.

The screenshot below shows a Natural Earth dataset published using the Personal Map Server XYZ service and rendered with an OpenLayers browser application.



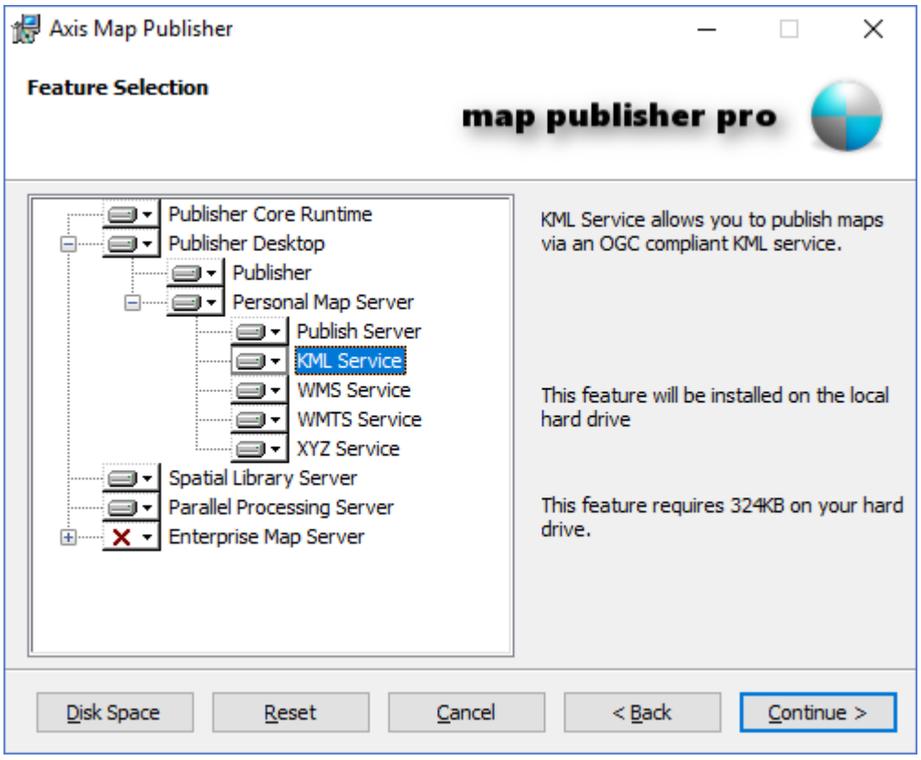
To learn more about authoring and publishing maps to Personal Map Server using Map Publisher Desktop please refer to the help guide included with Map Publisher Professional.

3.2.5 KML Service

The KML service is a FastCGI process that runs under the http server and delivers map content as Google KML.

OGC Keyhole Markup Language Service (KML)

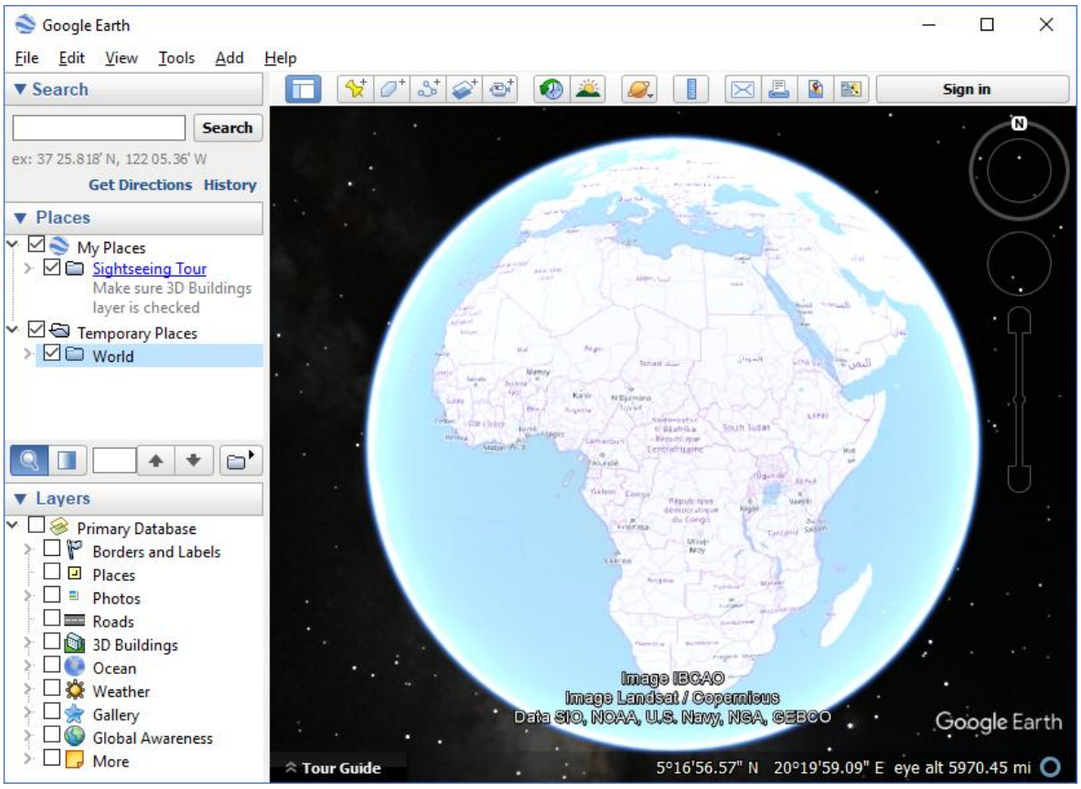
The KML Service is a FastCGI service named" **axis-kml.exe** " and is located in the default Cgi-Bin directory post install. The KML Service produces KML Super Overlays for each map that is published using the Map Publisher Desktop application. The KML Service is installed as part of the Personal Map Server in the installer package as shown in the screenshot below:



OGC Keyhole Markup Language Service (KML) Usage

Author and publish a map to the Personal Map Server using the Map Publisher Desktop application. After publishing the map, open your browser and type in the url pattern "**http://[HOST ADDRESS]:[HOST PORT]/cgi-bin/axis-kml.exe/[MAP TITLE]** " and hit enter. The parameter "[MAP TITLE]" at the end is the Title of the map file deployed under the http server. If you leave that parameter blank the server will first look for a file named default.axis and return that map, otherwise it will return the map with a title that is first in an alphabetical list. When prompted by the browser to open the KML file returned by the request select Google Earth and click OK. Google Earth should open up and automatically add the map to the Temporary Places folder.

The screenshot below shows OpenStreetMap tiles proxied through the Personal Map Server KML service to the Google Earth Desktop application as a KML Super Overlay document.



To learn more about authoring and publishing maps to Personal Map Server using Map Publisher Desktop please refer to the help guide included with Map Publisher Professional.

4. How To

4.1 Overview

How To User Guide Topics

- Launch Personal Map Server
  How to launch the application and start the http service.
- Connect To Personal Map Server
  How to connect to the server using the Map Publisher Desktop application.

4.2 Launch Personal Map Server

There are several ways to connect to Personal Map Server using the Map Publisher Desktop application.

Using The Desktop Icon

If the option to place a desktop icon on the Desktop was selected during the installation of Personal Map Server you can double click the icon to launch the application. The icon is shown below:



Using The Start Menu

If the option to place a shortcut in the Start Menu was selected during the installation of Personal Map Server you can select the menu option to launch the application. The steps are as follows:

1. Click the **Start** menu icon on the bottom left of your screen in the task bar.
2. Click the folder named "**AGSI** ".
3. Click the option named "**Map Publisher Personal Map Server <version>** ".
4. After the application starts click the "**Start** " button on the Toolbar or from the Menu if the server is not already started.
5. Inspect the Log Entry List and / or the Status Bar and make sure the server started successfully.
6. If the server started successfully then you are finished. When you close the application window the service will be shutdown.

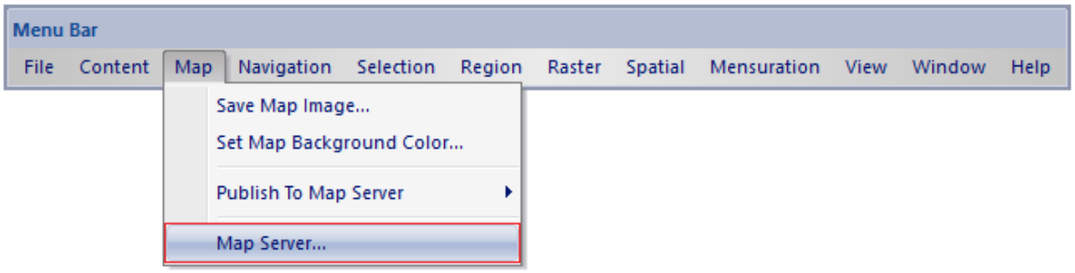
Using Map Publisher Desktop

Users can launch Personal Map Server directly from the Map Publisher Desktop application using the following options:

1. Using the "**Map**" toolbar select the button named "**Map Server** " as shown below.



2. Using the Menu Bar "**Map**" popup menu select the option named **"Map Server... "** as shown below.



For a more detailed explanation use Personal Map Server using Map Publisher Desktop please see the help documentation for Map Publisher Desktop that is accesible via the Map Publisher Desktop application using the Help menu or F1.

4.3 Connect To Personal Map Server

There are several ways to connect to the Personal Map Server mapping services using the Map Publisher Desktop application. Follow the steps below for each of the services.

Note: Please make sure the Server is started and the service you want to connect to was installed during the Map Publisher Professional installation process.

Connect To The KML Service

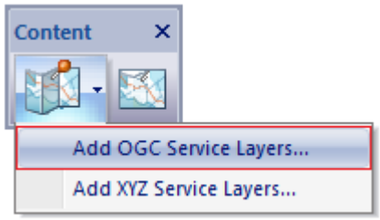
Map Publisher Desktop does not support reading KML files. The KML service is intended for Google Earth and Google Map clients. The address of the KML service is as follows:

http://[HOST ADDRESS]:[HOST PORT]/cgi-bin/axis-kml.exe/[MAP TITLE]

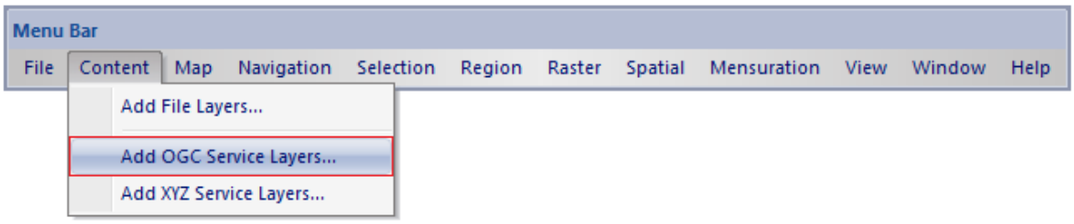
The document returned from the request string above is a KML Network Link that will automatically invoke the Google API to start requesting data from the KML server if opened with the Google Earth Desktop application. To use the KML service with the Google Maps Javascript API please refer to the Google Maps API documentation on the Google website.

Connect To The WMS Service

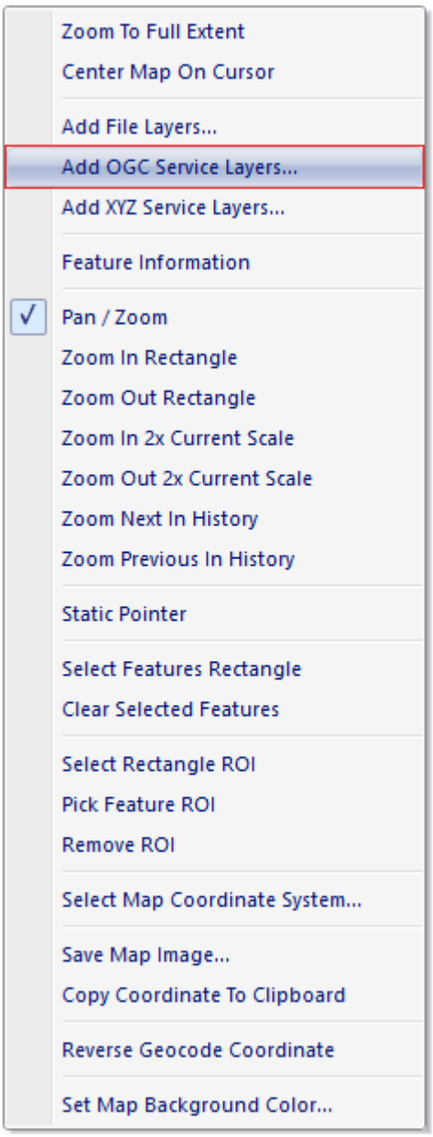
1. Using the "**Content**" toolbar select the button named "**Add Service Layers**" and select the popup menu option named "**Add OGC Service Layers...**" to display the "**Add OGC Service**" dialog window as shown below.



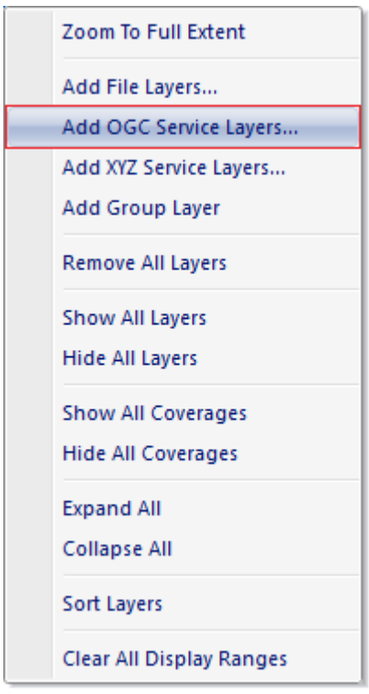
2. **OR**...using the Menu Bar "**Content**" popup menu select the option named **"Add OGC Service Layers...** " to display the "**Add OGC Service**" dialog window as shown below.



3. **OR** ...using the Map Window right-click popup menu select the option named "**Add OGC Service Layers...** " to display the "**Add OGC Service**" dialog window as shown below:

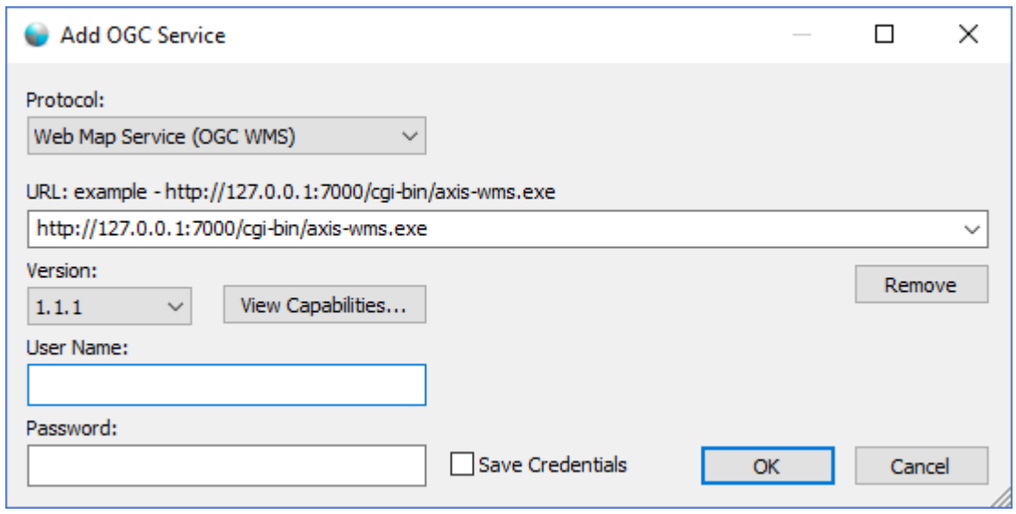


4. **OR** ...using the Content Docking Window Tree Control root node right-click popup menu select the option named "**Add OGC Service Layers...** " to display the "**Add OGC Service**" dialog window as shown below:



5. Select the "**Web Map Service (OGC WMS)**" option in the "**Protocol**" drop down list box and fill out the nessesary information in the "**Add OGC Service**" dialog

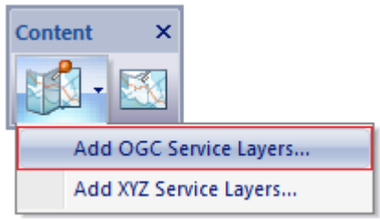
window and click "**OK**" as shown below:



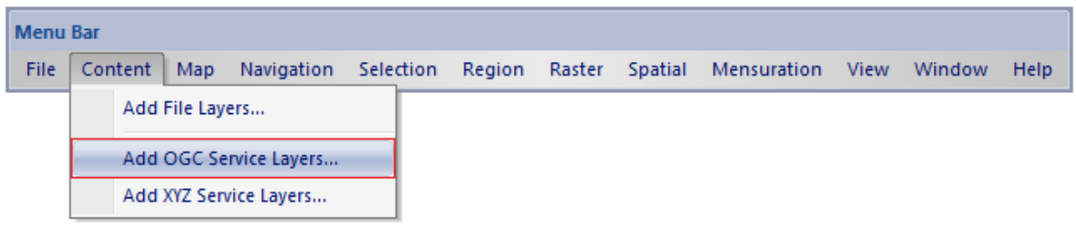
If the connection to the service is successful the WMS Service will be added as a map layer in the Content Docking Window Tree Control and you can start using the service.

Connect To The WMTS Service

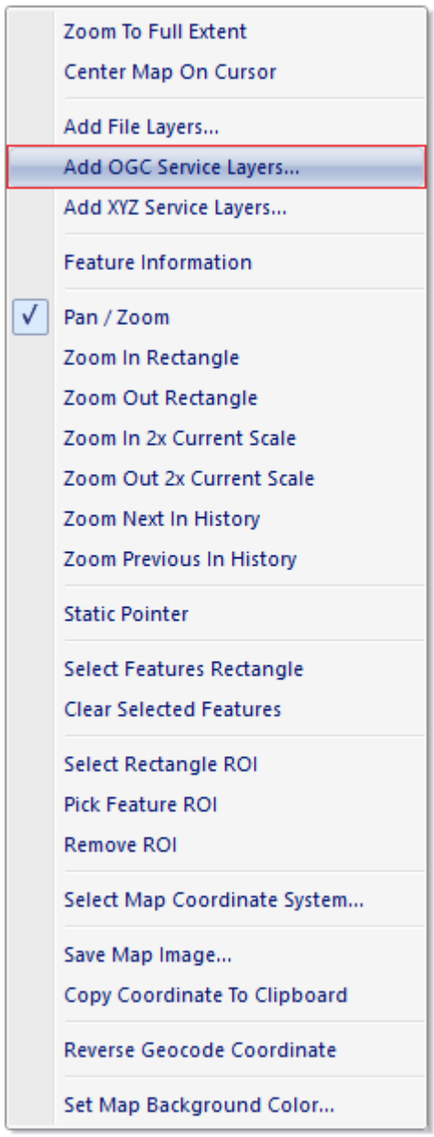
1. Using the "**Content**" toolbar select the button named "**Add Service Layers**" and select the popup menu option named "**Add OGC Service Layers...**" to display the "**Add OGC Service**" dialog window as shown below.



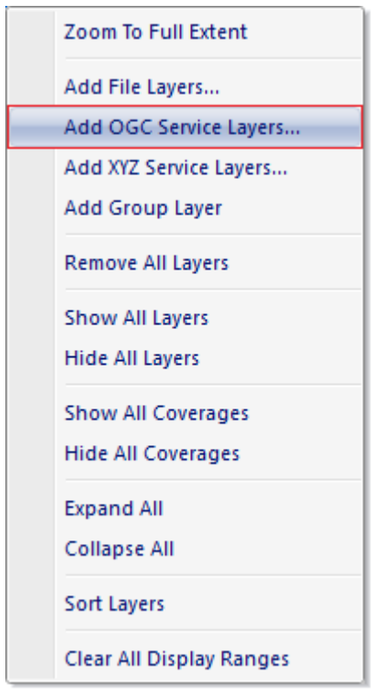
2. **OR**...using the Menu Bar "**Content**" popup menu select the option named **"Add OGC Service Layers...** " to display the "**Add OGC Service**" dialog window as shown below.



3. **OR** ...using the Map Window right-click popup menu select the option named "**Add OGC Service Layers...** " to display the "**Add OGC Service**" dialog window as shown below:

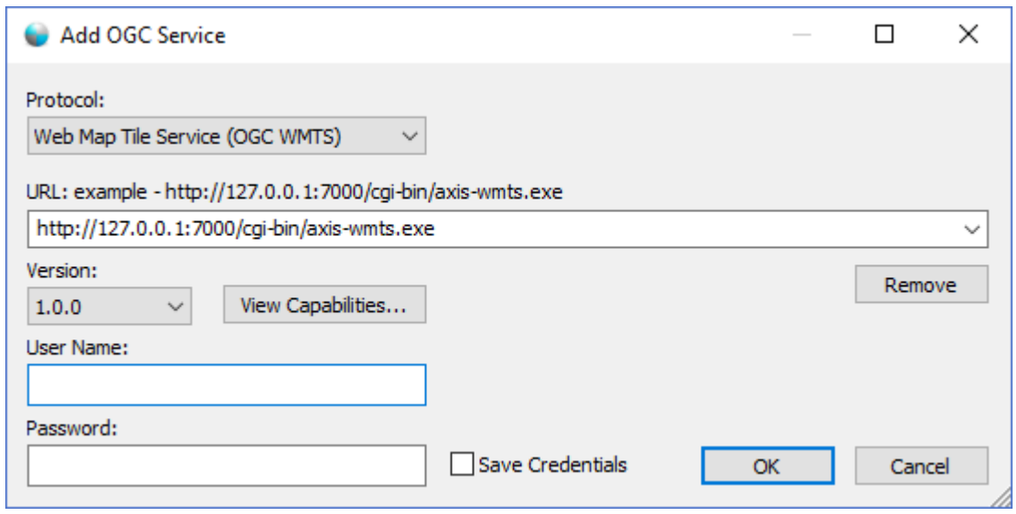


4. **OR** ...using the Content Docking Window Tree Control root node right-click popup menu select the option named "**Add OGC Service Layers...** " to display the "**Add OGC Service**" dialog window as shown below:



5. Select the "**Web Map Tile Service (OGC WMTS)**" option in the "**Protocol**" drop down list box and fill out the nessesary information in the "**Add OGC Service**"

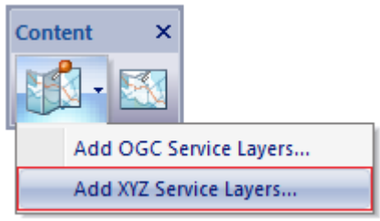
dialog window and click "**OK**" as shown below:



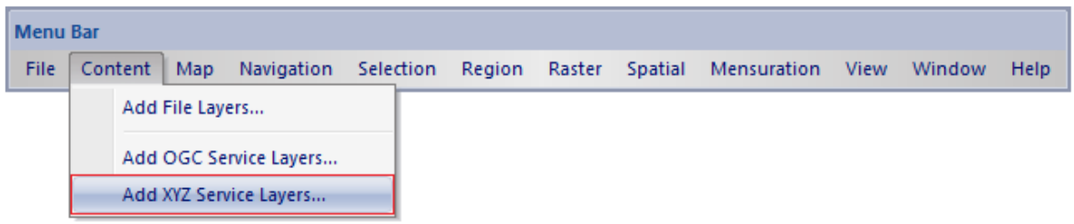
If the connection to the service is successful the WMTS Service will be added as a map layer in the Content Docking Window Tree Control and you can start using the service.

Connect To The XYZ Service

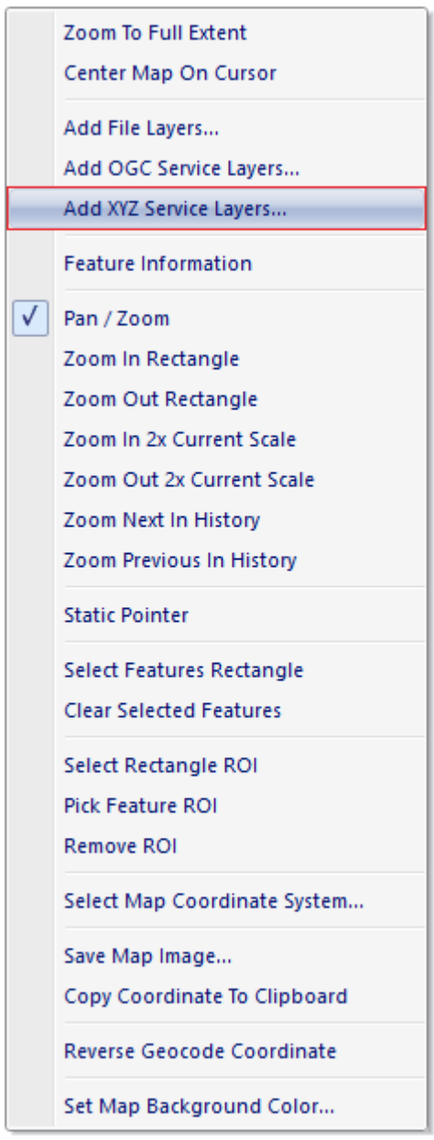
1. Using the "**Content**" toolbar select the button named "**Add Service Layers**" and select the popup menu option named "**Add XYZ Service Layers...**" to display the "**Add XYZ Service**" dialog window as shown below.



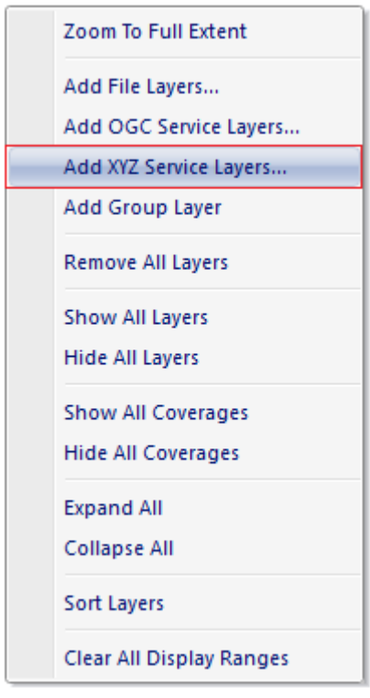
2. **OR**...using the Menu Bar "**Content**" popup menu select the option named **"Add XYZ Service Layers...** " to display the "**Add XYZ Service**" dialog window as shown below.



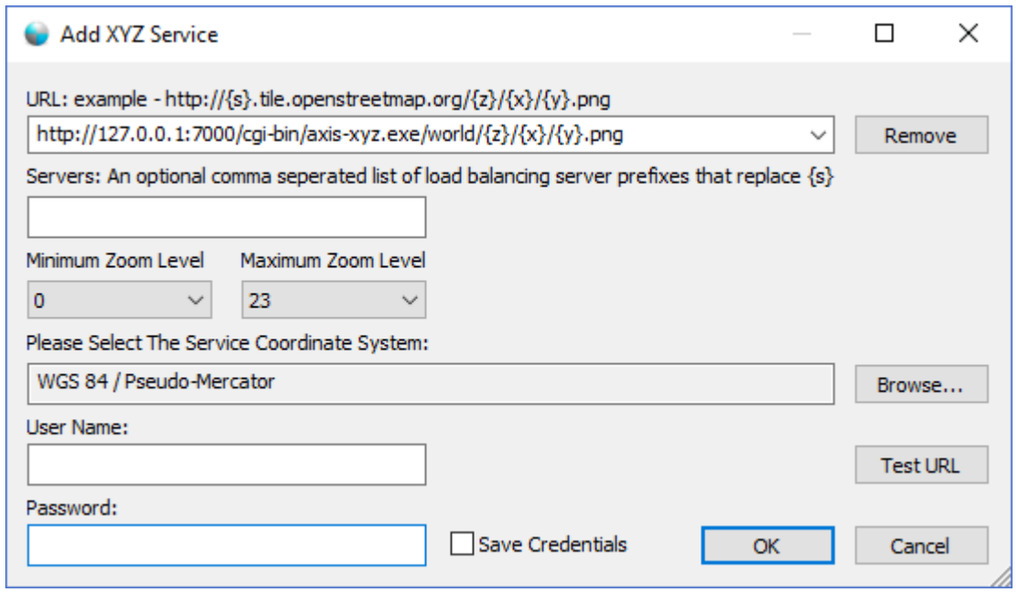
3. **OR** ...using the Map Window right-click popup menu select the option named "**Add XYZ Service Layers...** " to display the "**Add XYZ Service**" dialog window as shown below:



4. **OR** ...using the Content Docking Window Tree Control root node right-click popup menu select the option named "**Add XYZ Service Layers...** " to display the "**Add XYZ Service**" dialog window as shown below:



5. Fill out the nessesary information in the "**Add XYZ Service**" dialog window and click "**OK**" as shown below:



   If the connection to the service is successful the XYZ Service will be added as a map layer in the Content Docking Window Tree Control and you can start using the service.

For a more detailed explanation use Personal Map Server using Map Publisher Desktop please see the help documentation for Map Publisher Desktop that is accesible via the Map Publisher Desktop application using the Help menu or F1.