ADVIZOR Solutions, Inc.

Analyst Product Line -- Release 7.2 -- January, 2019

Implementation Guide

Introduction

ADVIZOR® Analyst software provides powerful visual business analysis capabilities in a package that requires minimal configuration or IT involvement. Desktop client applications can analyze data loaded *ad hoc* from spreadsheets or text files, or from network database servers, and can publish guided analysis dashboards to Microsoft IIS web servers hosting ADVIZOR Server AE software for interactive access via most browsers or the Apple iPad. This *Guide* describes the basic capabilities and architecture of ADVIZOR Analyst projects, and provides practical instructions for typical administrative tasks from installation requirements to configuration of ADVIZOR Server AE for secure project access. Please be sure to check the Help topics built into the ADVIZOR desktop applications for more complete reference information, and the Release Notes ("What's New" in Help) for your version of the software in case some of the details have changed.

Architectural Concepts and Implications

A fundamental concept for all ADVIZOR products is the in-memory data model, which enables high-performance Visual Discovery™ insights and analysis. An ADVIZOR application's data pool is initially loaded from any combination of database tables and queries, spreadsheets, and text files, and then may be augmented with calculated fields and roll-ups, but in typical practice it is loaded from a highly-condensed project file in a proprietary, encrypted format.

An ADVIZOR Analyst project, or dashboard, consists of a set of data sources, a set of data transformation specifications, and a set of chart specifications, including grouping on pages. The data sources are specified by path and file name or database server connection and authentication details, as well as by lists of fields to load into the data pool along with table and field name mappings and field type-conversion and formatting specifications. The data transformations that can be performed within the data pool include numeric and string calculations, logical expressions, keyed field copying and linkage, and table roll-ups. A project's specifications can be saved as an "ADV" file so that when re-opened, the data that currently matches the data source specifications is loaded and transformed in the same ways, and charts are re-created, laid out, and configured with the same dimensions of the data.

Once an ADVIZOR ADV project file is opened, with the data loaded into memory and the specified transformations calculated, the project can be saved in "ADVM" form, which includes a compressed and

encrypted copy of the data pool. This ADVM project file is self-contained, so it can be moved and re-opened on another PC without access to the original data sources.

Another important characteristic of ADVM project files is that they can be opened much more quickly and efficiently than the corresponding ADV project files, so it is generally recommended that larger projects be opened from ADVM files. If the original data sources for a project are database tables that grow continuously, you would need to open the ADV version of the project to retrieve the latest database contents, since an ADVM project file contains a fixed data snapshot. New snapshots of a database can be created automatically by using the "Adv2Advm" utility in a scheduled task.

Adv2Advm simply opens an ADV project file, loading the data sources into memory and calculating any transformations specified, and then immediately saves the project with the data in ADVM format. Optionally, the ADVM can be created without any data source definitions, to prevent end users from re-saving the project as an ADV and directly accessing the data sources.

Deployment Concepts

A typical departmental deployment paradigm begins with development of a general dashboard that can answer several classes of critical questions. A "master project file" is saved in ADV format in a location that can be accessed only by those authorized to modify it. For day-to-day queries and analysis, a wider audience of general users could open an ADVM version of the project from a shared network location on a file server using an ADVIZOR desktop application such as Desktop Navigator or Analyst/X. The ADVM file would be generated by a scheduled task that runs regularly (usually nightly) on a centrally-administered machine such as a file server.

For larger or more casual audiences, ADVIZOR Server AE, an ASP.NET application that runs on Microsoft IIS, can deliver interactive access to the dashboard via most web browsers, or via the ADVIZOR iPad app. The ADVIZOR project is initially made available to ADVIZOR Server AE by a "publishing" operation done by a project author using ADVIZOR Analyst or Analyst/X; subsequently, the ADVIZOR Server AE dashboard can be updated as part of the same scheduled task that generates a new snapshot ADVM file.

Installation

ADVIZOR Analyst, Analyst/X, and Desktop Navigator Requirements

Platform
- Operating System
    - Microsoft Windows 10 (32- or 64-bit)
    - Microsoft Windows 8/8.1 (32- or 64-bit)
    - Microsoft Windows 7 (32- or 64-bit)
    - Microsoft Windows Server 2008 (R2), Windows Server 2012 (R2), or Windows Server 2016
    - **NOTE: We strongly recommend 64 bit operating systems.**
    - **NOTE: We do NOT support Microsoft Windows Vista, Windows XP, or Windows Server 2003.**

- Network Dependencies
  - ADVIZOR Analyst uses standard database and Windows file server protocols

Hardware

- Any current, business-focused PC or laptop with an Intel x86 or x64-compatible processor.
- We do NOT recommend computers with low-end, entry-level processors.
- 4 GB of RAM or greater. 8+ GB and a 64-bit operating system are required for larger volumes of data, above 2 million rows and 20 columns in one or more tables.
- Graphics display processor with at least 512MB of video RAM
- Either shared or dedicated video RAM is acceptable
- Video display resolution of 1024 x 768 or greater
- Video display color depth of 16 million colors
- Mouse or compatible pointing device

Estimating Project RAM Usage

The amount of RAM required to load an ADVIZOR Analyst project is dependent on both your application data and the complexity of the project. In particular, the minimum amount of RAM is determined by:

- The amount of data being loaded into memory
  - The number of rows
  - The number of fields actually loaded
- The type of data in each field
  - Alphanumeric (string)
  - Numeric or Date
- The complexity of the project
  - Total number of charts
  - Number of calculated fields
  - Number and size of rolled-up tables

As a typical example, a project that loads 200 MB of text files with a total of 90 charts might require 1.1 GB to fully open the ADV and 550 MB to fully open the 40 MB ADVM.

ADVIZOR Server AE Requirements

Platform

- Microsoft Windows Server 2016 (64-bit)
- Microsoft Windows Server 2012 (R2) (64-bit)
- Microsoft Windows Server 2008 (R2) (64-bit)
- **Note: We do NOT support Windows Server 2003 (64-bit)**
- IIS 7 or later, installed and running prior to installation of the Microsoft .NET Framework
  - For IIS 7 (Windows Server 2008) or later, the following Role Services must be pre-installed:

- Common HTTP Features/Static Content
- Common HTTP Features/Default Document
- Common HTTP Features/Directory Browsing
- Common HTTP Features/HTTP Errors
- Application Development/ASP.NET
- Security/Windows Authentication (needed for secure configuration)
- Management Tools/IIS Management Console
- Management Tools/IIS 6 Management Compatibility/IIS 6 Scripting Tools
  - For IIS 8 (Windows Server 2012) and later, the following Role Services and Features are also needed:
    - Application Development/ASP.NET 3.5
    - Application Development/ASP.NET 4.5 *(or later)*
    - .NET Framework 3.5 Features/HTTP Activation
    - .NET Framework 4.5 *(or later)* Features/WCF Services/HTTP Activation

Hardware
- Any current server-class computer, with multiple x64 processor cores.
- At least 16GB of RAM is recommended.

Clients
ADVIZOR Analyst projects that have been published to ADVIZOR Server AE can be accessed and interacted with using the following clients:

- Any modern browser:
  - Microsoft Internet Explorer 10 or 11
  - Microsoft Edge (Windows 10)
  - Google Chrome (Windows or MacOS)
  - Mozilla Firefox (Windows or MacOS)
  - Apple Safari (MacOS)
- The Advizor app for iPad/iPhone, version 6.9, downloadable from the Apple App Store.

Estimating Server RAM Usage
ADVIZOR Server AE generally requires the same amount of RAM to open the first session of a project as ADVIZOR Analyst. Additional concurrent sessions share the data pool and typically increase the RAM required by 15-30% (depending on the type and number of charts in the published project), so the example project cited above might require 2 GB to support 10 concurrent sessions (550 MB + 9 * 150 MB). Note that an ADVIZOR Server AE session is normally recycled after 20 minutes of inactivity, so typical concurrent load is much less than a coordinated training session, for instance.

Databases Supported
In addition to text files, ADVIZOR Analyst, Analyst/X, Desktop Navigator, and Server AE can load data from the following types of databases:

- Microsoft Excel (XLS, XLSX) (not via ODBC)

- Microsoft Access (not via ODBC)
- SalesForce.com (requires interactive login, so not supported by Adv2Advm and Server AE)
- Microsoft SQL Server (version 7.0 or later)
- Oracle (version 9i or later)
- ODBC interfaces to databases (NOTE: ODBC connections must be defined as "System DSNs" through Windows Control Panel prior to using them in ADVIZOR):
  - Oracle ODBC driver - SQORA32.DLL
  - Microsoft ODBC for Oracle - MSORCL32.DLL
  - Microsoft SQL Server - SQLSRV32.DLL
  - Pervasive drivers
    - Pervasive ODBC Client Interface - W3ODBCCI.DLL
    - Pervasive ODBC Engine Interface - W3ODBCEI.DLL
  - MySQL driver
    - MySQL ODBC 3.51 Driver - MYODBC3.DLL (MyODBC-3.51.11-2-win.msi - when used with MySQL version mysql-essential-4.1.13-win32.msi)
    - MySQL 5 - MYODBC5.DLL
  - Splunk - SPLUNKDSII.DLL
  - Greenplum (DataDirect) - DDGPLM25.DLL, IVGPLM25.DLL
  - Vertica - VERTICA_7.1_ODBC_3.5_64.DLL, VERTICA_8.1_ODBC_3.5.DLL

  No other ODBC drivers are supported.

Installation Procedures

ADVIZOR Analyst, Analyst/X, and Desktop Navigator applications are simple to install: just run "*Product Bundle.exe*" from the downloaded and unpacked Zip file and enter the license key when prompted. Any previous version of the same application is automatically removed when the new release is installed.

For ADVIZOR Server AE, if there is an older version already installed, the web.config and "Projects\data security.config" files (if customized) should be backed up to a different name or path for reference, and the existing version of the product should be uninstalled first. Then the new version can be installed by running "Server AE Bundle.exe". Note that ADVIZOR Server AE uses a different licensing mechanism than the desktop applications and does not prompt for a license key. After installation, configuration as described below is usually required.

NOTE: When ADVIZOR Server AE is installed, it shows up as a web application named "ADV" under "Default Web Site" in the IIS Manager. Installation will fail if the name "Default Web Site" is not present at the time. The web site name can be customized after ADVIZOR Server AE installation.

Post-Installation Steps

Registering Libraries for Adv2Advm

If you will be using the Adv2Advm utility included with 64-bit ADVIZOR Analyst or Analyst/X, and you have installed and will be running ADVIZOR Server AE on the same system, you must ensure that both

products are exactly the same version number; and then Adv2Advm will be usable with no further configuration.

Otherwise, you will need to manually register two component DLLs before Adv2Advm will run successfully. Execute the following using an Administrator Command prompt (right-click on the "Command Prompt" item from the Start menu and select "**Run as administrator**").

For 32-bit Windows, or 64-bit ADVIZOR Analyst software on 64-bit Windows:

```
cd/d C:\Program Files\ADVIZOR Solutions\Analyst   (see note)
regsvr32 VzLib.dll VzCalc.dll
```

For 32-bit ADVIZOR Analyst software on 64-bit Windows:

```
cd/d C:\Program Files (x86)\ADVIZOR Solutions\Analyst   (see note)
\Windows\SysWow64\regsvr32 VzLib.dll VzCalc.dll
```

Note: The path ends with "AnalystX" for the ADVIZOR Analyst/X product.

Configuration

Scheduled Data Updates

In a production environment where the source data changes continuously, an ADVIZOR project should be updated regularly, usually nightly, so ordinary users can quickly and efficiently open the visual analysis dashboard with the latest data in ADVM format from a standard network location. The update process can be controlled by a batch script invoked by the Windows Task Scheduler.

Directory Organization

In the recommended procedure, Adv2Advm loads the master ADV project file from a protected directory and the data from the database server using an administrative account and saves the resulting ADVM file in a shared network location. Prior versions of the ADVM can be preserved for future reference by renaming them to include a date stamp, using batch script syntax like "%date:~4,2%-%date:~7,2%".

Basic Script

The same batch script can update a project that has been published to ADVIZOR Server AE, simply by copying the ADVM file created by Adv2Advm to the appropriate Projects sub-directory. Note, though, that all project files in ADVIZOR Server AE Projects directories are named with an ADV extension, so the script should rename the ADVM file with the ADV extension to replace the previous ADV file. As a generic example, your nightly update batch script might look like this:

```
rename C:\ADVIZOR\Latest\DataAnalysis.advm DataAnalysis%date:~10,4%-
     %date:~4,2%-%date:~7,2%.advm
"C:\Program Files\ADVIZOR Solutions\Analyst\Adv2Advm"
     -i:C:\ADVIZOR\Master\DataAnalysis.adv
     -o:C:\ADVIZOR\Latest\DataAnalysis.advm
```

```
copy/Y C:\ADVIZOR\Latest\DataAnalysis.advm "C:\Program Files\Advizor
     Solutions\ADVIZOR Server AE\Projects\Official\DataAnalysis.adv"
```

Automated Table Export

It may be useful to export one or more tables from your ADVIZOR project as soon as they are updated,
particularly if the project calculates performance measures, for instance derived from a regression
model. This can be specified on the Adv2Advm command line using the "-ot" and "-otf" options. These
options can be used as follows:

- A path parameter after "-otf:" specifies the folder in which to save exported tables as CSV files.
  If no "-otf" parameter is specified, the folder defaults to the same one specified for output of
  the ADVM file.
- A semicolon-separated list of table names following "-ot:" specifies which complete tables to
  save as CSV files.
- The parameter for the "-ot:" option can contain a table name followed by a period and a
  comma-separated list of field names.
- To avoid parsing errors with batch scripts, observe the following:
  - Surround the option parameter strings with double-quote characters if field or table names
    contain spaces.
  - Insert a backslash (\) in front of any period, comma, or semicolon character embedded in a
    field or table name.
  - If a table or field name contains a percent sign, double it in a batch file.

As an example, the following command line invoked as a batch script (from a .BAT file) creates two text
files, ScoreRollup.csv and CustomerList.csv, in the folder "C:\ADVIZOR\Data Export", in addition to the
ADVM file in C:\ADVIZOR\Latest:

```
"C:\Program Files\ADVIZOR Solutions\Analyst\Adv2Advm" ^
-i:C:\ADVIZOR\Master\DataAnalysis.adv ^
-o:C:\ADVIZOR\Latest\DataAnalysis.advm ^
-otf:"C:\ADVIZOR\Data Export" ^
-ot:"ScoreRollup;CustomerList.Name,Return %%,Last\,First\.Init"
```

Note that the ScoreRollup.csv file contains a complete export of the ScoreRollup table, and the
CustomerList.csv file contains just the three columns "Name", "Return %", and "Last,First.Init".

Scheduled Task Configuration

PLEASE NOTE: When configuring a scheduled task, please ensure that the "Do not store password"
check box in the General Properties tab is NOT checked if any projects use "Integrated Security"
(Windows Authentication) to access Microsoft SQL Server data sources.

Enabling Data Export

The Project Directory listing (http://*server*/adv) identifies projects with embedded data as "Static" type
and others as "Dynamic", but in general it's not recommended to publish projects without embedded
data. The exception to this recommendation is a process that should be followed when changes are

made to a project and the Export Data or Export Project functionality is desired: when changes are made to the project, it should first be published to ADVIZOR Server AE with the Embed Data option UNchecked, but with the Export Data or Export Project options set; then the ADV file should be moved from the Server AE Projects directory to the protected directory where it should replace the master project file. This will allow the export options to be preserved in the nightly update process.

Configuring Adv2Advm to Send Email Notification

If you will be using the Adv2Advm utility, errors that occur during unattended operation are easily missed. To avoid this, Adv2Advm can optionally be configured to send an email notification when errors occur. This is done by modifying the configuration file, Adv2Advm.exe.config, with a text editor. The configuration file is in XML format, and some knowledge of XML is helpful, but not required:

1. Load Adv2Advm.exe.config into a text editor.
2. Locate the **configuration\system.net\mailSettings\smtp\network** element.
3. Modify the following attributes to configure Adv2Advm to use your Simple Mail Transport Protocol (SMTP) server:
    a. **host**: Specifies the hostname of the SMTP mail server to use for SMTP transactions.
    b. **port**: Specifies the port number to use to connect to the SMTP mail server (normally 25, or 465 if SSL/TLS is supported).
    c. **enableSsl**: Specifies whether SSL is used to access an SMTP mail server.
    d. **userName**: Specifies the user name to use for authentication to the SMTP mail server.
    e. **password**: Specifies the password to use for authentication to the SMTP mail server.
4. Locate the **configuration\loggingConfiguration\listeners** element.
5. The **listeners** element contains multiple **add** elements. Locate the one with the **name** attribute of "AsiCustomEmailTraceListener".
6. In this **add** element, modify the following attributes to configure the email sender and recipient(s):
    a. **senderAddress**: Specifies the email sender. Typically, but not necessarily, the same as the **userName** in 3d above.
    b. **recipientAddresses**: Specifies the email recipient(s). Separate multiple recipients, if any, with commas.
    c. **subject**: Specifies the email subject.
7. Locate the **configuration\loggingConfiguration\categorySources** element.
8. The **categorySources** element contains multiple **add** elements. Locate the one with the **name** attribute of "Error".
9. This **add** element contains a **listeners** element. The **listeners** element contains an **add** element.
10. After the existing **add** element, insert a new line and write the following new **add** element:
    <add name="AsiCustomEmailTraceListener" />
11. Within the **configuration\loggingConfiguration\categorySources** element, locate the **add** element with the **name** attribute of "Warning".
12. This **add** element contains a **listeners** element. The **listeners** element contains an **add** element.

13. After the existing **add** element, insert an new line and write the following new **add** element:
    <add name="AsiCustomEmailTraceListener" />
14. Save the Adv2Advm.exe.config file, and exit the text editor.
15. Verify the configuration. Execute the following command from a DOS command prompt to send a test email: **Adv2Advm.exe -emailtest**

ADVIZOR Server AE

Secure Access

To configure ADVIZOR Server AE for secure access (HTTPS with Windows Authentication) on Windows Server 2008 or 2012 with IIS 7 or later:

1. Configure IIS to support HTTPS connections.
    a. Open the IIS Manager console and select Sites in the expanding left pane.
    b. Ensure that the list of Bindings for your web site includes "*:443 (https)":
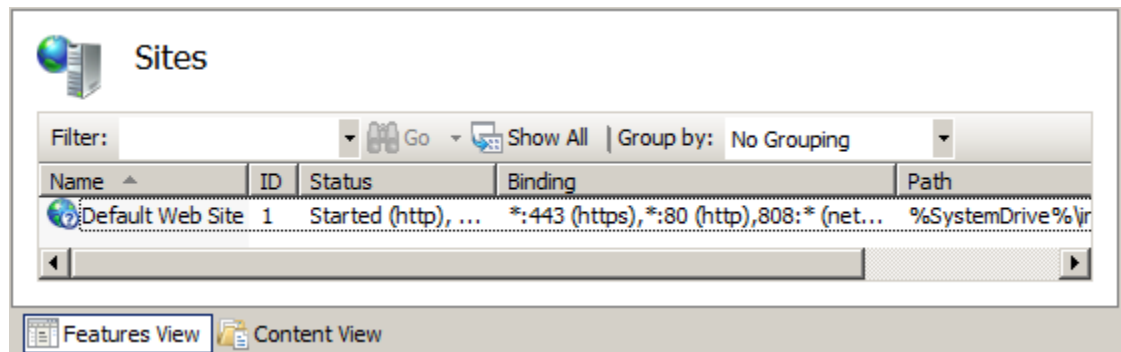
    c. If HTTPS is not included, edit the Bindings to add it, once you have obtained a commercial SSL Server certificate (or created a self-signed one). (See the Server Certificates feature of your server in IIS Manager.)
2. Edit the *web.config* file in the ADVIZOR Server AE installation directory.
    a. Using Notepad (right-click and "Run as administrator") or an XML editor, open the *web.config* file (normally in C:\Program Files\ADVIZOR Solutions\ADVIZOR Server AE).
    b. In the `<system.serviceModel>` section, edit the `<bindings>` subsection to comment out the `<webHttpBinding>`, `<basicHttpBinding>` and `<customBinding>` subsections for "http protocol anonymous access" and uncomment them for "https protocol with Windows authentication access". This can be done by simply moving the " `-->`" sequence from the end of the "http protocol anonymous access" line down 18 lines to the end of the next `</customBinding>` line, and moving the same sequence up 22 lines to the end of the "https protocol with Windows authentication access" line.
    c. Exit Notepad, saving the changed file.
3. Configure the ADV web application to enable Windows authentication.
    a. Click on the ADV application (virtual directory) in the tree view pane of IIS Manager.
    b. In the Features View, double-click on the Authentication icon in the IIS section.
    c. Disable Anonymous Authentication and enable Windows Authentication.

4. Specify the users and groups authorized to access the ADVIZOR Server AE web application.
   a. On Windows Server 2008 R2 (IIS 7.5) or later:
      i. Click on the ADV application in the IIS tree view.
      ii. Double-click the .NET Authorization Rules icon (under ASP.NET).
      iii. Add one or more Allow Rules, specifying the individual accounts or groups desired. (**NOTE** that this edits the *web.config* file, so be careful not to overwrite this change by re-saving the file from Notepad!)
      iv. **After** you've added all your Allow Rules, add a Deny Rule to deny All Users access. (NOTE this is added after the local Allow Rules, so it denies access to all **other** users.)
   b. For Windows Server 2008 (R1—IIS 7.0), the .NET Authorization Rules icons are not available, so the *web.config* file must be edited manually, as in this example:

```
<system.web>
  <authentication mode="Windows" />
  <authorization>
  <allow users="yourdomain\user1,yourdomain\user2" />
  <deny users="*" />
  </authorization>
```

The ADVIZOR Server Project Directory page can then be accessed directly from any PC using any browser, or from the ADVIZOR iPad app, at the address **https://**server.fqdn**/adv**. By default, the browser will prompt the PC user for authorized credentials, as will the Advizor iPad app. Note that most browsers remember credentials for the life of the process, so subsequent connections to ADVIZOR Server AE will use the same credentials and not prompt, unless all windows of the browser are first closed. Note also that most trusted HTTPS certificates are specific to a fully-qualified domain name, so the full server name is usually required (e.g., advizor.mydomain.org). If the certificate is not trusted, Microsoft Internet Explorer will present a warning but allow you to connect anyway; other browsers may provide a way to proceed, but will not allow full communication with ADVIZOR Server AE, so the dashboard will not load. Please see the **Troubleshooting** section below for additional notes on using different browsers with Windows Authentication.

Non-Domain Environment

If you prefer to use Windows Basic Authentication (which transmits passwords unencrypted), you should use HTTPS protocol. (Note that the Basic Authentication role service needs to be installed for IIS before you can enable this Authentication method. Note also that the ADVIZOR iPad client does not support Basic authentication.) Add the following lines to the `<bindings>` section of the *web.config* file and comment out all other binding methods:

```
    <!-- Use these bindings for https protocol with Basic (Windows)
authentication access -->
    <webHttpBinding>
      <binding name="RestBinding">
        <security mode="Transport">
          <transport clientCredentialType="Basic" />
```

```
        </security>
      </binding>
    </webHttpBinding>

    <basicHttpBinding>
      <binding name="BasicBinding">
        <security mode="Transport">
          <transport clientCredentialType="Basic" />
        </security>
      </binding>
    </basicHttpBinding>

    <customBinding>
      <binding name="BinaryBinding">
        <binaryMessageEncoding />
        <httpsTransport authenticationScheme="Basic" />
      </binding>
    </customBinding>
```

Controlling Access to Projects

Beyond controlling which users can access any projects on ADVIZOR Server AE, you may want to control which users can access specific projects. This can be done by simply editing file access permissions for folders or ADV files under the Projects subdirectory. You can add Deny permissions for every account or group that should not have access to a project, or you can disable permission inheritance and remove Allow permissions for everyone but those who should be able to load a project file. Users who do not have permission to load a project will not see it listed in the Project Directory page, either.

Publishing Projects

In order to use the Publishing Wizard in ADVIZOR Analyst and Analyst/X when ADVIZOR Server AE is configured to use Windows authentication, you must use an address that is recognized as a Local Intranet site by Internet Explorer. Such a site would be accessible in a browser without prompting for login credentials. Further, the site certificate must be fully trusted (i.e., not a self-signed certificate, ordinarily) in order to use HTTPS for publishing. Then projects can be published by setting the Server Address in ADVIZOR Analyst's Publish Dashboard dialog to **http**://*server*/**adv** or **https**://*server*/**adv**.

If you want ADVIZOR Server AE users to be able to export selected data from Data Sheets to text files, the project must be published with the Export Data option selected. However, in an environment with scheduled nightly updates, the project should be published initially with data not embedded, and the resulting ADV file in the Projects directory should be used as the master project file. The Adv2Advm utility will then preserve the setting of the Export Data option when the ADVM file is created.

Restrict Publishing Permissions

The list of users able to publish projects to ADVIZOR Server AE can be restricted when the Server is in Windows Authentication mode by changing the permissions for the file "AsiProjectInstaller.asmx" in the installation directory.   Simply add Deny permission to the file for those that are not authorized to publish.

Credential-Based Filters

You can give different users restricted access to different segments of the data in a single project by editing an XML-format configuration file and linking it to the appropriate dimension when you publish. This feature is described in detail in the topic "Credential Based Filters" in the online Help. The basic technique is to list the Windows domain accounts of all the people who should have any access to the project and, for each, list the categories of some dimension that they should be able to see or not see. When the configuration file is in place and the project is published, the table and field containing the category values can be identified.

IMPORTANT!! Be sure that the data field you associate with the security strategy is **NOT** used in any Text Filter charts in the project! If it is, the credential-based filtering restriction could be overridden by end users changing Text Filter state from their browser or iPad session. A safe alternative is to create a copy of the field using the Expression Builder and use one in a Text Filter and the other for the credential-based filter.

Note that while there must be a "data security.config" file in the ADVIZOR Server AE Projects directory that defines all "Strategy Ids" and names, you may want to place the complete definition in a sub-folder to ensure that it is not removed or replaced in case of a software upgrade. Also, since the "strategy id" value is permanently stored in the published project, you should configure a value closely associated with the project(s) that will use it.

Advizor iPad App Configuration

In order to access projects published to ADVIZOR Server AE from an iPad, you can download the Advizor app from the App Store. When you first start the app, you will be prompted to specify a Server Address:

Before you start...

Before using this application you must indicate the address of the ADVIZOR Server to communicate with.

This address will typically look like: 'http://myserver/adv' and is the same address that you would use in a browser application.

Please enter the address below:

Server Address: https://my.server.com/adv

OK

This should be the same URL you would enter to view the ADVIZOR Server AE Project Directory in a browser. The project directory will be displayed, something like this:

ADVIZOR Server AE Directory			
Project Name	Location	Creator	Last Update
Customers Zoom Grid	Demo	jpyrce	8/5/15, 3:00 PM
Customers	Demo	jpyrce	9/3/15, 4:07 PM
DemoProject	Demo	jluers	10/7/15, 3:57 PM
MutualFunds_Renamed	Demo	jpyrce	11/9/15, 12:06 PM
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If you need to switch to a different ADVIZOR Server AE instance, you can specify the address in the Settings for the Advizor app:

Advizor	
SERVER SETTINGS	
Server Address: http://webdemos.advizorsolutions.net/adv	
Application Version:	6.9

Maintenance

In a scheduled update environment any changes to the project definition, from cosmetic adjustments to updating database passwords, should be saved as a new version of the master ADV project file. The next invocation of the regular update script will propagate the changes to ADVIZOR Server AE and the general ADVM project.

Excluding Data Sources

The optional command-line parameter "-xds" can be added when Adv2Advm is invoked, to cause data source definitions to be omitted from the generated ADVM file. This may be desirable for security purposes, such as in an environment where Windows integrated authentication is not used to access a database, and instead a database-specific username and password are used, which are saved in the ADV file. Using "Adv2Advm -xds" prevents ADVM-file users from editing the data source definitions and saving the project as an ADV to gain unauthorized access to the database.

Flight Recorder Bookmarks

Bookmarks may be created in the Flight Recorder pane: see the topic in ADVIZOR Help for more details. Bookmarks created from a web client of ADVIZOR Server AE are stored on the server in a directory named "Bookmarks" in the "Projects" directory. They are stored in a subdirectory based on the project name and the identity of the user who created the bookmark. The identity is based on how ADVIZOR Server is configured: if access is anonymous, then the identity is for the web client (typically an IP address). If Windows Authentication is configured, then the identity is the Windows login. Bookmark files may be created or deleted by users; they are not managed by ADVIZOR ServerAE. These are small

text files, so the space used is not significant. If these files are removed, the user's bookmarks will be lost.

Troubleshooting

Database Timeouts

If your database is very large and heavily used, complex SQL queries can sometimes fail to get a response within the default timeout period of 30 seconds. You may see an error message like "Timeout expired. The timeout period elapsed prior to completion of the operation or the server is not responding." If this starts to occur when loading an existing ADV project that has loaded successfully in the past, you can increase the length of time to wait for a response before an error is reported by editing the Data Source that has the problem. Open an ADVM version of the project, and the Settings tab of the Data Source Editor will allow a larger value to be entered:
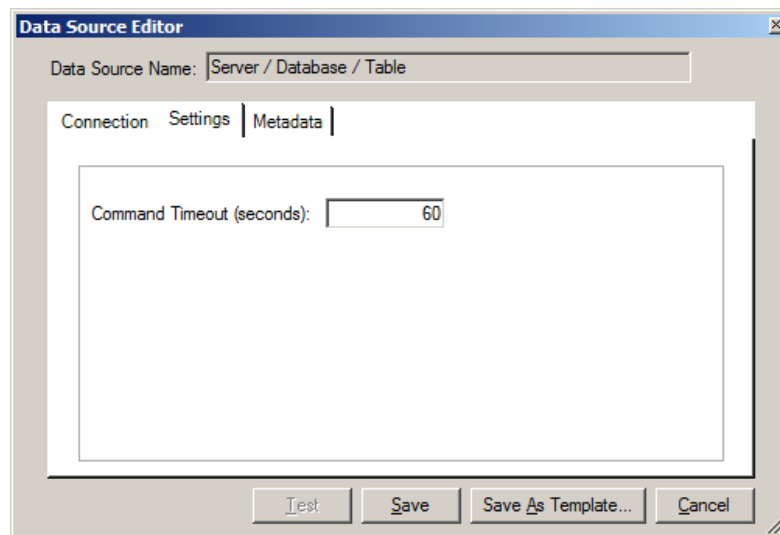

After increasing the timeout value, you should Save the Data Source definition and then save the project in ADV format, and use the ADV file to replace the master file for the project.

If you receive a timeout error when creating a new data source, you can change the default timeout for new data sources by editing the Config file for your application (ProApp.exe.config for ADVIZOR Analyst, or PublisherApp.exe.config for ADVIZOR Analyst/X). Near the end of the XML-format text file, under <appSettings>, change the value for the CommandTimeout key.

Multiple Credential Prompts from Non-IE Browsers

If you are using the Google Chrome (or Firefox) browser to connect to an ADVIZOR Server AE system configured for Windows Authentication you might see multiple (usually 3) prompts for username and password:
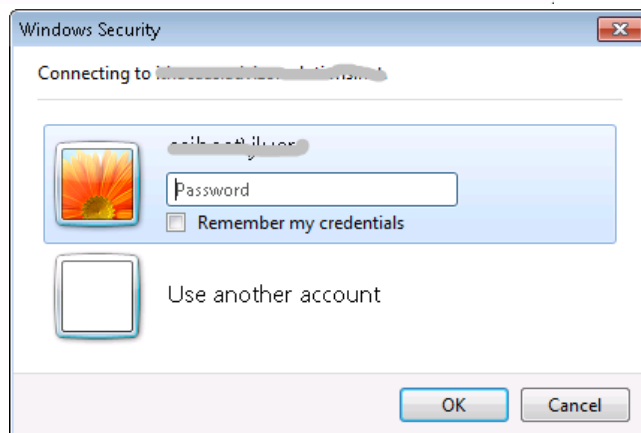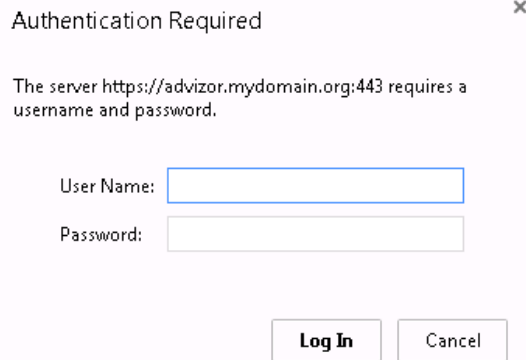
This can be avoided by proper Windows Internet Options settings:

1) Open the "Internet Options" dialog (from Windows Control Panel, Network and Internet category, or near the bottom of the Internet Explorer "Tools" [gear icon] menu).

2) On the Security tab, set the ADVIZOR Server AE system as a trusted site: click "Trusted sites", click "Sites", enter server URL, click "Add" and "Close".

3) Still on the Security tab, set a custom security level for Trusted sites: click "Custom level…", scroll to the last setting (Logon), and select "Automatic logon with current user name and password" to allow credentials to be supplied automatically.

For servers in other domains, it may be necessary to check the "Remember my credentials" box in the Windows Security prompt.

IE Security Warning

On Windows Server 2008, 2012, and 2016, you will see one or more warnings when an ADVIZOR desktop application is started if the Internet Explorer Enhanced Security Configuration is in effect for your account. This occurs because the embedded Internet Explorer control is used in the application. The warnings can be dismissed, since pages from Internet sites are not normally displayed in the application. Alternatively, the warnings can be avoided by disabling the Enhanced Security Configuration from Add/Remove Windows Components or the Server Manager, as described in the Microsoft article http://technet.microsoft.com/en-us/library/dd883248(WS.10).aspx.

Cookie Errors

If you receive an error in a browser connecting to ADVIZOR Server AE that states "Server Error in '/ADV' Application" and "A potentially dangerous Request.Cookies value was detected from the client", or a System.Web.HttpRequestValidationException, you can eliminate the error messages by making a change in the web.config file. (Remember the techniques for editing this file detailed in the section on configuring for secure access.) In the `<system.web>` section, the `httpRuntime` line should add the attribute `requestValidationMode="2.0"` to look like this:

```
<httpRuntime executionTimeout="1200" requestValidationMode="2.0" />
```