**ACTIVE DASHBOARDS SOFTWARE
INSTALLATION GUIDE v6.7**

Active Dashboards Installation Guide

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About This Guide

Purpose

This guide describes how to install the Active Dashboards products.

Readership

The guide is intended for the system administrator of the organisation who intends to install the Active Dashboards software.

Recommended Use

Chapter 1 gives a brief introduction to the installation process. You may find it helpful to read this chapter first. The remaining chapters describe the installation procedure for Active Dashboards.

Other Recommended Reading

- Active Dashboards - Dashboard Designer Guide
- Active Dashboards - Data Caching Guide
- Active Dashboards - Data Loading Guide
- Active Dashboards - Data Mashup Guide
- Active Dashboards - Integration Guide
- Active Dashboards - Process Flow Guide
- Active Dashboards - Quick Query Guide
- Active Dashboards - User Guide
- Active Dashboards - User Guide (Mobile)

All these Guides and more can be found within the Help Menu of the Active Dashboards Designer application once installed.

Support Portal

A range of additional Active Dashboards information can be found in our online self-service support portal at http://support.dynistics.com. It is recommended you make use of this prior to contacting Support.

Content includes:
- Portal documents - examples, walkthroughs, troubleshooting and references guides.
- Solutions - explore How-to's and learn best practices from our knowledge base.
- Forums - explore Dashboard community forums.
- Latest news - announcements of and events.
- Support tickets - view and raise support tickets.

Note that some Support Portal content and features require registration.

Acknowledgements

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Contents

Chapter 1

Active Dashboards Introduction

The Active Dashboards application provides users with a flexible way of creating and displaying business information from multiple data sources in a graphical format.

The installation process involves installing up to four Active Dashboards components, described in the following chapters.

- **Web Application**

  An ASP.NET Web Application. It can be accessed through a standard web browser. This allows the application to run as a stand-alone web site or it can be embedded into an existing web site.

- **Dashboard Designer**

  A .NET Windows Forms multi-user application where dashboards are designed for display in the Web Application.

- **Alerting Service (optional)**

  A Windows Service which integrates with the Web Application to provide a data-driven system to generate automatic emails and alert log entries when Data Source values pass configured thresholds.

- **Data Loading Engine (optional)**

  A Windows Console application that allows Data Sources to be automatically run on a schedule and the results loaded into a relational database.

  The above can be installed onto the same computer or separate networked computers.

Recommended Installation Order

It is of benefit to undertake the installation of Active Dashboard software in the following order:

1. Web Application.

2. Dashboard Designer.

3. Alerting Service.

4. Data Loading Engine.

Installations performed in this manner benefit from automatically reusing paths created during the Web Application installation when installed on the same computer.

Chapter 2

Product Support

We only support Active Dashboards when used with the prerequisite Operating Systems (OS) and 3rd party software as listed in this guide.

Any listed OS or 3rd party software used with Active Dashboards must be up to date as recommended by the supplier e.g. the latest Service Pack with the all security updates installed. Additionally, the 3rd party must be actively supplying updates to the OS or software. A supplier no longer supporting a product will mean our support will be extremely limited and may result in an inability to provide support.

Supported Operating Systems

The operating systems supported, while Microsoft support remains available, for the installation of Active Dashboards are:

- Microsoft Windows 8.1 *****
- Microsoft Windows 10
- Microsoft Windows Server (Desktop Experience):
    - 2012 *****
    - 2012 R2 *****
    - 2016
    - 2019

* **Recommendation:** Products have passed Microsoft's Mainstream Support End Date; we strongly recommend upgrading to fall within Mainstream Support to maintain full/best support.

Supported Data Connectivity Options

The following data sources can be used to populate Active Dashboards content:

- Microsoft SQL Server databases (2012 SP4 *****, 2014 SP3 *****, 2016 SP2, 2017, 2019) while Microsoft supported.
- Microsoft Analysis Services OLAP Cubes.
- Oracle databases.
- Other database options via ODBC/OLEDB.
- Microsoft Office (local Access, Excel and online Excel).
- XML, CSV, RSS.
- Web Services (Google Analytics, Google Sheets, Salesforce.com).
- Social Media (Facebook, LinkedIn, Twitter).
- Recruitment (Broadbean, Bullhorn (beta), Etz, LogicMelon).
- Optional Data Loading into Microsoft SQL, Oracle and other relational databases.

* **Recommendation:** Products have passed Microsoft's Mainstream Support End Date; we strongly recommend upgrading to fall within Mainstream Support to maintain full/best support.

Visit and search our *Support Portal* at http://support.dynistics.com.

Chapter 3

The Web Application

This section describes the installation instructions for the Active Dashboards Web Application. The Web Application provides users with a graphical read-only access to business data.

Installation Prerequisites

- The operating system should be one of those listed in *Chapter 2 - Product Support*.
- 32-bit and 64-bit operating systems are supported. Refer to *Appendix 1 - 64-Bit Support*.
- Microsoft Internet Information Services (IIS) 7, 7.5, 8, 8.5 or 10 is installed and configured as described below.
- Microsoft .NET Framework 4.7.2 is installed (or a later compatible version).

Mobile Client Prerequisites

- Operating System:

  The operating system must be on general release and supported by the supplier.
- Web Browser:
  - Apple Safari Mobile browser on Apple iPhone and iPad devices running iOS 11.
  - Google Chrome Mobile browser on Android.

  Note: Due to device and browser variations not all devices can be tested or have 100% compatibility.
- The web browser on the client PC used to view Active Dashboards must support:
  - JavaScript.
  - Cookies.
  - Pop-up blocking must be disabled for the Dashboard Website - otherwise features such as Dashboard Exporting and drilling-down from Items may not work.

Client Prerequisites

- Operating System:

  The operating system must be on general release and supported by the supplier.
- Web Browser
  - Google Chrome.
  - Mozilla Firefox Quantum.
  - Microsoft Edge (Chromium-based).
- The web browser on the client PC used to view Active Dashboards must support:
  - JavaScript.
  - Cookies.
  - Pop-up blocking must be disabled for the Dashboard web application.
  - For viewing exported Item data in Microsoft Office Excel file format (.xlsx) a local installation of Microsoft Office Excel version 2010 SP1, 2013, 2016 or Office 365.

Important Notes:

▪ Ensure graphics drivers are up to date on all computers browsing Dashboards. This can adversely affect the rendering of charts where unexpected gaps appear due to old drivers being installed.

▪ SharePoint 2013 SP1 and above is not yet a supported integration platform. SharePoint 2010 however is supported.

▪ Microsoft have released a hotfix relating to `PageRequestManager` error messages reported in web pages about not being able to get access to it. Ensure Windows is up to date but in some case if issues arise refer to *http://support.microsoft.com/kb/2600088*.

▪ If both IIS and the .NET Framework need to be installed, ensure they are installed in the order given above. Failing this, the installation may not operate correctly. Please see the section entitled *Registering ASP.NET in IIS* below for more details.

▪ The Active Dashboards Web Application has been tested on the supported web browsers.

▪ The Web Application is optimised for display in 1024 x 768 pixels or above.

▪ Some features are disabled for the mobile platform which are detailed in the *Designer Guide* and the User *Guide (Mobile)*.

Configuring IIS for the Dashboard Web Application

For Windows Server operating systems ensure the following Role / Role Services are installed:

(via Control Panel - Administrative Tools - Server Manager)

- Web Server (IIS)
  - o Management Tools
    - ▪ IIS 6 Management Compatibility
      - IIS 6 Metabase Compatibility
    - ▪ IIS Management Console
  - o Web Server
    - ▪ Application Development
      - .NET Extensibility
      - ASP.NET
      - ISAPI Extensions
      - ISAPI Filters
    - ▪ Common HTTP Features
      - Default Document
      - Static Content
    - ▪ Security
      - Request Filtering
      - Windows Authentication

For Windows Desktop operating systems ensure the following Windows Features are turned on:

(via Control Panel - Programs and Features - Turn Windows features on or off)

- Internet Information Services
  - o Web Management Tools
    - ▪ IIS 6 Management Compatibility
      - IIS Metabase and IIS 6 configuration compatibility

- IIS Management Console
  - o World Wide Web Services
    - Application Development Features
      - .NET Extensibility
      - ASP.NET
      - ISAPI Extensions
      - ISAPI Filters
    - Common HTTP Features
      - Default Document
      - Static Content
    - Security
      - Request Filtering
      - Windows Authentication

Microsoft .NET Framework Installation

The installer program will warn you if the required .NET Framework is missing and needs to be installed.

Registering ASP.NET in IIS

Note: If you installed the .NET Framework on a system that already had IIS installed, then IIS is automatically configured to handle requests to ASP.NET pages, such as the Active Dashboards web pages. If this is the case, ignore the rest of this section.

If you installed IIS <u>after</u> installing the .NET Framework then you will need to register ASP.NET in IIS. If it is not registered, then ASP.NET web pages, such as Active Dashboards web pages, will not work.

To register ASP.NET with IIS please either:

- Reinstall IIS and ASP.NET in the recommended order; or

- Use the Microsoft ASP.NET IIS Registration Tool as follows:

  This utility is included with the .NET framework and is usually located in the following folder: *[WinDir]\Microsoft.NET\Framework\[Version]*

  Example of use (run from Windows Command Prompt):

  ```
  C:\Windows\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis.exe -i
  ```

  Note: Please consult the Microsoft documentation about this utility before use.

Installation Procedure

1.   Run the *WebSiteInstall.exe* file located in the installation media. This will launch the set-up tool. Upon initialization a welcome page is displayed. Click *Next* to continue to the next step.
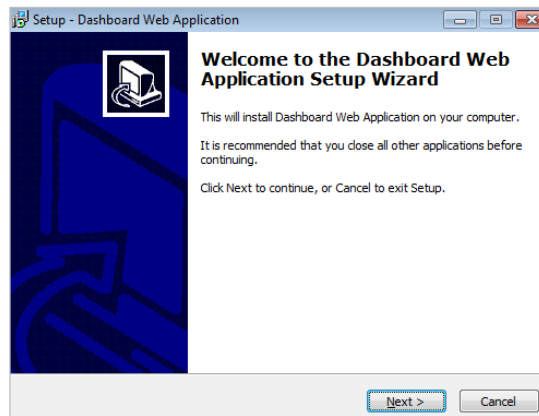
Figure 1: Web App Installation - Welcome Page

2.   Enter your name and optionally the name of your company. Once this has been entered click *Next*.
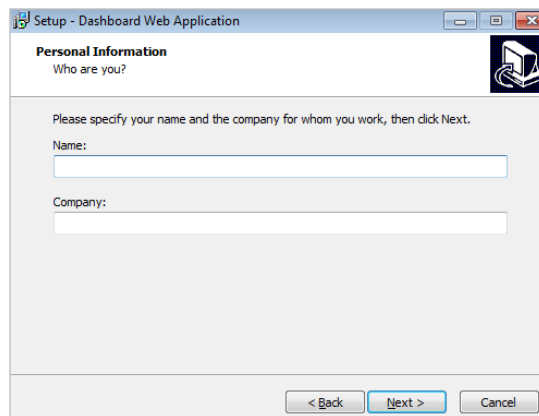
Figure 2: Web App Installation - Personal Information

3.   Read and accept the license agreement and then click *Next*.

Note: the license agreement, *End User License Agreement (EULA).pdf*, is also included with the product installation files and accessible from the installed Dashboard Designer and Web Application.
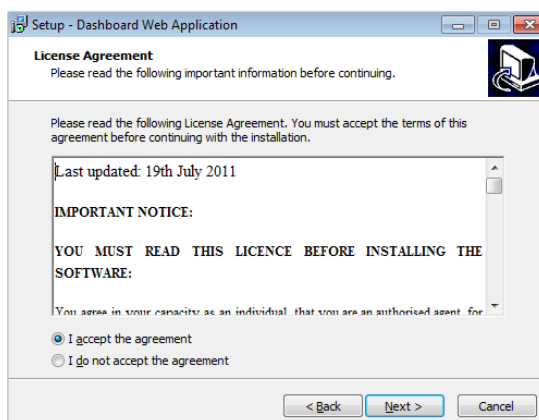
Figure 3: Web App Installation - License Agreement

4. Enter the location into which the installation will be placed and then click *Next*. The default location is *C:\Active Dashboards\WebApp* unless a previous installation path is found.
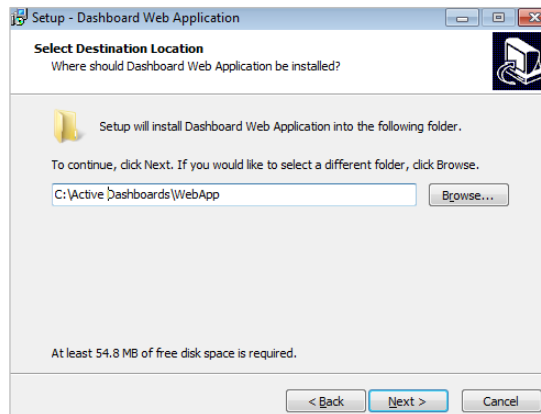
Figure 4: Web App Installation - Destination Folder

See *Appendix 2*, *Windows Virtual Store* relating to permission related issues.

5. Select whether to install the demonstration set of Dashboards. The default is not to install any demonstration data. Once a selection has been made click *Next*.
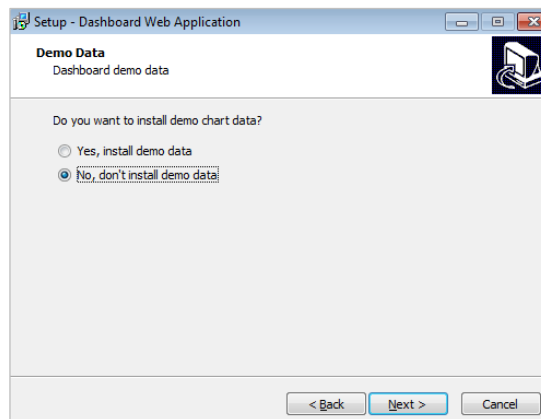

Figure 5: Web App Installation - Demonstration Dashboards

6. Enter the name of the virtual directory to create. Microsoft IIS should be installed on the same machine as the installation. Once this has been entered click on *Next*.
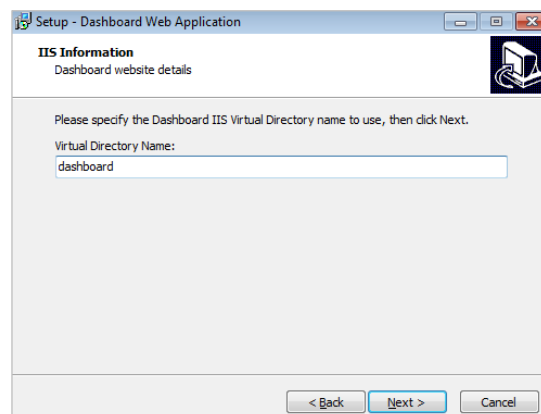
Figure 6: Web App Installation - IIS Information

7. Select the website under which the virtual directory will be created and also the website port number. The default Http port number is *80*. Once selections have been made click *Next*.
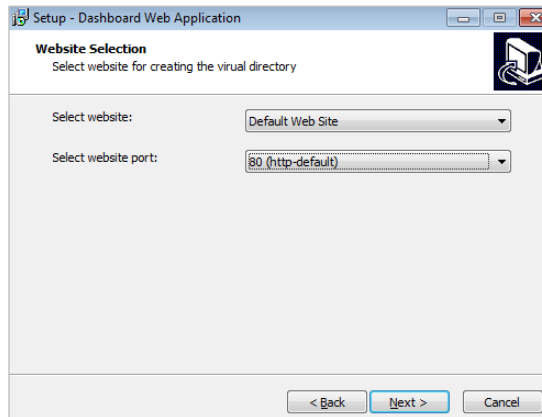
Figure 7: Web App Installation - Details

8. Read the summary page and check that the information previously entered is correct. Click *Install* to continue to the next step if all the details are correct. Click *Back* if you wish to amend any details.
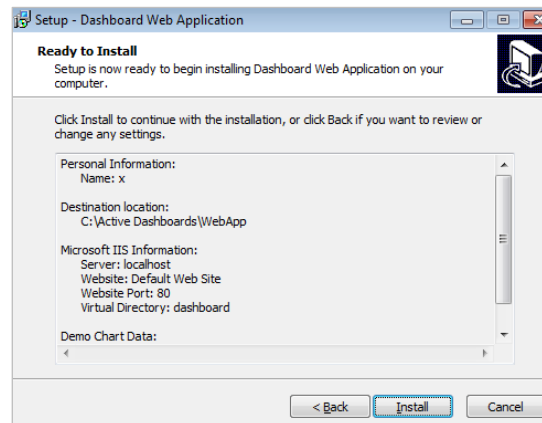
Figure 8: Web App Installation - Install Details

9. The installation progress will be shown and once this has completed the installation will automatically move to the next step.
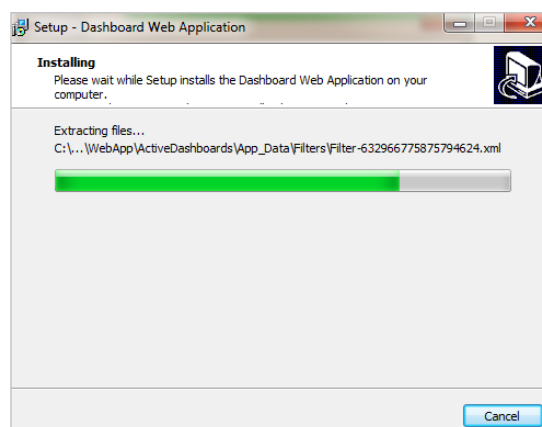
Figure 9: Web App Installation - Installation Progress

10. During the installation process you will be asked whether to configure IIS. See *Figure 10*. On selecting the *Yes* option IIS will be updated. Selecting *No* will only install the files and will not alter IIS.

    Important: If upgrading your existing Dashboard Web Application do not run the IIS setup part of the installer - if you want to preserve your existing Dashboard IIS settings e.g. Directory Security,

you should respond *No* to the message below. Refer to the *Upgrading the Web Application* section below.
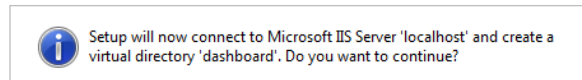
Figure 10: Web App Installation - Virtual Directory Creation

11. If you chose *No*, you should manually set up IIS as follows:

    • Ensure you have followed the IIS installation/configuration instructions above.

    • Create a new Virtual Directory application with the name you entered in Step 6 above.

    • Set its Local Path to the path entered in Step 4 above.

    • Ensure it is configured to use an Application pool with a NET CLR version v4.0.

    • If using IIS 6 or above, then add the Virtual Directory to the desired Application pool.

    Select *Yes* to create the new virtual directory with default settings.

    Important: If the virtual directory already exists the defaults settings will be reapplied as it will be considered an updated.
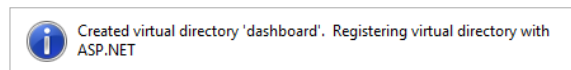
Figure 11: Web App Installation - Confirmation

12. Select *Ok*

13. A message *Registered virtual directory with ASP.NET* is displayed.

14. Select *Ok*

15. The Web Application has now been installed. Click on *Finish* to exit from the setup wizard.
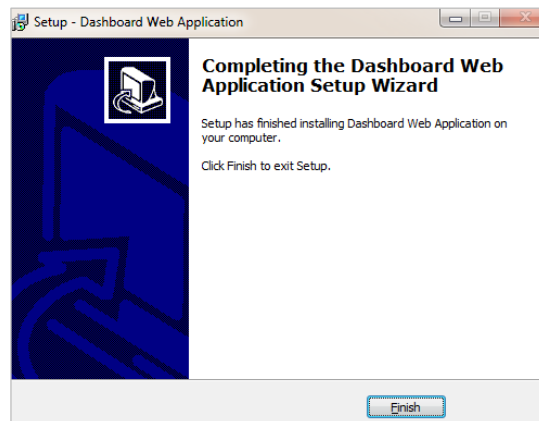
Figure 12: Web App Installation - Completion Page

16. Run through the *Checking the IIS Application* Pool section below.

17. Run through the *Checking the IIS Web Application* section below.

18. Run through the *Browsing the Web Application / Additional Configuration* sections below.

Checking the IIS Application Pool

Important: Ensure to now check and change the Application Pool the Web Application is assigned to and ensure it uses .NET Framework v4.0. The *DefaultAppPool* is chosen by default.

The installation application does not validate the correct Application Pool Framework Version. The Web Application will error if the wrong .NET Framework is set.

Figure 13: Web Application - Application Pool - Wrong

To correct this either change the Application Pool the Web Application uses or change the .NET Framework for the chosen Application Pool being used.

Note: Changing the Application Pool .NET Framework version will affect all Web Applications using it. If unsure, create a new Application Pool solely for Active Dashboards to use. This is recommended.
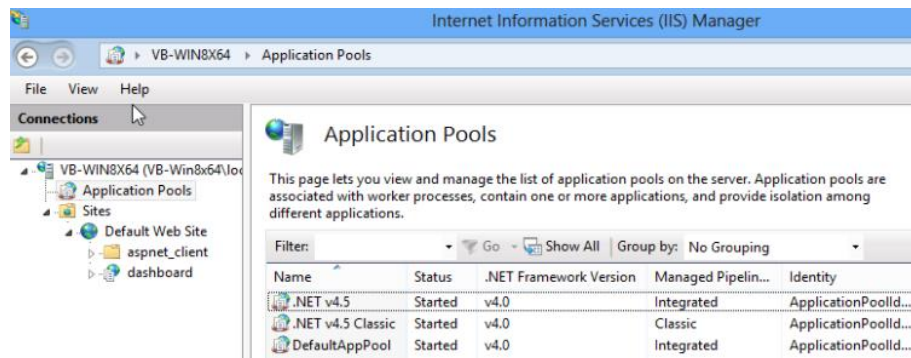
Figure 14: IIS Manager - Application Pool Framework Setting

Changing the Application Pool

Select the Web Application name listed under the correct Web Site in IIS Manager.

Select the *Basic Settings* link on the right.

Select the *Select …* button.

In the *Application pool* list pick the appropriate named Application Pool ensuring it is using the correct .NET framework.

Note: Older IIS version may be configured differently. Consult the Microsoft web site for the steps required appropriate for the version.

Changing the Application Pool Framework Version.

Select the Application Pool entry for the machine in IIS Manager to list all current pools.

Check the .NET Framework Version column of the appropriate pool entry.

Select the *Basic Settings* link on the right.

Change the .NET Framework version to the correct version.
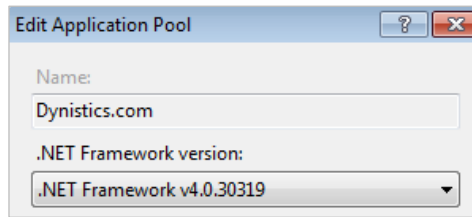
Figure 15: Application Pool Version

Configure 32-bit or 64-bit Application Pools

Application Pools support either 32-bit or 64-bit Web Applications but cannot be mixed.

Refer to the *Advanced Settings* of an Application Pool and the *Enable 32-bit Applications* property.

Note: Windows ODBC DSN entries must be made with the corresponding 32 or 64-bit ODBC Manager to be accessible.

Configure Maximum Worker Process

Important: Refer to the *Advanced Settings* of an Application Pool and ensure that the *Maximum Worker Processes* value is set to 1. A Web Garden is not supported.

Figure 16: Process Model Settings

Checking the IIS Web Application

Important: Ensure to now check the Dashboard Web Application's settings:

- In IIS Manager select the Dashboard Web Application just installed, e.g. *Sites - Default Web Site - dashboard.*

- Then select and open the Session State option, e.g.:

- Then ensure the *In process* option is selected, e.g.:
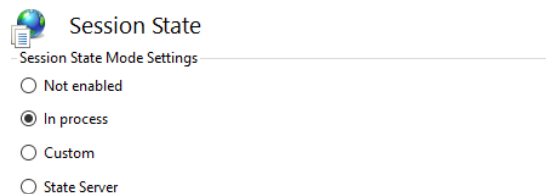
Figure 17: Session State Settings

Browsing the Web Application / Additional Configuration

1. To test this installation, open a web browser and enter the following address to navigate to:

   http://localhost/dashboard

   The Active Dashboards web page will appear.

   If accessing from a web browser on another PC then replace *localhost* with the name of the server onto which the application is installed.

Note: If you did not install to the default *dashboard* virtual directory then replace *dashboard* with the name of the virtual directory you chose during setup.

Important Note: If you receive a *Configuration Error* reported in the browser check the Web Application and its associated Application Pool to ensure the correct .NET Framework is being used - as described above.

2. The *Administration* page, *Quick Query* page, Dashboard page *Saved Filters* feature and *Dashboard Export* page of the Dashboard Web Application require *write* and *modify* permissions to the App_Data folder if settings are to be saved.

If the Web Application does not have this access, then these pages will display an error message *Access to path [x] is denied,* or similar when saving changes.

To correct this, you must grant the Windows user account that the Web Application runs under *read*, *write* and *modify* access to this folder as follows:

In Windows Explorer, right click on the *App_Data* folder found at:

 [Root of Dashboard web app]\dashboards\ActiveDashboards\App_Data

Select *Properties* from menu and then click on the *Security* tab.

Give the User the permissions as shown in the example at *Figure 18* below:
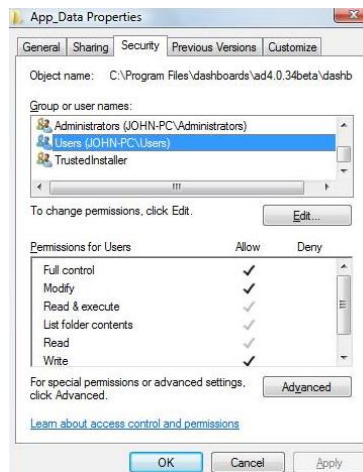
Figure 18: App_Data folder Permissions

Note: In the above example all Windows Users of this machine are given read/write/modify access to this folder. If you wish to be more restrictive on who has access to this folder you can grant the Windows User account that the Web Application runs under read access only.

The Windows user account that an ASP.NET Web Application runs under depends on various factors such as:

- The version of IIS being used;

- The Identity chosen for the IIS Application Pool the Web Application is running in (IIS 6 and above only);

- The optional identity settings specified in the Web Application's *Web.Config* file and the IIS Authentication settings for the Web Application.

- By default, this User Account is:

  o   IIS 5.1: *<Machine Name>\ASPNET*.

  o   IIS 6 and 7: *NT Authority\Network Service*.

  o   IIS 7.5, 8, 10: *ApplicationPoolIdentity* i.e. IIS *AppPool\<Application Pool Name>*

Note: If Active Dashboards is installed with IIS version 6 or above then the dashboard virtual directory/application created is placed in the *DefaultAppPool* application pool. If you wish to

associate it with a different application pool this can be configured using IIS Manager (Control Panel - Administrative Tools - Internet Information Services (IIS) Manager).

Note: When accessing the dashboard web page, the users may encounter an error accessing the global assembly cache. This is resolved by running the IIS website permissions wizard. This wizard can be run in IIS 5.1 Manager by right clicking on the 'dashboard' virtual directory within IIS and selecting *All Tasks - Permissions Wizard* from the displayed options. The default *Inherit all security settings* should be chosen unless company policy states otherwise.

Refer to the *User Guide* for more information about the Dashboard Administration pages and Saved Filters feature.

Refer to the *Quick Query Guide* for more information about the Quick Query page.

3. To determine if additional configuration is required review the following sections which can be found later within this document:

- User Accounts Included as Standard.

- IIS User Accounts and Resources using Windows Authentication.

- Installing the Dashboard Web Application with HTTPS.

- Configuring Web Application System Language.

- Configuring Built-in Usage Log.

Silent Installation Procedure

The *WebSiteInstall.exe* installation program can be run in Silent mode. This allows installation without user interaction.

The *WebSiteInstall.exe* optional command line parameters are as follows:

- **/SILENT**

  Tells the installer to run without user input but does show the installation progress window.

- **/VERYSILENT**

  Tells the installer to run without user input and to not show the installation progress window.

- **/SUPPRESSMSGBOXES**

  This flag suppresses all error message boxes. e.g. if invalid /DIR path specified.

- **/LOG="filename"**

  This parameter tells the installer to write any info/errors to the supplied filename.

- **/DIR="x:\dirname"**

  This tells the installer to override the default installation directory with the supplied one.

- **/VIRTUALDIR="name"**

  This tells the installer to override the default IIS Virtual Directory name with the supplied one.

- **/COPYDEMODATA="1"**

  The parameter determines if the demonstration dashboards are installed. The Default is 1 which will install the demonstration set. Alternatively, a value of 0 will not install the demonstration dashboards.

- **/WEBSITE="Default Web Site"**

  This names the web site under which the virtual directory will be created. The default is *Default Web Site*.

- **/PORT="number"**

  This tells the installer the Http port associated with the web site to use. The default Http port is *80*.

Example of running installer from command line:

```
WebSiteInstall.exe /SILENT /SUPPRESSMSGBOXES /LOG="log.txt" /DIR="c:\test"
/VIRTUALDIR="test"
```

Example of running installer as part of a DOS batch file:

```
WebSiteInstall.exe /SILENT /SUPPRESSMSGBOXES /LOG="log.txt" /DIR="c:\test"
/VIRTUALDIR="test"

IF ERRORLEVEL 1 ECHO ERROR INSTALLING!

IF NOT ERRORLEVEL 1 ECHO INSTALL OK
```

User Accounts Included as Standard

The standard installation of the run-time Web Application includes some pre-configured User Accounts some of which have no password. Please refer to the *Active Dashboards User Guide* section on *Dashboard Administration (Default Settings)* for more information.

All Users Locked Out

It is possible, particularly when using the Active Directory Access Mode described below to be in a position where all users are locked out of the Dashboard Administration pages.

Note: It is recommended that the first step in configuring your Security Settings is to create a User Account with Administration rights and with a password. This user will then be able to access the Dashboard Administration pages manually via the login page e.g. *http://localhost/dashboard/login.aspx.*

Active Dashboards with Microsoft Active Directory

If you are planning to integrate Active Dashboards with Microsoft Active Directory i.e. using the same Group names and structure within both, you should take the following steps in IIS to ensure that Windows Authentication is enabled and then also configure the Active Dashboards Web Application to use Authentication:

Note: Ensure to give *read* permissions as a minimum to the Web Application root folder to accounts/groups accessing ActiveDashboards. Additional permission to *write* to the *ActiveDashboards\App_Data* path will be required for those users/groups capable of accessing the Administration functions via the Web browser.

IIS 7:

1. Go to Control Panel - Administrative Tools - Internet Information Services (IIS) Manager as above.
2. Select the Virtual Directory for your Active Dashboards installation and on the right-hand side you will see a group of icons. Select the *Authenticatio*n icon as illustrated at *Figure 19* below:
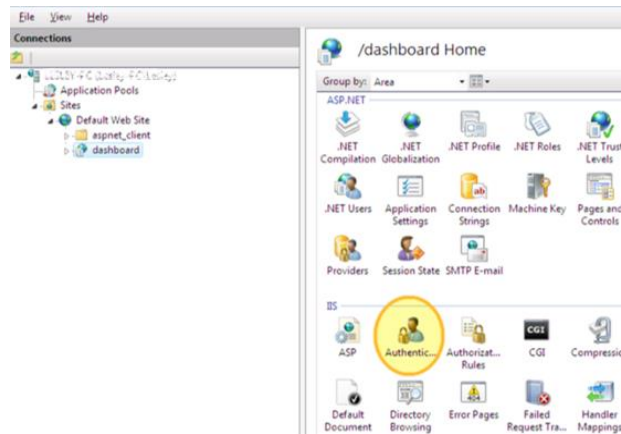
Figure 19: IIS 7 Authentication Icon

3. Having selected the *Authentication* icon, ensure that *Windows Authentication* is set to *Enabled* and *Anonymous Authentication* is set to *Disabled* as illustrated in *Figure 20*.
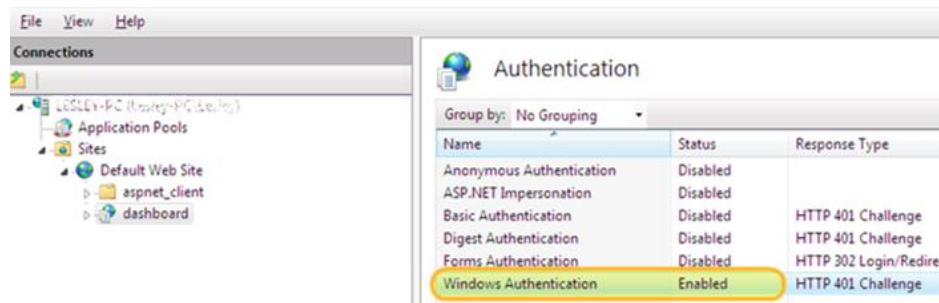
Figure 20: IIS7 - setting Windows Authentication

Note: If Active Directory Integration is being used then the Dashboard Web Application's Admin pages require access to look up Active Directory Group names for the *Active Directory Group picker* feature to work (please see the *User Guide* for further information about this).

The Windows Users using this Dashboard Admin page feature should be granted access to this Active Directory information. This typically involves these users having to be members of the *Domain Admins* Active Directory Group.

Web Application Authentication Configuration:

To integrate the Active Dashboards Web Application with the Microsoft Active Directory the following steps should be followed:

1. Start the Web Application.

2. Click the *Admin* link.
   In order to be able to use the Dashboard Administration pages, the user must be a member of an *Admin Group* with permission to see at least one of the Administration links (Refer to the *User Guide*.).

   If the current user is a member of a privileged Group, the *Admin* link will be shown in the Active Dashboards header. See *Figure 21*.
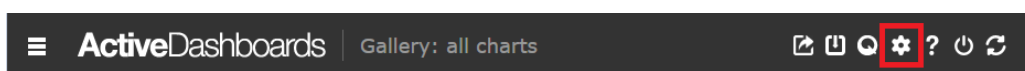
Figure 21: Web Application - Admin Link

3. Select the *Security Settings* link

4. Click the *Edit* button

Figure 22: Web Application Administration - Security Settings

5. Change the *Access mode* setting to *Active Directory Groups*

6. Click *Save*

7. You will now need to configure the Users and Groups as detailed in the *User Guide* in the chapter titled *Dashboard Administration*.

IIS User Accounts and Resources using Windows Authentication

Using Windows Authentication within IIS allows for several different approaches to SQL Server and file resource security. Several of these are outlined below.

1. **No Impersonation.**

    Using this method, the user connects to the Dashboard Web Application using their Active Directory account. When accessing resources, such as running Data Connectors within the product, the system will connect using the IIS system account or the account named for use within the Thread Pool that IIS is running Active Dashboards within. Therefore, when using this option, the system administrator needs to ensure that the default account identity has access to read data from the SQL Server and access to any resources required.

    This approach has the advantages of being simple and requires little extra administration. However, all users access data through the same account which could result in security vulnerabilities which are harder to audit at a data layer level.

2. **No Impersonation with Connection String settings.**

    Similar to above the IIS is set up to run with Windows Authentication. However, when defining Data Connectors within the Dashboard Designer the administrator can specify a username and password to use. Note that this username and password refer to a SQL Server account, not an Active Directory one. This results in all users connecting to the data using the same account.

    Whilst this approach is very simple to set up, it has significant vulnerabilities in terms of security and accountability and is therefore not recommended.

3. **Impersonation.**

    Within the Dashboard Web Application, the base *Web.Config* file can be edited to enable Impersonation. This means that when a user of the Web Application makes a request to a Data

Connector, the system passes their Windows User details through to SQL Server. To enable this, the administrator will need to edit the *Web.Config* file and set the value of the *impersonate* key to *true*, so it reads `<identity impersonate="true"/>`.

This is the recommended approach for securing Active Dashboards. It enables users to have separate security levels in the data layer as required and supports detailed auditing.

Note: If after making the above change you receive the following error "*HTTP Error 500.24 - Internal Server Error. An ASP.NET setting has been detected that does not apply in Integrated managed pipeline mode.*" then extra configuration changes may be required. One way of resolving this is by adding the following setting *<validation validateIntegratedModeConfiguration="false"/>* to the *<configuration><system.webServer>* section of the *Web.Config*.

4. **Impersonation with a named user account.**

   Similar to the above, it is possible to set up impersonation to use a specific named user account instead of allowing the user's own Windows Account to be passed through. This is done by editing the *Web.Config* file for the Dashboard Web Application and altering the Impersonation key to the following `<identity impersonate="true" userName="accountname" password="password"/>` replacing the username and password as required.

   Whilst this approach is again simple to implement, there is a vulnerability in terms of someone gaining access to the *Web.Config* file and discovering the username and password of a Windows Account. Generally, we would recommend using the user's own account in preference to this.

Note: Data Source Permissions - the Dashboard Web Application works through read-only access to resources such as databases and xml files. Therefore, it is strongly recommended that any user accounts used to gain access to resources for the application be set up with the minimum permissions required (for example, granted read access only and denied permissions to delete or modify the resource).

Installing the Dashboard Web Application with HTTPS

The Web Application supports all normal operations within a secure environment, such as over HTTPS. When operating within a secure environment, all access must remain within the scope of the same secure session, for example when attempting to view the trace output.

Configuration

Important Note: When editing and saving the Active Dashboards *Web.Config* file it is important to remember that IIS may not recognise a small change such as when configuring diagnostics options.

To overcome this and ensure changes are detected, add a new blank line to the very top or very bottom of the file and save it, Then, reopen the file and remove the inserted blank line and again save the file.

Configuring Web Application System Language

The Web Application can be configured to support the following locales using a *Web.Config* file change:

- English - Great Britain (en-GB).

- English - American (en-US).

Validation checks matching one of the two identified locales are performed to check date formats entered by users using the filtering features of Active Dashboards. Users of the Web Application must enter the date in the correct format matching the locale. In addition, the entry format will match the format in which dates are displayed. The formats expected are:

- English - Great Britain locale: dd/mm/yyyy.

- English - American locale: mm/dd/yyyy.

Edit the *ActiveDashboards/Web.Config* file as shown in *Example 1: System Locale - English GB* and dates entered will be expected to conform to the format *dd/mm/yyyy*. Display of dates will use the same format.

```
<globalization enableClientBasedCulture="true" culture="en-GB"
uiCulture="en-GB"/>
```
Example 1: System Locale - English GB

Edit the *ActiveDashboards/Web.Config* file as shown in *Example 2: System Locale - English US* and dates entered will be expected to conform to the format *mm/dd/yyyy*. Display of dates will use the same format.

```
<globalization enableClientBasedCulture="true" culture="en-US"
uiCulture="en-US"/>
```
Example 2: System Locale - English US

Note: The English - Great Britain locale format is the default for all non English-American locales.

Note: All Web Application users will be required to enter the same format regardless of the locale associated with their web browser.

Configuring Built-in Usage Logs

The Active Dashboards software can log User activity, Alert processing and Data Loading processing to CSV log files. Users with Administration permissions in the Web Application can view Items detailing this activity. There are two steps required to successfully make use of the Usage Log feature:

1. Enable Logging within the Dashboard Designer to create the relevant logs and begin the process of recording activity. See the *Designer Guide* sections titled *Chapter 10 - Defaults for all Dashboards* and *Chapter 12 - Alerts and Triggers*.

2. To view the built-in Usage Log Items using the Web Application a System Data Source Name (DSN) must be created under the Windows Control panel Data Sources (ODBC) manager for each log file enabled. See the *User Guide* section titled *Chapter 3 - Usage Log Tab*.
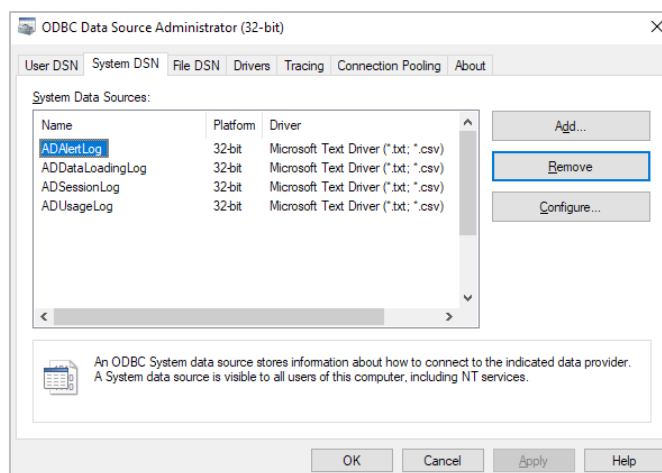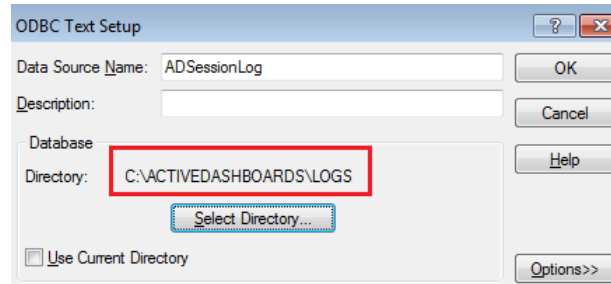
Creating Usage Log System DSNs

Figure 23: Windows Control Panel - Data Sources (ODBC)

The DSN names must be *ADAlertLog*, *ADDataLoadingLog*, *ADSessionLog* and *ADUsageLog* and use a Text Driver for Comma Separated Value (CSV) files.

Note: It is important these ODBC DSNs are mapped to the folder matching the log file location as configured in the Dashboard Designer.

Figure 24: Windows Control Panel - Data Sources (ODBC) Configuration

Note: Ensure permissions are granted for accessing the usage log folder and files.

Configuring Session Timeout

To alter the timeout which controls when idle Dashboard user sessions are automatically destroyed, follow the steps below.

The Session timeout can be modified by manually editing the *Web.Config* file or via the IIS Manager as outlined below.

Via Web.Config File

1. Open the dashboard *Web.Config* file in a text editor.
    The path is typically *<Installation location>\Web.Config*

2. Find the line which starts, *<sessionState/>*. If it has previously been altered it may already have a setting as detailed in step 3 below.

3. Edit the line to be *<sessionState timeout="20"/>*.
    Note: This will set the timeout to be 20 minutes. Choose an appropriate value. Large values will affect the performance of the server as user sessions will take longer to recover.

Via Session Timeout - IIS Manager

1. Open IIS Manager (Control Panel - Administrative Tools - Internet Information Manager (IIS) Manager)

2. Expand Sites

3. Expand the relevant Web site

4. Select the dashboard Application to be reconfigured

5. Open the *Session State* feature

6. Edit the *Time-out (in minutes)* field

7. Select *Apply*

Web Application Restarts and Session Timeout

If the Dashboard Web Application is restarted for any reason, then any current Dashboard user sessions are automatically destroyed.

Some reasons why the Dashboard Web Application may restart are listed below:

- Its configuration settings are altered by editing its Web.Config file(s), either, via a text editor or via the Internet Information Services (IIS) Manager.

- The IIS Web Server hosting the Dashboard Web Application is stopped and started.

- The IIS Web Site hosting the Dashboard Web Application is stopped/started or restarted.

- The IIS Application Pool which contains the Dashboard Web Application is stopped/started, recycled, or times-out.

- The server hosting the Dashboard Web Application is rebooted.

Configuring Dashboard Player

The Dashboard Player allows users to create a playlist of Dashboards to automatically cycle through at a set interval in their web browser. Refer to the User Guide.

Unattended mode

It is possible to automatically display Dashboards using the Player on an unattended computer, so the Player resumes after computer restarts. To achieve this:

1. Manually launch the Dashboards in a web browser on the computer and setup and start the Dashboard Player running.

2. Setup the computer to automatically launch the Dashboards in the same web browser upon start-up. On Windows operating systems this can be achieve using the Windows Task Scheduler or by setting-up a Startup program so the Dashboard URL is opened in a browser upon log on.

3. Depending on the operating system you may be able to configure it to automatically login upon restart or to not require a log in.

4. To avoid Dashboard session timeout messages, append `SesErrAck=OK` to the URL. For example:
   ```
   http://localhost/dashboard/ActiveDashboards/DashboardPage.aspx?SesErrAck
   =OK
   ```

Other Configuration Settings

The Web Application has other configuration settings that control Dashboard functionality. These are located in the ActiveDashboards*Web.Config* file:

Setting	Valid values	Default value	Description
`ad_EnableRequestLevelDataCaching`	`0` or `1`	`1`	Whether to enable caching of Data Source results for the duration of each request made to the Dashboard Web application? Enabling this may improve performance by reducing the number of Data Sources being run but may increase memory usage on the Web Server.
`ad_ItemLoadDelayMS`	`0` or positive integer	`0`	The delay in milliseconds between each Item loading on a Dashboard. Does not affect Dashboards displayed on supported mobile devices.
`ad_SavedFilterDefaultAccess`	`Public` or `Private`	`Private`	Whether Dashboard Saved Filters should default to public or private access when created?

`ad_SavedFilterOpenSameWindow`	0 or 1	0	Whether selecting a Saved Filter should open it in a new or use the same browser window by default?
`ad_ShowItemErrorDetails`	0 or 1	1	Whether error details should be displayed on Dashboard Item instead of the generic "A problem has occurred…" message?
`ad_SuperGridForceExportToExcel`	0 or 1	0	Whether Super Grid Items should always export data in Excel format?

Chapter 4

The Dashboard Designer

This section describes the installation instructions for the Active Dashboards Designer. The Dashboard Designer allows you to create the content displayed in the Active Dashboards Web Application.

The Dashboard Designer should be installed onto the computer(s) that will administer the Active Dashboards web installation.

The installation creates links for starting the Dashboard Designer which can be found by;

- Clicking *Start*

- Clicking *Program Files*

- Expanding Dashboards

  Or

- Double Clicking the icon on the user's desktop.

The users administering Active Dashboards should be able to access the Active Dashboards installation on the web server onto which it is deployed.

Installation Prerequisites

- The operating system should be one of those listed in *Chapter 2 - Product Support*.

- Microsoft .NET Framework 4.7.2 is installed or, a later compatible version.

- The user of the Dashboard Designer must have *read* file access to the Active Dashboards Web Application folders and *read*, *write* and *modify* access to its App_Data folder.

- Additionally, *write* access to the folder containing the Dashboard Designer application file is required for technical logging to assist the support team in diagnosis of issues.

- Additionally, full access to the Windows registry the Dashboard Designer is installed upon:

  - *HKEY_LOCAL_MACHINE\SOFTWARE\Dynistics\DashboardDesigner* on 32-bit machines

  - or *HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Dynistics\DashboardDesigner* on 64-bit machines

  - *HKEY_CURRENT_USER\SOFTWARE\Dynistics\DashboardDesigner*

Microsoft .NET Framework Installation

The installer program will warn you if the required .NET Framework is missing and needs to be installed.

Installation Procedure

1. Run the *DashboardDesignerInstall.exe* file located in the installation media. This will launch the set-up tool. Upon initialization a welcome page is displayed. Click *Next* to continue to the next step.
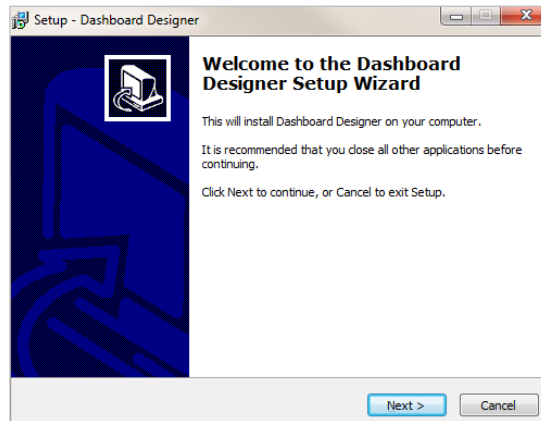
Figure 25: Designer Installation - Welcome Page

2.   Enter your name and optionally the name of your company. Once this has been entered click *Next*.
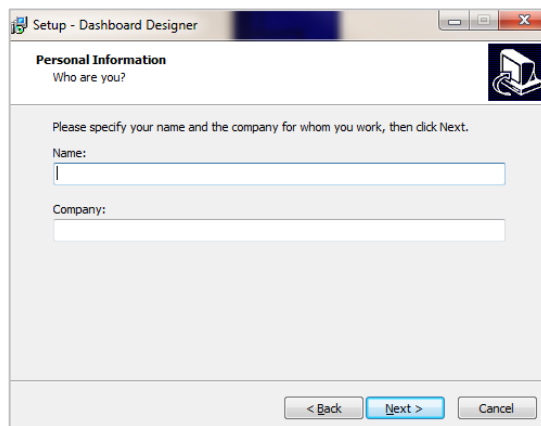
Figure 26: Designer Installation - Personal Information

3.   Read and accept the license agreement and then click *Next*.

Note: the license agreement, *End User License Agreement (EULA).pdf*, is also included with the product installation files and accessible from the installed Dashboard Designer and Web Application.
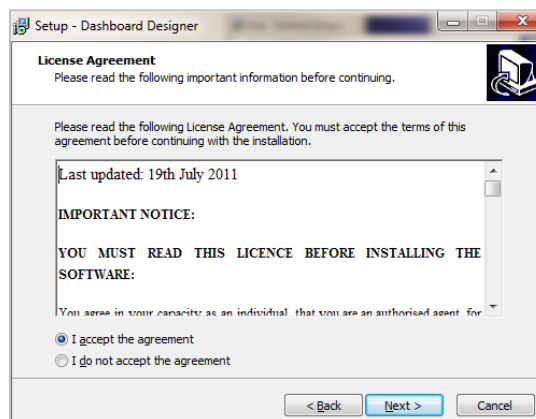
Figure 27: Designer Installation - License Agreement

4.   Enter the location into which the installation will be placed and then click *Next*. The default location is *C:\Active Dashboards\Dashboard Designer* unless a previous installation path is found.
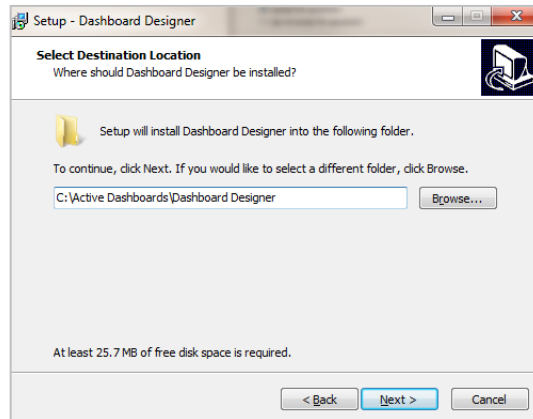
Figure 28: Designer Installation - Destination Folder

See *Appendix 2, Windows Virtual Store* relating to permission related issues.

5.   Read the summary page and check that the information previously entered is correct. Click *Install* to continue to the next step if all the details are correct. Click *Back* if you wish to amend any details.
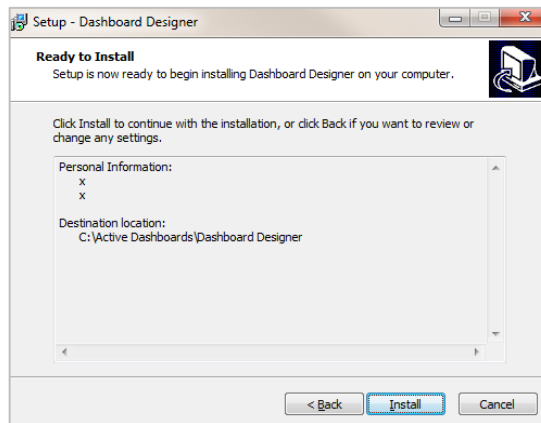
Figure 29: Designer Installation - Install Details

6.   The installation progress will be shown. Once this has been completed the installation will automatically move to the next step.

7.   The Dashboard Designer has now been installed. Click *Finish* to exit from the setup wizard.
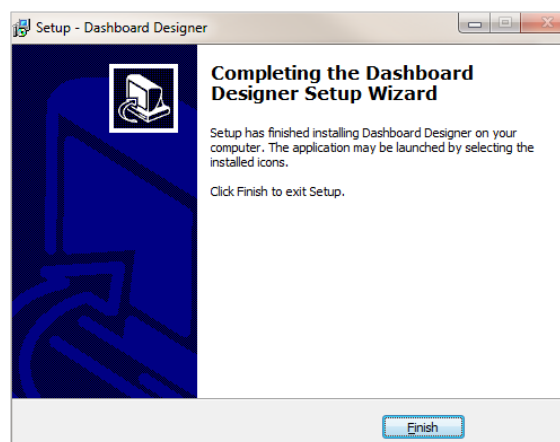
Figure 30: Dashboard Designer - Completion Page

8. To test the installation, click on the Dashboard Designer link installed on your desktop or from the Programs Menu. See the *Active Dashboards Designer Guide* for further descriptions of how to access and use the Dashboard Designer.

Each user of the Dashboard Designer requires *read*, *write* and *modify* access to the Active Dashboards Web Application's App_Data folder. If the user does not have this access, then the Dashboard Designer will display an error message "Access to path [x] is denied" when loading and / or saving.

To correct this please grant the user *read*, *write* and *modify* access to this folder as follows:

In Windows Explorer, right click on the App_Data folder found at:

[Root of Dashboard web app]\dashboards\ActiveDashboards\App_Data

Select *Properties* from menu and then click on the *Security* tab.

Give the Users the permissions as shown in the example *Figure 31* below:
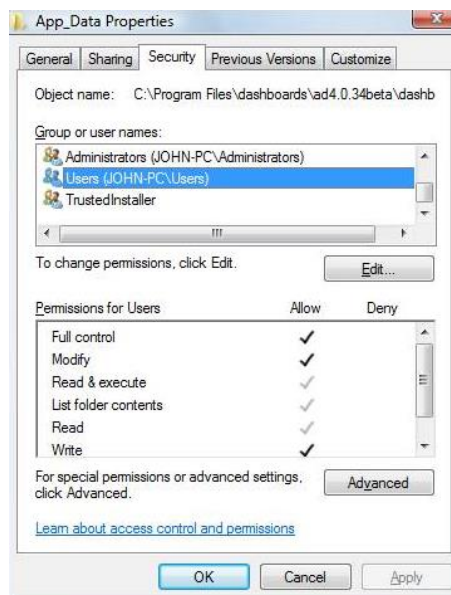
Figure 31: App_Data folder Permissions

Uninstall Procedure

The Dashboard Designer can be uninstalled from two places:

1. To uninstall the service run the *Uninstall Dashboard Designer* option from the Start Menu - Programs - Dashboards folder.

2. In the Windows Control Panel - Programs and Features locate the *Dashboard Designer* and right click to reveal the uninstall option and select it.

Chapter 5

The Alerting Service

This section describes the installation instructions for the Active Dashboards Alerting Service.

The Alerting Service is a standard Windows Service which integrates with the Web Application to provide a data-driven system to generate automatic emails and alert log entries when data source values pass configured thresholds. An administrator is responsible for configuring the *alerts*, *triggers* and *actions* within the *Dashboard Designer*. For more information refer to the *Designer Guide*.

The recommendation is to install the Alerting Service on a single unified server with the Web Application. It is possible to install the Alerting Service to a different machine which is not hosting the Web Application or Dashboard Designer, so long as it can access the Web Application to run the necessary ASP.NET page.

The installation creates a link for the tool under Start - Program Files - Dashboards for uninstalling the service and also an entry in the Control Panel.

Installation Prerequisites

- The operating system should be one of those listed in *Chapter 2 - Product Support*.

- Microsoft .NET Framework 4.7.2 is installed (or a later compatible version).

- If logging of alerts is configured, the user account configured for the IIS Service / Application Pool process must have *read* / *write* permissions to the log file location.

- The Alerting Service must be able to access the Web Application to run the necessary ASP.NET page.

Microsoft .NET Framework Installation

The installer program will warn you if the required .NET Framework is missing and needs to be installed.

Installation Procedure

1. Run the *AlertingServiceInstall.exe* file located within the installation media. This will launch the set-up tool. Upon initialisation a welcome page is displayed. Click on *Next* to continue to the next step.
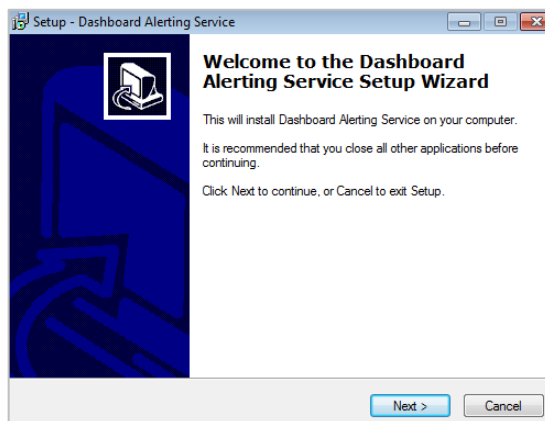

Figure 32: Alerting Service - Welcome Page

2. Enter your name and optionally the name of your company. Once this has been entered click *Next*.
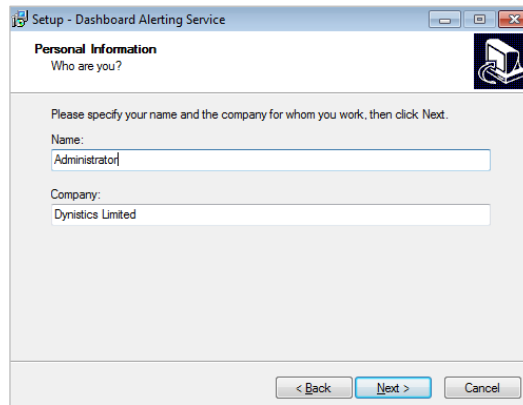
Figure 33: Alerting Service Installation - Personal Information

3. Read and accept the license agreement and click *Next*.

   Note: the license agreement, *End User License Agreement (EULA).pdf*, is also included with the product installation files and accessible from the installed Dashboard Designer and Web Application.
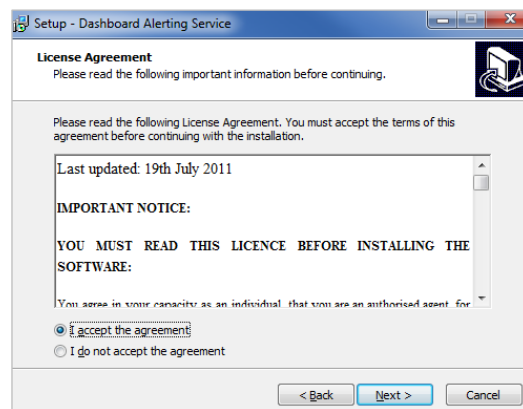
Figure 34: Alerting Service Installation - License Agreement

4. Enter the location into which the installation will be placed and then click *Next*.
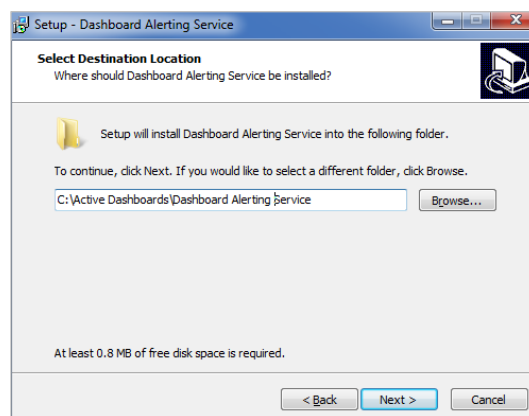
Figure 35: Alerting Service Installation - Destination Folder

5. Enter the name of the virtual directory which the Alerting Service will use to trigger Alerts and click *Next*.

   Note: This URL is prefilled if the Dashboard Web Application has already been installed on the same machine.
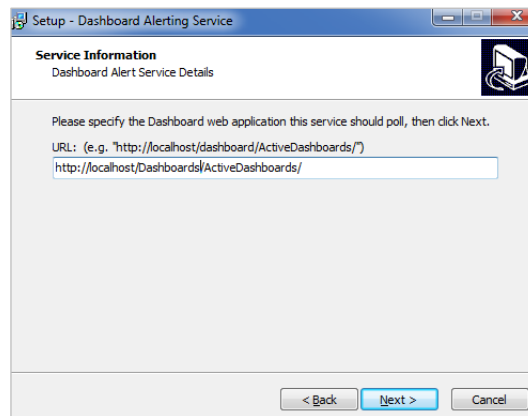
Figure 36: Alerting Service - Service Information

6. Read the summary page and check the information previously entered is correct. Click *Install* to continue to the next step if the details are correct. Click *Bac*k if you wish to amend any details.
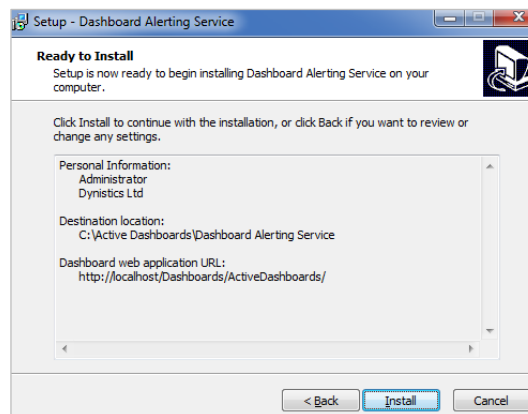
Figure 37: Alerting Service Installation - Summary

7. The installation progress will be shown. Once this has been completed the installation will automatically move to the next step.

8. The Dashboard Alerting Service has now been installed. Click *Finish* to exit from the setup wizard. See *Figure 38*.
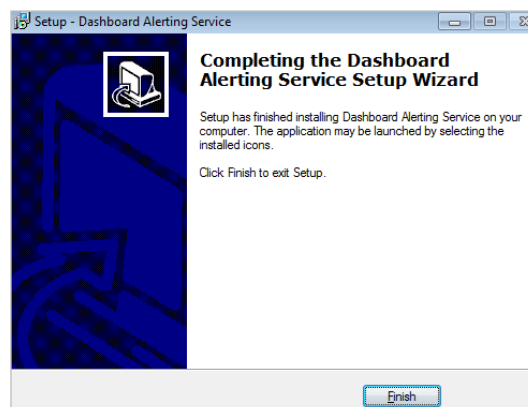
Figure 38: Alerting Service Installation - Completion Page

9. After installation the service will automatically start. It is also set to automatically start when Windows starts.

10. The status of the Dashboard Alerting Service can be viewed using the standard Windows Services control panel. See Windows - Control Panel - Administrative Tools - Services as shown in *Figure 39*.
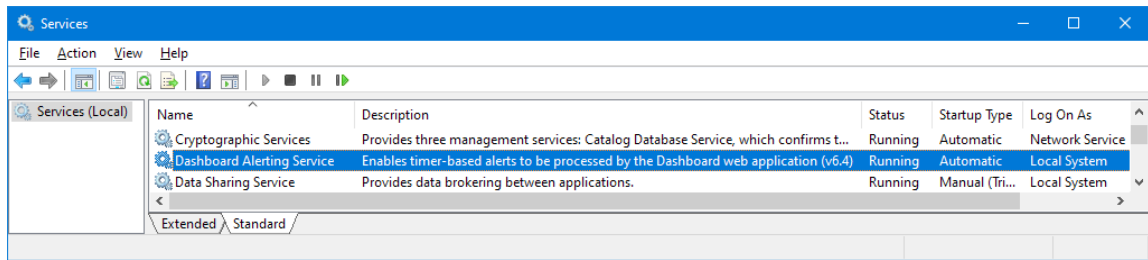
Figure 39: Windows - Control Panel - Administrative Tools - Services

11. Ensure the Dashboard Alerting Service is configured with a *Log On* Windows Account that has sufficient privileges to make HTTP requests to the Dashboard Web Application.

12. The Web Application is supplied with a pre-built *License Expiry* Alert which can be configured to email chosen recipients a warning when your Dashboard license is about to expire, see *Chapter 7 - Licensing*.

Default Configuration

This section details the default recommended settings applied during installation.

- General - Automatic start-up
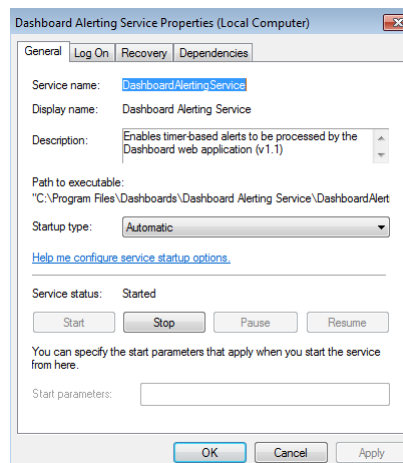
Figure 40: General Settings - Automatic start-up

- Log On - Using account with minimal security permissions.
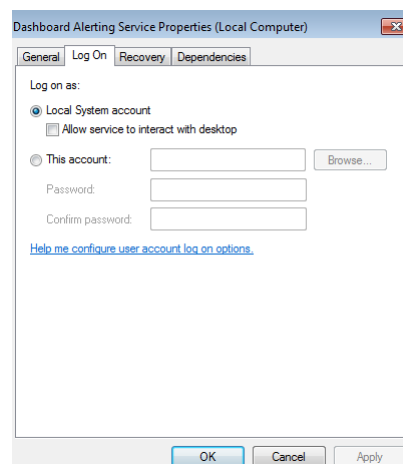
Figure 41: Log On Settings - Local System account.

- Recovery - None
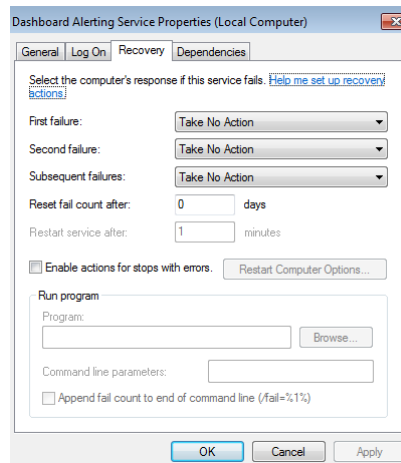
Figure 42: Recovery - None

- Dependencies - None
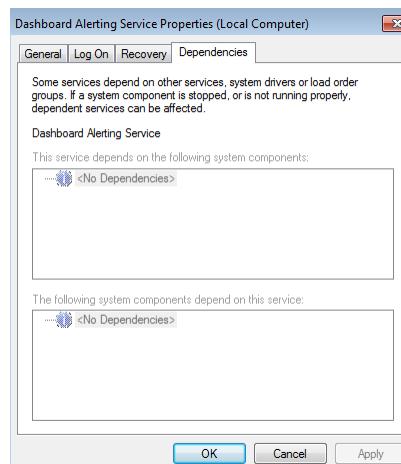
Figure 43: Dependencies - None

Uninstall Procedure

The Alerting Service can be uninstalled from two places:

1. To uninstall the service run the *Uninstall Dashboard Alerting Service* option from the Start Menu - Programs - Dashboards folder.

2. In the Windows Control Panel - Programs and Features locate the *Dashboard Alerting Service* and right click to reveal the uninstall option and select it.

Troubleshooting

- Check the Alerting Service is running . See Windows - Control Panel - Administrative Tools - Services as shown in *Figure 39*

- Check the Windows Event Viewer - Application Log (Windows - Administrative Tools - Event Viewer) for Information / Error messages logged by the Dashboard Alerting Service:
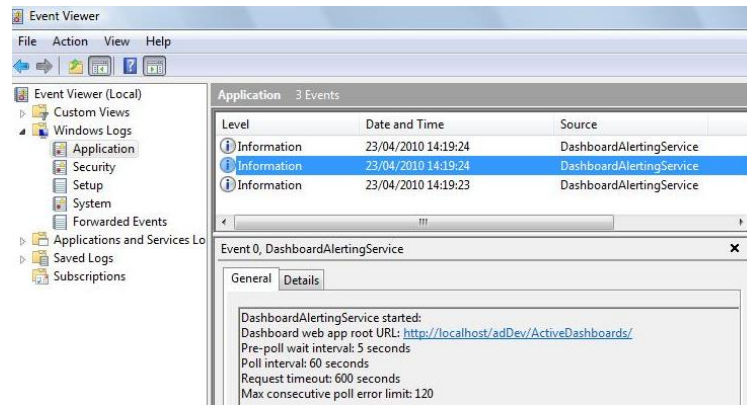
Example 3: Windows Event Viewer

- Any errors or warnings encountered whilst processing Alerts can be found in the Web Application Trace (opened via F9 key in the Dashboard Designer). Click on the *View Details* link of the last ***ProcessAlerts.aspx*** entry listed:

Example 4: Application Trace

Any errors will be displayed in red text in the *Request Details* shown.

If Alert logging is enabled, then triggered alerts are written to the Alert file specified - including details of any Emails that failed. The Web Application needs *read* / *write* / *modify* access to the file specified.

- Check all the above installation steps were carried out.

- Uninstall and reinstall the Dashboard Alerting Service.

- Visit and search our *Support Portal* at http://support.dynistics.com.

Chapter 6

The Data Loading Engine

This section describes the installation instructions for the Active Dashboards Data Loading Engine. The Data Loading feature of Active Dashboards allows Data Sources to be automatically run on a schedule and the results loaded into a relational database.

Data Loaders are configured in the Dashboard Designer, stored in the Dashboard Web Application *App_Data* folder and processed by the Data Loading Engine.

Installation Location

Review the *Active Dashboards Data Loading Guide* to help determine where to install the Data Loading Engine, especially the chapter *Configuring the Data Loading Engine* regarding required permissions and network access.

Note: Data Loading can be defined and tested in the Dashboard Designer prior to installation of the Data Loading Engine. Installation of the Data Loading Engine is only required when you need Data Loading to be run automatically on a scheduled basis.

Installation Prerequisites

- The operating system should be one of those listed in *Chapter 2 - Product Support*.
- Microsoft .NET Framework 4.7.2 is installed (or a later compatible version).
- Additionally, full access to the Windows registry the Data Loading Engine is installed upon:
    - *HKEY_LOCAL_MACHINE\SOFTWARE\Dynistics\DashboardDataLoadingEngine* on 32-bit machines or
    - *KEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Dynistics\DashboardDataLoadingEngine* on 64-bit machines.
- See the *Active Dashboards Data Loading Guide* for further required permissions and network access.

Microsoft .NET Framework Installation

The installer program will warn you if the required .NET Framework is missing and needs to be installed.

Installation Procedure

1. Run the *DataLoadingEngineInstall.exe* file located in the installation media. This will launch the setup tool. Upon initialization a welcome page is displayed. Click *Next* to continue to the next step.
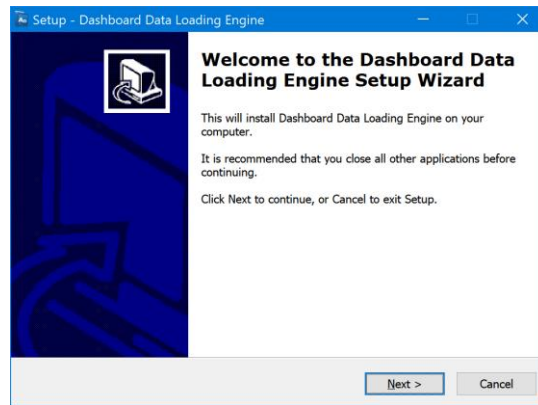
Figure 44: Data Loading Engine Installation - Welcome Page

2. Enter your name and optionally the name of your company. Once this has been entered click *Next*.
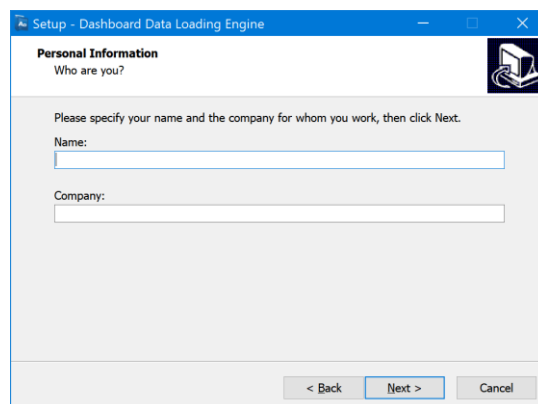
Figure 45: Data Loading Engine Installation - Personal Information

3. Read and accept the license agreement and then click *Next*.

   Note: the license agreement, *End User License Agreement (EULA).pdf*, is also included with the product installation files and accessible from the installed Dashboard Designer and Web Application.
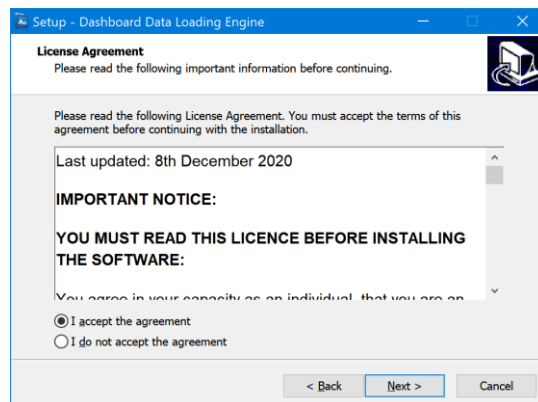
Figure 46: Data Loading Engine Installation - License Agreement

4. Enter the location into which the installation will be placed and then click *Next*. The default location is *C:\Active Dashboards\Data Loading Engine* unless a previous installation path is found.
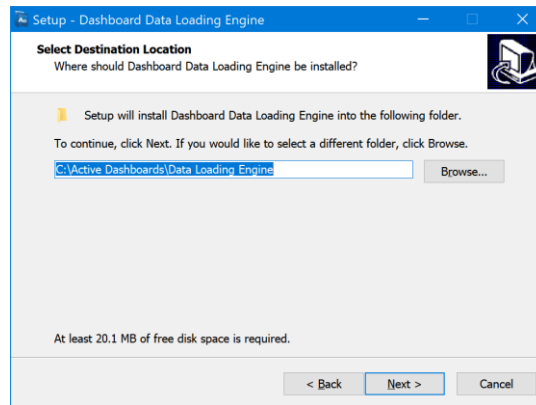
Figure 47: Data Loading Engine Installation - Destination Folder

5. Enter the location of the Dashboard Web Application that contains the Data Loader definitions the engine should process and click *Next*.
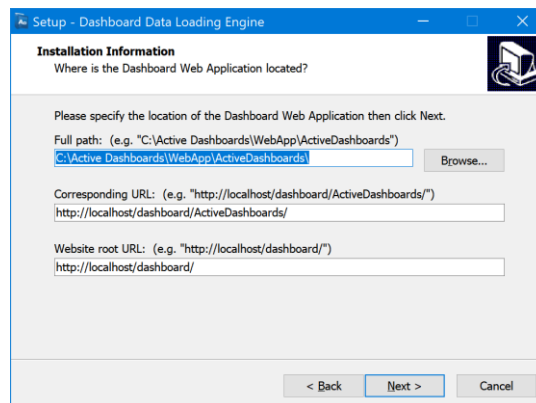
Figure 48: Data Loading Engine Installation - Web Application Location

6. Read the summary page and check that the information previously entered is correct. Click *Install* to continue to the next step if all the details are correct. Click *Back* if you wish to amend any details.
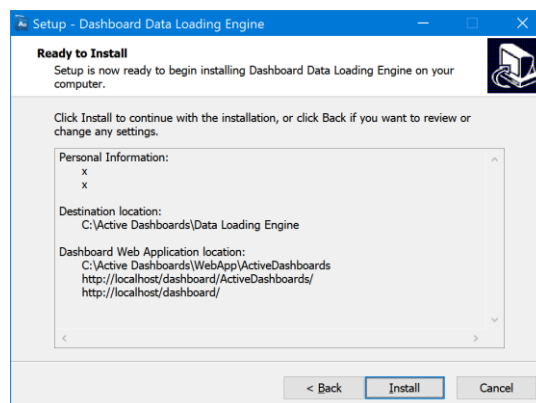
Figure 49: Data Loading Engine Installation - Install Details

7. The installation progress will be shown. Once this has been completed the installation will automatically move to the next step.

8. The Data Loading Engine has now been installed. Click *Finish* to exit from the setup wizard.
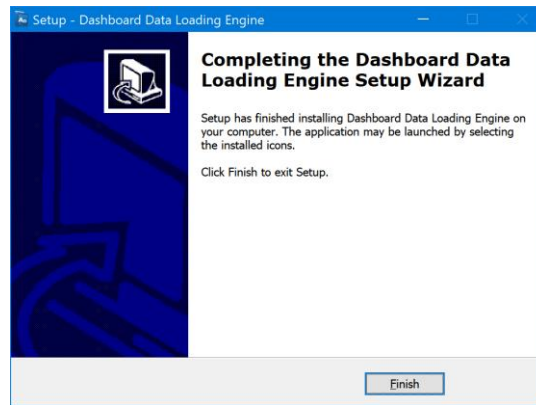
Figure 50: Data Loading Engine Installation - Completion Page

9. Ensure all required permissions and network access are in place for the Data loading Engine. Refer to the *Active Dashboards Data Loading Guide,* Chapter *Configuring the Data Loading Engine*.

Uninstall Procedure

The Data Loading Engine can be uninstalled from two places:

1. To uninstall the service run the *Uninstall Dashboard Data Loading Engine* option from the Start Menu - Programs - Dashboards folder.

2. In the Windows Control Panel - Programs and Features locate the *Dashboard Data Loading Engine* and right click to reveal the uninstall option and select it.

Chapter 7

Licensing

The Active Dashboards Web Application requires a valid license to be installed which is checked at run time. License files are typically supplied for the first installation, upon renewal or other changes to the license details.

Note: License files are intended solely for use on the machine identified during the steps proceeding installation.

Clients should ensure all Active Dashboards installations are properly licensed at all times and in accordance with the End User License Agreement and all applicable laws.

The following details cover the steps needed to re-apply licenses.

License Installation - Steps Required

1. Obtain the license files. This is typically via email but may also be via instructions directing the user to an FTP download site.

2. Download and unzip the files

3. To install the unzipped files, overwrite your existing license folders as follows:

4. Locate the Web Application licensing folder called *ActiveDashboards\License* and overwrite it with the new *License* folder.

It is important the Dashboard Designer and Dashboard Data Loading Engine can *read* the Web Application license - so permissions must be set to allow this based on the choices made in the Designer *File* menu held under the *Change Web Application* option.

License Information

Users with Administrative permissions in the Web Application can view details of the currently installed license in the *Administration License* page. See the *User Guide* section titled *Dashboard Administration*.

Dashboard Designer users can view details via the *Help* and *About* menu option.

The Web Application comes with a pre-built *License Information* Item that shows details of your Dashboard license.

The Web Application comes with a pre-built *License Expiry* Alert that once fully configured, will email recipients of your choosing an *Active Dashboards License Expiring* email when your Dashboard license has 30 or fewer days remaining.

Also refer to the *Designer Guide - Built-In System Information* section.

License Expiry Alert Configuration

Use the Dashboard Designer to configure the *License Expiry* Alert with relevant *From* and *To* email details. Also ensure the *Outgoing Email Server (SMTP)* details are correct and the Dashboard Alerting Service is installed and running.

See the *Designer Guide - Alerts and Triggers* section.

Chapter 8

Moving a Dashboard Installation

This section describes the process for relocating an installation of the Active Dashboards Web Application to a different server.

Note: Before undertaking any work on a Dashboard Installation, please ensure you have an up to date backup of the data concerned. Refer to *Chapter 10, Post Installation Information*.

Moving Server

1. Contact Support, stating you are planning on moving server and supply details of the new server (Server Name, IP address, MAC address). We will arrange the necessary steps for a new Active Dashboards license to be issued to you.

2. On the new server, run through the *Chapter 3*, *The Web Application*, *Installation Prerequisites*.

3. On your existing server, open Internet Information Services (IIS) and locate the folder path of the Dashboard Web Application to be moved.

4. If possible, ensure no more edits are made to your existing server install (e.g. no one is editing it using Dashboard Designers, Web Application Administration pages or manually customising it).

5. Copy the entire Dashboard Web Application folder to your new server.

6. Apply the new Dashboard license to your new server install.

7. On the new server, manually set up IIS as described in *Chapter 3*, *The Web* Application, *Installation Procedure*.

8. Review *Chapter 3*, *The Web* Application, *Installation Procedure* and ensure all relevant parts are set up correctly on the new server (e.g. Built-in Usage Logs, Session Timeout). Do not run the Dashboard Web Application installer.

9. Test the Dashboard Web Application on your new Server.

10. Compare your old and new installs, and if necessary, copy over any recent edits made to your old install (e.g. from the *App_Data*, *custom* or *Logs* folders)

11. Ensure Dashboard Designer installs point to the Dashboard Web Application on your new server.

12. Decommission your old server install.

Moving Server and Upgrading

If you are planning on moving and upgrading your Active Dashboards Web Application, we recommend it is carried out in the following order:

1. Move your Active Dashboards Web Application as described above.

2. Confirm the new installation is working correctly.

3. Upgrade your new installation, refer to *Chapter 9*, *Upgrading a Dashboard Installation*.

Chapter 9

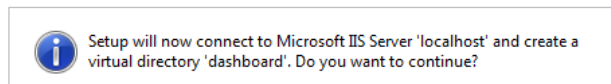# Upgrading a Dashboard Installation

This section describes the process for upgrading an Active Dashboards Web Application, Dashboard Designer or Dashboard Alerting Service installation to a newer version.

Note: Before undertaking any work on a Dashboard Installation, please ensure you have an up to date backup of the data concerned. Refer to *Chapter 10, Post Installation Information*.

Upgrading the Web Application

1. Take a complete backup of the Web Application folder. This will be the path the IIS Manager maps to.

2. Run the installation program on the same server as the existing Web Application. It is important to select the existing directory as the location for the new installation.

    Note: If upgrading your existing Active Dashboards Web Application there is no need to run the IIS setup part of the installer - if you want to preserve your existing Dashboard IIS settings e.g. Directory Security, You should respond *No* to the message below:

    > Setup will now connect to Microsoft IIS Server 'localhost' and create a virtual directory 'dashboard'. Do you want to continue?

3. Once the installation is complete, it may be necessary to migrate all of the application data to convert the data structures. Conversion is only required when upgrading from a version prior to 4.5. Refer to *Application Data Migration*.

4. Ensure any Add-Ons previously installed are updated to the latest available version. Refer to the *Add-Ons* section below.

5. If any custom elements were previously present in the now upgraded installation, it may be necessary to reapply them one by one. Refer to *Chapter 10, Post Installation Information*.

    a. Customised charts installed prior to 4.5 which are tightly linked into core product files should be re-applied and now use the new *custom\charts\customcharts.xml* so they will not be overwritten by future product upgrades.

6. Depending on the software used you may need to apply a valid product license. This occurs when a standard version is used which does not contain client licenses.

Add-Ons

After upgrading the Web Application, any Add-Ons previously installed should be upgraded to the latest version. Add-Ons are installed to the Web Application *ActiveDashboards\Widgets* folder. The standard content of this folder is shown below. Action is only required if your *Widgets* folder differs to this.

📁 CompetitionChart	📁 MultiCylinder	📁 MultiTab	📝 WidgetPage.aspx
📁 DataFeed	📁 MultiHBullet	📁 PivotGrid	
📁 Gantt	📁 MultiItem	📁 ProcessFlow	
📁 GeographicMap3d	📁 MultiSpark	📁 TimeChart	
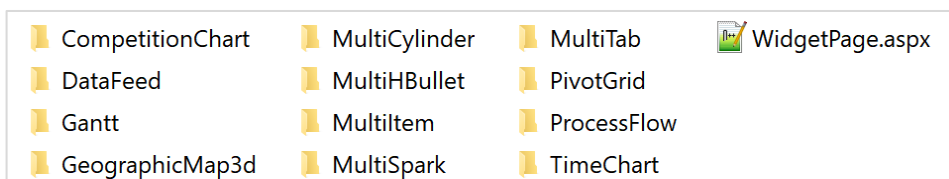
Figure 51: Standard Content of Widgets Folder

The latest versions of the Add-Ons installers are located within the *\AddOns* folder in the root folder of your Web Application folder. Each one contains a document explaining how to install and configure it.

After upgrading you may have to reapply any custom Add-On changes previously made.

Multiple Dashboard folders

Where multiple *ActiveDashboards* folders exist under the same Web Application a manual upgrade must be performed.

To illustrate the steps required, three Web Application folders are used *ActiveDashboards, ActiveDashboardsA, and ActiveDashboardsB.*

All of these folders are located under the Web Application installation folder at the same level.

Steps Required:

1. Ensure appropriate backups are taken of *ActiveDashboards* first. See *Chapter 10, Post Installation Information*.

2. Upgrade the main Web Application folder *ActiveDashboards*, if not already done by running the installation program.

3. Backup up everything in the folder *ActiveDashboardsA*. This is important as this contains folder / files which contain the Dashboard definitions. Refer to *Chapter 10, Post Installation Information*.

4. Copy the contents of the *ActiveDashboards* folder over *ActiveDashboardsA*. This will make them a duplicate of each other.

5. Restore the files from the *ActiveDashboardsA* backup taken as follows:

   a. Copy the <u>backup</u> version of *ActiveDashboardsA\App_data* to *ActiveDashboardsA\App_data*. Overwrite all folder/files

   b. Copy the <u>backup</u> version of *ActiveDashboardsA\Custom* to *ActiveDashboardsA\Custom*. Overwrite all folder/files

   c. Copy the <u>backup</u> version of *ActiveDashboardsA\Web.Config* to *ActiveDashboardsA\Web.Config*.

   d. Copy any other files you have customised. Refer to *Chapter 10, Post Installation Information*.

Repeat the above steps substituting *ActiveDashboardsB* for *ActiveDashboardsA.*

Migrated Folder Recommendations

The Web Application and the Dashboard Designer both share the same folders based on the current path the Dashboard Designer is set to administer.

The following should be considered before copying or restoring folders in the steps above.

1. Each *ActiveDashboard* folder will contain an *App_Data\AdminTool* folder.
   This contains files relating to user accounts associated with the Dashboard Designer and also the current state of locked items.

2. Ensure backup copies are taken when all users are logged out of the Dashboard Designer to ensure system locks are not wrongly copied and restored.

3. Do not restore files in the *\AdminTool\Locks* folder. This contains system locks.

4. Do not restore files to the *\AdminTool\UserAccounts* folder unless they originated from the exact same folder. Overwriting these files may result in losing the user names and passwords of existing users including that of the system administration account.

Upgrading the Dashboard Designer

1. The Dashboard Designer does not contain any program specific data, so it does not require backing up before upgrading.

2. Run the installation program on the same machine upon which the software is currently installed. The software can be installed to the existing location or a new one determined by the administrator.

3. Any previous version of the Web Application data will need to be migrated before use with the Web Application. Refer to *Application Data Migration*.

Migrated Folder Recommendations

When dealing with an Active Dashboards 4.5 and above file structure the following should be considered prior to copying or restoring in steps above.

1. Refer to the *Upgrading the Web Application* and the section titled *Migrated Folder Recommendations.*

2. If changes have been made to the *DashboardDesigner.exe.config* file, it may be a candidate to back up.

3. Any log files generated by the application are located in the folder where the Dashboard Designer executable is installed. These are *Dashboard Designer-<yyyy-mm-dd>.log*. The application should be stopped before copying the current file.

Upgrading the Alerting Service

There is no direct upgrade for the Dashboard Alerting Service. It must be uninstalled and the new version installed.

The Alerting Service does not contain any program specific data and therefore does not require backing up before upgrading. However, you must:

1. Follow the uninstall procedure detailed in *Chapter 5* titled *Uninstall Procedure.*

2. Then follow the installation procedure detailed in *Chapter 5* titled *Installation Procedure*.

Upgrading the Data Loading Engine

Run the installation program on the same machine upon which the software is currently installed. The software can be installed to the existing location or a new one determined by the administrator.

Application Data Migration

The Migration Wizard can be used to undertake the application data changes required to migrate old files structures to those required. The Wizard can be started in a number of ways:

Note: If the Designer has not yet been installed it should be now as the Migration Wizard forms part of the Designer Tool.

1. Dashboard Designer users can start the Wizard using the *Maintenance | Migration Wizard* menu option, or;

2. When the Dashboard Designer detects migration is required after changes are made to the viewed Web Application using the *File | Change Web Application* form, or;

3. When starting up and existing paths are stored in the machine registry which are checked.

Before any users can log in, the System Administrator (sysadmin) must log in and create accounts for users and circulate the user name and password details. The System Administration account is not able to create Dashboard content and is reserved for high level maintenance tasks one of which is the creation of user accounts that can define Dashboard contents. In fact, many features will be disabled and greyed out and will only be activated for standard user accounts. See below for user account creation.

Note: The System Administration user account file is only installed if the Web Site has been upgraded. It is not installed if only the Migration wizard has been run. See below for the steps to allow the administrator to login for the first time.

Ensure the Windows user performing the Migration has both *read* and *write* permissions to the existing application data (App_Data) folder.

Note: The migration wizard only covers the information stored in the application data folder. It does not cover customisations which will need to be manually re-applied.

Migration Wizard

1. Start the Dashboard Designer.

2. Any pre-existing Web Application path stored in the registry will be checked resulting in the prompt to undertake migration.
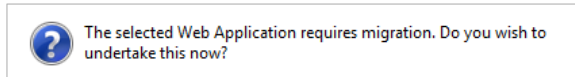
3. To undertake the migration of the current path, proceed to step 9 below.

4. Alternatively, selecting *No* will start the Dashboard Designer and an alternative path can be chosen. Follows these steps;

5. Go to *File | Change Web Application.*

6. Set the paths to that of the application data folder to be migrated

7. Click *Load*

8. The paths will be tested again and the prompt above redisplayed.

9. Select *Yes* and the Migration Wizard starts
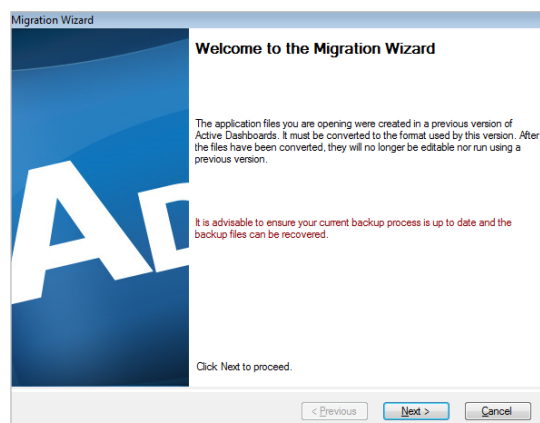
10. Note the advice for backing up and take appropriate actions. Refer to *Chapter 10*, *Post Installation Information*.

11. Click *Next*
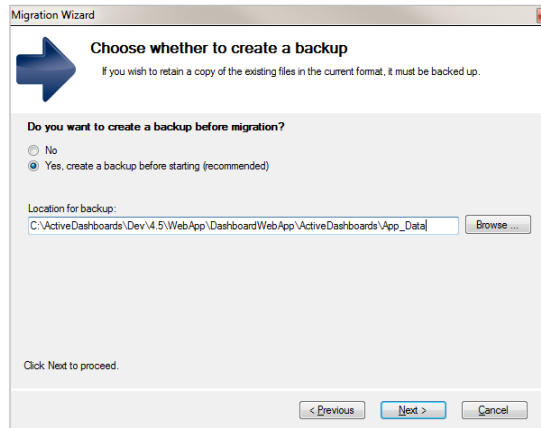
12. It is advisable to select *Yes, create a backup before starting (recommended)*.

13. Select the *location for backup*. It will default to the current Web Application data folder being migrated.

14. Click *Next*
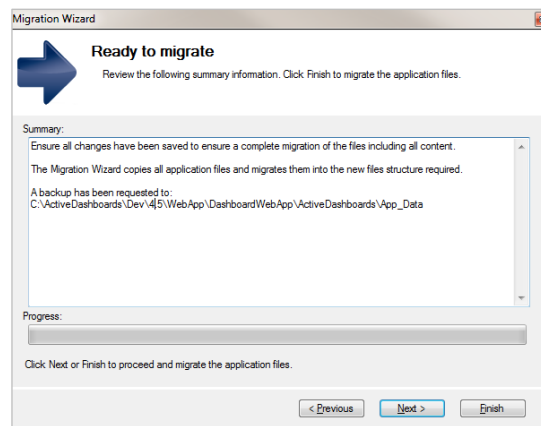
15. A migration summary is displayed. Check the details and select *Next* to proceed. Click *Back* to change previously selected details.

16. If you wish to see the log file created during migration, check the check box shown
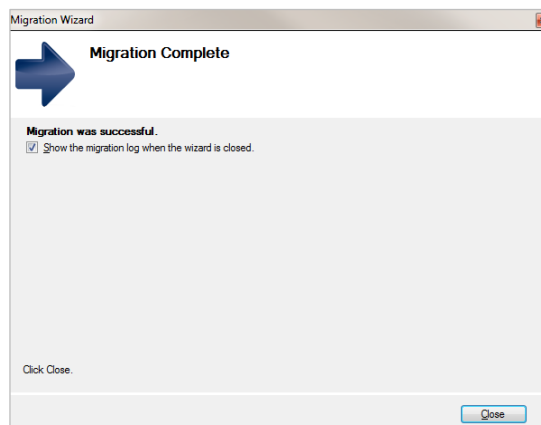
17. Click *Close* and if selected, the log file will be displayed

18. You will automatically be prompted to log in

19. Click *Cancel* to go back to the Dashboard Designer. For example, if you wish to migrate other installations.

Or,

20. Login as the System Administrator to create user accounts. See *Dashboard Designer - User Account Creation*

> **Note:** When migrating application data (App_Data) forming part of an older version of Active Dashboards it will be necessary to manually copy the System Administration user account file and Themes folder and files from a compatible version after migration. This will ensure the now migrated folder structure conforms.
>
> **System Administration Account**
> The System Administration user account file is only installed by the Web Application installation program. Login details will be defined by the file.
>
>   **a.** Locate the *App_Data\AdminTool\UserAccounts* folder
>   **b.** Copy the *User-000000000000000000.xml* file to the *App_Data\AdminTool\UserAccounts* folder within the newly migrated Web Application.
>
> This may occur when an offline backup copy of the *App_Data* folder containing the old file structure (pre 4.5) is taken prior to performing a Web Application upgrade and running the Migration Wizard.
>
> **Themes**
> The Themes folder and files are only installed by the Web Application installation program and older migrated folder structure must be made to conform.
>
>   **a.** Locate the *App_Data\Themes* folder
>   **b.** Copy the following system files to the *App_Data\Themes* folder within the newly migrated App_Data folder:
>   *Theme-000000000000000001.xml*
>   *Theme-000000000000000002.xml*
>   *Theme-000000000000000003.xml*
>   *Theme-000000000000000004.xml*
>   *Theme-000000000000000005.xml*
>   **Note:** Other files listed will be your own custom theme files which you may wish to also copy.
>
> This may occur when an offline backup copy of the *App_Data* folder containing the old file structure (pre 4.5) is taken prior to performing a Web Application upgrade and running the Migration Wizard. Additionally, if a backup was taken of a 4.5 version *App_Data* and not requiring migration is restored, it will not have any Themes.

Dashboard Designer - User Account Creation

1. Default log in details for the System Administrator.
Account Name: **`sysadmin`**
Password: **`P@55w0rd`**
(Capital letter, symbol, two numbers, lower case letter, number, two lowercase letters)

> **Note:** It is recommended you change the password soon after installation

2. Go to the *Maintenance | User Maintenance* form.
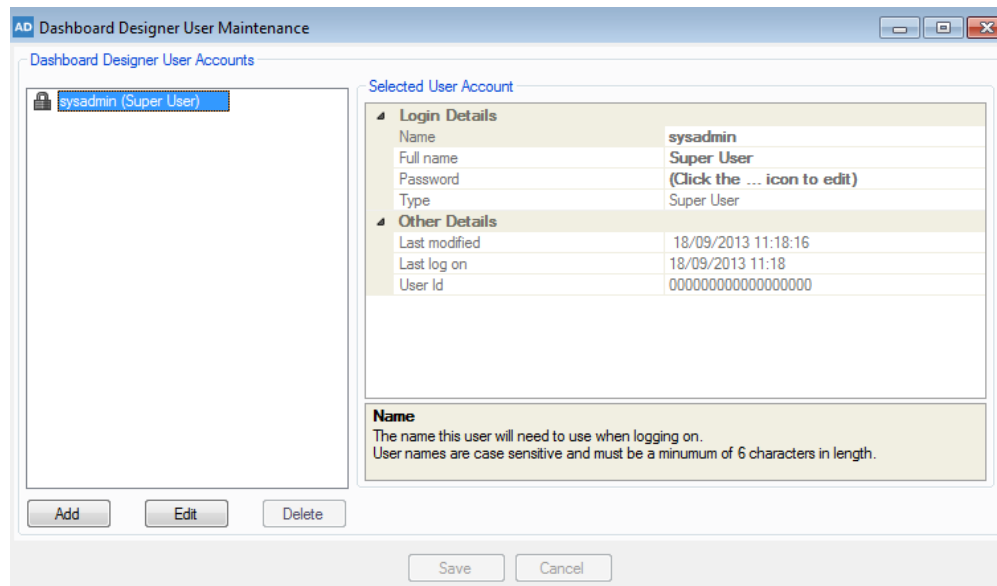
Figure 52: User Maintenance

3. Click *Add*.

4. Enter a *Name* which the user will use to log into the Dashboard Designer.
   This must be a minimum of 6 characters long and formed of uppercase, lowercase and numbers only or any combination. E.g. LESLEY, Richard, John01, stephen or 012345.

5. Enter a corresponding *Full Name* which helps identify the new user.

6. Enter a *Password*. By default, the password will be blank which will indicate to the Dashboard Designer to force the user to change their password at the next logon.

   a. To enter a password, click on *(Blank password, click ... icon to edit)* in the *Password* entry field

   b. Click the … button which is displayed in the right side of the *Password* entry field to display the *Change Password* dialog shown below. This must be a minimum of 6 characters long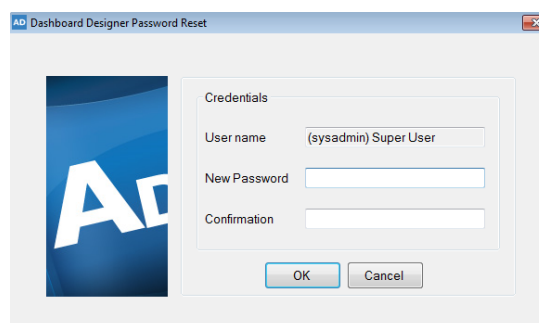 and formed of uppercase, lowercase and numbers only or any combination. E.g. SECURITY, Security, security, 53cur1ty or 012345.

   c. Click *Ok* after entering the *New Password* and *Confirmation* fields with the same password.

   d. Alternatively, click *Cancel* to ignore any changes and retain the original password which may be blank.

Figure 53: User Maintenance - Password Change

7. Select the user type using the *Type* field.

   a. Choose *User* for users who will create Dashboard contents

   b. Choose *Super User* for users who will act as secondary System Administrators.

      Note: System Administrator and Super Users cannot create Dashboard content

8. Click *Save*

Repeat this for all users required. **Note:** Names and Passwords are case sensitive.

Layout Migration Wizard

Introduced in version 6.4, the Layout Migration Wizard can be used to convert previously manually created Dashboard Layouts. The Dashboard Designer will automatically prompt you if migration is required. Refer to the *Designer Guide - Dashboard Layouts* section.

Chapter 10

Post Installation Information

This section details additional information which clients may need to consider when maintaining an Active Dashboards product installation considering existing policies including backup procedures.

Dashboard Support Contact Details

The support contact details displayed on Dashboards should be configured to show your organisation's contact details or this feature should be disabled. By default, Dashboards will display generic example support contact details. Refer to the *Show support details* section in the *Designer Guide*.

Backup and Disaster Recovery

In general, it is prudent for organisations to consider and adopt an effective backup and disaster recovery strategy covering IT infrastructure and to test and review its effectiveness from time to time.

To allow organisations to enhance existing procedures to incorporate Active Dashboards this section outlines areas to consider in relation to Active Dashboards.

Active Dashboards Web Application

Make a backup of:

1. License files located in the *<Installation folder>\ActiveDashboards\License* folder.

2. Any client created Dashboard definitions found at *ActiveDashboards\App_Data*

3. Web Application configuration files:

    a. *<Installation folder>\Web.Config*

    b. *<Installation folder>\ActiveDashboards\Web.Config*

4. Copy any customisations. These include:

    a. *ActiveDashboards\custom* folder.

    b. *ActiveDashboards\charts\charts.xml* file.

    c. *ActiveDashboards\Widgets* folder.

    These folders are the typical locations for client specific customisations but may vary based on entries configured. Check any and all custom entries made in the *charts.xml* file for additional specific paths.

    Note: Entries found in the charts.xml should now be moved to use the *customcharts.xml* file which is not overwritten during upgrades.

5. Environment backups: See below

In the event of any doubt, all of the above can be accomplished by taking backups of the complete set of folders containing:

1. The Web Application installation folder.

2. Environmental backups: See below.

Active Dashboards Data Loading Engine

1. Make a backup of the Data Loading Engine installation folder.

2. Backup/document all Windows commands, batch files, scheduled tasks or anything else created to control the scheduled running of Dashboard Data Loaders.

3. Backup all Data Loading Destination Databases on a regular basis.

4. Environmental backups: See below.

Environmental

Consider other environmental backups, for example:

a. IIS configuration. Refer to Microsoft for full details.
    E.g. http://blogs.iis.net/bills/how-to-backup-restore-iis7-configuration

b. Registry relating to ODBC Drivers and DSNs created. Refer to Microsoft for full details.
    E.g. *http://support.microsoft.com/kb/942976*

c. Security related permissions for Registry and folders used by the Web Application and Dashboard Designer.

Information may be located on multiple separate machines depending on the setup choices made.

Additional Information

Database Server - SQL Server

Refer to database vendor specific documentation relating to ports used which may require firewall exceptions to be added allowing network traffic to and from the database server.

Typically, UDP network packets are sent to port 1434 for SQL Server.

Additionally, the Active Dashboards Designer calls the *sp_databases* stored procedure to list databases in the Data Connector *Connection String* property popup and therefore *execute* permissions and connection access will be required for the Windows user account under which the Designer used.

Web Server

URL Scanners

Some Web Server have additional features such as Microsoft URLScan Tool which can by default interfere with requests made for web pages. In some cases, it is necessary to reconfigure settings.

For example, the default settings for URLScan do not allow requests where paths contain full stop characters.

Check and change the scanners configuration to allow Active Dashboard requests when web pages are found to be blocked.

Refer to vendor documentation for configuration details.

Support Portal

Visit and search our *Support Portal* at http://support.dynistics.com.

Appendix 1

64-Bit Support

As from version 4.4 of Active Dashboards it is possible to install and run Active Dashboards on 64-bit versions of Windows.

Current Limitations

There are several limitations to be aware of when running a 64-bit deployment.

In general, on 64-bit Windows, 32-bit processes cannot load 64-bit DLLs/Drivers, and 64-bit processes cannot load 32-bit ADOMD s/Drivers.

The following specific limitations exist:

Dashboard Designer

The Dashboard Designer when installed onto a 64-bit version of Windows will use the Windows on Windows (WOW64) sub-system to run as a 32-bit application. The Dashboard Designer is created specifically to use this Windows feature and run as a 32-bit application due to the following limitations:

- The availability of 64-bit data source drivers is limited compared to 32-bit. You cannot use 32-bit drivers within a 64-bit installation.

Web Application

The Web Application will be installed as 32-bit on 32-bit versions of Windows and 64-bit on 64-bit versions of Windows. A 64-bit installation is affected by:

- The limited availability of 64-bit data source drivers compared to 32-bit versions.

- Only 32-bit data source drivers can be used with 32-bit installs and 64-bit data source drivers with 64-bit installs.

- To use 32-bit data source drivers on 64-bit Windows, IIS can be configured to run the Web Application in a 32-bit process as follows:

    o 64-bit IIS 6 can be configured to run all web applications in 32-bit mode.

    o 64-bit IIS7 and IIS7.5 can be configured to run web applications in 32-bit mode at an IIS Application Pool level.

    See references below for more information on configuring IIS to achieve this.

- Ensure the correct ODBC Manager is used when creating DSN entries on Windows matching the *Advanced Settings* of an Application Pool based on the *Enable 32-bit Applications* value. When true, use the 32-bit ODBC Manager. See the Microsoft references below.

Data Loading Engine

The Data Loading Engine when installed onto a 64-bit version of Windows will use the Windows on Windows (WOW64) sub-system to run as a 32-bit application. The Data Loading Engine is created specifically to use this Windows feature and run as a 32-bit application due to the following limitations:

- The availability of 64-bit data source drivers is limited compared to 32-bit. You cannot use 32-bit drivers within a 64-bit installation.

References

1. Microsoft knowledge base article:

   http://support.microsoft.com/kb/942976

   The 32-bit version of the ODBC Administrator tool and the 64-bit version of the ODBC Administrator tool display both the 32-bit user DSNs and the 64-bit user DSNs in a 64-bit version of the Windows operating system

Appendix 2

Windows Virtual Store

In versions of Windows such as Windows 8.1, Microsoft has incorporated a feature called *Virtual Store*. This intercepts requests for disk and registry access which fail and makes accessible copies in other locations with access granted to the user. This overcomes initial failure but can lead to unexpected behaviour.

In cases where changes made are not being reflected in the product examine whether permissions issues are at fault and this feature has been encountered.

Check the logged in Windows user virtual store location:

For disk related issues:

For example, if changes have been made using the Dashboard Designer but they are not displayed by the Web Application. In this circumstance a copy of the product definition files may have been copied to the Virtual Store due to permissions issues.

```
C:\Users\<Windows User Account>\AppData\Local\Dynistics_Ltd
```

where <Windows User Account> is the currently logged in user profile details. E.g. domain.user name.

Resolve the permission issue and remove the VirtualStore folder taking care to retain any required changes.

For registry related issues:

Check `HKEY_CURRENT_USER\Software\Classes\VirtualStore`

For further information related the Virtual Store refer to Microsoft documentation.

Changing the Local Security Policy

Start the Local Security Policy editor, typically from the Control Panel | All Control Panel Items | Administrative Tools option.
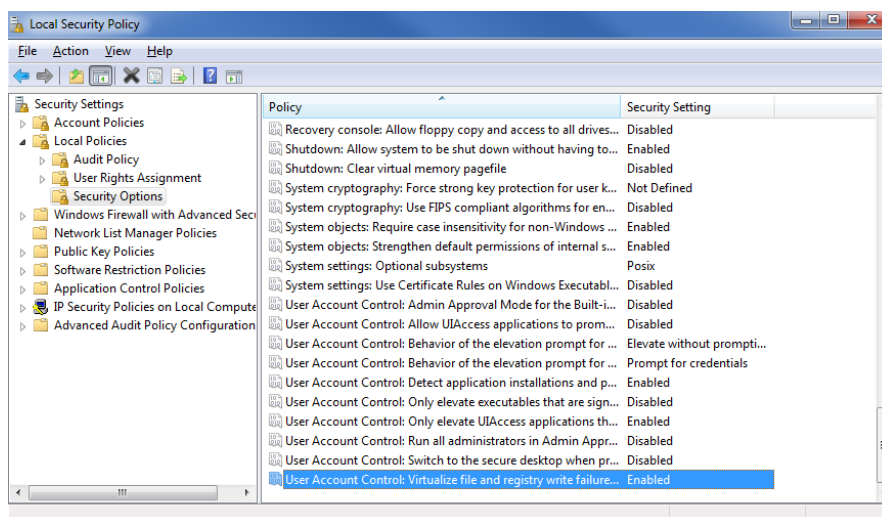

Figure 54: Local Security Policy Editor

User Account Control: Virtualize file and registry write failures to per-user locations.

This policy setting controls whether application write failures are redirected to defined registry and file system locations. This policy setting mitigates applications that run as administrator and writes run-time application data to %ProgramFiles%, %Windir%, %Windir%\system32, or HKLM\Software.

The options are:

• Enabled: (Default) Application write failures are redirected at run time to defined user locations for both the file system and registry.

• Disabled: Applications that write data to protected locations fail.

For further information refer to Microsoft documentation.

Appendix 3

58

Dashboard Designer - Technical Log

Active Dashboards incorporates a feature to log technical details of the system which can greatly assist in the diagnosis of issues.

Logging is enabled through settings held within the application configuration file and can be found in the same directory as the applications executable file. The configuration file is called, *DashboardDesigner.exe.config*.

Important Note: Windows users running the Dashboard Designer will require *create* and *modify* permissions to enable the log file to be created and also entries to be written.

Note: It is recommended that changes to the settings are only made having consulted the support team and detailed guidance has been provided. Changing the log settings without advice can have detrimental effects to the performance of the application and can consume more disk space then would be desirable.

By default, only error information is logged which maintains the performance of the Dashboard Designer and minimises the log file growth.

It is recommended that log files are harvested from all Dashboard Designer installed machines when an issue is being raised with the support team. The log files may contain valuable assistance to speed up the process of identifying the issue.