



# Click Studios

## Passwordstate

## Installation Instructions

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# 1 System Requirements - General

Passwordstate has the following system requirements:

## Web Server

Your web server which will host the Passwordstate web site can be any of the following Operating System versions:

- Microsoft Windows Server 2003 & IIS 6.0
- Microsoft Windows Server 2008 & IIS 7.5
- Microsoft Windows Server 2008 R2 & IIS 7.5
- Windows 7 & IIS 7.5

**Note:** Microsoft **.Net Framework 3.5 SP1** must also be installed on your Operating System. Passwordstate does not currently work with the .Net Framework 4.0, so you must have version 3.5 installed.

## Database Server

Your SQL Database which will host the Passwordstate database can be any of the following versions of SQL Server:

- Microsoft SQL Server 2005
- Microsoft SQL Server 2005 Express
- Microsoft SQL Server 2008
- Microsoft SQL Server 2008 Express
- Microsoft SQL Server 2008 R2
- Microsoft SQL Server 2008 R2 Express
- Microsoft SQL Server 2012
- Microsoft SQL Server 2012 Express

**Note:** If you would like to use the High Availability module of Passwordstate, your distribution and publication databases must reside on SQL Server 2005, 2008 or 2012 – SQL Express can only act as a subscriber to SQL Server replication.

**Important:** SQL Server must be configured for mixed-mode authentication, so the Passwordstate web site can connect to SQL Server using an SQL Account. **Active Directory Accounts cannot be used to authenticate against the database.**

## Email Server

If you would like to receive emails generated from Passwordstate, you must also have an email server which is capable of sending anonymous SMTP emails, or emails from an authenticated mailbox

## 2 Internet Information Services (IIS) Requirements

### Windows Server 2008 & Windows 7

When installing Internet Information Services on Microsoft Server 2008 or Windows 7, the following component/roles are required as a minimum. If these IIS roles are not installed, Passwordstate will install them for you.

#### Common HTTP Features

- Static Content
- Default Document
- HTTP Errors

#### Application Development

- ASP.NET
- .NET Extensibility
- ISAPI Extensions
- ISAPI Filters

#### Security

- Windows Authentication
- Request Filtering

#### Performance

- Static Content Compression
- Dynamic Content Compression

### Windows Server 2003

When installing Internet Information Services on Microsoft Server 2003, you must ensure the following Web Service Extensions are installed and enabled (Allowed):

- Active Server Pages
- ASP.NET v2.0.50727

### 3 What Information is required for the Initial Setup

Prior to installing Passwordstate and running through the initial Setup Wizard, you will require the following information:

- **An SQL Account (not an Active Directory account)** with sufficient permissions to create the database and tables – at a minimum the 'dbcreator' and 'securityadmin' SQL Server roles are required - dbcreator to create the database/tables, and securityadmin to create an SQL Account called 'passwordstate5\_user' which is used so the Passwordstate web site can connect to the SQL Server. The 'sa' account has these privileges, although some DBA's do not like to use this account due to its elevated privileges.
- Your **Registration Key** details for Passwordstate
- **Host Name** and **Port Number** of an **email server** capable of sending anonymous SMTP mail, or from an authenticated mailbox
- **SMTP Address** from which Passwordstate will send the emails from
- **Proxy Server Details** – Passwordstate can periodically check for the updates, and if your organization requires all internet access to go through a proxy server, you will need to specify the proxy host name and port number during the installation (this feature can also be disabled once you're using Passwordstate if required).

## 4 SQL Server Express, and SQL Port Number Considerations

If you intend to use SQL Server Express to host your Passwordstate database, please consider the following before installing Passwordstate:

1. If you're using SQL Server Express on a different server to where you installed Passwordstate, you may need to check if the TCP/IP Protocol is enabled (use SQL Server Configuration Manager -> SQL Server Network Configuration), and also the Windows Service 'SQL Server Browser' is set to 'Automatic' Startup Type and has been started. You will need to restart SQL Server Express after changing these settings
2. By default, SQL Server Express installs with an 'instance' name of SQLEXPRESS. When you're configuring Passwordstate for first time use, specifically the 'Database Settings' page, please ensure you have specified the name of the instance correctly i.e. HostName\SQLEXPRESS
3. If you intend to also install the High Availability instance of Passwordstate, SQL Server Express can only be used as the Subscriber for data replication, not the Publisher or Distribution database.

If you are running SQL Server on a non-standard port number, you will need to append the port number to the end of the Database Server Name during '10. Configuring Passwordstate for First Time Use' in the following way: ServerHostName,PortNumber i.e. sqlserver1,8484

## 5 Creating an Appropriate DNS Record

During the installation of Passwordstate, there are two options for specifying the URL for the Passwordstate web site, and they are:

### Option 1 – Use web server host name in URL

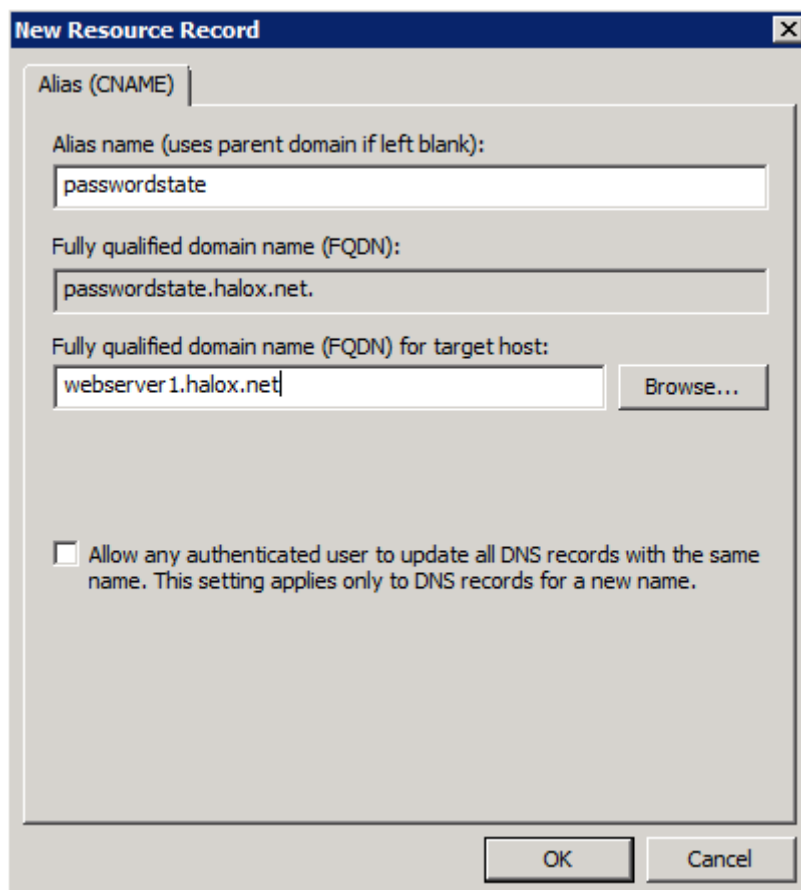
This option does not require you to create a DNS entry to use Passwordstate. You can simply type the following URL format into your browser – <http://MyServerName:PortNumber> i.e. <http://webserver:9119>

### Option 2 – Specify your own custom URL for Passwordstate

In order to have your own personalised URL for the Passwordstate web site, you will need to create a DNS entry which points back to your web server's host name.

The default URL for this option is <http://passwordstate>, and you can create the required DNS entry by following these instructions:

1. On your server hosting DNS, start 'DNS Manager'
2. Right click on the appropriate domain, and select 'New Alias (CNAME)'
3. As per the following screenshot, specify the name of your web server host name in the 'Fully qualified domain name (FQDN) for target host' text box, then click on the 'OK' button



**New Resource Record**

Alias (CNAME)

Alias name (uses parent domain if left blank):  
passwordstate

Fully qualified domain name (FQDN):  
passwordstate.halox.net.

Fully qualified domain name (FQDN) for target host:  
webserver1.halox.net Browse...

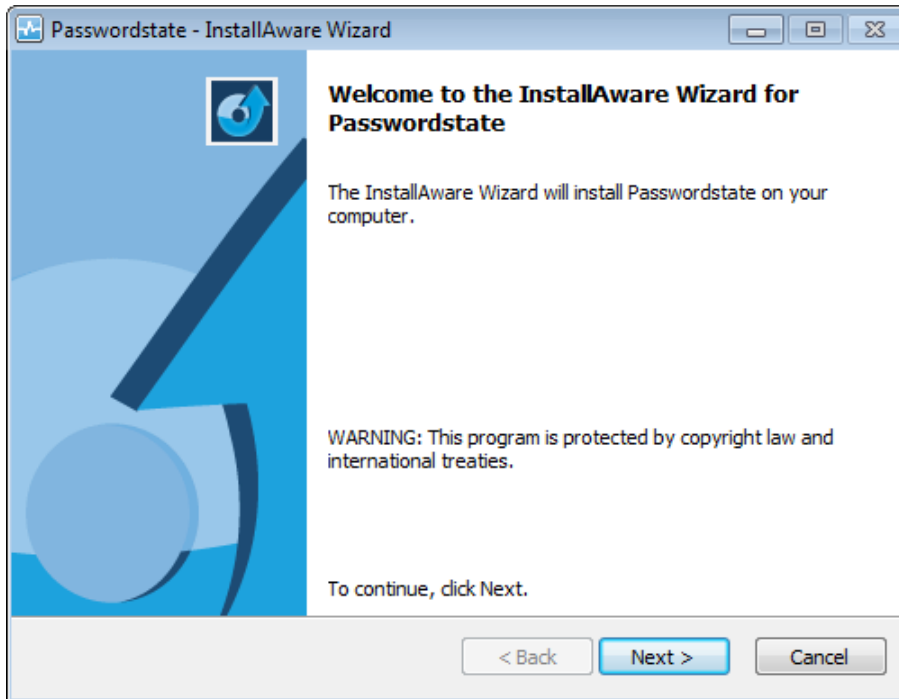
☐ Allow any authenticated user to update all DNS records with the same name. This setting applies only to DNS records for a new name.

OK Cancel

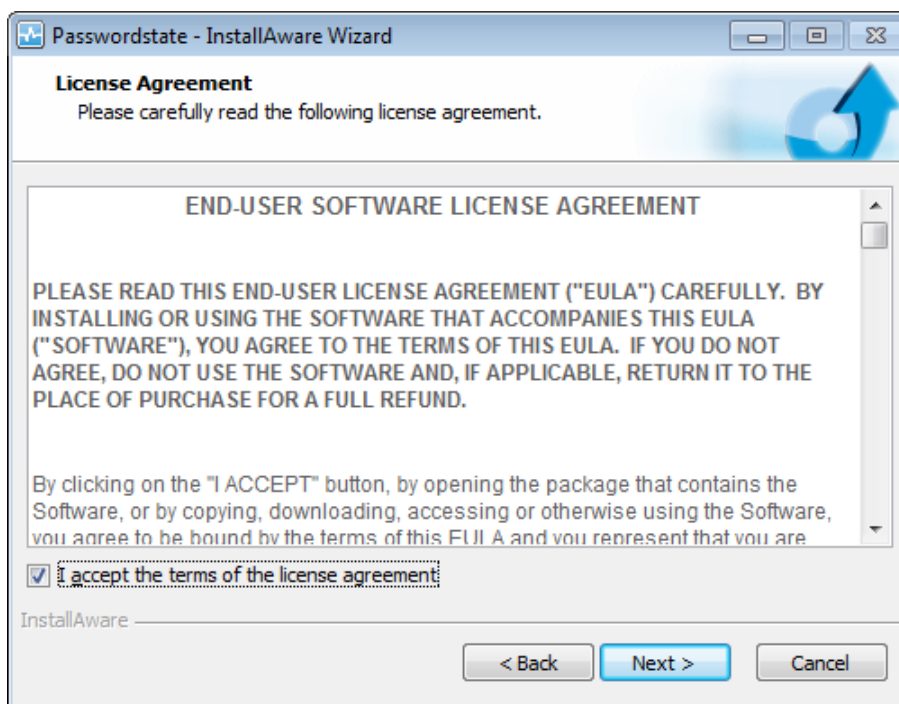
## 6 Installing Passwordstate

To install Passwordstate, run 'Passwordstate.exe' and follow these instructions:

1. At the 'Passwordstate Installation Wizard' screen, click on the 'Next' button

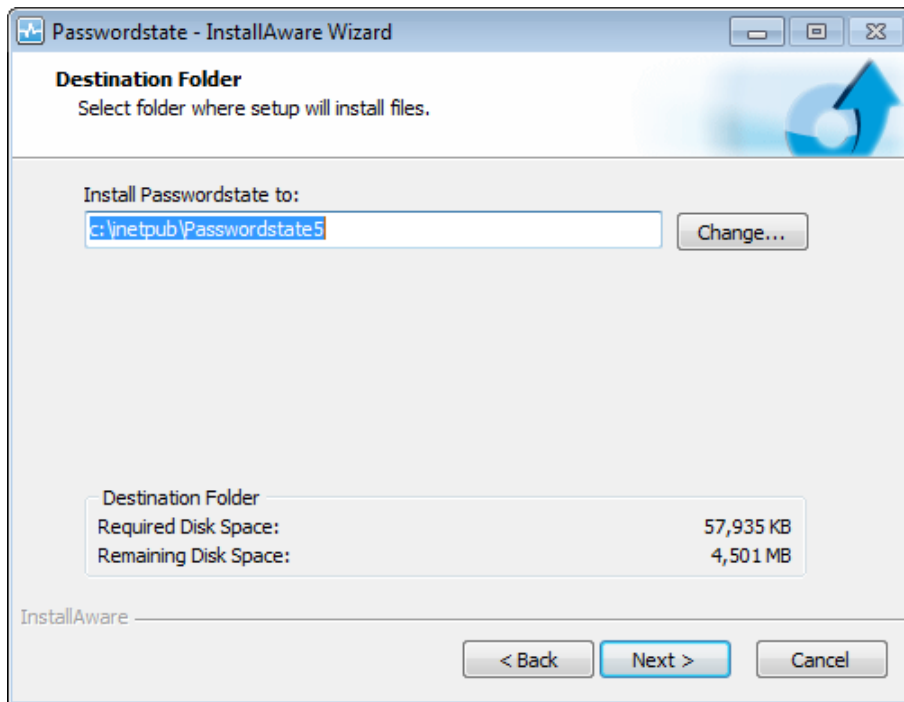


2. At the 'License Agreement' screen, tick the option 'I accept the terms in the License Agreement', then click on the 'Next' button





- At the 'Destination Folder' screen, you can either accept the default path or change to a different location, then click on the 'Next' button

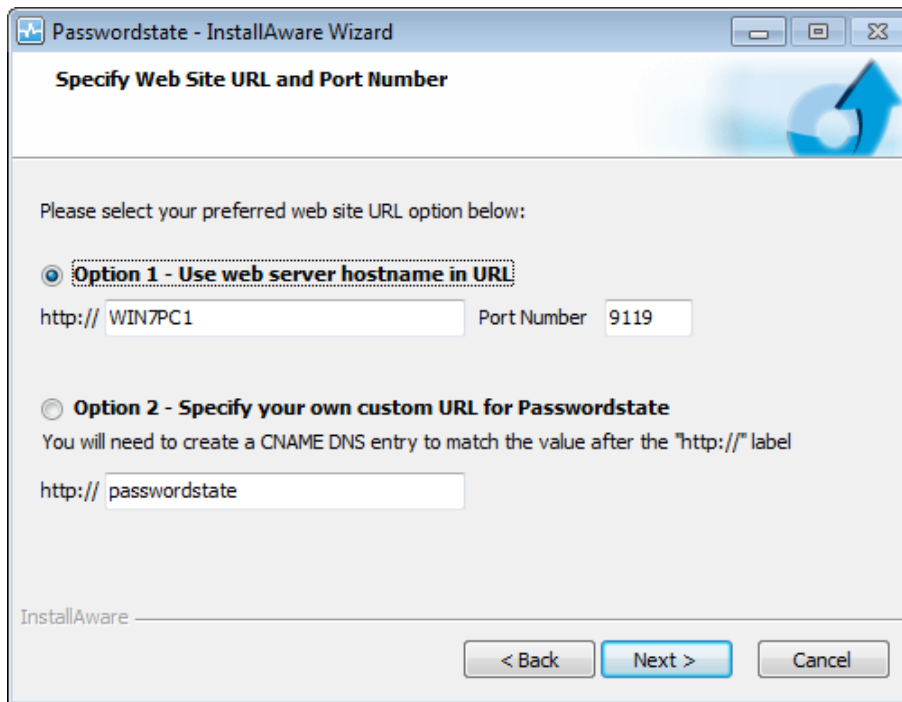


- At the 'Specify Authentication Options for Passwordstate' screen, select your preferred authentication method, and then click on the 'Next' button

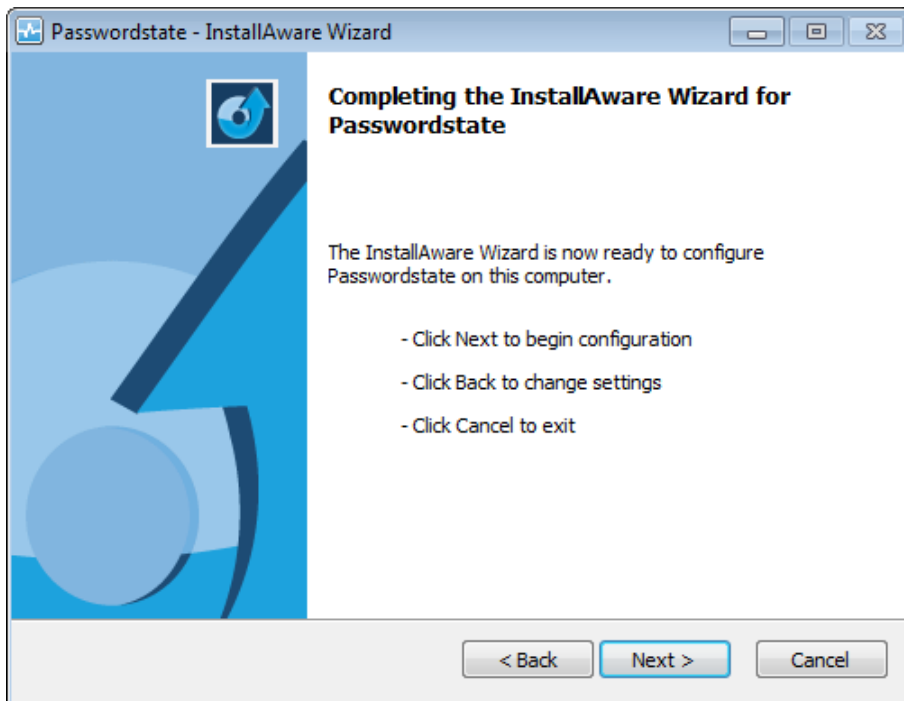


- At the 'Specify Web Site URL and Port Number' screen, specify one of two options:

- a. Option 1 – this allows you to use a URL like <http://MyServerName:9119> as the URL
- b. Option 2 – this allows you to use a URL like <http://passwordstate> (this requires you to create a matching CNAME DNS entry)



6. At the 'Completing the InstallAware Wizard for Passwordstate' screen, click on the 'Next' button



7. Once installed, click on the 'Finish' button

## 7 Active Directory Integrated Authentication & Browsers

If you choose to install the 'Active Directory Integrated' version of Passwordstate, the default settings for Internet Explorer and Chrome is to pass your domain credentials from the browser to the Passwordstate web site **without prompting you for authentication details**.

**Please Note:** It is recommended that once Passwordstate is installed, you run through the initial setup using your browser on a desktop computer or notebook, as using Internet Explorer on the server can cause prompting, regardless of the following recommendations – this is due to further restrictions Microsoft places on using browsers on server operating systems

Please use the following as a guide for troubleshooting browser prompting issues.

### Authentication Providers in IIS

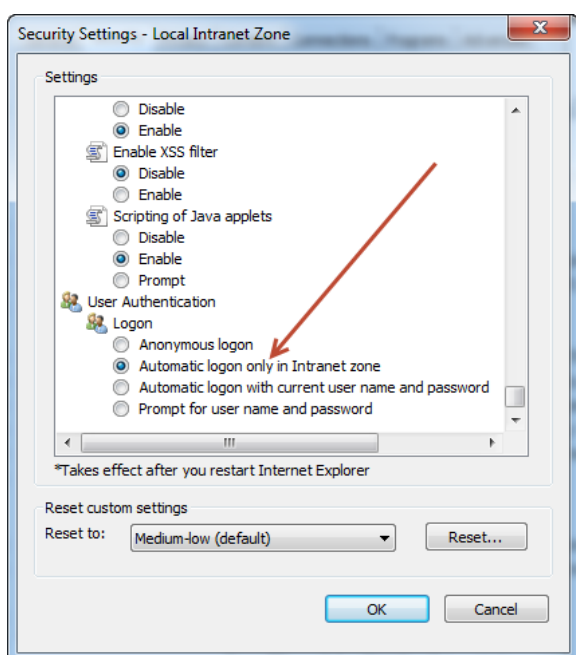
Order of authentication 'providers' for Windows Authentication in IIS. By changing the following setting, helps prevent the web site prompting for authentication:

- Open IIS and select the Passwordstate web site
- Double click on the "Authentication" option
- Right click the "Windows Authentication" item and select "Providers"
- Try moving NTLM to the top, then restart the web site

### Password Site being Detected in Intranet Zone

The Passwordstate web site needs to be detected as being in the Local Intranet Zone, as the default settings in Internet Explorer for this zone is to 'pass through' credentials from the browser to IIS. In Internet Explorer, the option for 'User Authentication' is set to 'Automatic logon only in Intranet zone' for this zone

- Check the site is being detected in the Intranet Zone in Internet Explorer (IE9) by going to the 'File' menu and selecting 'Properties'
- Ensure 'Automatic logon only in Intranet zone' is selected for the 'Local Intranet Zone' as per the following screenshot:



**DNS Entry and IIS Site Bindings**

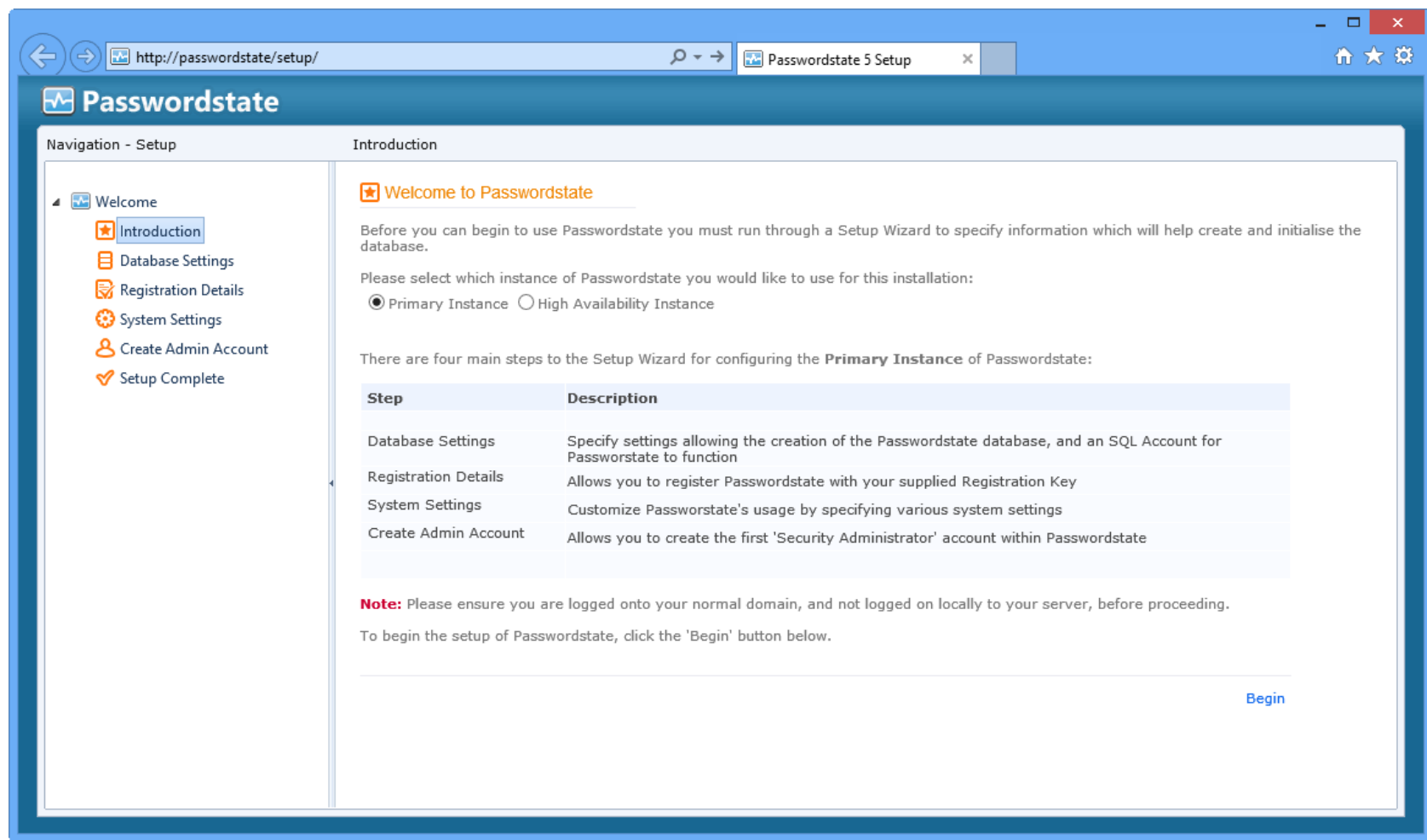
Other issues which can cause authentication prompting relates to the DNS entry created for the site URL, in combination with the IIS site bindings. The following is a guide, and you may need to test various settings to see if you can resolve the issue this way:

- A CNAME DNS entry needs to be created, where the 'Alias' name can be anything you like - generally most customers use the Alias 'passwordstate'. The Alias needs to point to the fully qualified domain name (FQDN) for the web server host i.e. servername.domain.com. We've seen some customer bind to the IP Address of the server, and this has caused issues
- For the IIS site 'Bindings', the hostname you specify should generally just be 'passwordstate', as per the DNS entry you created, and the IP Address you select should be 'All Unassigned'. Some customers have needed to specify the FQDN name as the Host Name i.e. passwordstate.domain.com, but generally you should not need to do this
- You should restart the web site if you make any changes with these settings

## 8 Configuring Passwordstate for First Time Use

**Introduction** - Now that Passwordstate is installed, you can direct your browser to the DNS entry you specified in Section 7 - Creating an Appropriate DNS Record, and follow the initial Setup Wizard – this wizard will guide you through a series of questions for configuring Passwordstate for use.

**Please Note 1:** If using 'Active Directory Integrated' authentication, please ensure you are logged onto your normal domain, and not logged on locally to your server, before proceeding.



**Database Settings** – On this screen you will need to specify database settings for creating the Passwordstate database. Please use the onscreen instructions if you have any issues connecting to the database.

**Please Note:** Creating the database, and populating the tables with data, could take up to a minute to complete.

Navigation - Setup

Database Settings

Database Settings

In order to create the Passwordstate database, the following conditions must be met:

**Condition 1:** Your SQL Server must be configured for **mixed-mode authentication**

**Condition 2:** You must supply an SQL Account (below) with sufficient privileges to create the Passwordstate database - at a minimum the 'dbcreator' and 'securityadmin' SQL Server roles

If you are having problems connecting to the database, click here for help - [Possible Connection Failure Reasons](#).

**Please Note:** Creating the database, and populating the tables with data, could take up to a minute to complete.

**Database Creation**

SQL Server Version \*

Database Server Name \*

SQL Server Instance Name

SQL Login Name \*

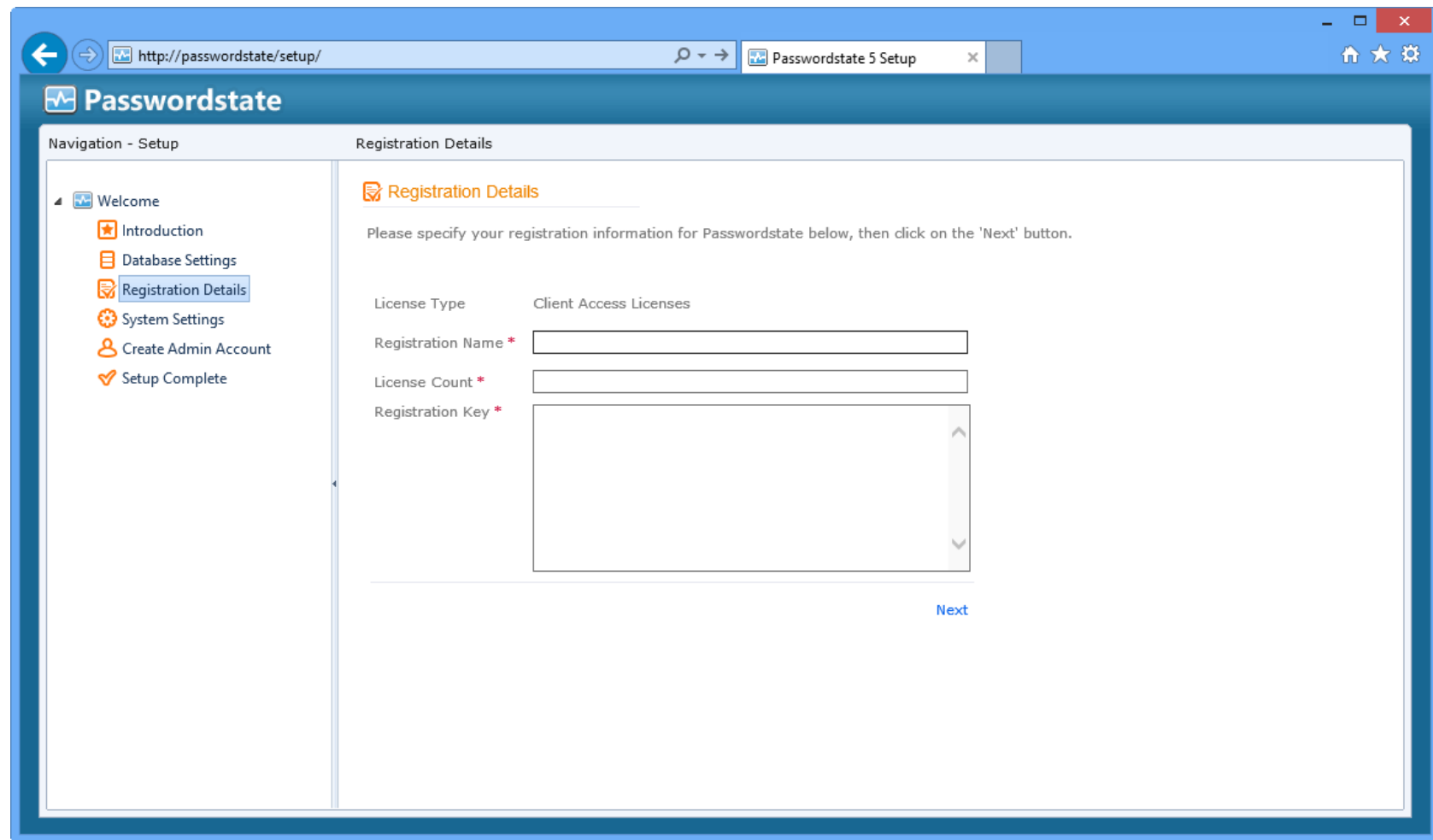
Specify an SQL Account login here - not a Windows Domain account.

Password \*

☐ I have clicked on the 'Test Connection' link

Status: Not tested [Test Connection](#) | [Next](#)

**Registration Details** – On this screen you need to specify your Registration details for Passwordstate. If you have not received your registration details, please visit [www.clickstudios.com.au](http://www.clickstudios.com.au).



The screenshot shows a web browser window with the URL `http://passwordstate/setup/` and a tab titled "Passwordstate 5 Setup". The page has a blue header with the "Passwordstate" logo. A navigation sidebar on the left lists the following items: Welcome, Introduction, Database Settings, Registration Details (highlighted), System Settings, Create Admin Account, and Setup Complete. The main content area is titled "Registration Details" and contains the following text: "Please specify your registration information for Passwordstate below, then click on the 'Next' button." Below this text are three input fields: "License Type" (with a dropdown arrow), "Client Access Licenses" (with a dropdown arrow), "Registration Name \*" (with a text input field), "License Count \*" (with a text input field), and "Registration Key \*" (with a large text area). A blue "Next" button is located at the bottom right of the form.

**System Settings** – On this screen you specify various system wide settings for Passwordstate usage. Please note that any of these settings can be changed after the initial Setup Wizard has completed. Explanation for each of these settings is detailed after this screenshot.

The screenshot shows a web browser window with the URL `http://passwordstate/setup/` and a tab titled "Passwordstate 5 Setup". The page has a blue header with the "Passwordstate" logo. On the left is a "Navigation - Setup" sidebar with a tree view containing: Welcome, Introduction, Database Settings, Registration Details, System Settings (highlighted), Create Admin Account, and Setup Complete. The main content area is titled "System Settings" and contains a sub-header "System Settings" with a gear icon. Below this is a instruction: "Please specify the appropriate System Settings below, then click on the 'Next' button." There are four tabs: "Miscellaneous" (selected), "Active Directory Options", "Email Settings", and "Emergency Access Account". The "Miscellaneous" tab contains the text: "Please confirm the Locale is correct for your region, and specify proxy server details if required." Below this is a dropdown menu for "Locale (Date Format) \*" with the value "English (Australia) - d/MM/yyyy". Further down is a section titled "If your organisation uses a proxy server to access the Internet, please specify the details here:" followed by three input fields: "Proxy Server :", "User Name :", and "Password :". To the right of the "Proxy Server" field is the text "Format is 'ServerName:PortNumber'". To the right of the "User Name" field is the text "Only specify Username/Password if you need to authenticate". A blue "Next" button is located at the bottom right of the form area.

Navigation - Setup

- Welcome
  - Introduction
  - Database Settings
  - Registration Details
  - System Settings**
  - Create Admin Account
  - Setup Complete

### System Settings

Please specify the appropriate System Settings below, then click on the 'Next' button.

Miscellaneous   Active Directory Options   Email Settings   Emergency Access Account

Please confirm the Locale is correct for your region, and specify proxy server details if required.

Locale (Date Format) \* : English (Australia) - d/MM/yyyy

If your organisation uses a proxy server to access the Internet, please specify the details here:

Proxy Server :  Format is "ServerName:PortNumber"

User Name :  Only specify Username/Password if you need to authenticate

Password :

Next



## System Settings Detail

Action	Description
<i>Locale</i>	Select the appropriate locale for your region. This will be the default Locale for all users. If you require different Locales for different users (as they cross different time-zones), you can set this for individual accounts after the initial setup is complete
<i>Proxy Server</i>	Passwordstate can check if new versions are available. If you require to specify some proxy server details to access the Internet, you can do so here (checks for updates can also be disabled once you've started Passwordstate)
<i>AD Domain NetBIOS Name</i>	The NetBIOS name for your Active Directory domain
<i>AD Domain LDAP String</i>	The LDAP Query String for your Active Directory Domain <b>(Please confirm these settings have been detected successfully before proceeding)</b>
<i>Email Server Host Name</i>	The host name of a email server which is able to send either anonymous SMTP email, or authenticated email from a specify mailbox
<i>Email Server Port Number</i>	The port number in which your email server is configured to send mail (port 25 is generally the default port)
<i>SMTP Address</i>	The SMTP address you would like emails to be sent from when generated from within Passwordstate
<i>Use Mailbox to Send</i>	If you would like to send all email in Passwordstate from an authenticated mailbox, then select this option. If unselected, email will be send via anonymous SMTP
<i>User Name</i>	Domain user name for the authenticated mailbox
<i>Password</i>	Password for the authenticated mailbox
<i>Domain Name</i>	NetBIOS name for the domain the mailbox belongs to
Emergency Access Account	Specify a password for the Emergency Access Account feature of Passwordstate

**Create Admin Account** – On this screen you specify details for the first user account to be created in Passwordstate. This account will be granted Security Administrator privileges, and assign all Security Administrator roles.

Navigation - Setup

Create Admin Account

**Create Admin Account**

Before you can begin to use Passwordstate, you must first create an account which will be given the 'Security Administrator' role ('Security Administrators' can manage all features within Passwordstate).

**Please Note:** If you intend to upgrade from a previous version of Passwordstate, the account you create now will be updated with your settings from the previous version.

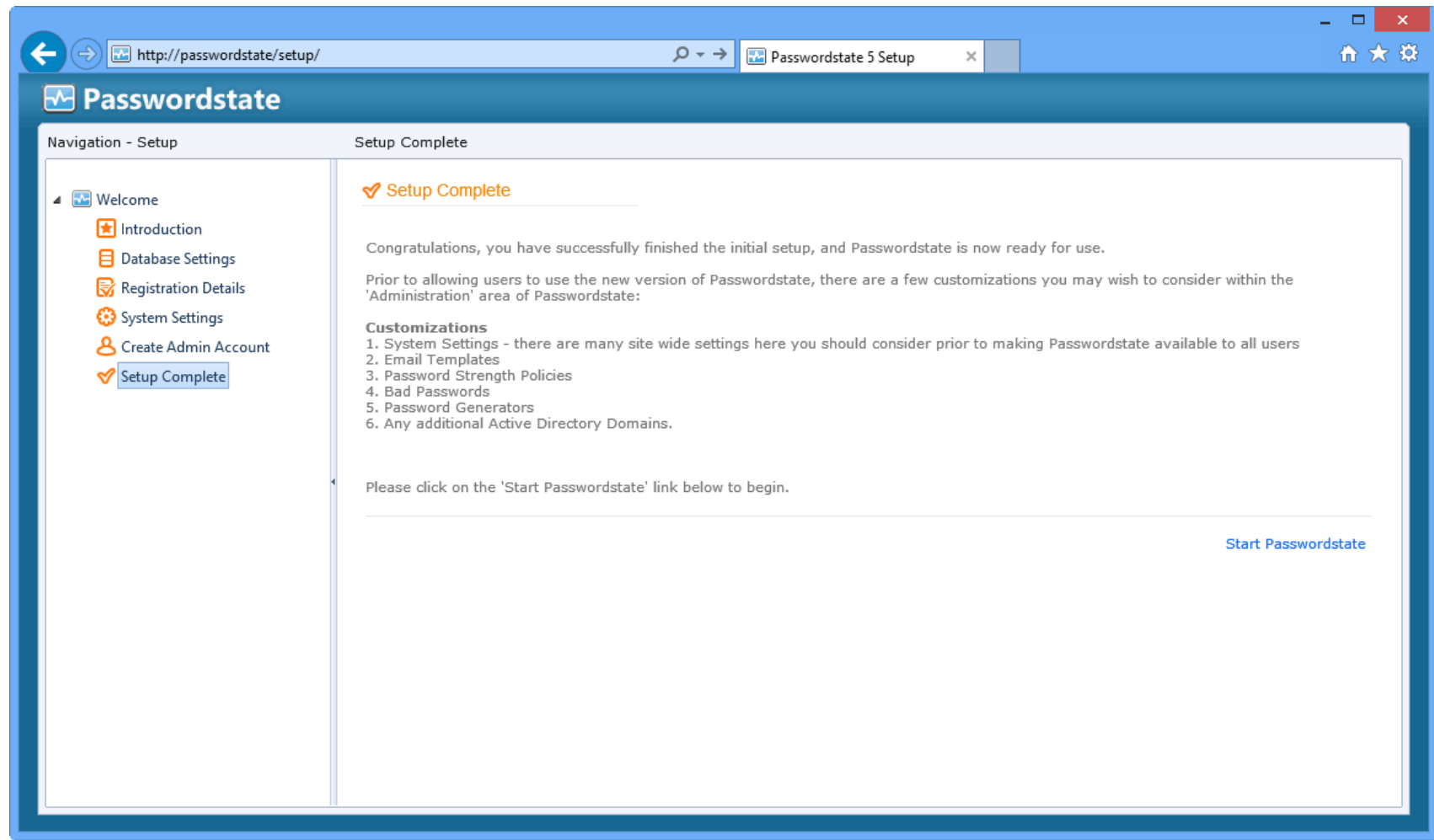
Please verify the details below are correct, then click on the 'Next' button.

UserID	halox\msand
First Name *	<input type="text" value="Mark"/>
Surname *	<input type="text" value="Sandford"/>
Email Address *	<input type="text" value="support@clickstudios.com.au"/>

[Next](#)

**Setup Complete** – The installation is now complete and you can begin using Passwordstate. Prior to granting access, or informing users of the new version, you may wish to review some of the system wide settings found under the 'Administration' area of Passwordstate.

**Recommendation:** It is highly recommended you also configure the Passwordstate web site with an SSL Certificate so all traffic between the browser and the web site is encrypted.



## 9 Backing Up Passwordstate

Once Passwordstate is installed, it's important to backup both the database and web tiers. To do this, consider the following:

1. Backup the SQL Database using the features built into SQL Server. If you are unsure of how to do this, please speak to your DBA, or refer to the SQL Server documentation
2. To backup the web tier, you simply need to backup the entire 'passwordstate5' folder. The most important file to backup is the web.config file, as this file contains the database connection string for Passwordstate

## 10 Encrypting the Database Connection String in the Web.config file

Whilst it's not entirely necessary to encrypt the database connection strings within the web.config file, it is recommended so the SQL Account credentials used to access the Passwordstate5 database is encrypted and unreadable from anyone who can read the file system on your web server.

To encrypt the database connections string, please follow these instructions:

### Encrypt Connection String

- Open a command prompt and change to the "v2.0.50727" .Net Framework folder (normally found under C:\Windows\Microsoft.NET\Framework\v2.0.50727)
- Type the following:
  - `aspnet_regiis.exe -pef "connectionStrings" "c:\inetpub\passwordstate5"` (change the path if you've installed Passwordstate to a different location)

### Decrypt Connection String

- Open a command prompt and change to the "v2.0.50727" .Net Framework folder folder (normally found under C:\Windows\Microsoft.NET\Framework\v2.0.50727)
- Type the following:
  - `aspnet_regiis.exe -pdf "connectionStrings" "c:\inetpub\passwordstate5"` (change the path if you've installed Passwordstate to a different location)

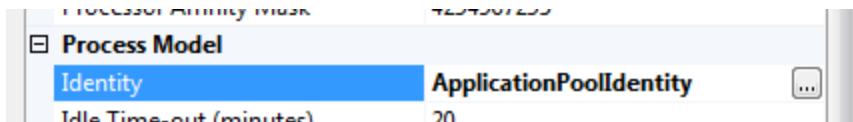
Note: If you intend to rename your server host name, you should decrypt these settings first, rename the server, then encrypt again.

## 11 Active Directory & IIS Application Pool

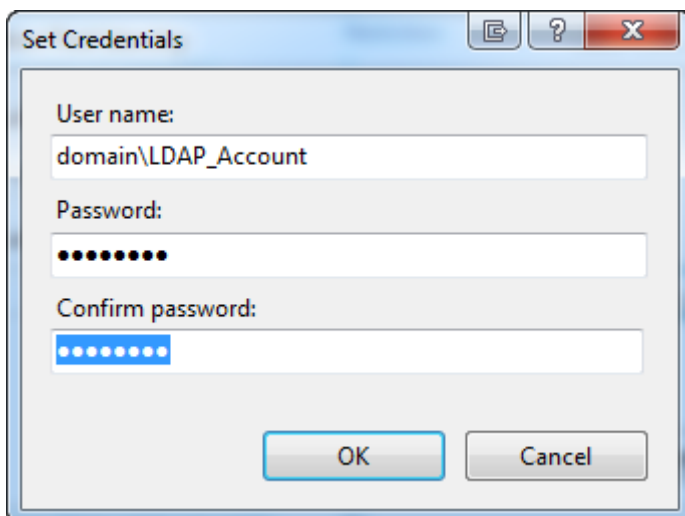
Passwordstate can query your Active Directory for the purpose of adding user accounts, and to synchronize memberships of domain security groups. By default, the account used is the 'NETWORK SERVICE' account which is part of Internet Information Services (IIS).

If you experience any errors when try to add users via Active Directory or query Security Groups, then it's likely your Active Directory setup only allows certain accounts to query it. If this is the case, then you will need to modify the IIS configuration to specify a different account. To do this, you can follow these instructions.

1. Open Internet Information Services (IIS) Manager on your web server
2. Click on 'Application Pools' in the 'Connections' panel
3. Right click on the application pool 'Passwordstate', and select 'Advanced Settings'
4. Look for the setting 'Identity' click on **ApplicationPoolIdentity**, and then on the ellipses button as per this screenshot:



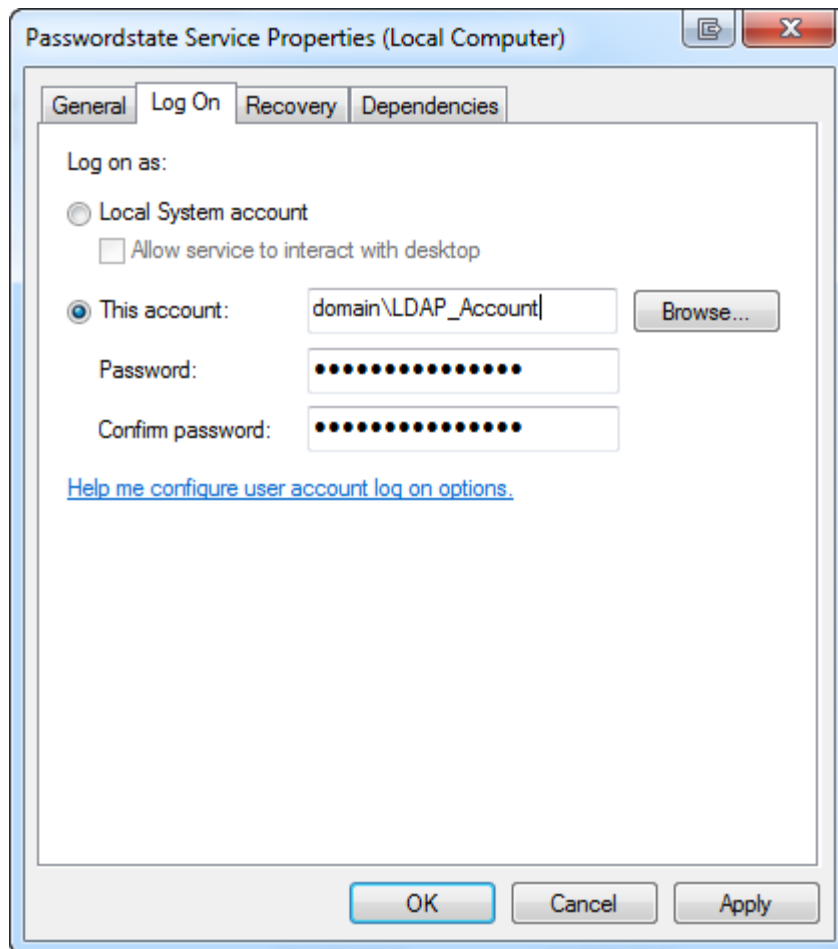
5. Select 'Custom account' and then specify the appropriate account details such as the example provided in the following screenshot:



6. Click on all the 'OK' buttons to close the windows, and then restart the Passwordstate site in IIS

## 12 Active Directory & Passwordstate Windows Service

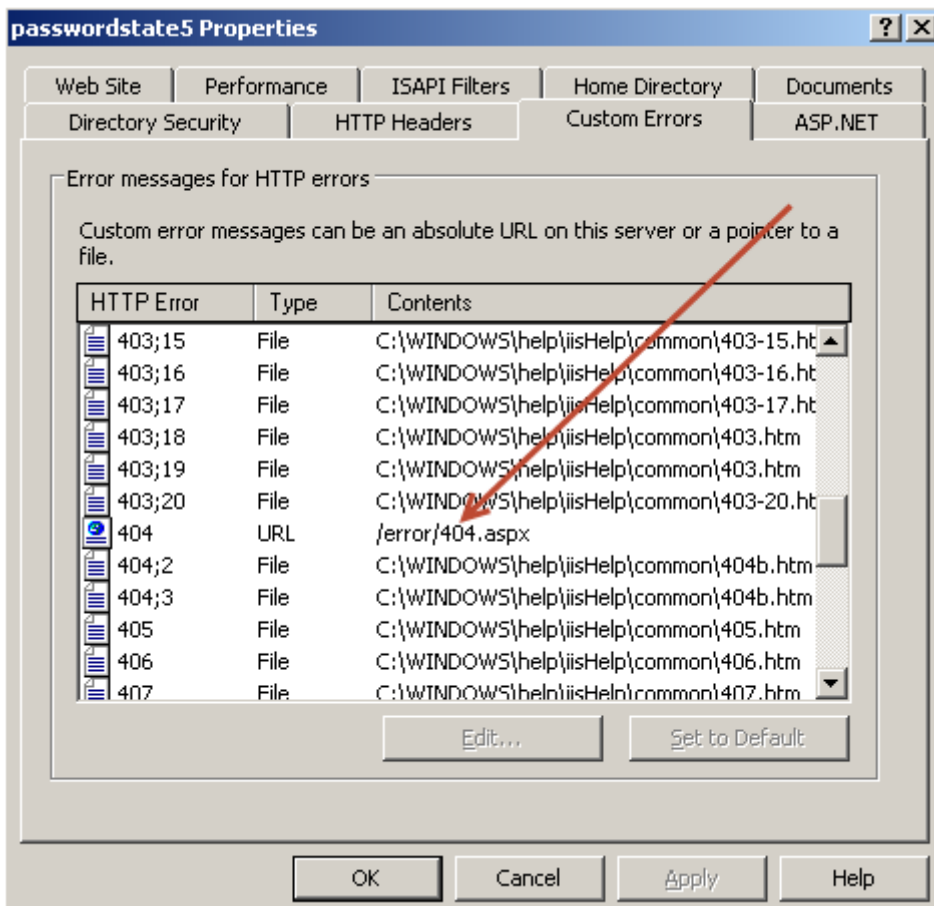
In addition to modifying the Application Pool, you may need to also modify the 'Log On' rights for the Passwordstate Windows Service, as this service also queries Active Directory to synchronize accounts and Security Groups.



## 13 Windows Server 2003 and Permalink Functionality

In order for the Permalink functionality to work in Passwordstate with IIS 6.0, you must manually make a change to the 'Custom Errors' section of the Passwordstate web site. To do this, please follow these instructions:

1. Open 'Internet Information Services' on your web server
2. Right click on the Passwordstate web site and select 'Properties'
3. Click on the 'Custom Errors' tab, scroll down to the HTTP Error 404, and make the change in the following screenshot (Select URL and specify the path):



4. Click on the 'OK' button