Passwordstate

Enterprise Password Management

App Server Install and Administration Guide

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1 App Server Overview

This document will detail instructions for installing the Passwordstate App Server, and configuring System wide settings related to this feature. This feature will allow you to use the native Android and iOS Mobile App, but can also be used as a portal for the Self Destruct Messages feature.

Typically, you would install this App Server in your DMZ, so you can allow access to it from outside your network. The App Server communicates securely back to your core Passwordstate website, on the port you use to access your Passwordstate site.

Alternatively, you can install the App Server on your Passwordstate webserver, and you may want to do this is you have limited servers in your environment.

For more information on how to use the Mobile App once this App Server has been installed, please refer to the **Mobile App User Manual** found under the **Help Menu** in Passwordstate.

For more information about using the App Server with the Self Destruct Portal, please see **Administration** -> **System Settings** -> **Self Destruct Messages**.

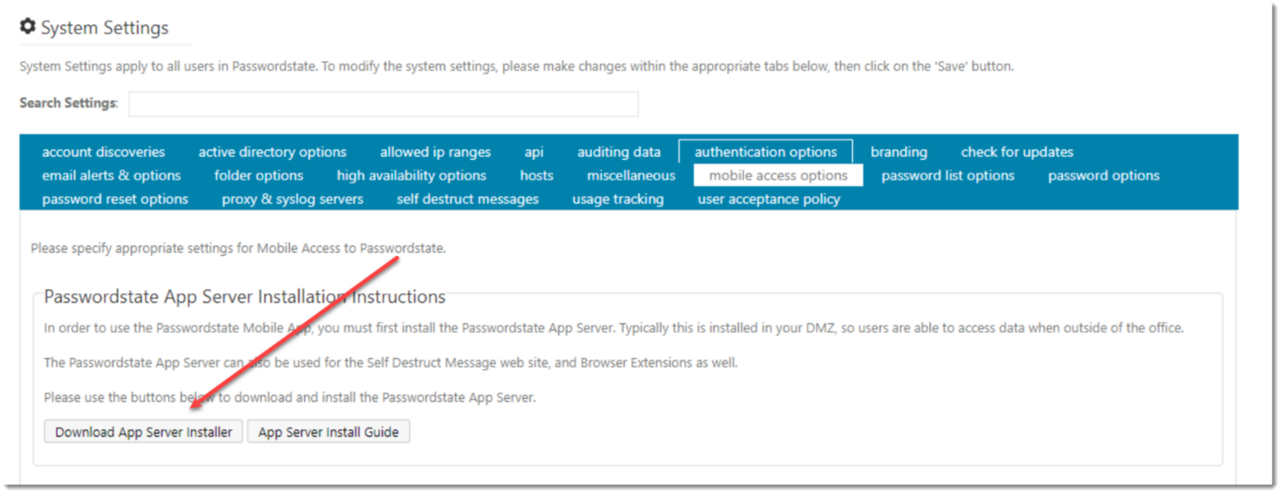
2 Prerequisites

In order for the App Server to function correctly, you will need to following requirements:

- An existing install of **Passwordstate 9** or above
- A Windows server running either **Windows 11**, or **Windows Server 2016** or above (*This can be your Passwordstate web server, or another server of your choice*)
- **Microsoft .NET Framework 4.7.2**
- A trusted SSL certificate (*More information on this in Section 4 of this guide*)
- From where your App Server is installed, you must have an open port for it to connect back to your SQL Server – this port is 1433 by default. If you are using a SQL Listener for database connectivity, you will need to allow port 1434 UDP – unless you have modified the default port.

3 Installing the App Server

1. In Passwordstate, go to **Administration** -> **System Settings** -> **Mobile Access Options** and click the **Download App Server Installer** button:



System Settings

System Settings apply to all users in Passwordstate. To modify the system settings, please make changes within the appropriate tabs below, then click on the 'Save' button.

Search Settings:

Please specify appropriate settings for Mobile Access to Passwordstate.

Passwordstate App Server Installation Instructions

In order to use the Passwordstate Mobile App, you must first install the Passwordstate App Server. Typically this is installed in your DMZ, so users are able to access data when outside of the office.

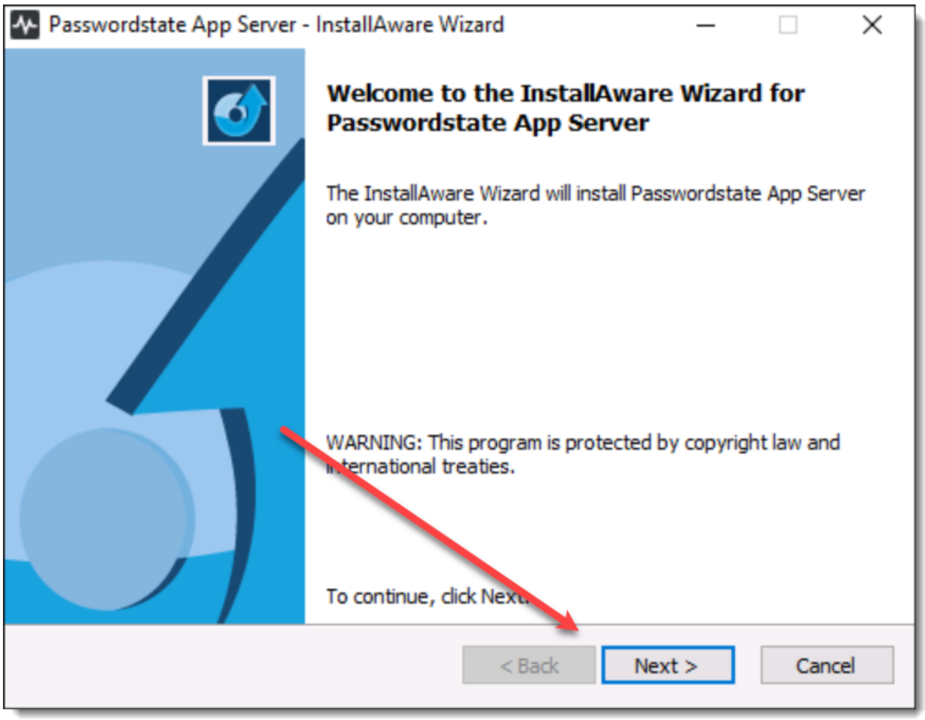
The Passwordstate App Server can also be used for the Self Destruct Message web site, and Browser Extensions as well.

Please use the buttons below to download and install the Passwordstate App Server.

2. A file will download in your browser, and you'll need to transfer this to the server you are installing the App Server on

3. As an Administrator, run the **PasswordstateAppServer.exe** file

4. Click **Next**:



Passwordstate App Server - InstallAware Wizard

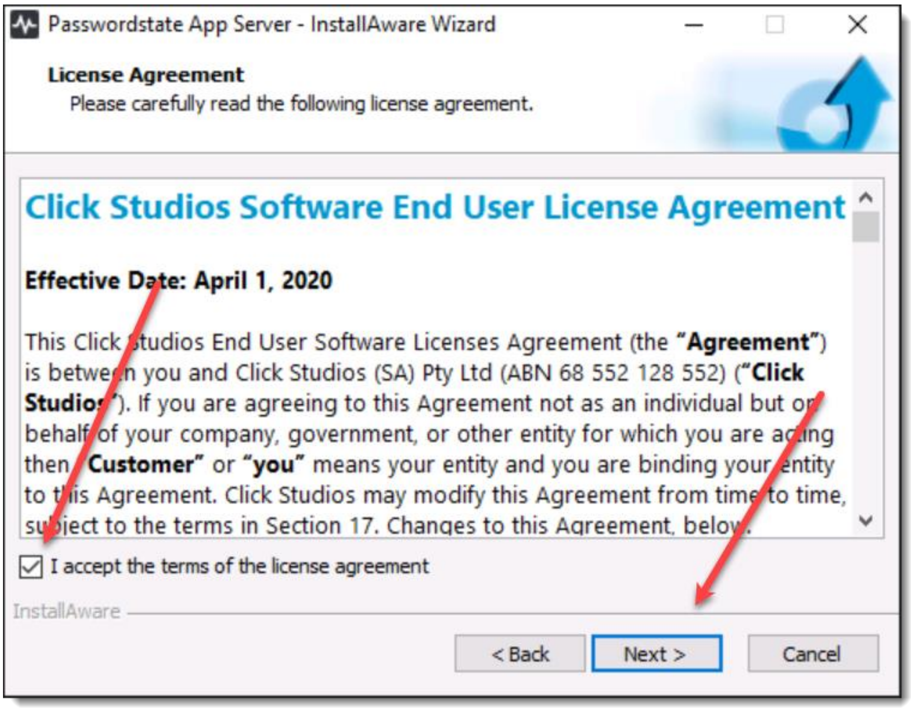
Welcome to the InstallAware Wizard for Passwordstate App Server

The InstallAware Wizard will install Passwordstate App Server on your computer.

WARNING: This program is protected by copyright law and international treaties.

To continue, click Next.

5. Accept the terms of the license agreement, and click **Next**:



Passwordstate App Server - InstallAware Wizard

License Agreement

Please carefully read the following license agreement.

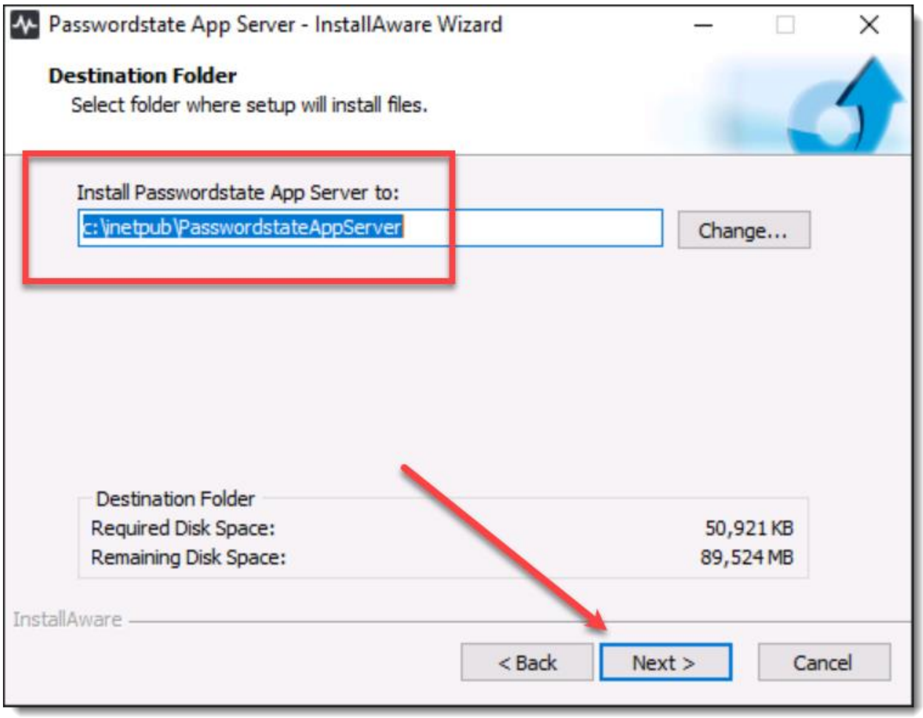
Click Studios Software End User License Agreement

Effective Date: April 1, 2020

This Click Studios End User Software Licenses Agreement (the "**Agreement**") is between you and Click Studios (SA) Pty Ltd (ABN 68 552 128 552) ("**Click Studios**"). If you are agreeing to this Agreement not as an individual but on behalf of your company, government, or other entity for which you are acting then "**Customer**" or "**you**" means your entity and you are binding your entity to this Agreement. Click Studios may modify this Agreement from time to time, subject to the terms in Section 17. Changes to this Agreement, below.

☑ I accept the terms of the license agreement

6. Accept the default install path, and click **Next**:



Passwordstate App Server - InstallAware Wizard

Destination Folder

Select folder where setup will install files.

Install Passwordstate App Server to:

c:\inetpub\PasswordstateAppServer

Destination Folder

Required Disk Space: 50,921 KB

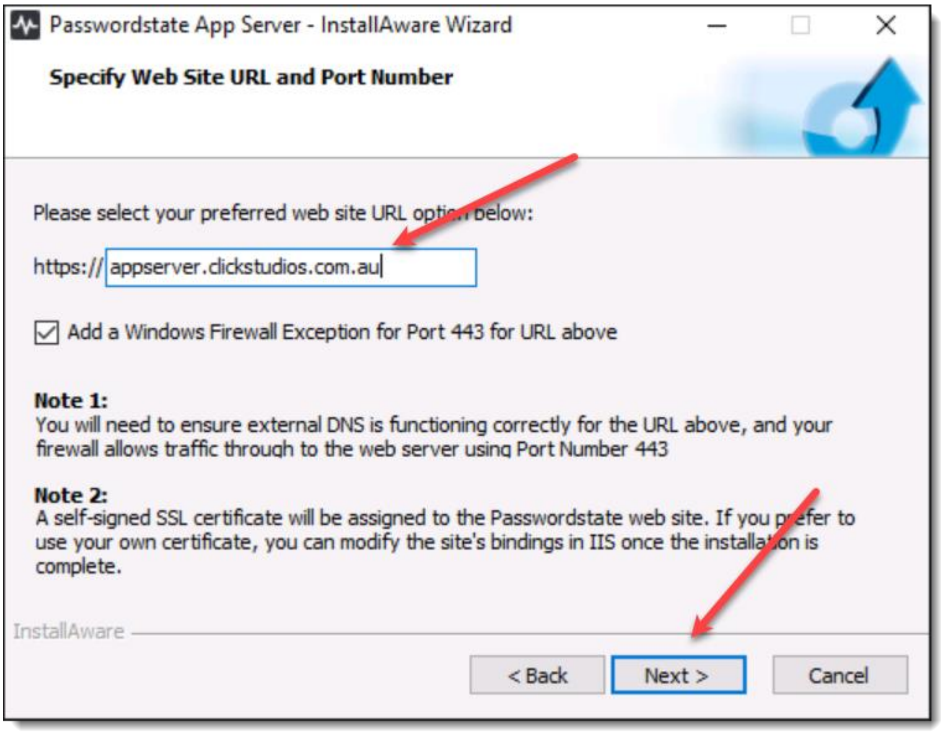
Remaining Disk Space: 89,524 MB

7. Set a URL of your choice, and click **Next**

Note 1: This URL will require a functioning DNS entry, whether it be internal, or external from your network

Note 2: The default port set is 443, but this can be changed in IIS later if you require a custom port for any reason

Note 3: This installer will set up a website in IIS with a Self Signed Certificate. You will need to change this certificate to a trusted one post install, to ensure for seamless access to your Mobile App.



Passwordstate App Server - InstallAware Wizard

Specify Web Site URL and Port Number

Please select your preferred web site URL option below:

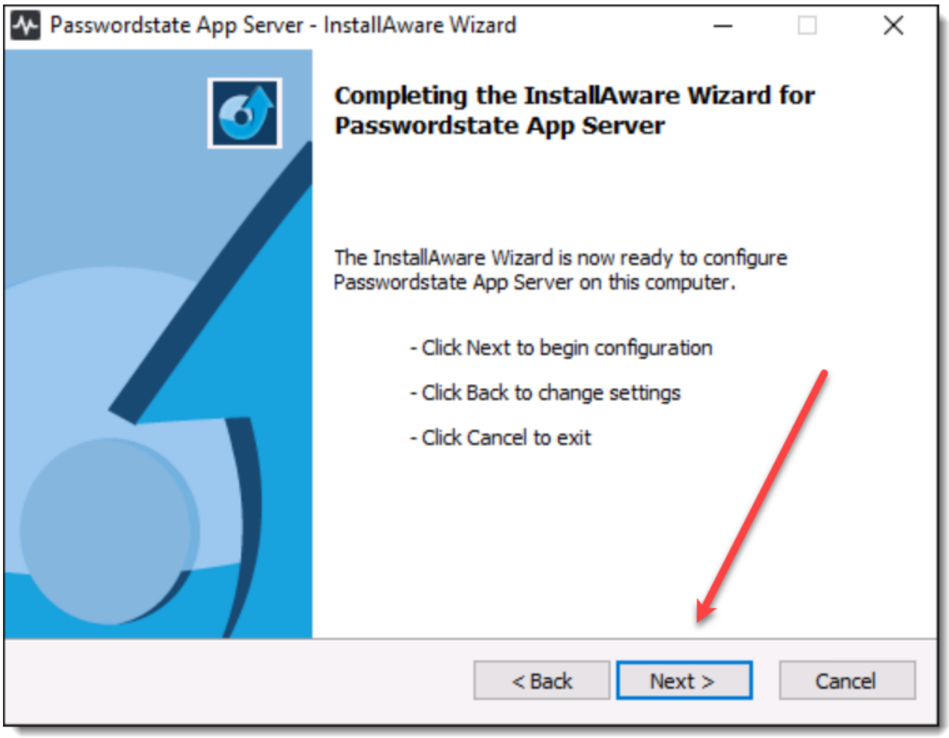
https:// appserver.clickstudios.com.au

☑ Add a Windows Firewall Exception for Port 443 for URL above

Note 1:
You will need to ensure external DNS is functioning correctly for the URL above, and your firewall allows traffic through to the web server using Port Number 443

Note 2:
A self-signed SSL certificate will be assigned to the Passwordstate web site. If you prefer to use your own certificate, you can modify the site's bindings in IIS once the installation is complete.

8. Click **Next**



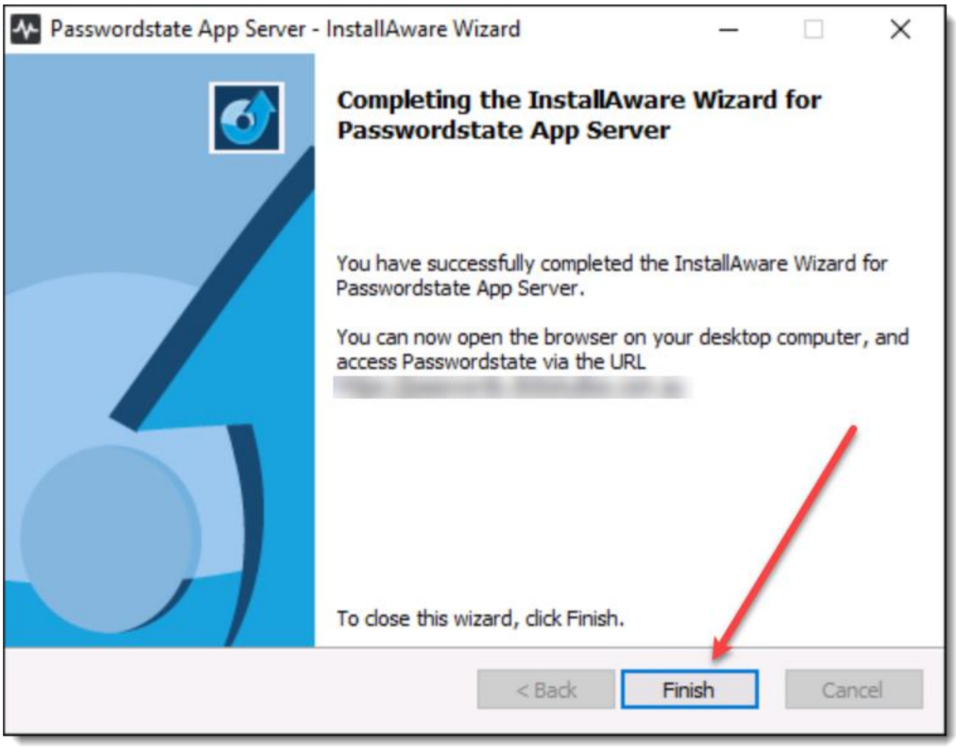
Passwordstate App Server - InstallAware Wizard

Completing the InstallAware Wizard for Passwordstate App Server

The InstallAware Wizard is now ready to configure Passwordstate App Server on this computer.

- Click Next to begin configuration
- Click Back to change settings
- Click Cancel to exit

9. Click **Finish**



Passwordstate App Server - InstallAware Wizard

Completing the InstallAware Wizard for Passwordstate App Server

You have successfully completed the InstallAware Wizard for Passwordstate App Server.

You can now open the browser on your desktop computer, and access Passwordstate via the URL [redacted]

To close this wizard, click Finish.

4 SSL Certificate Considerations

Typically, this Passwordstate App Server will be installed in your DMZ, and you will then permit access to this website from outside your network, by opening your firewall on Port 443 by default, and having an external functioning DNS entry. There are two reasons for this:

1. Users on mobile phones or tablets that aren't joined to your domain can connect to the AppServer, and use the Mobile App
2. Users can access the Self Destruct Messages portal from any machine outside your network, from any internet connection, and read Self Destruct Messages.

When installing the App Server, it will create a new website in IIS called **passwordstateappserver**. If IIS has not been installed already, the installer will automatically set up and configure IIS for you.

The installer will create a Self-Signed Certificate using the name of the URL that you have entered during the install process.

It is highly recommended you change this certificate and use a purchased SSL certificate and assign it to your **passwordstateappserver** website, to ensure functional use of the Mobile App. Also, if you intend on accessing your Self Destruct Portal using the Passwordstate App Server, instead of the embedded Self Destruct Portal, then you should also assign a purchased trusted certificate from an online authority.

The Self Signed certificate that comes with the installer or even a certificate issued by your internal Certificate Authority will present issues for your end users, as the devices from outside the network will not trust these certificates.

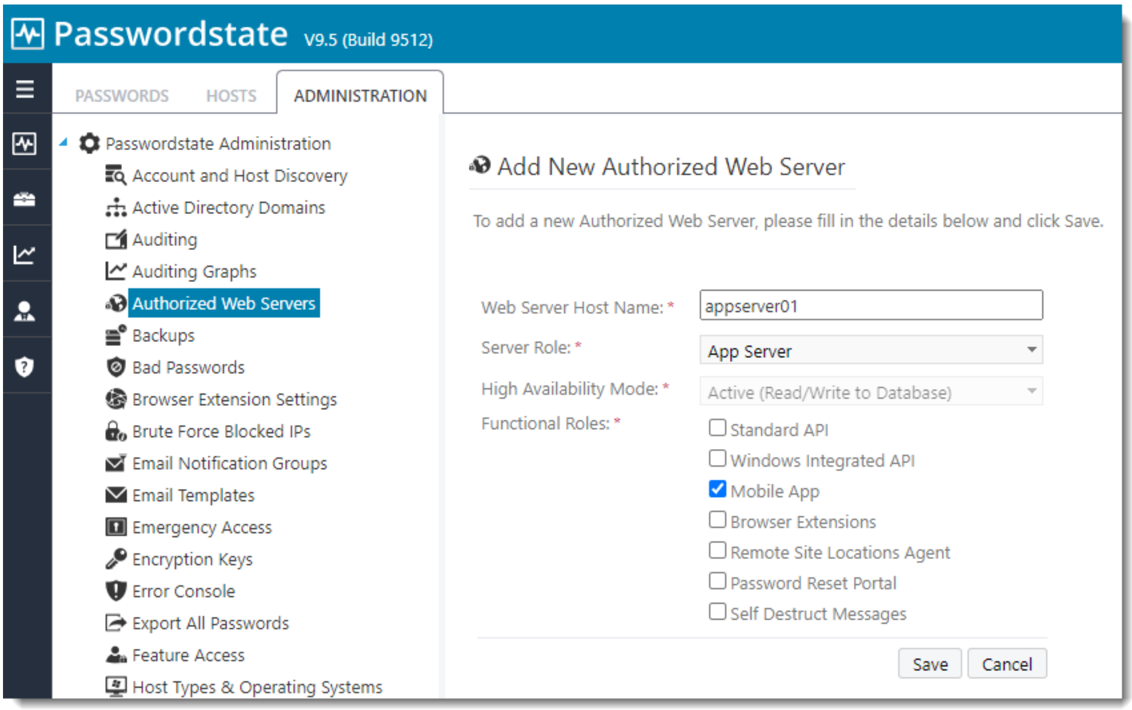
If your URL for the App Server is https://appserver.contoso.com, then you should use a certificate with a matching name of appserver.contoso.com, or even a wildcard certificate of *.contoso.com.

5 Initial App Sever Configuration

Please follow these instructions for the initial configuration of the App Server, before it can be used.

5.1 *Authorized Web Server*

In Passwordstate, under **Administration** -> **Authorized Web Servers**, click the **Add** button to add in the App Server. Enter in the netbios name of the server where you installed the App Server, and also assign the App Server role. Once this is done, click Save.



Add New Authorized Web Server

To add a new Authorized Web Server, please fill in the details below and click Save.

Web Server Host Name: * appserver01

Server Role: * App Server

High Availability Mode: * Active (Read/Write to Database)

Functional Roles: *

☐ Standard API
☐ Windows Integrated API
☑ Mobile App
☐ Browser Extensions
☐ Remote Site Locations Agent
☐ Password Reset Portal
☐ Self Destruct Messages

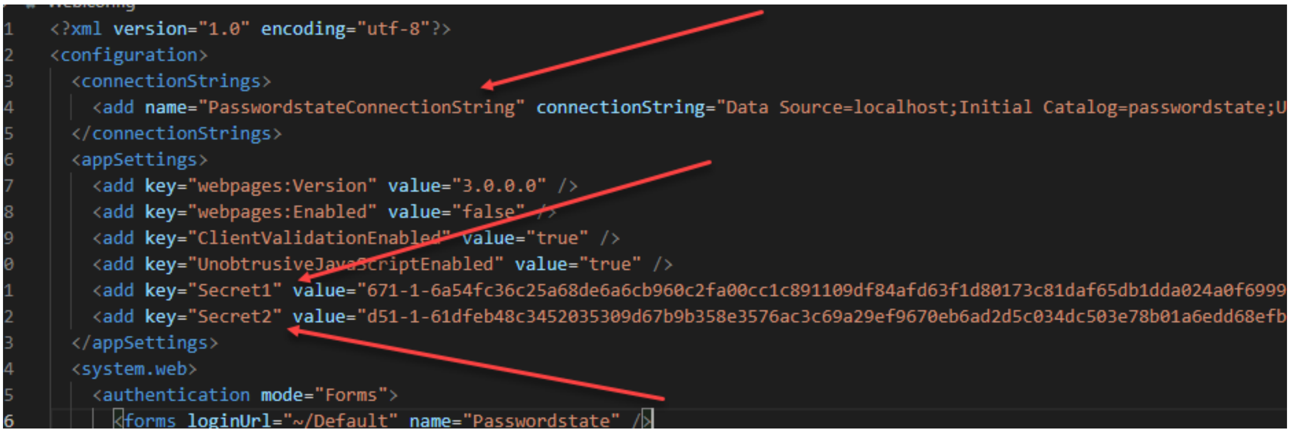
Save Cancel

5.2 *Web.config File Changes*

As a once off process, you will need to copy the following 3 lines from the web.config file from your main Passwordstate web site folder, to the web.config file in this App Server folder.

- Core Passwordstate vault web.config file default location: c:\inetpub\Passwordstate\web.config
- App Server web.config file default location: C:\inetpub\PasswordstateAppServer\web.config

Note: Only copy **PasswordstateConnectionString** and **Secret1** and **Secret2** lines



```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <connectionStrings>
    <add name="PasswordstateConnectionString" connectionString="Data Source=localhost;Initial Catalog=passwordstate;U
  </connectionStrings>
  <appSettings>
    <add key="webpages:Version" value="3.0.0.0" />
    <add key="webpages:Enabled" value="false" />
    <add key="ClientValidationEnabled" value="true" />
    <add key="UnobtrusiveJavaScriptEnabled" value="true" />
    <add key="Secret1" value="671-1-6a54fc36c25a68de6a6cb960c2fa00cc1c891109df84afd63f1d80173c81daf65db1dda024a0f6999
    <add key="Secret2" value="d51-1-61dfeb48c3452035309d67b9b358e3576ac3c69a29ef9670eb6ad2d5c034dc503e78b01a6edd68efb
  </appSettings>
  <system.web>
    <authentication mode="Forms">
      <forms loginUrl="~/Default" name="Passwordstate" />
```

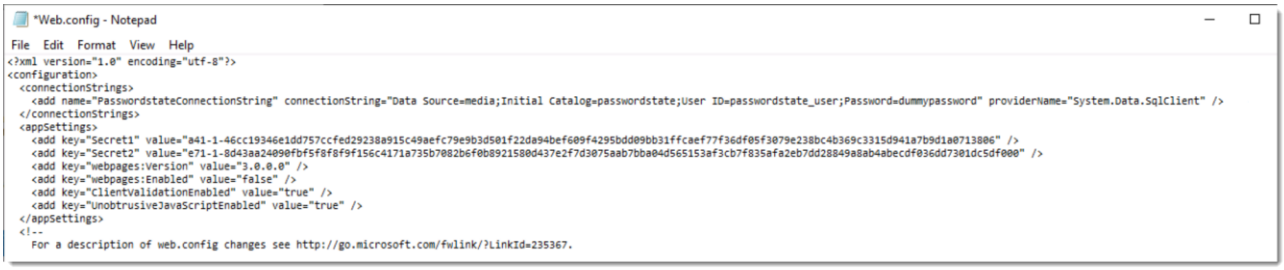
When looking at the web.config file for your main Passwordstate installation, if you do not see your database connection string, or appSetting section, then most likely you have encrypted these sections of the file, and you will need to decrypt them in order to copy across the contents. To do this, follow the instructions below – and only do this when users are not using Passwordstate:

- Open command prompt as Administrator, and run the following commands
  - CD C:\Windows\Microsoft.NET\Framework64\v4.0.30319
  - aspnet_regiis.exe -pdf "connectionStrings" "c:\inetpub\passwordstate"
  - aspnet_regiis.exe -pdf "appSettings" "c:\inetpub\passwordstate"

To re-encrypt them again afterwards, use the commands:

- aspnet_regiis.exe -pef "connectionStrings" "c:\inetpub\passwordstate"
- aspnet_regiis.exe -pef "appSettings" "c:\inetpub\passwordstate"

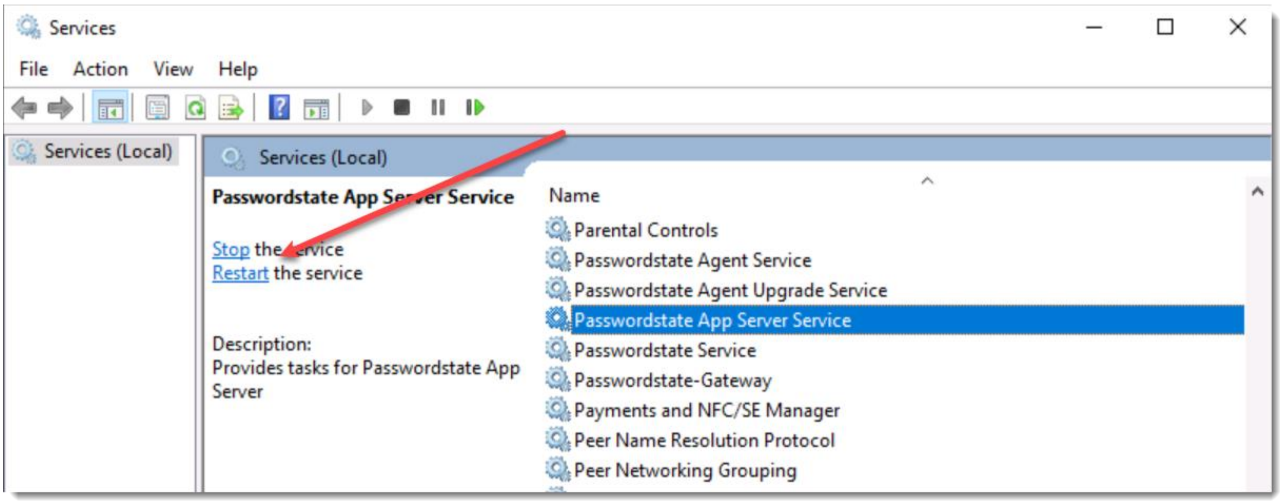
Example of App Server web.config file after inserting connection string and secret keys



```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <connectionStrings>
    <add name="PasswordstateConnectionString" connectionString="Data Source=media;Initial Catalog=passwordstate;User ID=passwordstate_user;Password=dummypassword" providerName="System.Data.SqlClient" />
  </connectionStrings>
  <appSettings>
    <add key="Secret1" value="a41-1-46cc19346e1dd757ccfed29238a915c49aefc79e9b3d501f22da94bef609f4295bdd09bb31ffcaef77f36df05f3079e238bc4b369c3315d941a7b9d1a0713806" />
    <add key="Secret2" value="e71-1-8d43aa24090fbf5f8f8f9f156c4171a735b7082b6f0b8921580d437e2f7d3075aab7bba04d565153af3cb7f835afa2eb7dd28849a8ab4abecdf036dd7301dc5df000" />
    <add key="webpages:Version" value="3.0.0.0" />
    <add key="webpages:Enabled" value="false" />
    <add key="ClientValidationEnabled" value="true" />
    <add key="UnobtrusiveJavaScriptEnabled" value="true" />
  </appSettings>
  <!--
    For a description of web.config changes see http://go.microsoft.com/fwlink/?LinkId=235367.
```

Note: From where your App Server is installed, you must have an open port for it to connect back to your SQL Server – this port is 1433 by default. If you are using a SQL Listener for database connectivity, you will need to allow port 1434 UDP – unless you have modified the default port.

Now restart the Passwordstate App Server Windows Service:



Passwordstate App Server Service

Stop the service
Restart the service

Description:
Provides tasks for Passwordstate App Server

Parental Controls
Passwordstate Agent Service
Passwordstate Agent Upgrade Service
Passwordstate App Server Service
Passwordstate Service
Passwordstate-Gateway
Payments and NFC/SE Manager
Peer Name Resolution Protocol
Peer Networking Grouping

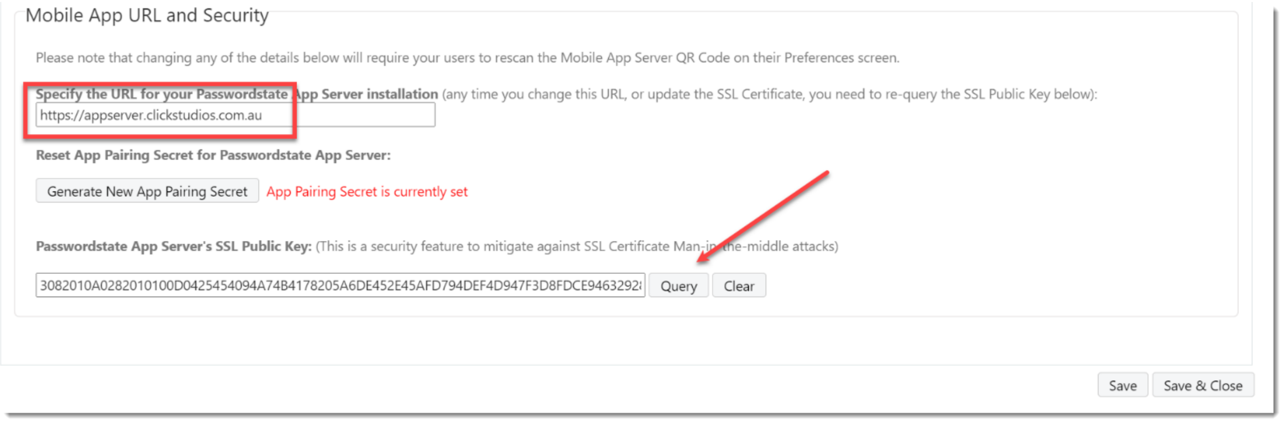
5.3 Managed Service Account (MSA) for Database Connectivity, and NTFS permissions

If you use a Managed Service Account for database connectivity, then additional NTFS permissions are required to the folder C:\inetpub\PasswordstateAppServer\images\LookupImages for your Managed Service Account. The Passwordstate App Server Service has a process where it can write any new Custom Images to disk, that may have been uploaded via the core Passwordstate product. These images are required for the Mobile App.

5.4 URL and APP Server Public Key

In Passwordstate, under **Administration** -> **System Settings** -> **Mobile Access Options**, set your URL for your App Server, including port if it is different to 443. Also, for added security, you should generate a SSL Public Key by clicking the **Query** button.

Once these fields are populated, click the **Save** button:



Mobile App URL and Security

Please note that changing any of the details below will require your users to rescan the Mobile App Server QR Code on their Preferences screen.

Specify the URL for your Passwordstate App Server installation (any time you change this URL, or update the SSL Certificate, you need to re-query the SSL Public Key below):

https://appserver.clickstudios.com.au

Reset App Pairing Secret for Passwordstate App Server:

App Pairing Secret is currently set

Passwordstate App Server's SSL Public Key: (This is a security feature to mitigate against SSL Certificate Man-in-the-middle attacks)

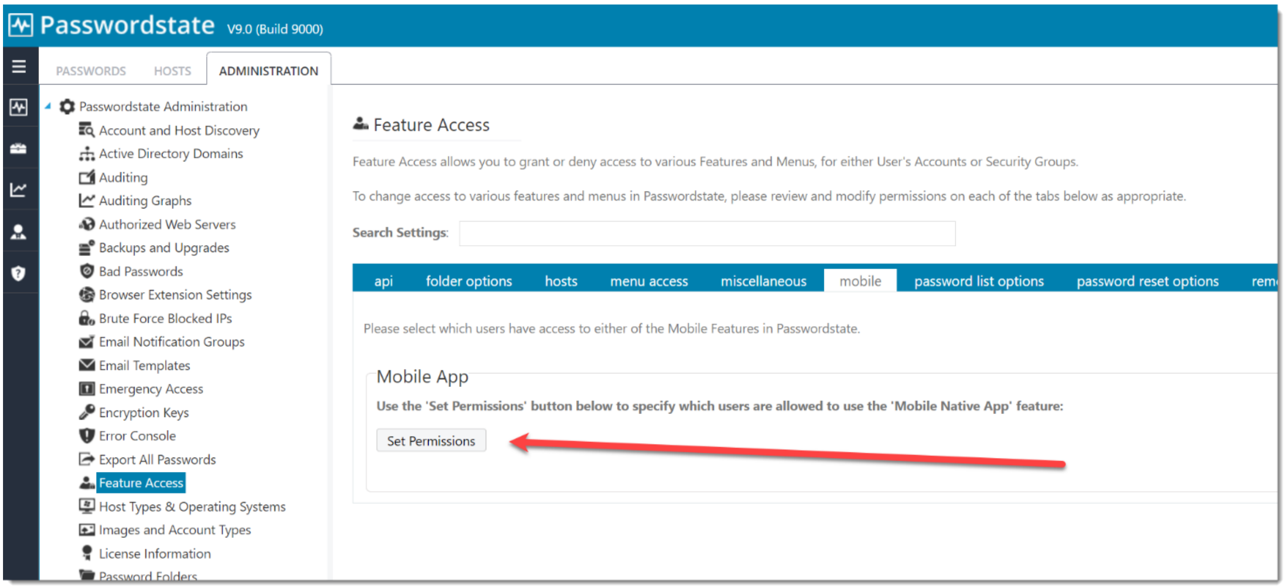
3082010A0282010100D0425454094A74B4178205A6DE452E45AFD794DEF4D947F3D8FDCE9463292

6 Mobile App Permissions

Passwordstate has the ability to enable or disable features for groups of users, and it's possible to prevent users from using the Mobile App. There are several places to consider when granting or denying these permissions.

6.1 Feature Access

As a Security Administrator, under **Administration** -> **Feature Access** -> **Mobile**, you can **allow** or **deny** users in Passwordstate from using the Mobile App:



Feature Access

Feature Access allows you to grant or deny access to various Features and Menus, for either User's Accounts or Security Groups.

To change access to various features and menus in Passwordstate, please review and modify permissions on each of the tabs below as appropriate.

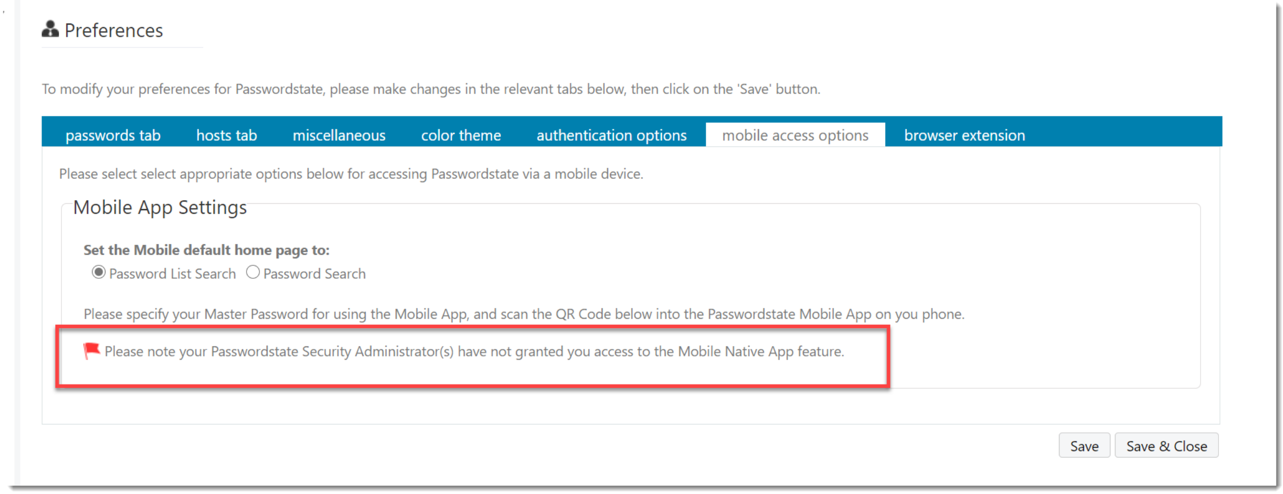
Search Settings:

Please select which users have access to either of the Mobile Features in Passwordstate.

Mobile App

Use the 'Set Permissions' button below to specify which users are allowed to use the 'Mobile Native App' feature:

If the user, or a Security Group the user is in, has been granted access on the screen above, they will be able to scan the QR code under their own personal preferences. If you deny them access, then they will be presented with this warning under their own personal preferences, and will not be able to use the App:



Preferences

To modify your preferences for Passwordstate, please make changes in the relevant tabs below, then click on the 'Save' button.

Please select select appropriate options below for accessing Passwordstate via a mobile device.

Mobile App Settings

Set the Mobile default home page to:

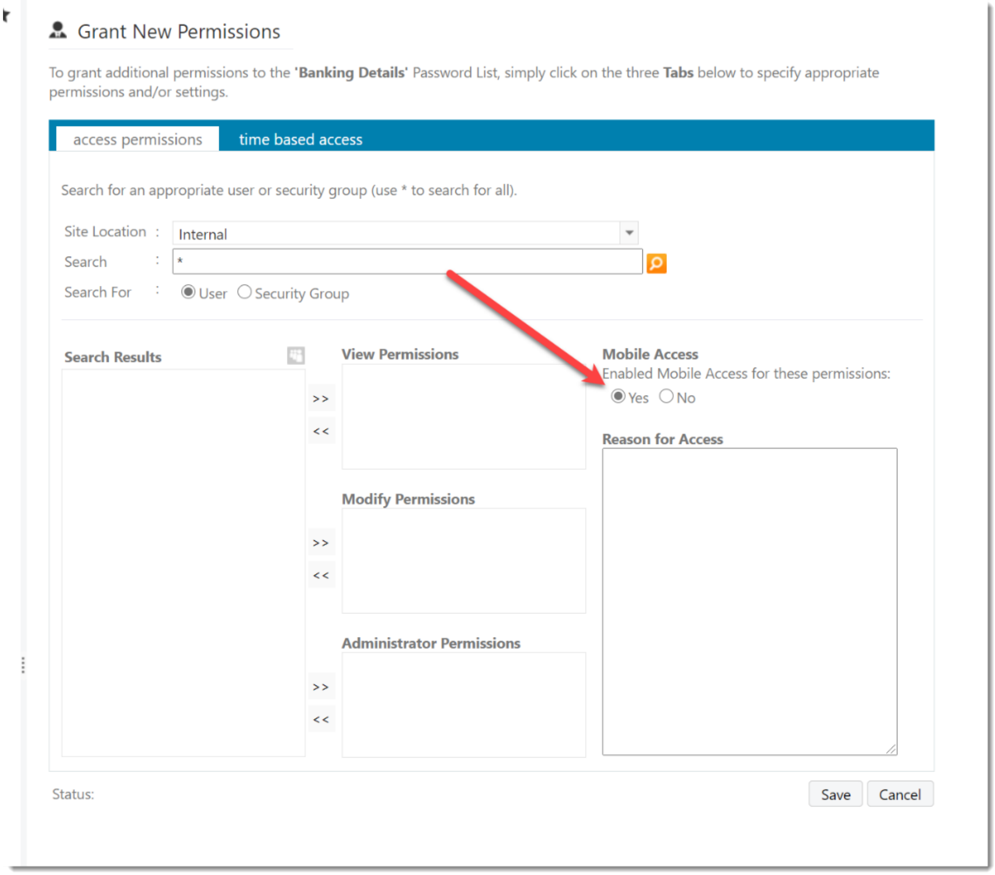
● Password List Search ○ Password Search

Please specify your Master Password for using the Mobile App, and scan the QR Code below into the Passwordstate Mobile App on you phone.

Please note your Passwordstate Security Administrator(s) have not granted you access to the Mobile Native App feature.

6.2 *Mobile Access to Password Lists*

For a greater level of control as to what passwords and Password Lists will show in the mobile App, you can turn off or on Mobile access at a Password List level. By default, when granting a user access to a Password List, it will also enable Mobile access too:



Grant New Permissions

To grant additional permissions to the **'Banking Details'** Password List, simply click on the three **Tabs** below to specify appropriate permissions and/or settings.

Search for an appropriate user or security group (use * to search for all).

Site Location : Internal

Search : *

Search For : ● User ○ Security Group

Mobile Access

Enabled Mobile Access for these permissions:

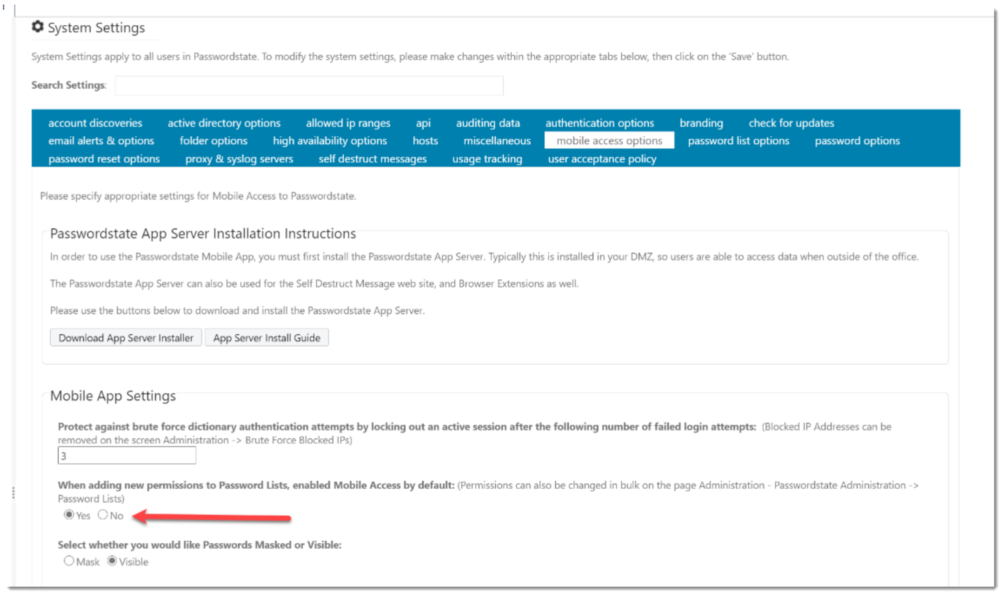
● Yes ○ No

Reason for Access

Status:

If you select the above option to **No** when granting a user access, that Password List will not show up in the Mobile App for that user.

There is also an option in the System Settings to set that above option to be **No** by default, instead of **Yes**:



System Settings

System Settings apply to all users in Passwordstate. To modify the system settings, please make changes within the appropriate tabs below, then click on the 'Save' button.

Search Settings:

Please specify appropriate settings for Mobile Access to Passwordstate.

Passwordstate App Server Installation Instructions

In order to use the Passwordstate Mobile App, you must first install the Passwordstate App Server. Typically this is installed in your DMZ, so users are able to access data when outside of the office.

The Passwordstate App Server can also be used for the Self Destruct Message web site, and Browser Extensions as well.

Please use the buttons below to download and install the Passwordstate App Server.

Mobile App Settings

Protect against brute force dictionary authentication attempts by locking out an active session after the following number of failed login attempts: (Blocked IP Addresses can be removed on the screen Administration -> Brute Force Blocked IPs)

3

When adding new permissions to Password Lists, enabled Mobile Access by default: (Permissions can also be changed in bulk on the page Administration - Passwordstate Administration -> Password Lists)

● Yes ○ No

Select whether you would like Passwords Masked or Visible:

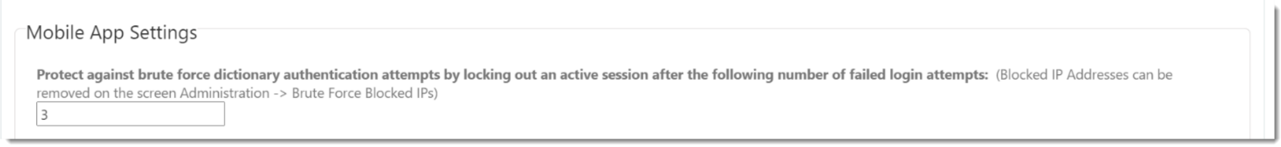
○ Mask ● Visible

7 Mobile App System Settings

Under **Administration** -> **System Settings** -> **Mobile Access Options**, there are also a number of other settings you can configure:

7.1 Brute Force Protection

If a user tries to log into the Mobile App, there is a brute force setting you can configure to prevent them from logging in again if they failed entering their **Master** password. Three is the default setting but is configurable:

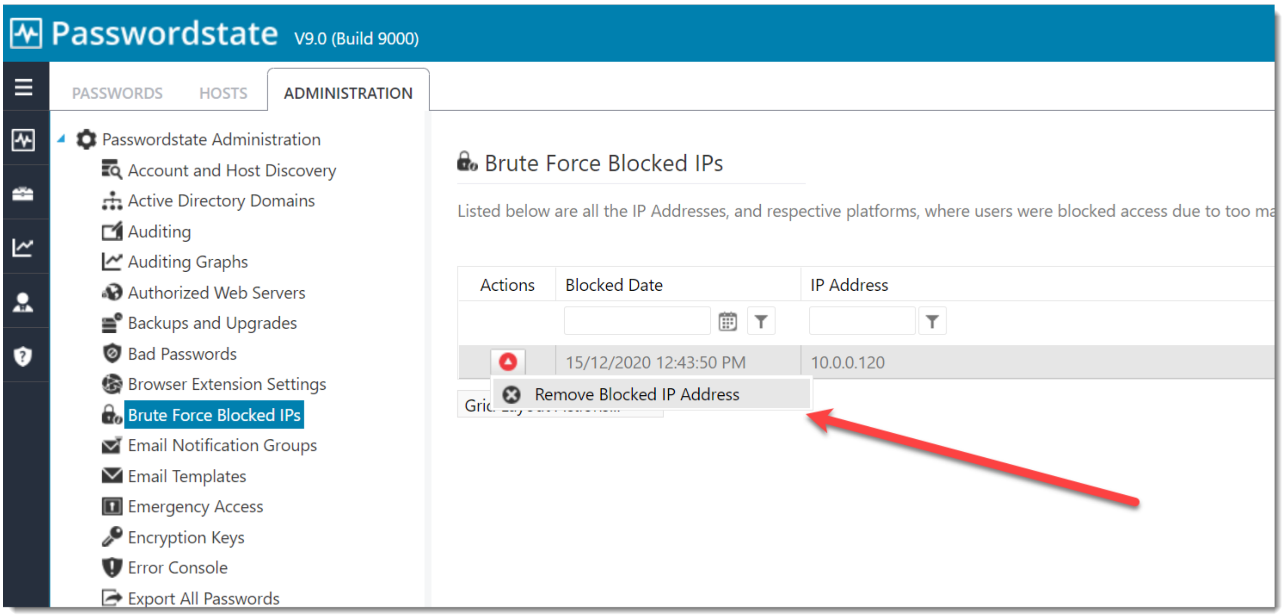


Mobile App Settings

Protect against brute force dictionary authentication attempts by locking out an active session after the following number of failed login attempts: (Blocked IP Addresses can be removed on the screen Administration -> Brute Force Blocked IPs)

3

If a user fails to log in and the Brute Force feature locks them out of the Mobile App, the user will be presented with an error message on their Mobile App screen, and a Passwordstate Administrator must unblock them from this screen:



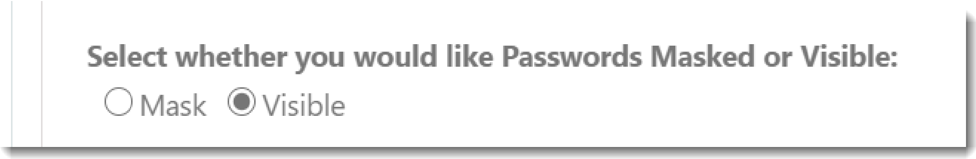
Brute Force Blocked IPs

Listed below are all the IP Addresses, and respective platforms, where users were blocked access due to too ma

Actions	Blocked Date	IP Address
	15/12/2020 12:43:50 PM	10.0.0.120

7.2 Mask Passwords or make them Visible

By default, your passwords in the Mobile App will be masked, and your users must press their finger on the masked password on the phone or tablet and choose **Toggle Mask** to see the password. You can make the password visible by default by changing this system setting option to **Visible**

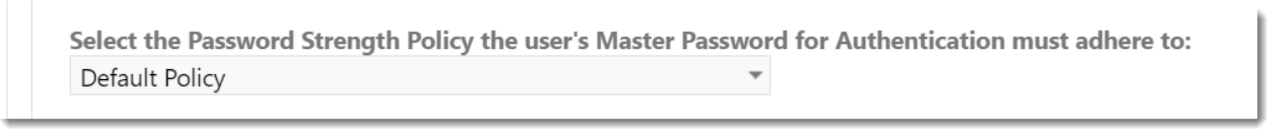


Select whether you would like Passwords Masked or Visible:

○ Mask ● Visible

7.3 Password Strength Policy

When a user attempts to use the Mobile App for the first time, they must create a Master Password under their own personal preferences. When the users need to authenticate into their Mobile App, this is the password that they need to enter. This system setting can force the user to adhere to a specific Password Strength Policy of your choice:



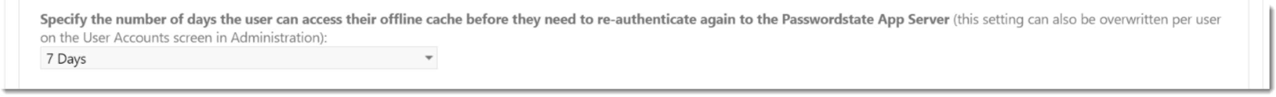
Select the Password Strength Policy the user's Master Password for Authentication must adhere to:

Default Policy ▾

7.4 Offline Cache

The Mobile App will sync with Passwordstate and download an offline cache of all Password Lists and Passwords user has access to. This feature improves performance dramatically and also allow your users to have access to their passwords when their device does not have access to the internet.

This System Setting below can be configured to require a manual authentication into the App more frequently, or less frequently, depending on your company policy.



Specify the number of days the user can access their offline cache before they need to re-authenticate again to the Passwordstate App Server (this setting can also be overwritten per user on the User Accounts screen in Administration):

7 Days ▾

By default, this setting is set to 7 days, and this value can be overwritten on a per user basis under **Administration** -> **User Accounts**, on the **Mobile Access Options** tab on each user in the system.

8 Encrypting the AppSettings Section in the Web.config file

It is highly recommended to encrypt the “**appSettings**” section in the web.config file, so any sensitive information such as your Secret Keys are unreadable in the file.

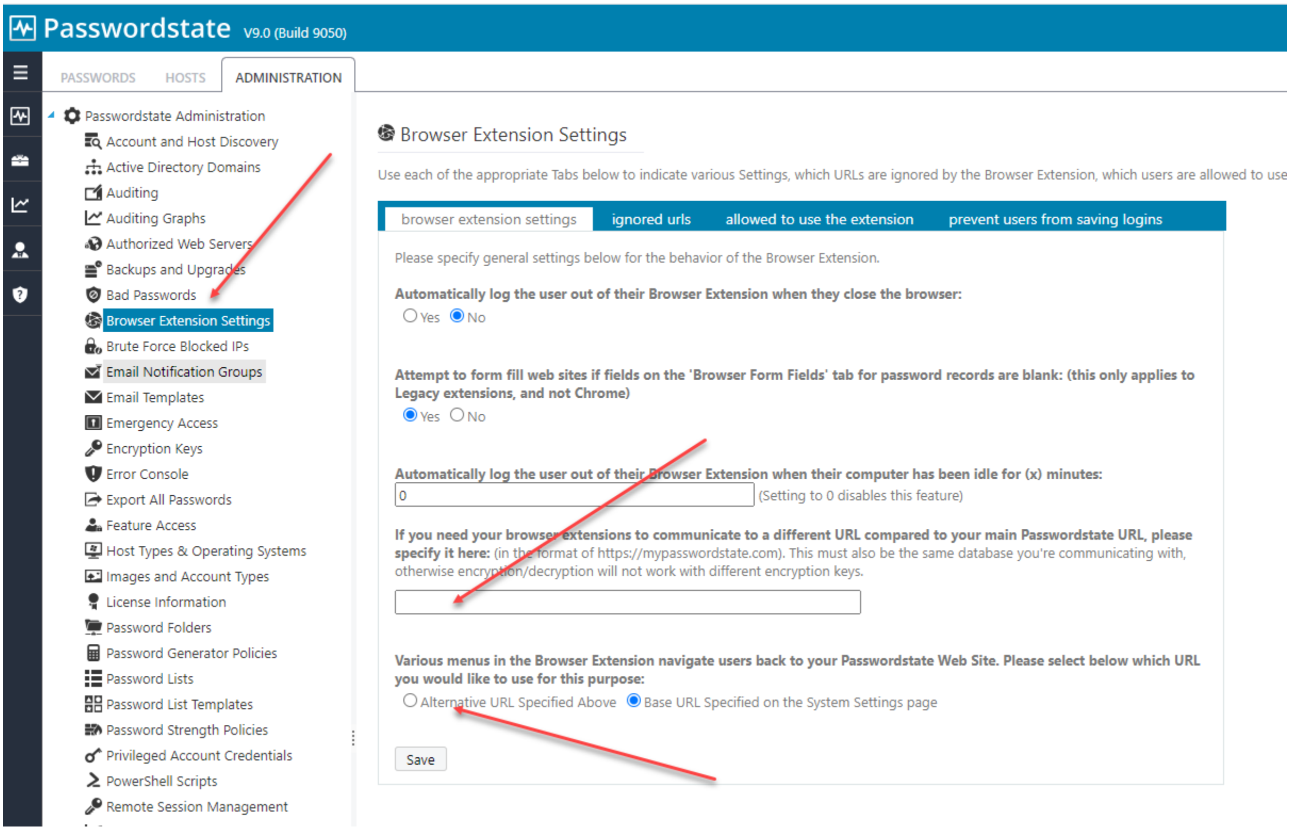
To encrypt this file, follow this complete guide:
https://www.clickstudios.com.au/downloads/version9/Encrypt_Passwordstate_Config_Files.pdf

9 Browser Extension and Self Destruct Web Site Usage

The Passwordstate App Server can also be used for the Browser Extensions, and the Self Destruct Message web site if required.

Browser Extensions

If you want your user's browser extensions to communicate via the URL of your Passwordstate App Server, instead of your normal Passwordstate instance, you can configure this below. Users will need to log out of their extension, and log back into Passwordstate to pick up this change.



Browser Extension Settings

Use each of the appropriate Tabs below to indicate various Settings, which URLs are ignored by the Browser Extension, which users are allowed to use

Please specify general settings below for the behavior of the Browser Extension.

Automatically log the user out of their Browser Extension when they close the browser:
○ Yes ● No

Attempt to form fill web sites if fields on the 'Browser Form Fields' tab for password records are blank: (this only applies to Legacy extensions, and not Chrome)
● Yes ○ No

Automatically log the user out of their Browser Extension when their computer has been idle for (x) minutes:
0 (Setting to 0 disables this feature)

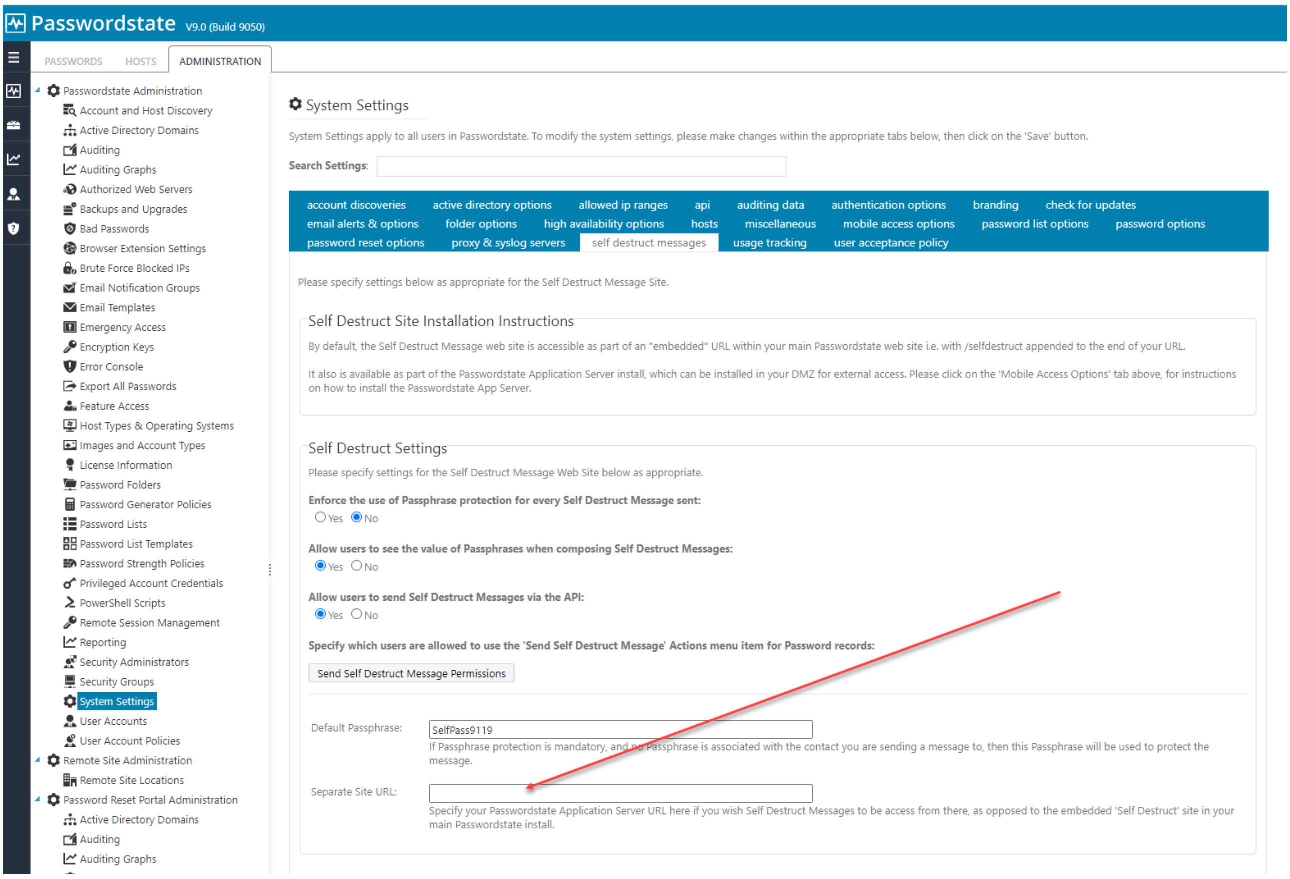
If you need your browser extensions to communicate to a different URL compared to your main Passwordstate URL, please specify it here: (in the format of https://mypasswordstate.com). This must also be the same database you're communicating with, otherwise encryption/decryption will not work with different encryption keys.

Various menus in the Browser Extension navigate users back to your Passwordstate Web Site. Please select below which URL you would like to use for this purpose:
○ Alternative URL Specified Above ● Base URL Specified on the System Settings page

Self Destruct Message Web Site

By default, the Self Destruct Message web site is embedded with your normal Passwordstate web site, but it can also be used with the App Server as well if required i.e. if you install the App Server is installed in the DMZ.

To use the Self Destruct web site with the App Server, simple specify your App Server URL below in the following screenshot.



System Settings

System Settings apply to all users in Passwordstate. To modify the system settings, please make changes within the appropriate tabs below, then click on the 'Save' button.

Search Settings:

Please specify settings below as appropriate for the Self Destruct Message Site.

Self Destruct Site Installation Instructions

By default, the Self Destruct Message web site is accessible as part of an "embedded" URL within your main Passwordstate web site i.e. with /selfdestruct appended to the end of your URL.

It also is available as part of the Passwordstate Application Server install, which can be installed in your DMZ for external access. Please click on the 'Mobile Access Options' tab above, for instructions on how to install the Passwordstate App Server.

Self Destruct Settings

Please specify settings for the Self Destruct Message Web Site below as appropriate.

Enforce the use of Passphrase protection for every Self Destruct Message sent:
○ Yes ● No

Allow users to see the value of Passphrases when composing Self Destruct Messages:
● Yes ○ No

Allow users to send Self Destruct Messages via the API:
● Yes ○ No

Specify which users are allowed to use the 'Send Self Destruct Message' Actions menu item for Password records:

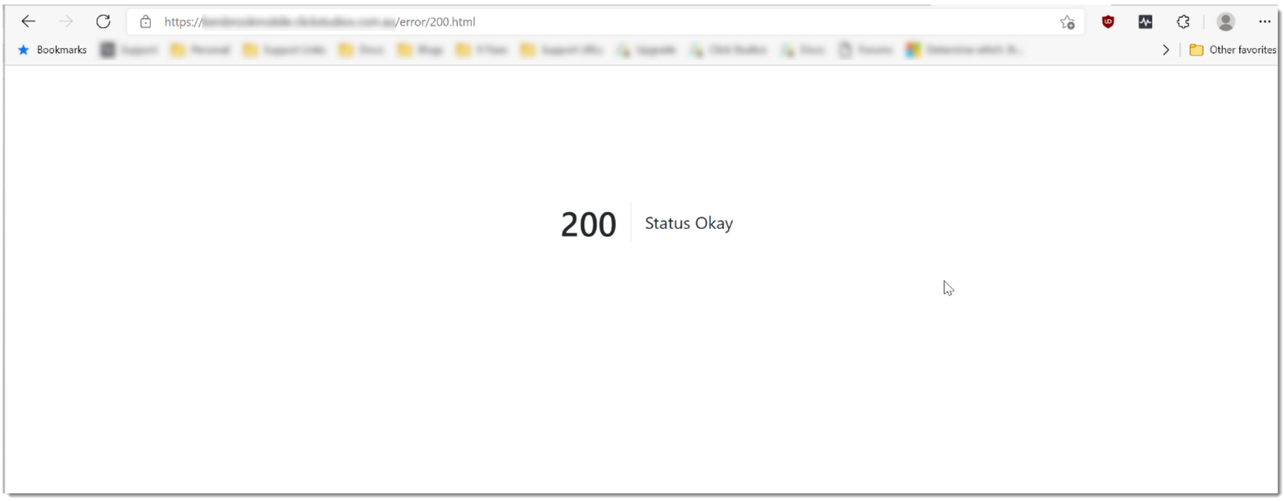
Default Passphrase: SelfPass9119
If Passphrase protection is mandatory, and no Passphrase is associated with the contact you are sending a message to, then this Passphrase will be used to protect the message.

Separate Site URL:
Specify your Passwordstate Application Server URL here if you wish Self Destruct Messages to be access from there, as opposed to the embedded 'Self Destruct' site in your main Passwordstate install.

10 AppServer Troubleshooting Guide

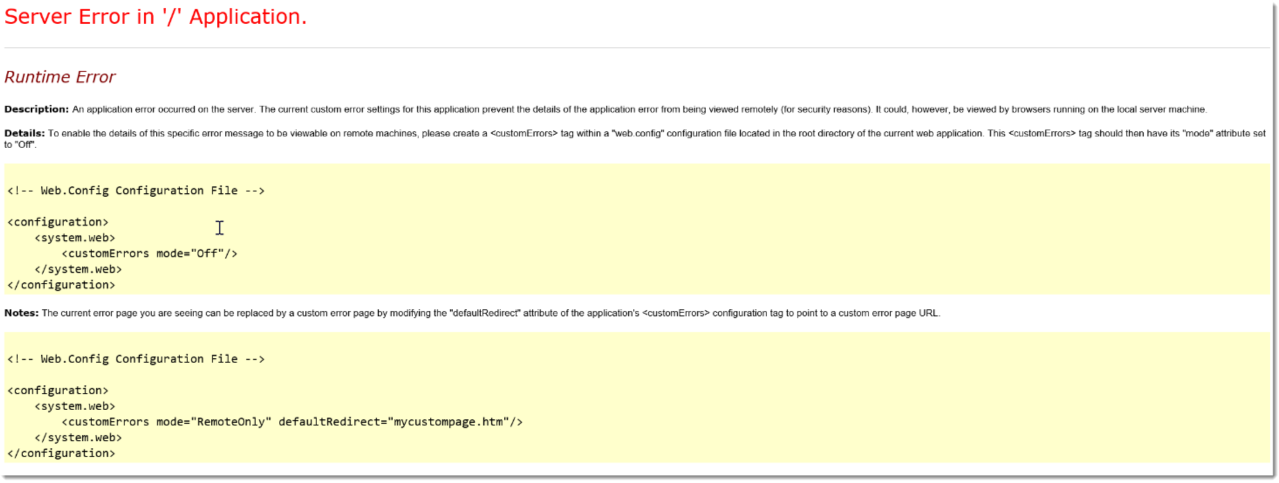
In this section we'll troubleshoot the App Server not working

First test to do is try browsing to your App Server URL and if the website is working correctly, you will get a **200 | Status Okay** message as per the below screenshot. This is the URL you have set under **Administration** -> **System Settings** -> **Mobile Access Options**



200 Status Okay

If you see an Error like this screenshot below, log directly into your App Server and try browsing to your URL again. You should get a more verbose error message when logged directly into the server which can help troubleshoot the issue:



Server Error in '/' Application.

Runtime Error

Description: An application error occurred on the server. The current custom error settings for this application prevent the details of the application error from being viewed remotely (for security reasons). It could, however, be viewed by browsers running on the local server machine.

Details: To enable the details of this specific error message to be viewable on remote machines, please create a <customErrors> tag within a "web.config" configuration file located in the root directory of the current web application. This <customErrors> tag should then have its "mode" attribute set to "Off".

```
<!-- Web.Config Configuration File -->

<configuration>
    <system.web>
        <customErrors mode="Off"/>
    </system.web>
</configuration>
```

Notes: The current error page you are seeing can be replaced by a custom error page by modifying the "defaultRedirect" attribute of the application's <customErrors> configuration tag to point to a custom error page URL.

```
<!-- Web.Config Configuration File -->

<configuration>
    <system.web>
        <customErrors mode="RemoteOnly" defaultRedirect="mycustompage.htm"/>
    </system.web>
</configuration>
```

Error 1:

"A network-related or instance-specific error occurred while establishing a connection to SQL Server. The server was not found or was not accessible. Verify that the instance name is correct and that SQL Server is configured to allow remote connections"

What does this mean?

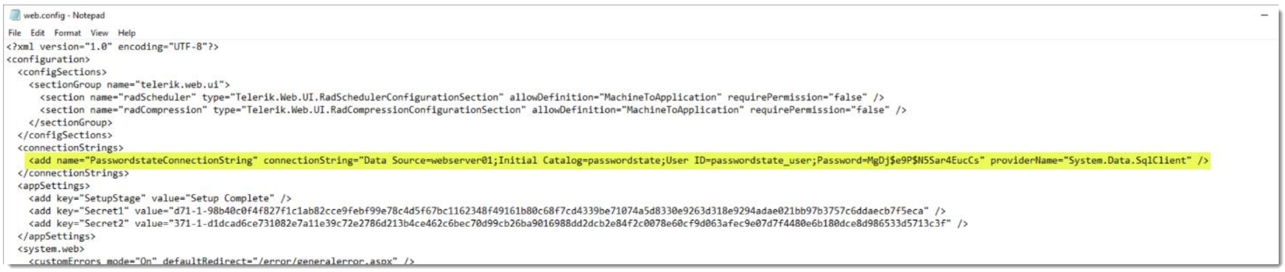
Your App Server needs to be able to communicate directly to your Passwordstate database in order for it to work successfully. There's a few possible reasons why your App Server cannot comminucate to your database server, and below are some possible fixes for this:

Fix 1:

First confirm that you have copied the Connection String out of your web.config file from your core Passwordstate webserver across to the App Server web.config file. The database server name, SQL user and password need to be the same on both servers.

Please note if your web.config file is encrypted, you cannot copy the encrypted text across from the primary web.config file to the App Server web.config. You will need to decrypt it first and copy across the clear text you see. A good tutorial on what an encrypted web.config file looks like can be found here: https://forums.clickstudios.com.au/topic/2699-encrypting-and-decrypting-the-webconfig-file/

An example of a clean Connection String to copy across can be seen in screenshot below:



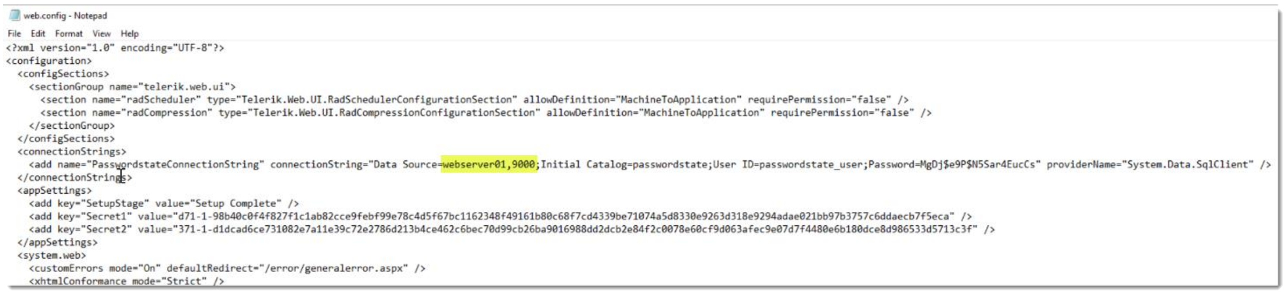
```
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
  <configSections>
    <sectionGroup name="telerik.web.ui">
      <section name="radScheduler" type="Telerik.Web.UI.RadSchedulerConfigurationSection" allowDefinition="MachineToApplication" requirePermission="false" />
      <section name="radCompression" type="Telerik.Web.UI.RadCompressionConfigurationSection" allowDefinition="MachineToApplication" requirePermission="false" />
    </sectionGroup>
  </configSections>
  <connectionStrings>
    <add name="PasswordstateConnectionString" connectionString="Data Source=webserver01;Initial Catalog=passwordstate;User ID=passwordstate_user;Password=MgDj$e9P$N5Sar4EucCs" providerName="System.Data.SqlClient" />
  </connectionStrings>
  <appSettings>
    <add key="SetupStage" value="Setup Complete" />
    <add key="Secret1" value="d71-1-98b40c0f4f827f1c1ab82cce9febf99e78c4d5f67bc1162348f49161b80c68f7cd4339be71074a5d8330e9263d318e9294adae021bb97b3757c6ddaecb7f5eca" />
    <add key="Secret2" value="371-1-d1dcad6ce731082e7a11e39c72e2786d213b4ce462c6bec70d99cb26ba9016988dd2dcb2e84f2c0078e60cf9d063afec9e07d7f4480e6b180dce8d986533d5713c3f" />
  </appSettings>
  <system.web>
    <customErrors mode="On" defaultRedirect="/error/generalerror.aspx" />
```

Fix 2:

Remote Directly into the App Server and perform a database connectivity test to you Passwordstate database server. An example of this in Powershell using the connection string above is:

Test-NetConnection webserver01 -Port 1433

1433 is the default port used for SQL, but is configurable. If you have changed the port, it will be referenced in your Connection String as per below screenshot:



```
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
  <configSections>
    <sectionGroup name="telerik.web.ui">
      <section name="radScheduler" type="Telerik.Web.UI.RadSchedulerConfigurationSection" allowDefinition="MachineToApplication" requirePermission="false" />
      <section name="radCompression" type="Telerik.Web.UI.RadCompressionConfigurationSection" allowDefinition="MachineToApplication" requirePermission="false" />
    </sectionGroup>
  </configSections>
  <connectionStrings>
    <add name="PasswordstateConnectionString" connectionString="Data Source=webserver01,9000;Initial Catalog=passwordstate;User ID=passwordstate_user;Password=MgDj$e9P$N5Sar4EucCs" providerName="System.Data.SqlClient" />
  </connectionStrings>
  <appSettings>
    <add key="SetupStage" value="Setup Complete" />
    <add key="Secret1" value="d71-1-98b40c0f4f827f1c1ab82cce9febf99e78c4d5f67bc1162348f49161b80c68f7cd4339be71074a5d8330e9263d318e9294adae021bb97b3757c6ddaecb7f5eca" />
    <add key="Secret2" value="371-1-d1dcad6ce731082e7a11e39c72e2786d213b4ce462c6bec70d99cb26ba9016988dd2dcb2e84f2c0078e60cf9d063afec9e07d7f4480e6b180dce8d986533d5713c3f" />
  </appSettings>
  <system.web>
    <customErrors mode="On" defaultRedirect="/error/generalerror.aspx" />
    <xhtmlConformance mode="Strict" />
```

If this Open Port test returns a failure, then most likely a firewall is blocking access between your App Server and Database server.

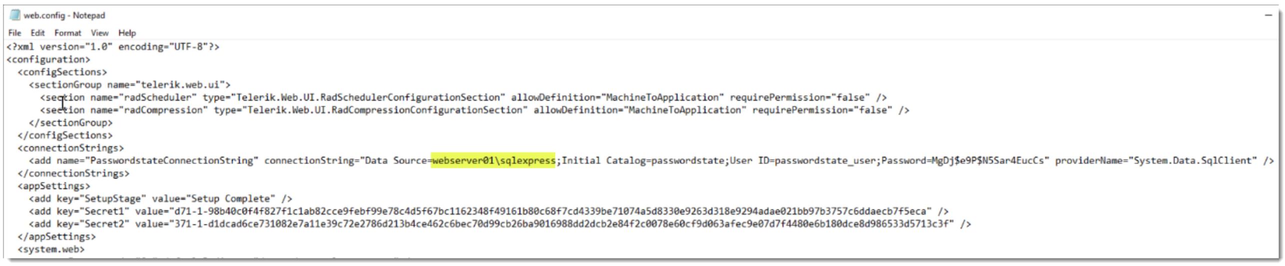
If this test fails it could also possibly be DNS for the Database server name is not resolvable from your App Server. A quick test to check DNS working when logged into your app server is as follows, either in a command prompt, or in Powershell:

NSLookup webserver01

If this test fails, please investigate DNS to confirm it is set up correctly.

Fix 3:

If you are using SQL Express you may need to enable TCP/IP on your database server, and possibly set a static Port. SQL Express by default uses a dynamic port and setting a static port can ensure firewall rules are working correctly. An example of what a SQL Express instance looks like in you web.config file is as per below screenshot:



```
<?xml version="1.0" encoding="UTF-8"?>
<configuration>
  <configSections>
    <sectionGroup name="telerik.web.ui">
      <section name="radScheduler" type="Telerik.Web.UI.RadSchedulerConfigurationSection" allowDefinition="MachineToApplication" requirePermission="false" />
      <section name="radCompression" type="Telerik.Web.UI.RadCompressionConfigurationSection" allowDefinition="MachineToApplication" requirePermission="false" />
    </sectionGroup>
  </configSections>
  <connectionStrings>
    <add name="PasswordstateConnectionString" connectionString="Data Source=webserver01\sqlexpress;Initial Catalog=passwordstate;User ID=passwordstate_user;Password=MgDj$e9P$N5Sar4EucCs" providerName="System.Data.SqlClient" />
  </connectionStrings>
  <appSettings>
    <add key="SetupStage" value="Setup Complete" />
    <add key="Secret1" value="d71-1-98b40c0f4f827f1c1ab82cce9febf99e78c4d5f67bc1162348f49161b80c68f7cd4339be71074a5d8330e9263d318e9294adae021bb97b3757c6ddaecb7f5eca" />
    <add key="Secret2" value="371-1-d1dcad6ce731082e7a11e39c72e2786d213b4ce462c6bec70d99cb26ba9016988dd2dcb2e84f2c0078e60cf9d063afec9e07d7f4480e6b180dce8d986533d5713c3f" />
  </appSettings>
  <system.web>
```

To learn how to fix this issue, please see Section 3 in this document: https://www.clickstudios.com.au/downloads/version9/Installation_Instructions.pdf

Fix 4:

If you are using the High Availability Module of Passwordstate, it’s possible you are also using SQL Replication with a “SQL Listener”. If using one of these you may need to open port **1434 UDP** on your database server, unless you have specially have changed this port.