



RIPPLESTONE ADMINISTRATOR GUIDE

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Overview

Ripplestone is a web portal that enables you to easily deploy Crystal Reports and other documents on your intranet or external web site. Ripplestone has a simple and easy to use web interface that requires little training.

Ripplestone is installed as a web application that runs on Windows PC's and Servers using Internet Information Services (IIS). Ripplestone is built using Microsoft Visual Studio 2015, ASP.NET and VB.NET, Crystal Reports for Visual Studio and the .NET Framework 4.5.1

Ripplestone File Locations

By default the installation of Ripplestone is C:\Sites\Ripplestone, but this location can be changed after Ripplestone is installed. The installation folder will need to have Read permissions for Network Service on the entire Ripplestone folder and will need Full Control for the Data folder and the ReportFolders folder.

Ripplestone Database

Ripplestone uses a database that can be either Microsoft Jet Engine (mdb) or Microsoft SQL Server. If using the Jet engine, the file database file is located in C:\Sites\Ripplestone\Data\Ripplestone.mdb and nothing else is required for the database. This is a good solution for trying Ripplestone and for smaller installations. If SQL Server is used any version of SQL Server can be used including the free Express versions. The SQL Server can also be installed either locally on the same server or on a separate server.

System Requirements

Required Hardware and Software

- Windows Server 2012 R2, Windows Server 2012, Windows Server 2008 R2 SP1, Windows Server 2008 SP2, Windows 10, Windows 8.1, Windows 7.
- Either 64 bit or 32 bit
- IIS needs to be installed and activated. IIS also needs to be installed before the .NET Framework or the .NET Framework will need to be re-registered with IIS.
- 200 MB of disk space
- 4 GB of RAM
- 1.6 GHz Processor
- .NET Framework version 4.5.1 or later

Recommended Hardware and Software

This is the recommended configuration for a production environment. We have tested this setup with 100 – 300 simulated concurrent users with very little scaling problems. To view the test results please contact us.

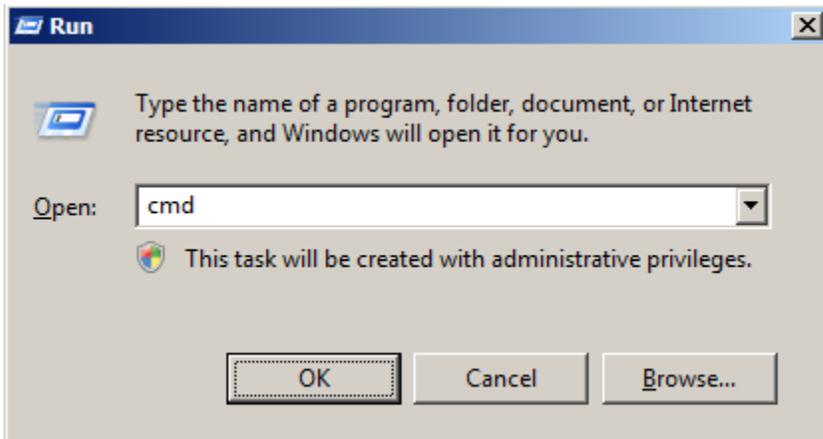
- Windows Server 2008 R2 or Windows Server 2012 R2 (this can be a VM)
- 8 GB of RAM
- 3.0 GHz Processor
- SQL Server (any version will work)

Registering ASP.NET with IIS

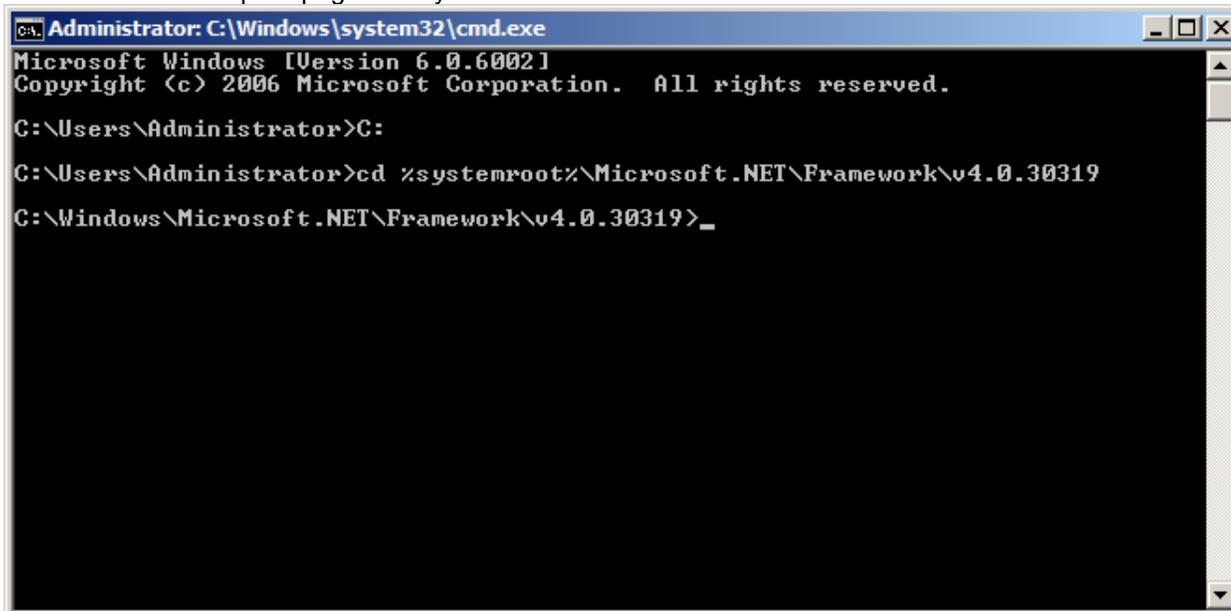
For Ripplestone to run correctly with IIS and the Microsoft .NET Framework, the framework needs to be registered with IIS. If IIS is installed before .NET then the installation of .NET will register with IIS during the install. If .NET is installed before IIS then .NET will need to be manually installed. Follow the steps below to register the correct version of the framework with IIS.

To register the .NET framework with IIS you need to run the aspnet_regiis command.

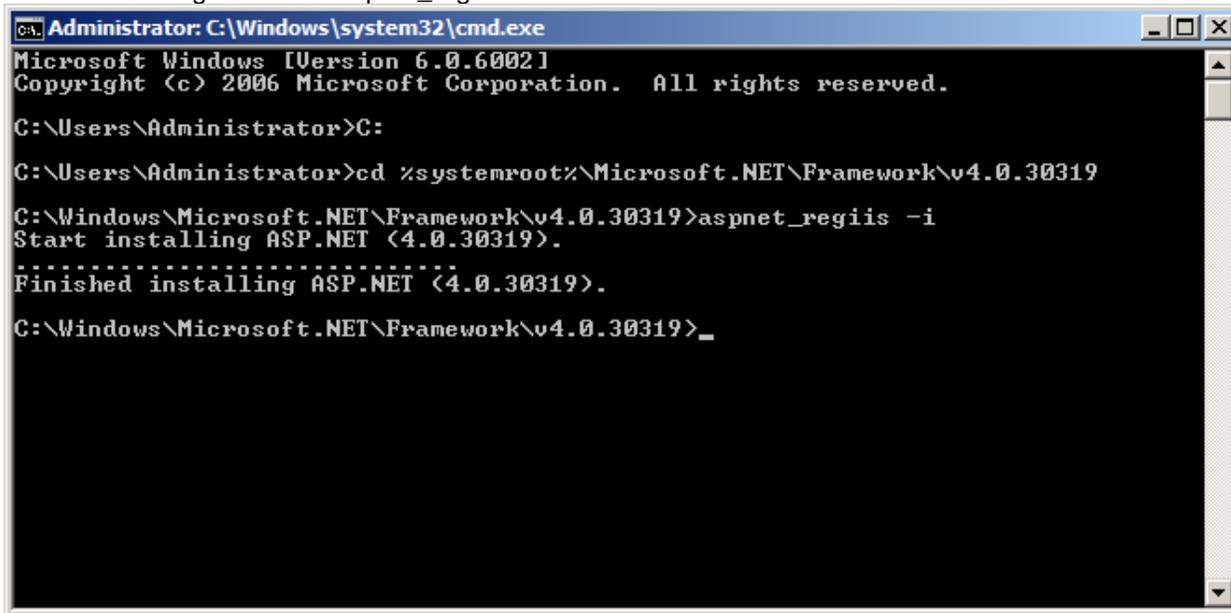
Click on Start/Run



From the command prompt go to %systemroot%\Microsoft.NET\Framework\v4.0.30319



Run the following command `aspnet_regiis -i`



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.0.6002]
Copyright (c) 2006 Microsoft Corporation. All rights reserved.

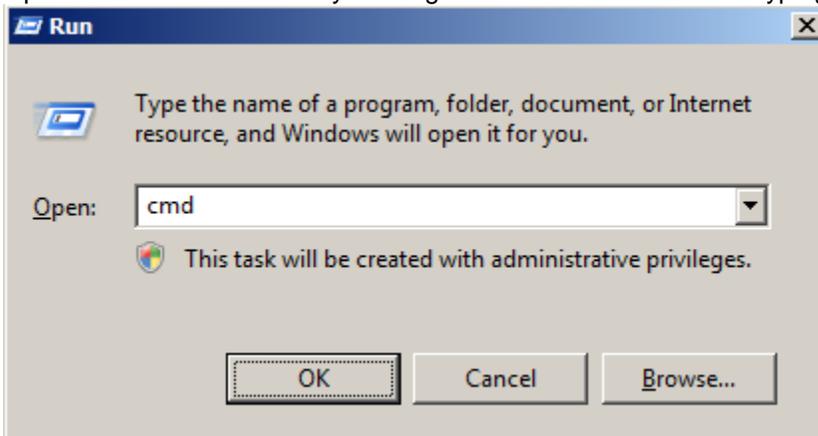
C:\Users\Administrator>C:
C:\Users\Administrator>cd %systemroot%\Microsoft.NET\Framework\v4.0.30319
C:\Windows\Microsoft.NET\Framework\v4.0.30319>aspnet_regiis -i
Start installing ASP.NET (4.0.30319).
.....
Finished installing ASP.NET (4.0.30319).
C:\Windows\Microsoft.NET\Framework\v4.0.30319>_
```

Register the Ripplestone Scheduler Service

For the Ripplestone scheduler to run scheduled jobs the scheduler program needs to run as a service. The scheduler gets registered with Windows during the installation of Ripplestone, but if you need to manually schedule or un-install the service follow the steps below.

To un-install the Ripplestone Scheduler Service:

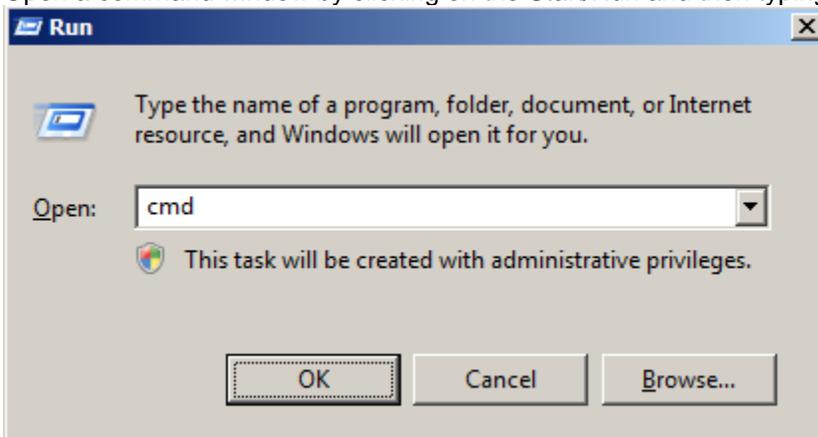
1. Open a command window by clicking on the Start/Run and then typing cmd in the textbox and press OK.



2. From the command type `CD C:\Sites\Ripplestone\bin` to get to the folder that contains the scheduler program. If this folder doesn't exist then it will need to be created and the `RSScheduler.exe` needs to be in the bin folder.
3. From this folder run the following line to un-install the service:
`C:\Windows\Microsoft.NET\Framework\v4.0.30319\InstallUtil /u RSScheduler.exe`
4. This will display if the scheduler was successfully un-installed or not.

To install the Ripplestone Scheduler Service:

1. Open a command window by clicking on the Start/Run and then typing cmd in the textbox and press OK.

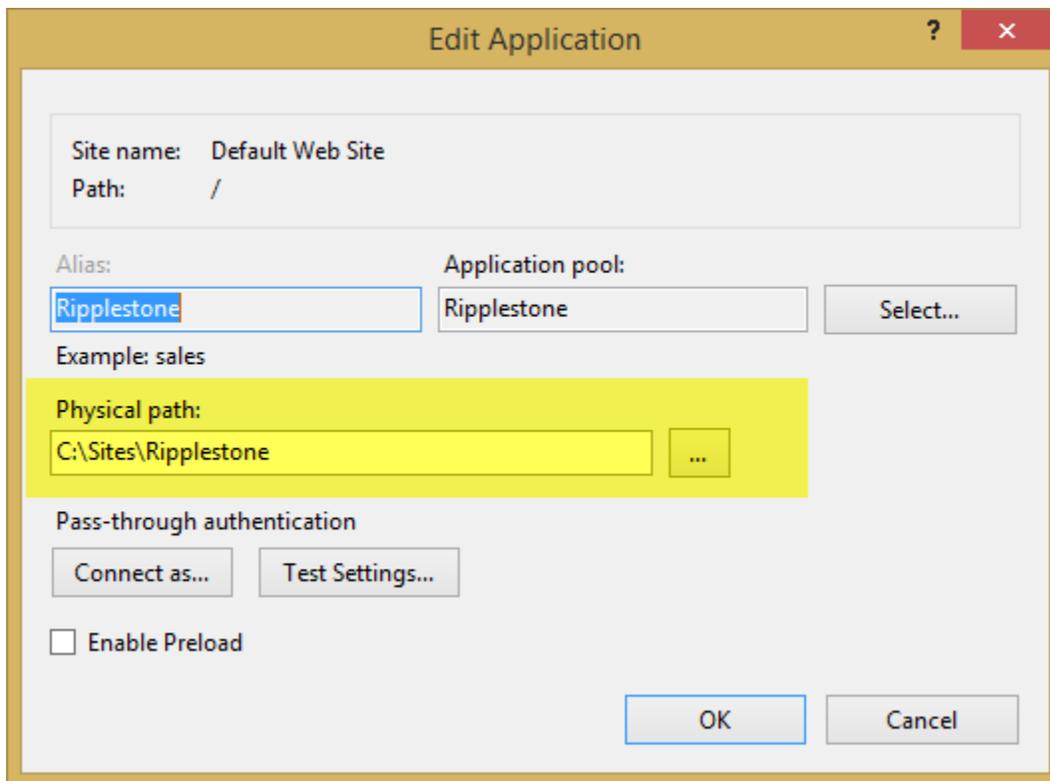


2. From the command type `CD C:\Sites\Ripplestone\bin` to get to the folder that contains the scheduler program, or whichever folder contains the Ripplestone installation.
3. From this folder run the following line to install the service:
`C:\Windows\Microsoft.NET\Framework\v4.0.30319\InstallUtil RSScheduler.exe`
4. This will display if the scheduler was successfully install or not.
5. You will then need to open the Services from the Administrative Tools and start the Ripplestone Scheduler.

Moving the Ripplestone Location

To move the location of Ripplestone from the default location (C:\Sites\Ripplestone) to another location follow the steps below:

1. Copy files from C:\Sites\Ripplestone to the new location. For example D:\Sites\Ripplestone
2. Update the file InstallScripts\RSInstall.vbs and change the strBasePath to the new location
3. Update the file Data\Ripplestone.config and changed the ConnectString (only if you are using Access) and the BasePath values to the new location
4. If you are using Access for the Ripplestone database, update the web.config file and change the RipplestoneAccess value to the new location.
5. UPDATE PERMISSIONS
6. CHANGE THE LOCATION OF THE SCHEDULERd:
- 7.
8. Within IIS, change the location the website file are in. Open the Basic Settings and change the Physical path to the new location.



9. Login to Ripplestone and go to the About page to check the location.

Changing the Timeout

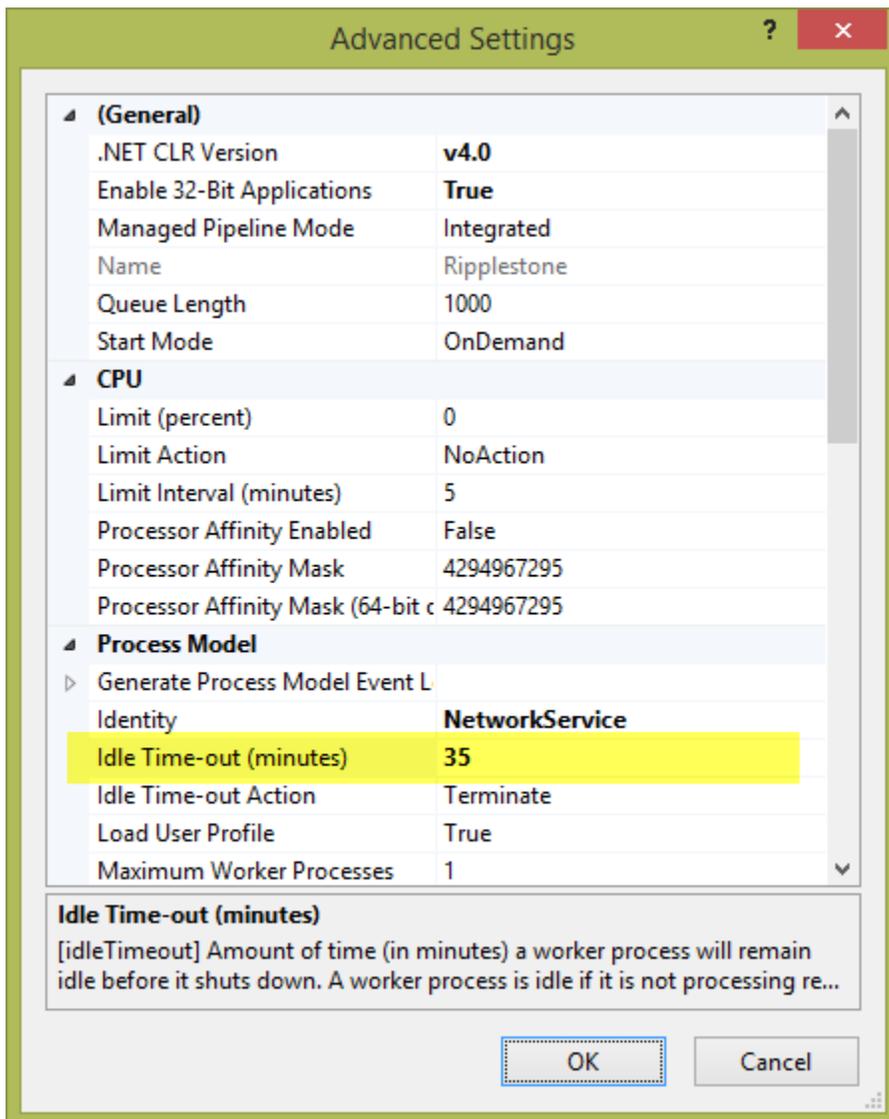
Ripplestone has a default timeout period of 20 minutes. If the application has not been used for 20 minutes, the session will end and the user will need to login again to continue. The default value can be changed by editing the web.config file located in C:\Sites\Ripplestone. The web.config file is an XML file that can be edited with any text editor or XML reader. Look for the authentication section and change the timeout to whatever value (in minutes) you would like. Below is an example of the authentication section with the default value of 20 minutes.

```
<authentication mode="Forms">
  <forms name="RSAuth" loginUrl="SignOn.aspx" protection="All" timeout="20"/>
</authentication>
```

You will also need to change the sessionState to the same value as the timeout above, this section is located below the authentication section.

```
<sessionState timeout="20" />
```

Within IIS change the Ripplestone Application Pool Idle Time-out value to be a few minutes more than the timeout values in the web.config file. Below is the Advanced Settings dialog box for the Ripplestone Application Pool.



Change the File Upload Size

When you publish a Crystal Report file or document to Ripplestone you are moving the physical file from the local storage to the web server. Ripplestone has a default file size of 20 MB, so report files that are larger than 20 MB will not upload.

This size can be changed in the web.config file located in C:\Sites\Ripplestone. The web.config file is an XML file that can be edited with any text editor or XML reader. Look for the httpRuntime section and change the maxRequestLength to whatever value you would like (1024 = 1MB).

Below is an example of the httpRuntime section with the default values that come with Ripplestone.

```
<!--Sets the max size for file uploads: 20480 = 20MB and 3600 = 1 hour -->  
<httpRuntime maxRequestLength="20480" executionTimeout="1800" requestValidationMode="2.0"/>
```

You will also need to change the requestLimits section

```
<requestFiltering>  
  <!-- Upload Size - 20MB -->  
  <requestLimits maxAllowedContentLength="20971520"/>  
</requestFiltering>
```

Changing the location of the Crystal Report Viewer Files

Ripplestone uses the Crystal Report files located in the default IIS location to view the reports. This default location might need to be moved to allow the Ripplestone website to read the files. The default location is in the inetpub folder

```
C:\inetpub\wwwroot\aspnet_client\system_web\4_0_30319\crystalreportviewers13
```

To change the location copy the crystalreportviewer13 folder from the location above to the Ripplestone folder. The default location for Ripplestone is below.

```
C:\Sites\Ripplestone\crystalreportviewers13
```

The web.config file located in the Ripplestone folder will also need to be updated to indicate the new location of the files.

The section that will need to be changed is the businessObjects section. A new key will need to be added called resourceURI. The new line is highlighted below.

```
<businessObjects>
  <crystalReports>
    <crystalReportViewer>
      <add key="documentView" value="printlayout" />
      <add key="EnableTextClipping" value="true" />
      <add key="maxNumberListOfValues" value="500" />
      <add key="resourceURI" value="~/crystalreportviewers13" />
    </crystalReportViewer>
  </crystalReports>
</businessObjects>
```

If this doesn't fix the problem, try adding the full path for the files. This is the same folder structure that is under the inetpub\wwwroot folder. In the Ripplestone folder create the folder structure of aspnet_client\system_web\4_0_30319\crystalreportviewers13 and then copy the file from the crystalreportviewers13 folder into this new folder. You will also need to change the resourceURI line in the web.config file to show the new path to the files. Note the forward slashes in the web.config file.

```
<businessObjects>
  <crystalReports>
    <crystalReportViewer>
      <add key="documentView" value="printlayout" />
      <add key="EnableTextClipping" value="true" />
      <add key="maxNumberListOfValues" value="500" />
      <add key="resourceURI"
value="~/aspnet_client/system_web/4_0_30319/crystalreportviewers13" />
    </crystalReportViewer>
  </crystalReports>
</businessObjects>
```

Calling a report from outside of Ripplestone (RS Express)

This feature, called RS Express, allows a report to be run and viewed in the report viewer without first logging into Ripplestone. This allows users of Ripplestone to run reports that are published in Ripplestone from external applications without the users first logging into Ripplestone and running the report from the Ripplestone application.

RS Express uses a query string that is appended to the URL to provide information that the viewer and report need to run. This information is normally provided by the Ripplestone application, but will now be provided using the query string

Below are instructions on how to use this feature

1. The query string can take up to 8 parameters. The first 2 are required and the others are optional. The name and description of each are listed below.

Parameter name	Required	Description
DocID	X	The ID of the published document. Note: The report must already be published within Ripplestone.
User	X	The name of an existing user within Ripplestone. For example, Administrator You can also use the encrypted user name described below.
Params		This is used to pass in values for report parameters. If the report has multiple parameters each parameter is separated by a comma. Range parameters can be passed in and are separated by a semi-colon (;). For example, if a report had two parameters, a Country parameter and a HireDate parameter and the Hire Date parameter is a range type, then the syntax would be Params=USA,4/1/2017;8/15/2017. This would pass "USA" into the Country parameter and would pass in the two dates as the start value and end value for the HireDate parameter.
Key		A system generated key to make this report unique. This helps make the query string more secure.
ExtFileName		This is used to pass in a file name that will be used to save a copy of the report. The Send To feature needs to be turned on in the Edit Document page to be used.
FileLocation		This is an ID for the Saved File Location that should be used to save the file. This is setup in the Saved File Location page and is used by the Send To feature along with the ExtFileName above. Using this will allow the report to be exported to the provided name and saved to a predefined location.
Display		This option determines if the report should be displayed on the users screen.

	<p>Values can be 1, 0, yes, no, true or false.</p> <p>This would be used with the two options about to save the report to a folder and then not be displayed to the user.</p>
Viewer	<p>This option allow the report to be export to different formats.</p> <p>Values include:</p> <ul style="list-style-type: none"> • CRWebViewer • Pdf • Excel (Formatted in xls format) • ExcelData (data only in xls format) • ExcelWorkbook (data only in xlsx format) • CSV • Text • Tab (text in tab separated format) • Word • RTF • EditableRTF

- To create the URL you create a valid URL to the CRViewer.aspx page. For example, www.ripplestonedemo.net/CRViewer.aspx or [//servername/ripplestone/CRViewer.aspx](http://servername/ripplestone/CRViewer.aspx)
- Then to append the query string; add a question mark (?) followed by the parameters for the query string. These are the parameters listed above. The parameters are separated by a "&"

RS Express Tab

To help with creating the query string we have added a tab called RS Express to the Edit Document page. This tab allows you to turn on or off the RS Express feature for this document, create a unique key and view a template for the query string.

Descriptions	Published Folder	Send To	Web Viewer Options	Dynamic Pick Lists	Database Connection	RS Express	Usage
<p><input checked="" type="checkbox"/> RS Express</p> <p><input checked="" type="checkbox"/> Active <input type="text" value="Use Global Setting"/> ▼</p> <p><input checked="" type="checkbox"/> Unique Key 58c03ccb <input type="button" value="Create a New Key"/></p> <p><input checked="" type="checkbox"/> Query String CRViewer.aspx?DocID=87&User=Valid User Name&Key=58c03ccb</p>							
<p><input type="button" value="Save"/> <input type="button" value="Cancel"/></p>							

System Options for RS Express

The RS Express feature can be controlled at a system level on the System Setup and Configuration page.

- RS Express – Active: This option allows you to turn the RS Express feature on or off. Turning the feature off will not allow any published reports to use RS Express, unless the report overrides this option at the report level.
- Require Unique Key: This option will require that a unique system generated key be used in the query string. Using the key makes the query string more secure by eliminating the ability for a user to guess different DocID values.
- Use Encrypted User Name: This option uses an encrypted user name instead of the plain text user name. This increases the security when the user name is used for Row Level Security and you do not want users entering other names into the query string

System Setup and Configuration

Configuration	Appearance	Publishing Options	Viewer Options
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Encrypted User Name

To get the encrypted user name for the query string, go to the Edit User page and then the User Options tab. This will contain the user's name in an encrypted format. This can then be used instead of the normal user name.

For example, the URL below is using the encrypted user name:

<http://Ripplestone/CRViewer.aspx?DocID=53&User=cfRiKypX6cl=>

General	User Options	User ID Tokens	Roles	User Security	Usage
	<p> Use Minimal Home Page: <input type="text" value="Use Global Setting"/></p> <p> Display Favorites as Home Page: <input type="text" value="Use Global Setting"/></p> <p> Encrypted User Name: <input style="background-color: yellow;" type="text" value="cfRiKypX6cl="/></p>				

Examples of valid URL's

This is using a local server called ww7507048dev and is running the report "EmployeePhoneList.rpt" that is located in the Alabama folder for user Administrator.

<http://ww7507048dev/ripplestone/CRViewer.aspx?DocID=2&User=jlyon>

This is the same as above, but using the Ripplestone Demo site.

<http://www.ripplestonedemo.net/CRViewer.aspx?DocID=2&User=Administrator>

This is using the Ripplestone Demo site to run the report "DynamicPickListEmployeePhoneList.rpt" in folder Alabama for user Administrator with a value of CA for the reports parameter.

<http://www.ripplestonedemo.net/CRViewer.aspx?DocID=4&User=Administrator&Params=CA>

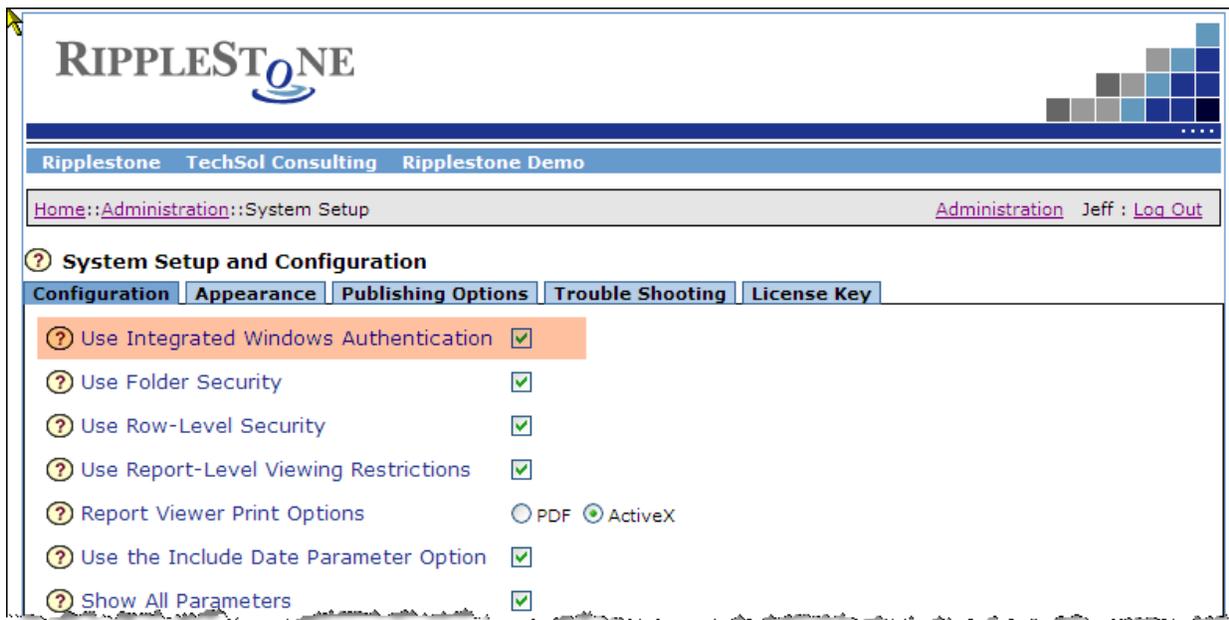
Windows Integrated Security

Integrated Windows Authentication makes use of the users existing Windows account for security. When using Integrated Windows Authentication, the user does not need to sign in using the Ripplestone login form, but existing Windows user accounts still must be registered in Ripplestone.

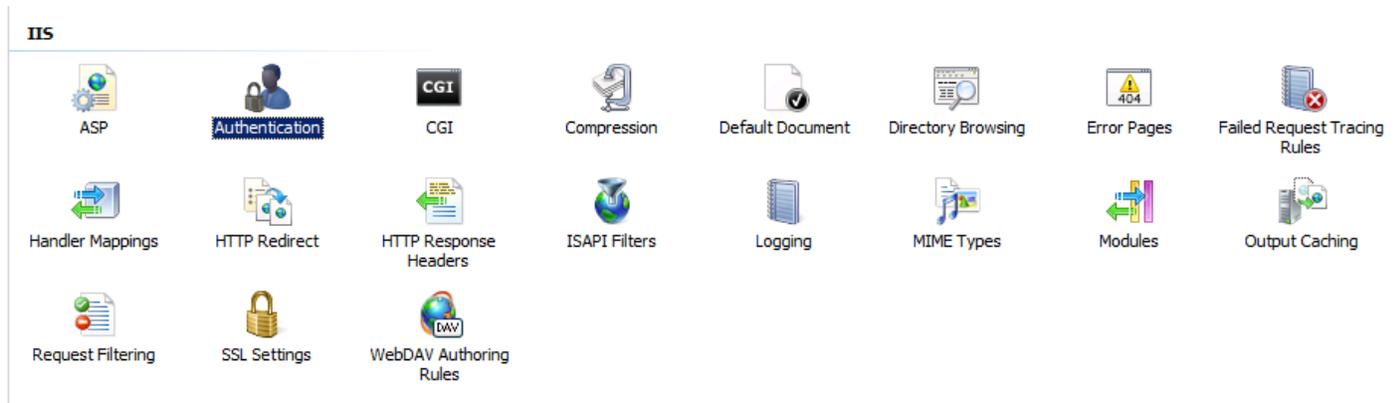
Setup

To enable Integrated Windows Security, perform the following four steps:

1. Change the setting in Ripplestone for Integrated Windows Authentication to Yes. This is completed from the System Setup and Configuration page



2. You need to change the Authentication for the Ripplestone website. Within IIS go to the Ripplestone website and double click on the Authentication icon.



- From the Authentication Section you will need to first disable the Anonymous Authentication and the Forms Authentication

Authentication

Group by: No Grouping		
Name ^	Status	Response Type
Anonymous Authentication	Disabled	
ASP.NET Impersonation	Enabled	
Basic Authentication	Disabled	HTTP 401 Challenge
Forms Authentication	Disabled	HTTP 302 Login/Redirect
Windows Authentication	Enabled	HTTP 401 Challenge

- Next you will need to enable the ASP.NET Impersonation and the Windows Authentication

Authentication

Group by: No Grouping		
Name ^	Status	Response Type
Anonymous Authentication	Disabled	
ASP.NET Impersonation	Enabled	
Basic Authentication	Disabled	HTTP 401 Challenge
Forms Authentication	Disabled	HTTP 302 Login/Redirect
Windows Authentication	Enabled	HTTP 401 Challenge

- Make sure that the Windows security on the folders used by Ripplestone is set correctly for each user or group who needs access to Ripplestone. The two folders that need to have security set are **C:\Sites\Ripplestone\Data** and **C:\Sites\Ripplestone\ReportFolders**. These two folders will need to have permissions for Full Control for the users that will be using Ripplestone. The easiest way to do this is to create a Windows group for the Ripplestone users and then give Full Control to this group for the 2 folders or you can grant the Everyone group full control.

You will also need to give Everyone or the Ripplestone Users and Network Service permission in the **C:\Windows\Temp** folder. This folder is used by Crystal Reports to store temporary report files.

Changing the SMTP Mail Server

The default configuration of Ripplestone uses an SMTP server that is hosted by Ripplestone. This will work for most users, but can be changed to use a different SMTP server or corporate mail server like Microsoft Exchange.

The web site and the scheduler both have their own configuration files that will need to be changed.

Web Site:

The web site configuration file is the web.config located in the C:\Sites\Ripplestone folder

Scheduler:

The scheduler configuration file is the RSScheduler.exe.config located in the C:\Sites\Ripplestone\bin folder

Both files have the same section that will need to be updated. Below is the section with the default settings. The line starting with **<network host=** is the line that will need to be updated. The host will change to be your SMTP server or Exchange server; it can either be the URL, Name or IP Address. If you do not need a user name and password you can remove those fields from the line.

After the changes have been made you will need to restart the scheduler service for the changes to read. The website will restart the next time a user uses the Ripplestone application.

```
<system.net>
  <mailSettings>
    <smtp deliveryMethod="Network" from="support@ripplestone.net">
      <network host="smtp.1and1.com" userName="emailer@ripplestone.com" password="rs!email"
port="587"/>
    </smtp>
  </mailSettings>
</system.net>
```

Create a New Skin

Skins in Ripplestone are created with CSS files and images.

The easiest way to create a new skin is to first copy the standard Ripplestone skin and then make changes to the new skin. By making your own skin you protect your changes from updates to the software that might replace the standard skins that are shipped with Ripplestone

1. Go to the skins folder at C:\Sites\Ripplestone\Style
2. Make a copy of the RSBlueBlocks.css or RSBlueBlocks_Wide.css files
3. Rename the copy to the skin name
4. Make any changes that you would like to the css file.
5. Save the file
6. Login to Ripplestone as a Super User
7. Go to the System Setup and Configuration page and then to the Appearance tab
8. Select the new skin from the Style Sheet dropdown
9. Refresh the browser to see the new skin. (If you are using Integrated Windows Authentication you might need to close the browser to see the new skin)

Changing the Logo

To change the logo in Ripplestone you need to add the new logo image to the Images folder and optionally to a sub-folder under the Images folder. Then the css style sheet will need to be change to access the new logo image.

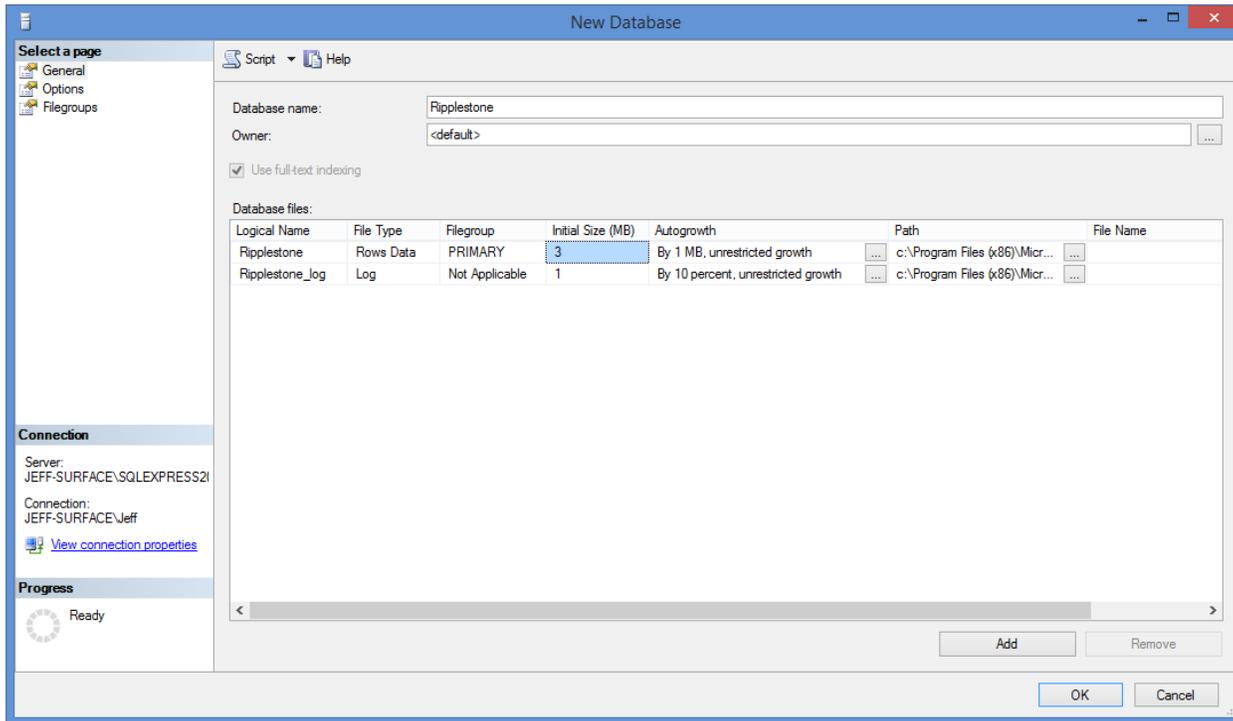
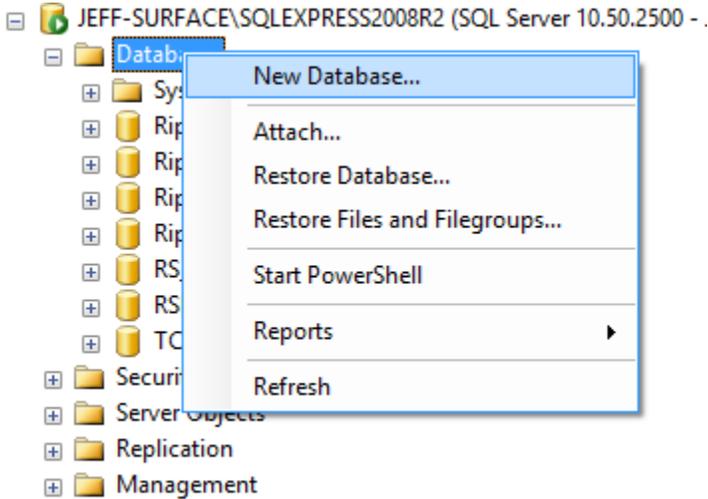
You can first create a new skin file by following the instructions on how to [Create a New Skin](#).

1. Copy the image to the Images folder or a sub-folder located at C:\Sites\Ripplestone\Images
2. Open the style sheet that you are currently using in a text editor or other reader that can read css files.
3. Search for the section called #HeaderImage2
4. Change the background-image line to point to the new logo image
5. Save the file
6. Refresh the browser

Create a Ripplestone SQL Server Database

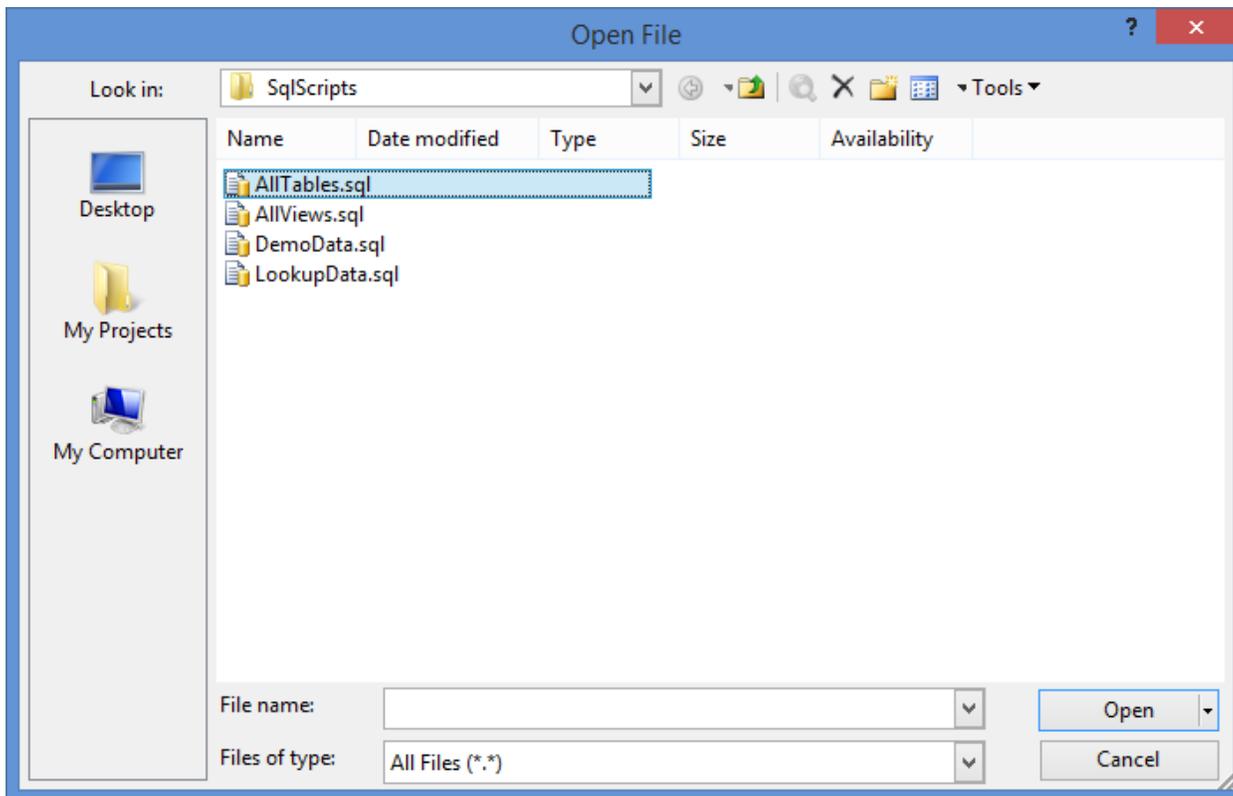
The following instructions create a SQL Server database with the demo data. These instructions and screenshots are from SQL Server 2008 R2.

Create a new database called Ripplestone



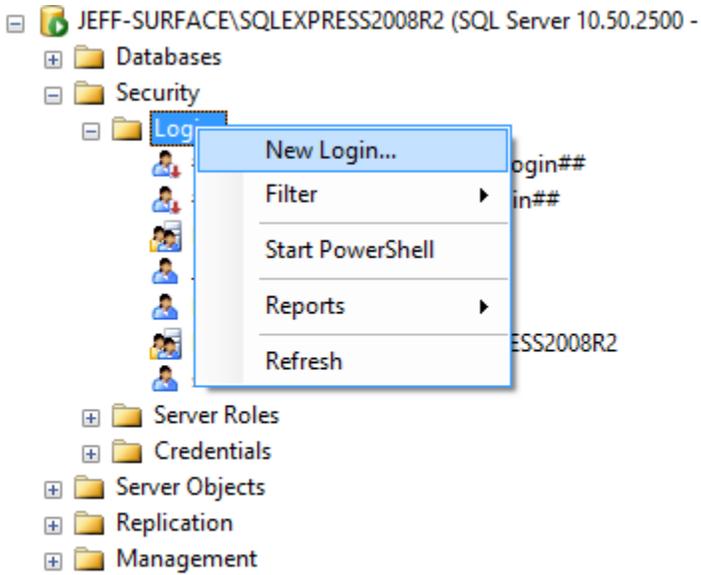
With the newly created database selected, click on File/Open/File... Select the SQL scripts located in C:\Sites\Ripplestone\SqlScripts and run the scripts in the following order

- AllTables.sql
- AllViews.sql
- LookupData.sql
- DemoData.sql



Create the Ripplestone User for SQL Server

The Ripplestone application uses a SQL Server account to login to the database. This user account needs to be created. To open the New Login form, select Security/Logins on the tree. Then click New Login...



From the New Login form type in “Ripplestone” as the Name and “**q!rsrun!8**” as the password.

The screenshot shows the 'Login - New' dialog box with the following configuration:

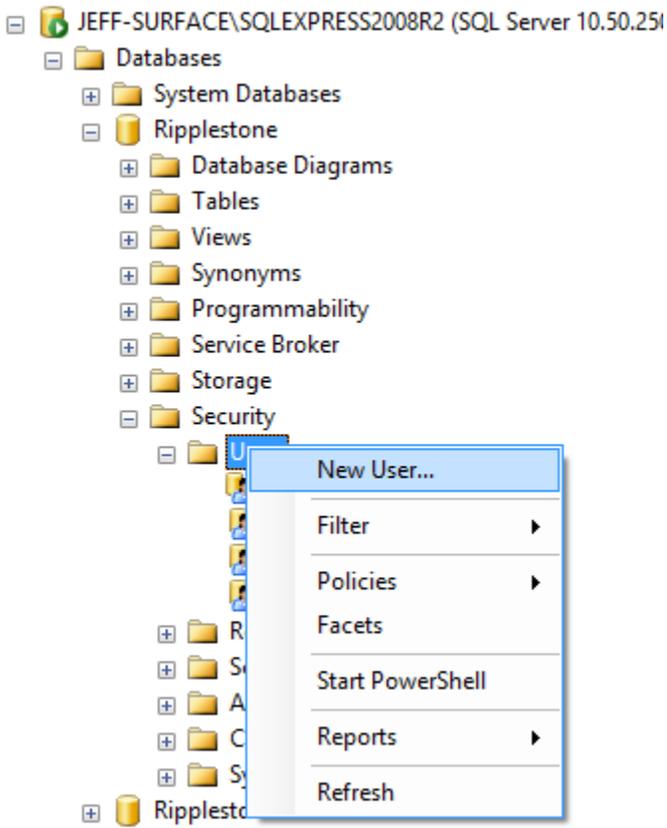
- Login name:** Ripplestone
- Authentication:** SQL Server authentication (selected)
- Password:** [Redacted]
- Confirm password:** [Redacted]
- Options:**
 - Specify old password
 - Enforce password policy
 - Enforce password expiration
 - User must change password at next login
- Mapping:**
 - Mapped to certificate
 - Mapped to asymmetric key
 - Map to Credential
- Mapped Credentials:** (Empty table)
- Default database:** master
- Default language:** <default>

The 'Connection' section displays:

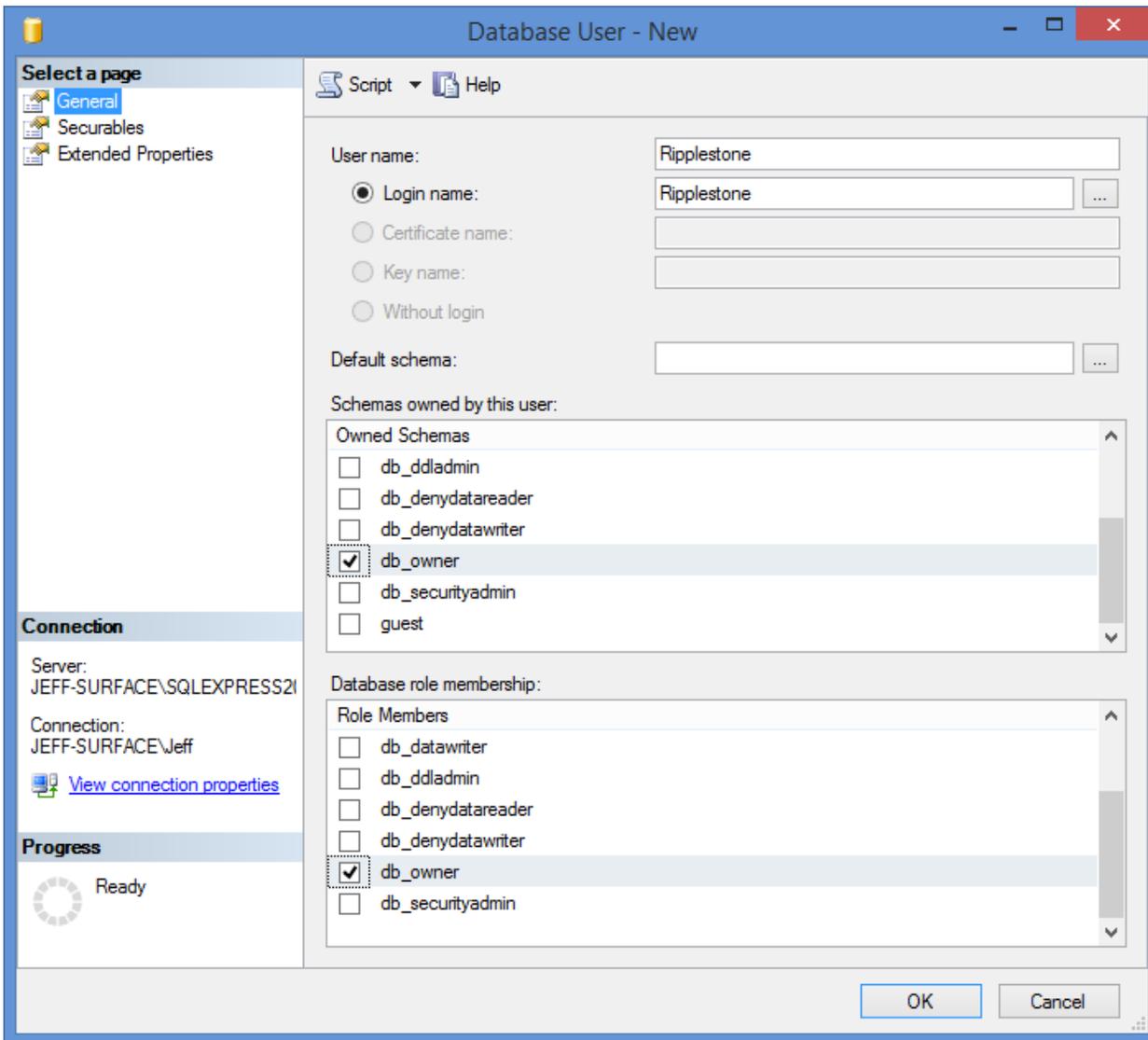
- Server: JEFF-SURFACE\SQLEXPRESS2
- Connection: JEFF-SURFACE\Jeff
- [View connection properties](#)

The 'Progress' section shows a 'Ready' status with a circular progress indicator.

The next step is to create a new user called Ripplestone. From the Databases/Ripplestone/Security/Users node, right click and select New User...



From the Database User form, use Ripplestone as both the User name and the Login name. Then make the new user the db_owner.



Changed the Configuration File to Use SQL Server

The next step is to update the Ripplestone configuration file to provide the connection string information for the new SQL Server database.

The configuration file is found at C:\Sites\Ripplestone\Data\Ripplestone.config. Open this file in notepad or another text editor. You should find a line that starts with <add key="ConnectionString" This line is the current ConnectionString and should point to the Access database. This line can be commented out by placing a "<!--" before the line and "-->" after the line

Then copy the following line into the Ripplestone.config file. The Data Source in this line is set to the local server and this will only work if SQL Server is installed on the same server as Ripplestone. If SQL Server is on another computer, then enter the computer name for the Data Source.

```
<add key="ConnectionString" value="Provider=SQLOLEDB.1;Data Source=(local);initial catalog=Ripplestone;User ID=Ripplestone;Password=q!rsrun!8;Persist Security Info=True;" />
```

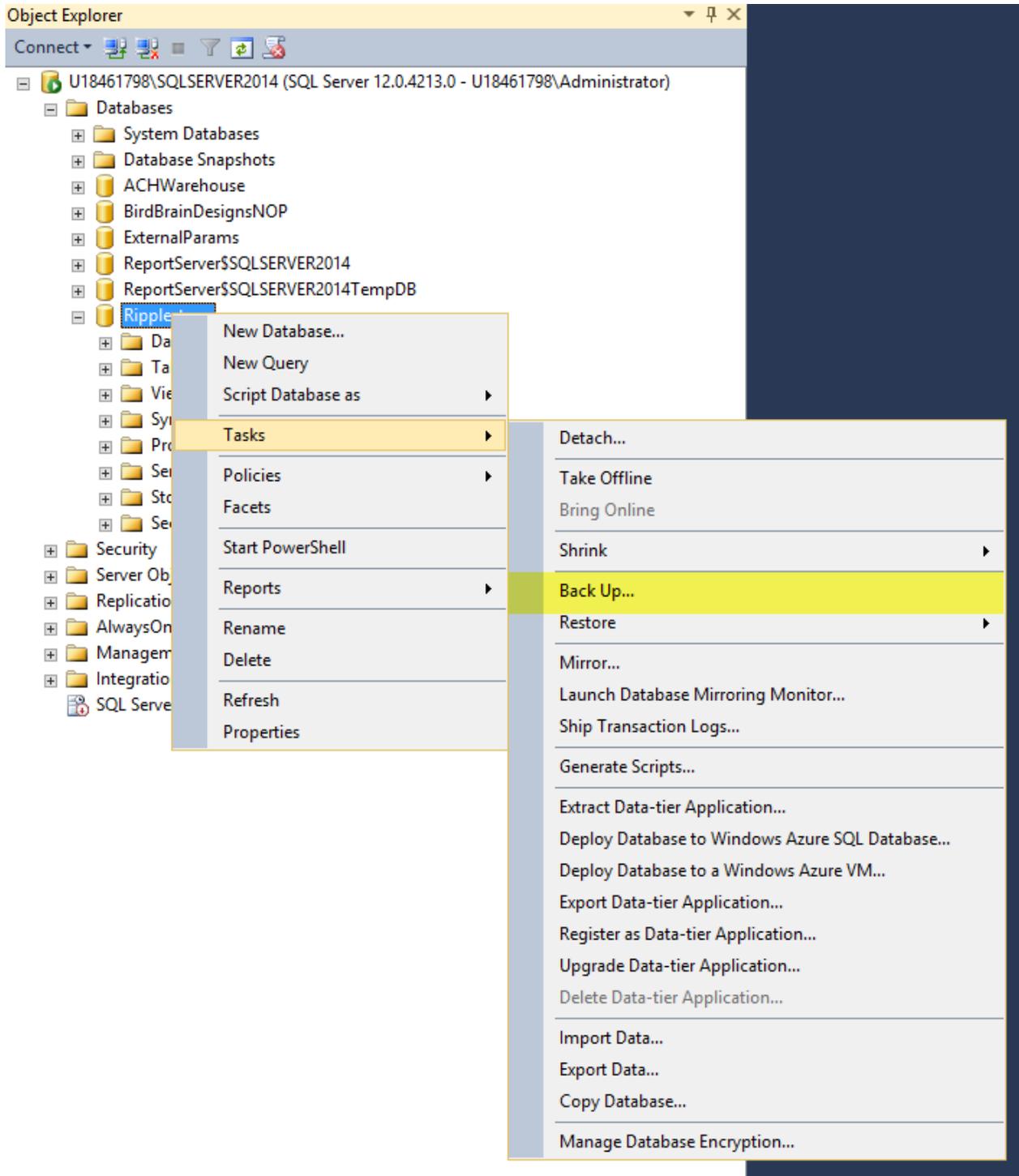
The second configuration file to change is the web.config file located in C:\Sites\Ripplestone. Look for the section called RipplestoneDAL and uncomment the line for SQL Server and comment out the line for Access. You will then need to look for the section called connectionString and update the connection string information with your SQL Server instance.

Restart IIS

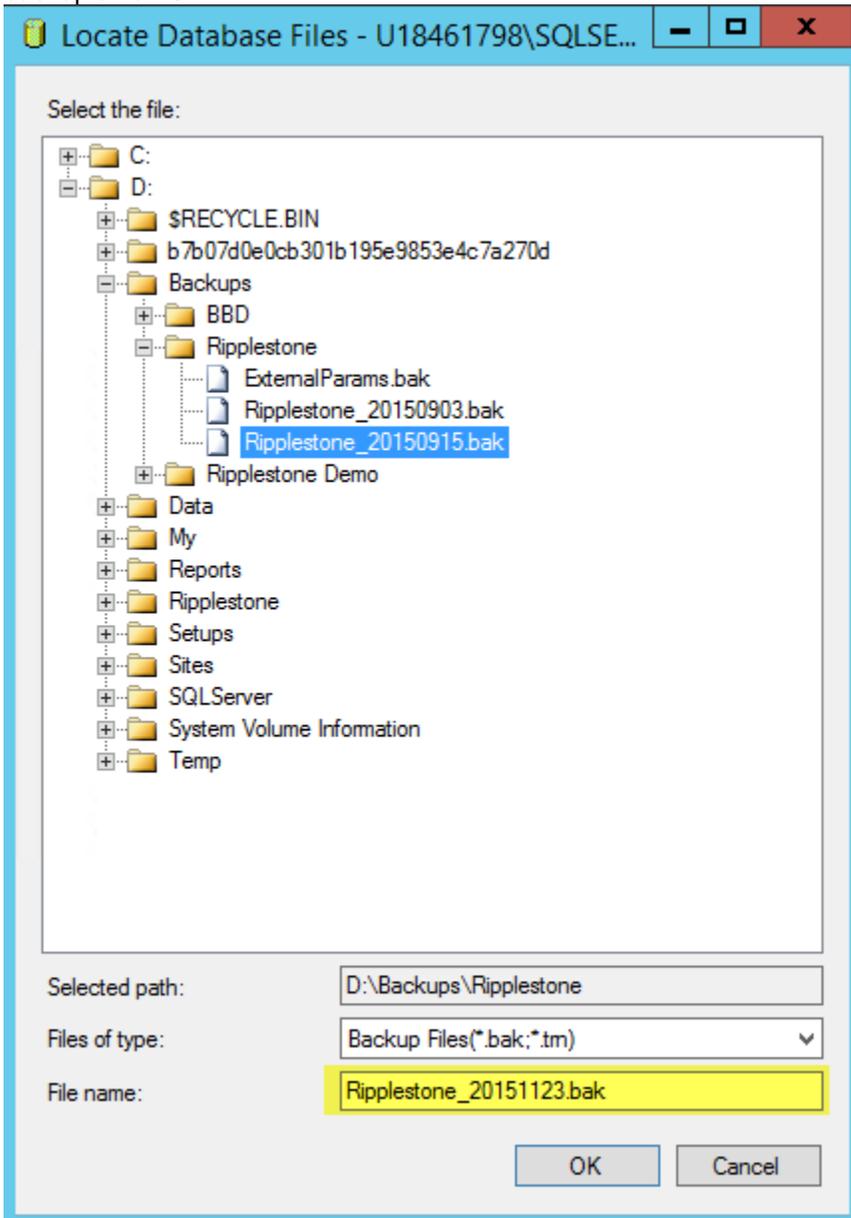
The last step is to restart IIS. This can be done by clicking on Start/Run and typing IISRESET and pressing OK.

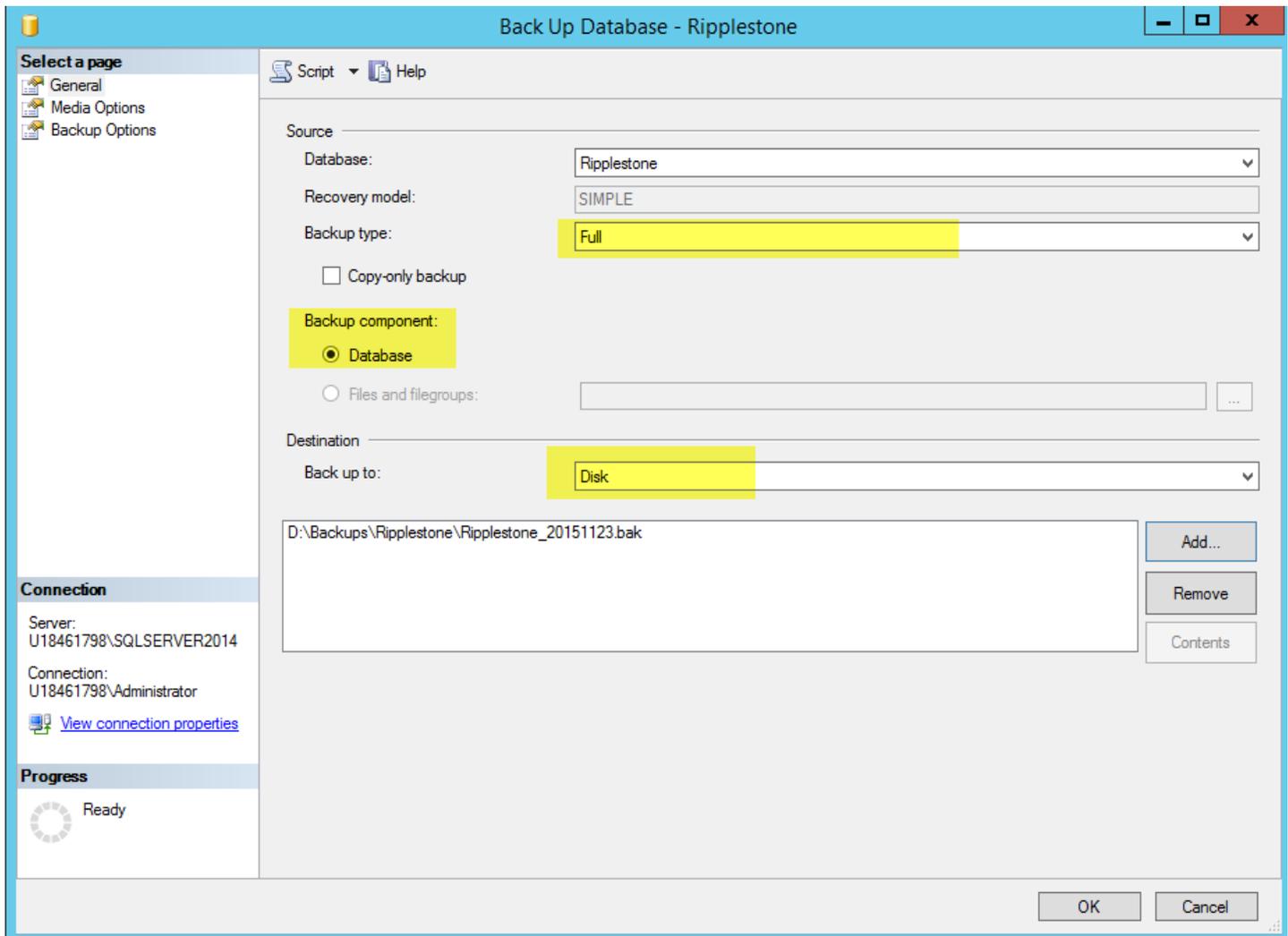
Create a Backup of a SQL Server Database

To create a backup of the Ripplestone database you will need to open the SQL Server Management Studio. Navigate to the Ripplestone database, then right click on the Ripplestone database and select Tasks/Backup from the context menu.



From the Back Up Database dialog box, select Back up to Disk and press the Add button to select a folder and to give the backup a name.





Once all the information is set you can click on the OK button to create the backup.

Performance Tips

When publishing Crystal Reports to Ripplestone; there are a few simple Crystal Reports design options that can be checked to increase the performance of the reports when they are run from within Ripplestone.

Page Setup

The first is to set the No Printer option on the Page Setup dialog box. This will stop the report from looking for the selected printer each time the report is run. It also has the added bonus of making the report look better within the web viewer. Open the Page Setup by clicking on Files and then Page Setup

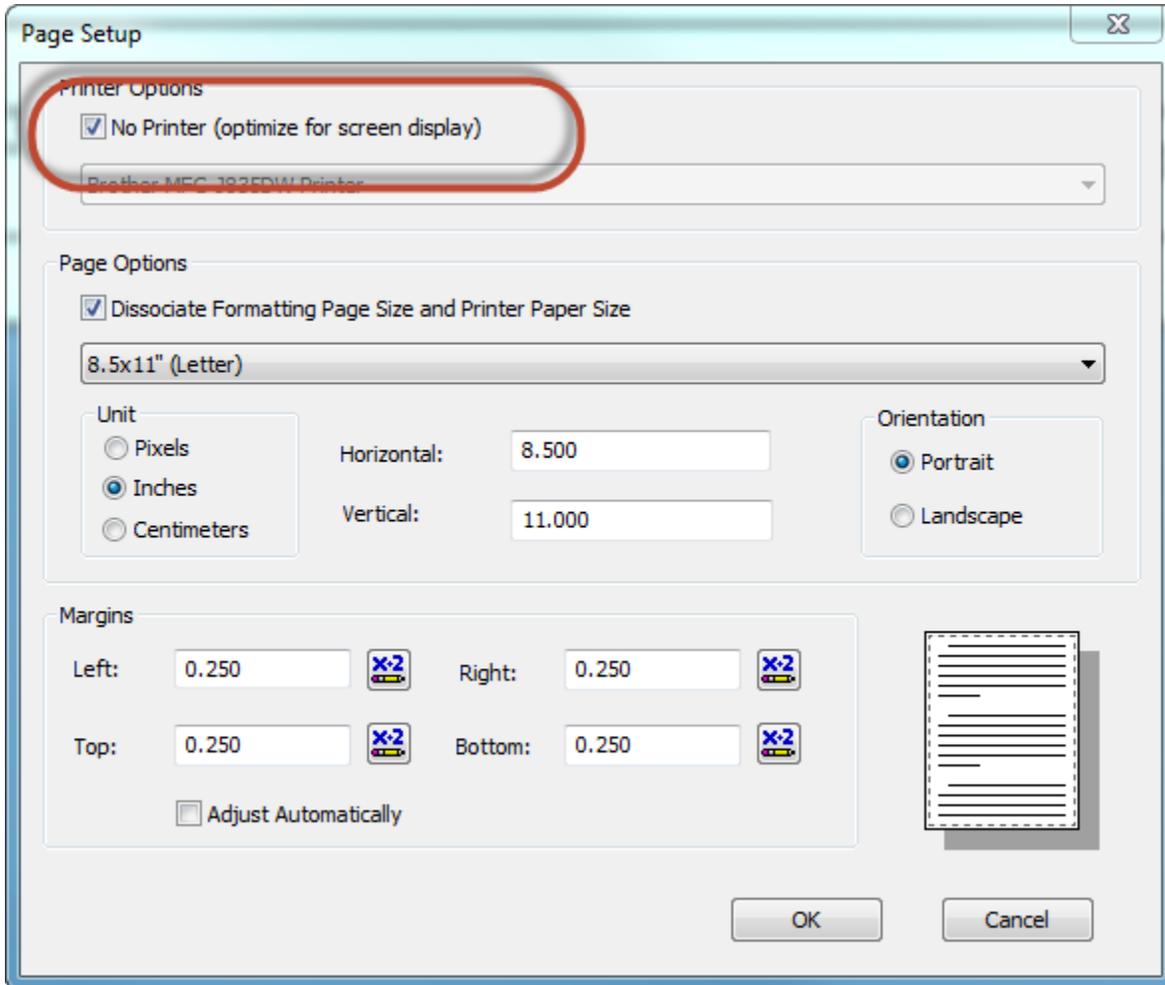
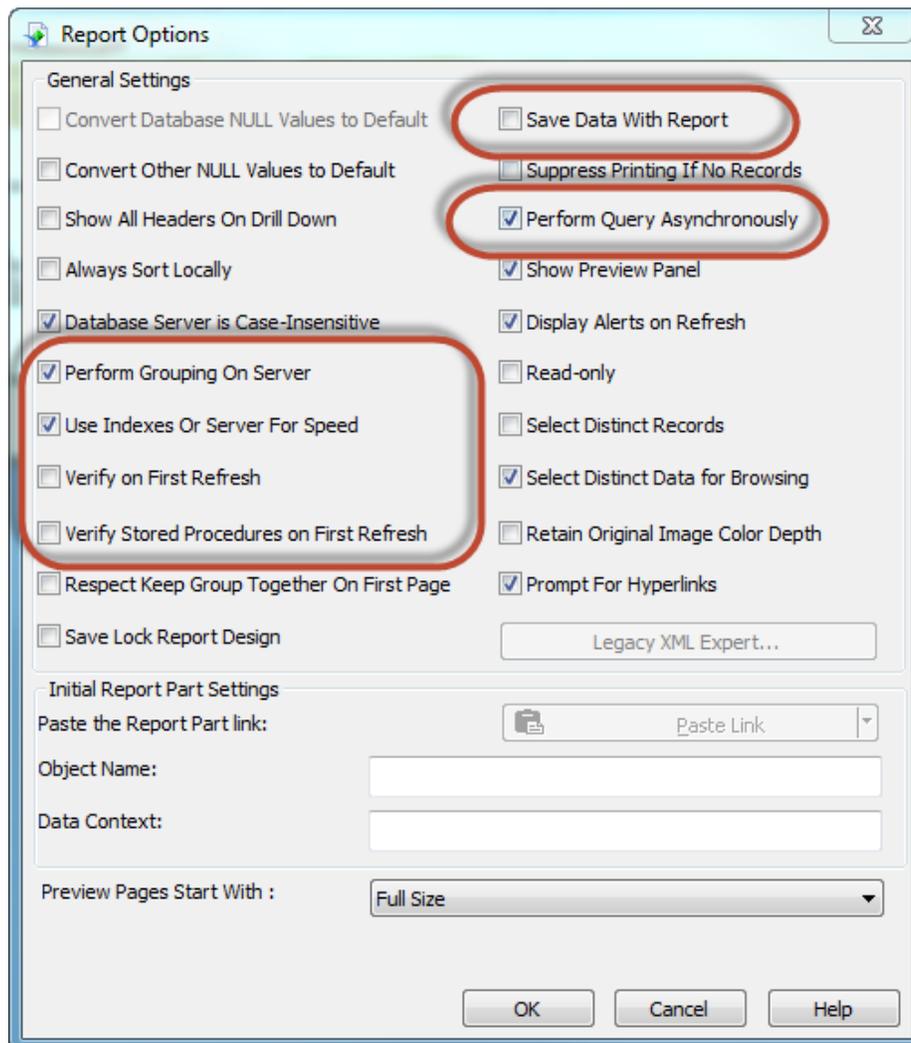


Figure 1 – Page Setup Dialog Box

Report Options

The report option dialog box has several options that can help the report process quicker. Open the Report Option by clicking on File and then Report Options.

- **Perform Grouping On Server** – This works with the Use Indexes Or Server For Speed option to allow the server to perform much of the processing for the report. These reduces the processing and memory used by the Ripplestone server.
- **Use Indexes Or Server For Speed** – Using this option will allow the SQL query to use the database indexes and can increase the speed when selecting large amounts of data.
- **Verify on First Refresh** –Unchecking this option will stop the report from first checking the database to refresh the schema. This will save a trip to the database.
- **Verify Stored Procedure on First Refresh** – Unchecking this option will stop the report from first checking the stored procedure to refresh the schema. This will save a trip to the database.
- **Save Data With Report** – Unchecking this option will keep the file size small and will allow the report to be loaded by the Crystal Report engine.
- **Perform Query Asynchronously** – Check this box to allow the report to execute the SQL statement without requiring Ripplestone to wait for the select statement to finish.



Update the PrintJobLimit on the Ripplestone Server

The default setting for the Crystal Reports PrintJobLimit is 75. You can increase this to 300 to allow more reports to run and to minimize the chance that the report engine will stay responsive.

To change the PrintJobLimit you will need to change the Registry on the Ripplestone server.

The two locations for a 64-bit server are:

HKEY_LOCAL_MACHINE\SOFTWAREWow6432Node\SAP BusinessObjects\Crystal Reports for .NET Framework 4.0\Report Application Server\InprocServer

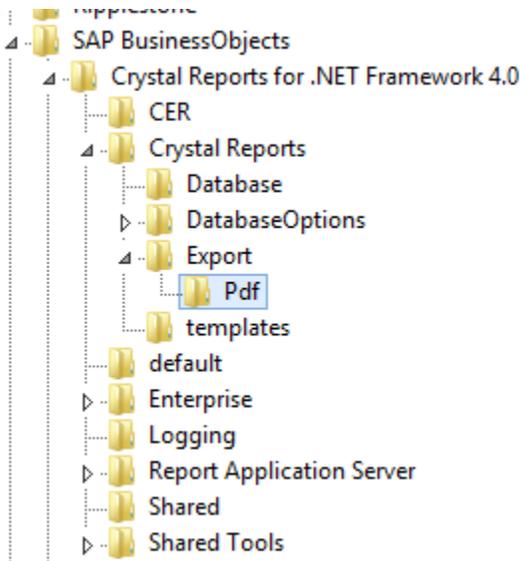
HKEY_LOCAL_MACHINE\SOFTWAREWow6432Node\SAP BusinessObjects\Crystal Reports for .NET Framework 4.0\Report Application Server\Server

Both of these locations have a key called PrintJobLimit and this can be changed to any number, but the recommended amount is 300.

Force Larger Font When Exporting to PDF

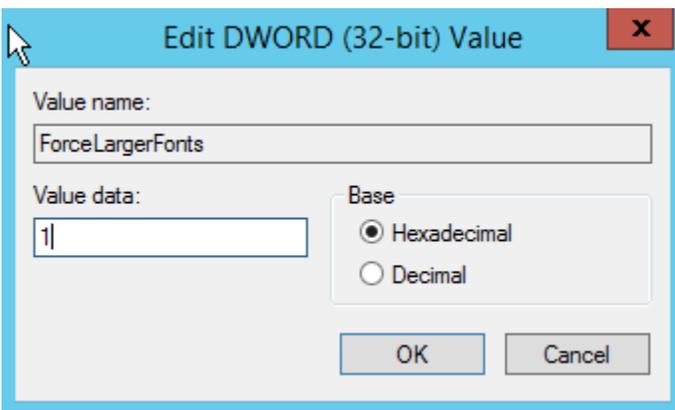
When exporting a Crystal Reports to a pdf, the output will be smaller than the original report. If this happens, you can create an entry in the Registry to force the larger font size.

In the following key HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\SAP BusinessObjects\Crystal Reports for .NET Framework 4.0\Crystal Reports add a new key called Export and then a key under that called Pdf.



The create a new DWORD called ForceLargerFonts with a value of 1

Name	Type	Data
(Default)	REG_SZ	(value not set)
ForceLargerFonts	REG_DWORD	0x00000001 (1)



Publish Report that use Oracle

To use reports that are getting data from Oracle you will need to install the 32-bit version of the Oracle Client on the Ripplestone server.

Once the Oracle Client has been installed, you will need to grant permissions to the Oracle folder and all the sub folders.

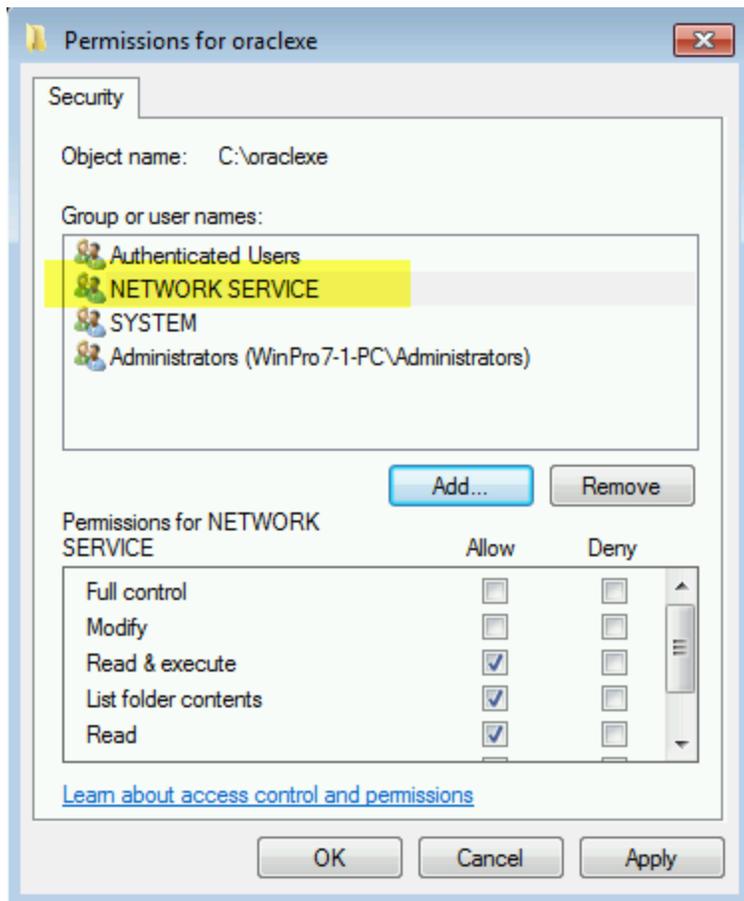
To find the install location for Oracle you can look in the Registry

For 32-bit - HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE

For 64 bit - HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ORACLE

Each version of Oracle has a different structure in the Registry, but look for a string value of ORACLE_BASE and this will display the install folder.

The Oracle folders needs to be granted permission for the NETWORK SERVICE system account.



Finally, for the permissions to take effect the server will need to be re-booted.