

RESOLVER

PERSPECTIVE UPDATE INSTRUCTIONS

Version 5.0

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Perspective Update Instructions by Resolver Inc.™

Version 5.0

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SYSTEM REQUIREMENTS (AIR & ICM) Version 5.0

The following requirements are for Perspective™ **AIR** and **ICM** editions operating in a traditional LAN/WAN environment with the Web server component running on a separate Microsoft® IIS box. These specs are for planning purposes only and apply to Perspective™ V.5.0 and Focal Point™ V.1.2. Please contact your Resolver representative for a specific assessment of your needs.

*NOTE: Meeting the **Minimum** system requirements means you can run the application successfully, but it may not provide the best performance. Meeting the **Recommended** requirements will offer a significantly better experience.*

	MINIMUM	RECOMMENDED
CLIENT MACHINE		
Processor Speed	1.5 GHz	2 GHz+
Memory	1 GB	2 GB
Operating System	Windows® Vista SP 3, Windows® 7 SP 1, Windows® 8.1, Windows® 10	
.NET Framework	Version 4.5.2	
Web Browser – Launch Perspective	Internet Explorer® 11 ⁷ , Edge	
Web Browser – Web Portal	Internet Explorer® 11 ⁷ , Edge, Chrome®, Safari® iOS 7, Android® Browser 4.2+	
Third Party Application	Adobe Reader® 9.4.0+ Sun Java® Runtime Environment 7 U71, 8 U25 ¹ , QlikView® Analyzer Plug-in for IE ²	
Mobile iOS App	iOS 7, iOS 8, iOS 9	
WEB SERVER MACHINE³ (ON PREMISE ONLY)		
Available Disk Space ⁴	1 GB	1 GB
Processor Speed	2 GHz	2 GHz Dual-Core
Memory	4 GB	4 GB
Operating System	Windows Server® 2012, Windows Server® 2012 R2, IIS® with Secure-Channel configured (HTTPS/SSL)	
.NET Framework	Version 4.5 with HTTP and non-HTTP activation	
C++ Runtime Libraries	C++ 2010 SP1 Runtime Libraries (x64) 10.40219	
QlikView® Server ⁵	64-bit Version 11.20 SR1	
DATABASE SERVER MACHINE³ (ON PREMISE ONLY)		
Available Disk Space	2 GB	20 GB+
Processor Speed	3 GHz	64-bit server dual-core or multi-processors
Memory	2 GB	4 GB+
Database Server ⁶	SQL Server® 2008 SP4, SQL Server® 2008 R2 SP3, SQL Server® 2012 SP1, SQL Server® 2014	
Reporting Services	SQL Server® 2008, SQL Server® 2012 Reporting Services, SQL Server® 2014 Reporting Services	

1. This requirement only applies if using Visual Analysis.
2. This requirement only applies to Perspective Focal Point.
3. These requirements apply to systems with 5-25 users. For systems with 25+ users, contact your Resolver account manager for more information.
4. Depending on the size of the Perspective database, more disk space may be needed for Focal Point and Workflow.
5. This requirement applies only to Focal Point. A limited QlikView™ Server license is included with Focal Point.
6. Only SQL Server Enterprise Edition is supported for indexing on audit tables.
7. For Windows® Vista SP 3, IE 9 is supported. IE Compatibility View is not supported.

Deployment Note: The Perspective client is deployed as a ClickOnce application, launched from IE. It has a zero client footprint and doesn't require administrative rights to launch.

Network Note: If single sign-on authentication or add from Active Directory is used, Active Directory Services must be enabled on the Perspective Web Server.

Internet Note: Internet connectivity on the Client Machine is required for full functionality.

SYSTEM REQUIREMENTS (SOC & EIM) Version 5.0

The following requirements are for Perspective™ **SOC** and **EIM** editions operating in a traditional LAN/WAN environment with the Web server component running on a separate Microsoft® IIS box. These specs are for planning purposes only and apply to Perspective™ V.5.0, Dispatch, and Focal Point™ V.1.2. Please contact your Resolver representative for a specific assessment of your needs.

*NOTE: Meeting the **Minimum** system requirements means you can run the application successfully, but it may not provide the best performance. Meeting the **Recommended** requirements will offer a significantly better experience.*

	MINIMUM	RECOMMENDED
CLIENT MACHINE		
Processor Speed	2 GHz dual-core	2.5 GHz dual-core
Memory	2 GB	4 GB
Operating System	Windows® Vista SP 3, Windows® 7 SP 1, Windows® 8.1, Windows® 10	
.NET Framework	Version 4.5.2	
Web Browser – Launch Perspective	Internet Explorer® 11 ⁸ , Edge	
Web Browser – Web Portal	Internet Explorer® 11 ⁸ , Edge, Chrome®, Safari® iOS 7, Android® Browser 4.2+	
Third Party Application	Adobe Reader® 9.4.0+ Sun Java® Runtime Environment 7 U71, 8 U25 ¹ , QlikView® Analyzer Plug-in for IE ²	
Mobile iOS App	iOS 7, iOS 8, iOS 9	
Officer Mobile	iOS 8, iOS 9	
WEB SERVER MACHINE³ (ON PREMISE ONLY)		
Available Disk	1 GB	1 GB
Processor Speed	2 GHz dual-core	2.5 GHz dual-core
Memory	4 GB	4 GB
Operating System	Windows Server® 2012, Windows Server® 2012 R2 IIS with WebSockets enabled ⁵ and Secure-Channel configured (HTTPS/SSL)	
.NET Framework	Version 4.5 with HTTP and non-HTTP activation	
C++ Runtime Libraries	C++ 2010 SP1 Runtime Libraries (x64) 10.40219	
QlikView™ Server⁶	64-bit Version 11.20 SR1	
DATABASE SERVER MACHINE³ (ON PREMISE ONLY)		
Available Disk	2 GB	20+ GB
Processor Speed	2 GHz dual-core	64-bit server dual-core or multi-processors
Memory	2 GB	4+ GB
Database Server⁷	SQL Server® 2008 SP4, SQL Server® 2008 R2 SP3, SQL Server® 2012 SP3, SQL Server® 2014 SP1	
Reporting Services	SQL Server® 2008, SQL Server® 2012 Reporting Services, SQL Server® 2014 Reporting Services	

1. This requirement only applies if using Visual Analysis.
2. This requirement only applies to Perspective Focal Point.
3. These requirements apply to systems with 5-25 users. For systems with 25+ users, contact your Resolver account manager for more information.
4. Depending on the size of the Perspective database, more disk space may be needed for Focal Point and Workflow.
5. Net.TCP binding on port 808 is required only if using DispatchLog.
6. This requirement applies only to Focal Point. A limited QlikView™ Server license is included with Focal Point.
7. Only SQL Server Enterprise Edition is supported for indexing on audit tables.
8. For Windows® Vista SP 3, IE 9 is supported. IE Compatibility View is not supported.

Deployment Note: The Perspective client is deployed as a ClickOnce application, launched from IE. It has a zero client footprint and doesn't require administrative rights to launch.

Network Note: If single sign-on authentication or add from Active Directory is used, Active Directory Services must be enabled on the Perspective Web Server.

Internet Note: Internet connectivity on the Client Machine is required for full functionality.

Update Instructions

Important Notes About SQL Server

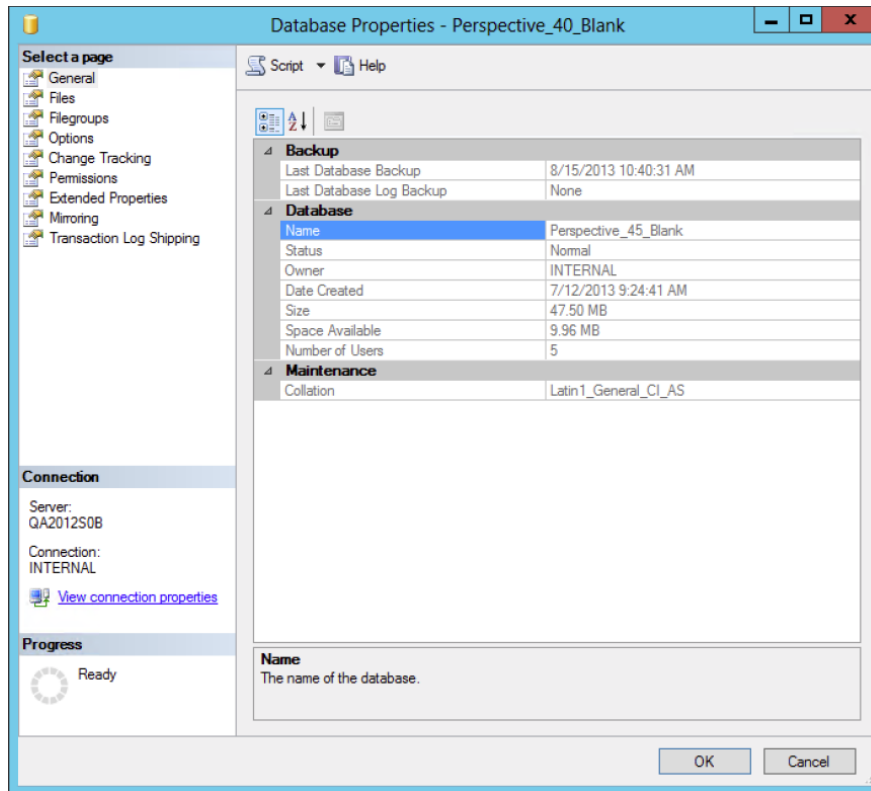
Only SQL Server Enterprise Edition is supported for indexing on audit tables. If you're upgrading Perspective using a non-enterprise version of SQL Server, you'll encounter errors related to indexing on audit tables. However, you will still be able to successfully upgrade despite these error messages, as they will not negatively affect the application.

Database Upgrade

Note: The following instructions are for updating from 4.5 or later to 5.0. To update from Version 4.0 or earlier, visit the [Resolver Support](#) site and refer to the Perspective Update Instructions 1.0 to 5.0 document.

1. Back up your Perspective SQL database.
2. Back up the **Perspective_Default.config** file in the Perspective Services Virtual Directory. This file contains all necessary information on how your system was configured.
3. Ensure that your database is already upgraded to **Perspective v.4.5** (i.e. `SELECT DatabaseVersion_NV FROM tblSystemSettings`).
4. In the **Compatibility Settings** of your SQL database, ensure your database is in compatibility mode for SQL 2008.

If it's not, open the **Microsoft SQL Management Studio**, expand **Databases**, right-click your Perspective database and select **Properties**. On the left-hand column, select **Options**. In the **Compatibility level** field, select **SQL Server 2008 (100)**.



5. Legacy update scripts are provided in the previous updates folder with this installation. Please verify which version of Perspective you are running before proceeding with upgrading your database. If you require assistance please contact Technical for assistance.
6. Update the Perspective database using the **Perspective Install > Database Setup > Update** folder. Using a SQL query tool (e.g., SQL Server Management Studio), execute update scripts against the Perspective database.
 - a. Run **SQLScript_Update_45_To_46.sql**.
 - b. Run **SQLScript_Update_4.6.0_to_4.6.1**.
 - c. Run **SQLScript_Update_4.6.1_to_4.6.2**.
 - d. Run **SQLScript_Update_4.6.2_to_5.0.0.sql**.
 - e. **Optional:** The SQL script **BackFill_SiteRollups.sql** can be run to check if a child value (Building, Location, or Section) has a latitude and longitude. If it's empty, it will match to the parent value. If all of the items in the tier are in the same location and you're comfortable with this being implemented for mapping purposes, you can set up the Site only, and then use this to populate the lower tiers. If you're a Hosted client, please make this request via our Support team at 1-877-776-2995 once you have all of your Site Rollups updated.

- f. **Optional:** The SQL script **Update_Inc_Act_Site_Geos.sql** can be run to populate the Geo Co-ordinates of all Activities and Incidents with a SiteRollup associated to them. This will only be run against Activities and Incidents without Geo Co-ordinates.
7. Repeat step 6 for each Perspective database you're running (e.g., test, production, archive).

Set Up Secure Sockets Layer (SSL) on Internet Information Services (IIS)

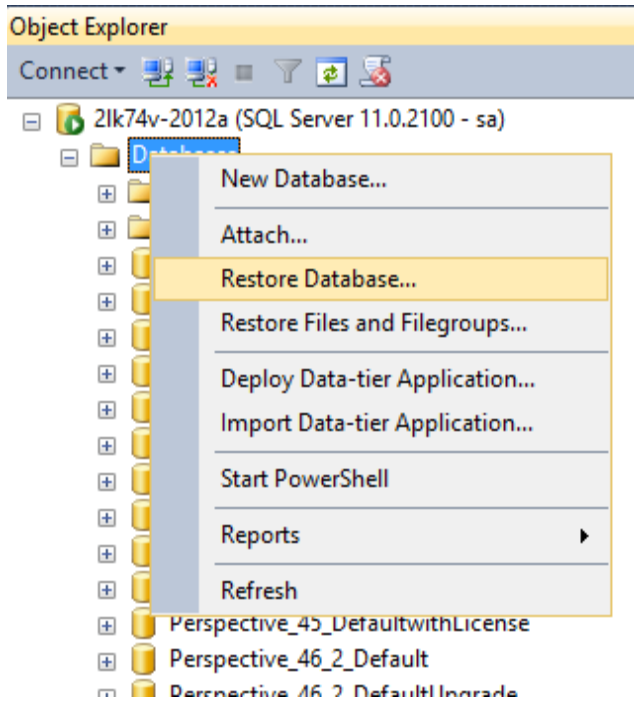
To set up SSL on IIS, follow the instructions on the [Microsoft IIS](#) website.

Database Restore (Dispatch Scheduling Services and Service Clustering)

*Note: This section applies to users installing Perspective **SOC** and **EIM** editions. If you're installing **AIR** or **ICM**, skip this section.*

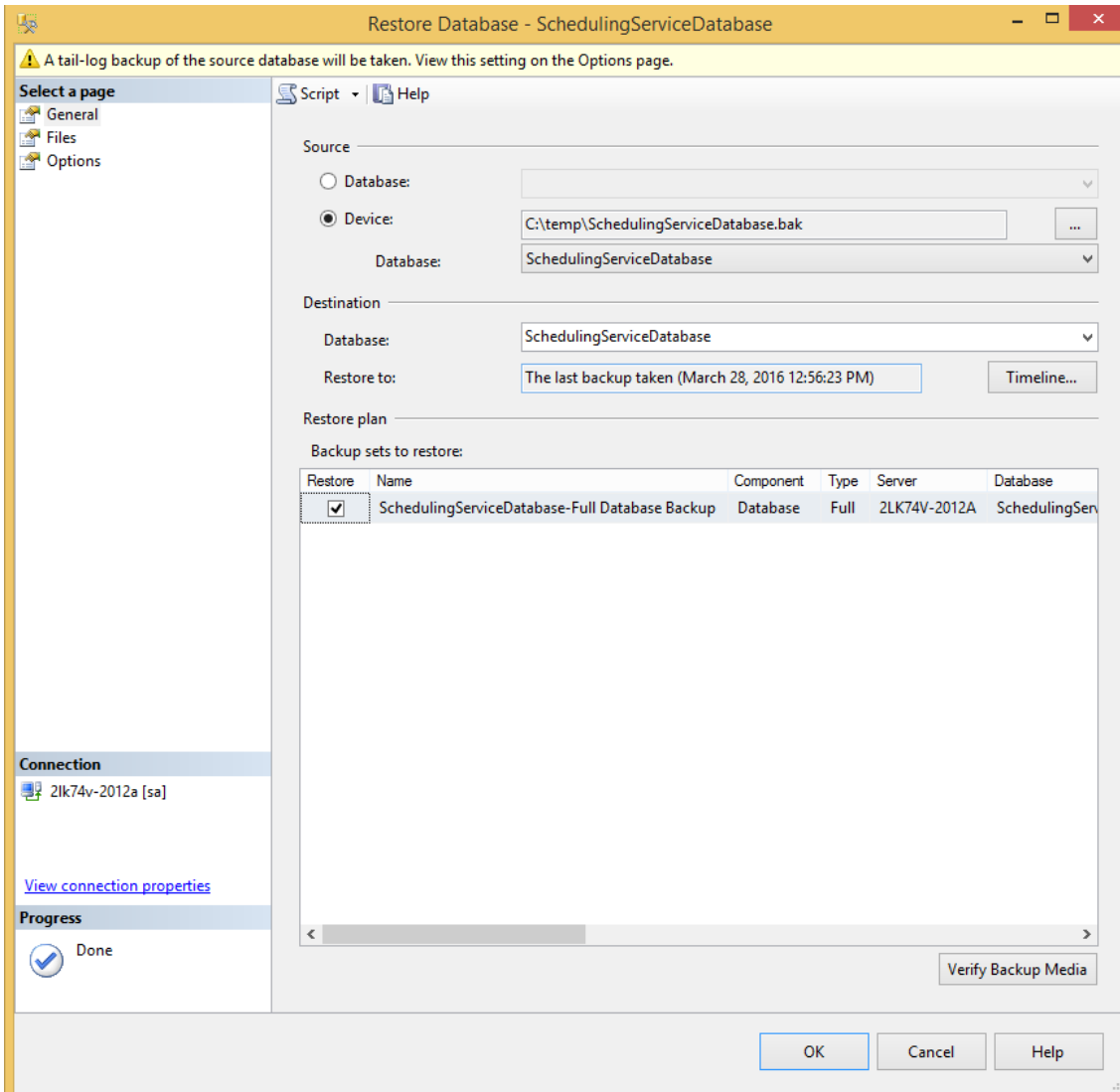
Follow these steps below to restore both the **Dispatch Scheduling Service** database and the **Service Clustering** database.

1. Open **SQL Management Studio**.
2. Right-click **Object Explorer** and click **Restore** Database.

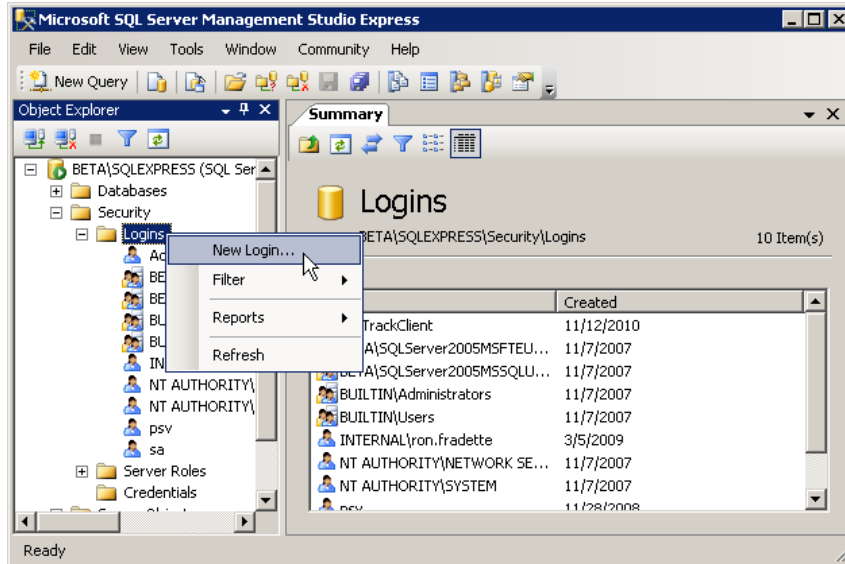


3. Navigate to the location of **Dispatching Schedule Service** database backup file.

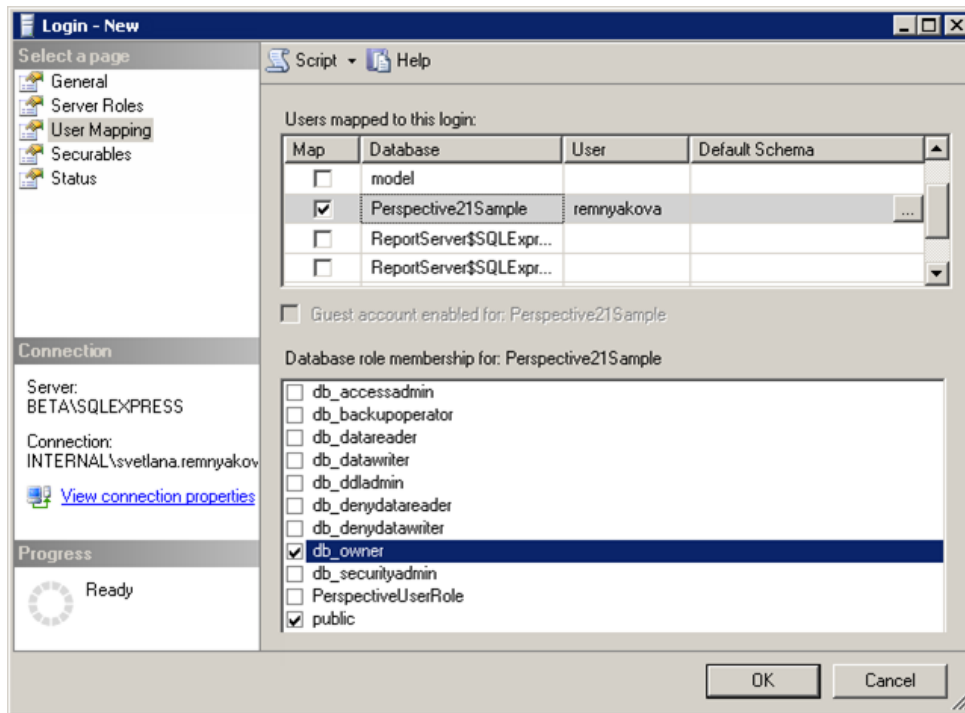
*Note: Standard backups are found in **Perspective Install > Database Setup > New**. If you're unsure which database to use, contact your Perspective Administrator.*



4. Click **OK** to restore
5. Create a new SQL user that will be used by Perspective to connect to the SQL Server:
 - a. Launch Microsoft SQL Server Management Studio. In the menu on your left, expand the **Security** node, right-click **Logins**, and select **New Login**.



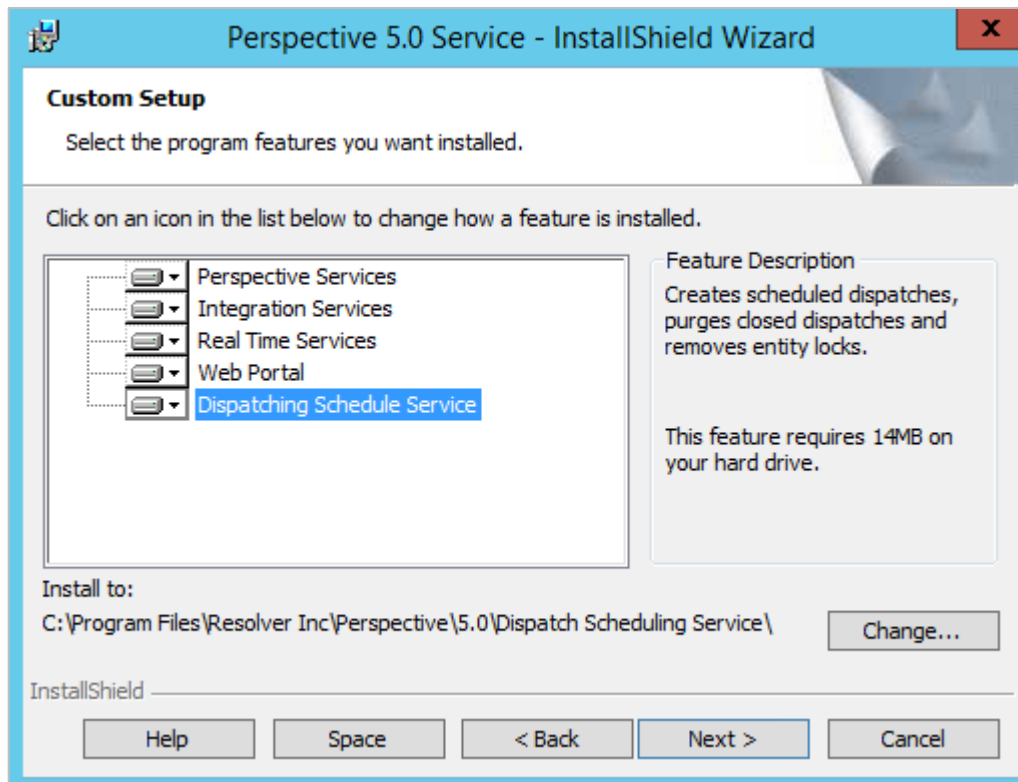
- b. In the **Login – New** form, under the **General** page, type in the **Login Name** and modify the rest of the options according to your preference.
- c. Open **User Mapping**. For both the **Dispatch Scheduling Service** and **Service Clustering** databases, ensure the account has either **db_owner** OR **db_datareader** and **db_datawriter** role membership rights, then click **OK**.



Scheduling Services

Note: The following changes apply only to users installing the **SOC** and **EIM** editions of Perspective. If you're installing the **AIR** and **ICM** editions, skip this section.

1. Navigate to install location of the scheduling service. If you completed a default installation of Perspective Services, it's located at **C:\Program Files\Resolver Inc\Perspective\5.0\Dispatch Scheduling Service**. If you completed a custom installation, this location is the path that was specified in the InstallShield Wizard.



2. Open the **Connections.xml** file.
3. Enter the service folder information to show the Integration Services virtual directory (i.e. **<servername>/integrationservices**).

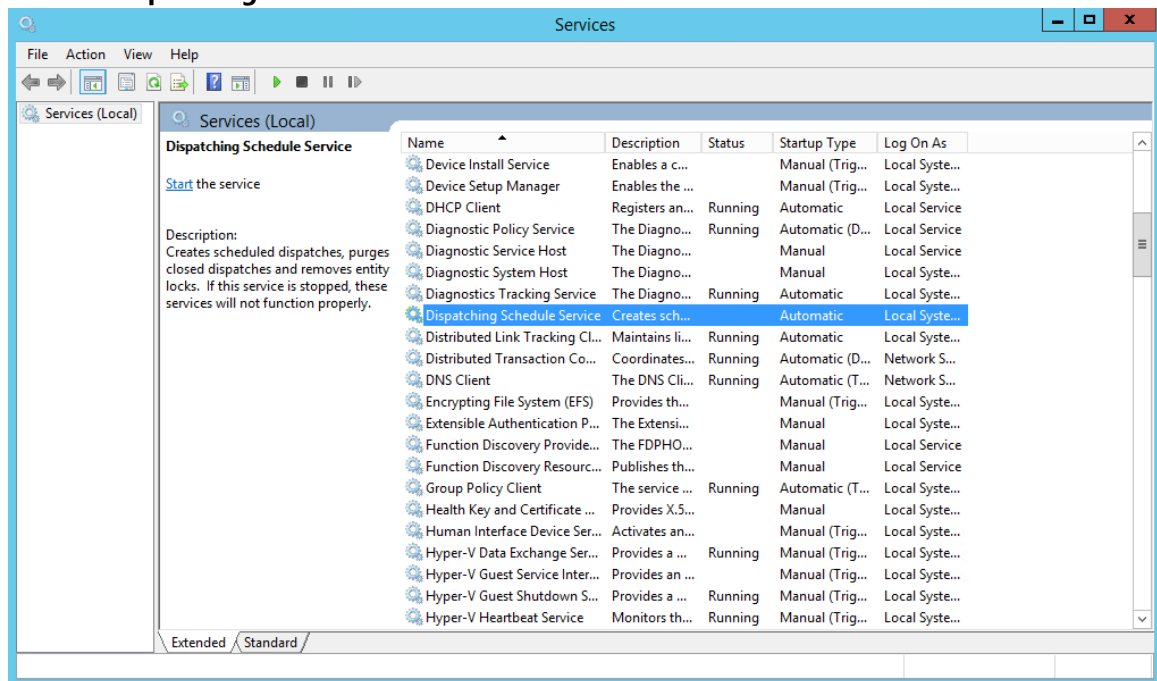
Note: If **Scheduling Services** and **Integration Services** are installed on the same machine, the Service Folder element(s) in the **Connections.xml** file must contain either an IPv4 address or the localhost alias.

4. Save your changes to the **Connections.xml** file then close.
5. Open the **SchedulingServices.exe.config** file.

- Under **appSettings**, enter the database connection string to point to the Scheduling Service database. For example:

```
<add key="DataBaseConnectionString" value="Data
Source=<dbserver\dbinstance>;Initial Catalog=<dbname>;user
id=<user>;password=<password>;Application Name=Integration Services" />
```

- Save your changes to the **SchedulingServices.exe.config** file then close.
- Open **Windows Services**.
- Click on **Dispatching Schedule Service**.



- Click the ▶ icon or right-click **Dispatching Schedule Service** then click **Start**.

Updating SQL Reports

- Update reports using the **Perspective Install > Reports Setup** folder (please refer to **Perspective Installation Guide** for more detailed outline of SQL reports setup):
 - Edit the **PublishServerReports.bat** file to target the SQL Reporting Services server.
 - Save and execute the file.

Note: If you're using Windows authentication, additional configuration of the Reports data source may be required.

Perspective Services Update

For more information on running the installs, refer to the **Perspective Installation Guide**.

1. If you're installing the **SOC** and **EIM** editions of Perspective, install the **WebSocket Protocol** on your webserver, if it is not already installed.
2. Uninstall **Perspective Services**. Click **Start** > Launch the **Control Panel** > Navigate to **Programs and Features** > Select **Perspective Services** > **Uninstall** > Follow the prompts displayed onscreen to uninstall **Perspective Services**.
3. If installed, uninstall any earlier versions of **Service Manager**. Check your Perspective directory and IIS for any remnants of your previous Perspective Services installation. Remove any remaining files or folders.
4. Install Perspective Services 5.0 using the **Perspective Install > Web Service Setup > Perspective Services** folder. Run (as an administrator) **Perspective.Services.exe** to install the updated Perspective Services.

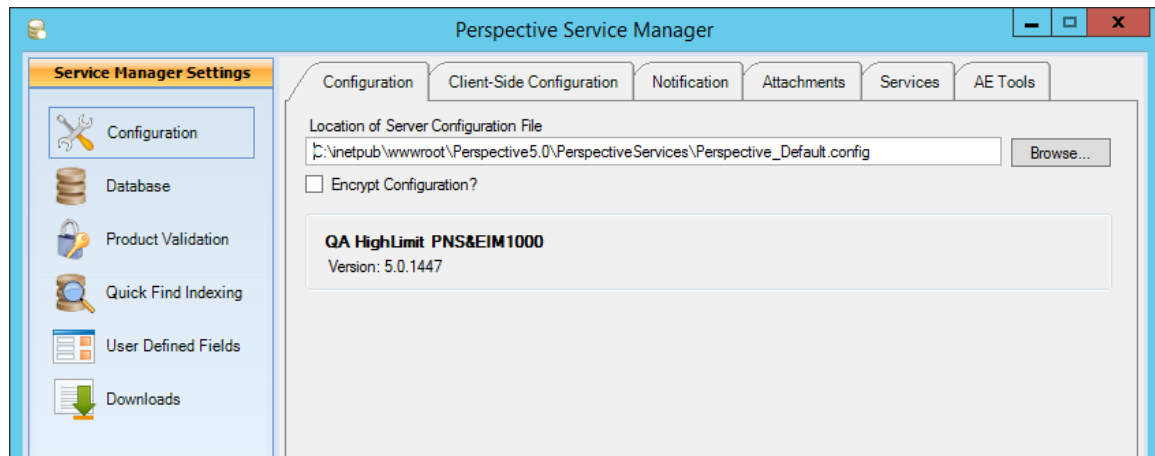
If this is your first time working with Perspective Services, please read through the **Perspective Installation Guide**.

If you're completing a Custom Install and your edition includes the **DispatchLog** component (**SOC** or **EIM**), ensure that Real Time Services is installed. Refer to the Installation Guide for configuration details.

Note: If Perspective Services prompts you to install C++ runtime libraries, refer to the Standard Install > Perspective Services (Application Web Server) section of the Perspective Installation Guide.

5. Install Perspective Service Manager (see the **Perspective Installation Guide** for details).
6. Configure connections using Perspective Service Manager:
 - a. To access Perspective Service Manager, open it from your desktop or go to C:\Program Files\Resolver Inc\Perspective\5.0\ServiceManager\Perspective.ServerManager.exe. Launch **Perspective 5.0 Service Manager** as an **administrator**. You will be asked to provide the Database Connection information. Refer to the **Perspective Installation Guide** if needed.
 - b. Under the **Configuration** tab, verify the location specified in the **Location of Server Configuration File** field. The field should be automatically populated with the default

location of the **Perspective_Default.config** file in the **Perspective Services Virtual Directory**. If necessary, use the **Browse** button to point to the correct location.



- c. Under the **Database** tab, enter the primary database information. This information can be copied from within the **Perspective_Default.config** backup file. Add secondary databases, if required.
- d. Under the **Product Validation** tab, enter your **Company Name** and **Master Key**, and click **Validate**.

Note: This step requires an Internet connection to download your encrypted license file from the licensing server. If your web server can't access the Internet, contact Technical Support at 1-877-776-2995 to get a license file for validation.

- e. In the **Client-Side Configuration** sub-tab, enter the **Server URL** for the client folder if the field is empty.
- f. Verify the **Notification** and **Attachments** settings, and make any required changes.
- g. Verify the **Quick Find Indexing** and **Services** settings, and make any required changes.
- h. Click **Save Changes**, then click **Yes** when prompted for confirmation.
- i. Close Perspective Service Manager and restart IIS.

For detailed instructions on using the Perspective Service Manager, see the **Perspective Installation Guide**.

7. Launch the Perspective Version 5.0 client from the host Perspective Services default web page (e.g., <https://<servername>/PerspectiveServices>) on each client machine. Your default web page should look like the screenshot below. Refer to the *Perspective Installation Guide* for more information.

Note: Following the configuration of the Web Server, please ensure application initialization has taken place so that end users do not experience delays with initial page loading. After any IIS reset or configuration, navigate to

<https://<servername>/IntegrationServices/service.svc> (On Premise) to begin the application initialization.



IMPORTANT NOTE: The MSI URL for Version 5.0 has changed:

- **<https://<servername>/PerspectiveServices/?opt=0>**

If installing clients using the MSI package, ensure that previously installed Perspective applications on client machines have been uninstalled first. To install Perspective on client machines using the MSI package, please refer to the **[Perspective Installation Guide](#)**.

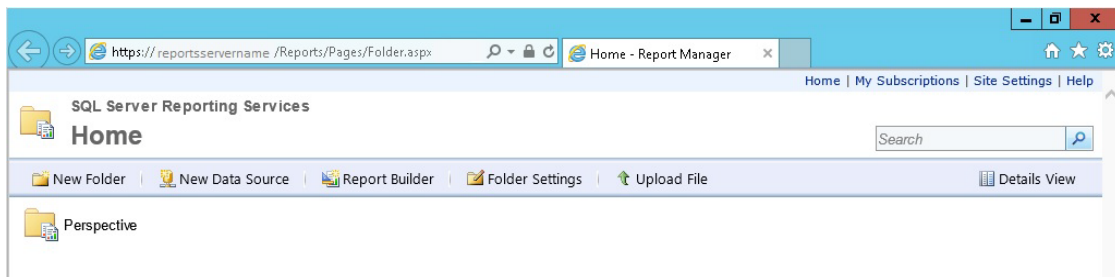
Testing Perspective Implementation

Once you have completed the steps outlined on the previous sections, please go through the following steps to ensure that all Perspective's components have been set up properly.

*Note: Following the configuration of the Web Server, please ensure application initialization has taken place so that end users do not experience delays with initial page loading. After any IIS reset or configuration, navigate to **https://<servername>/IntegrationServices/service.svc** to begin the application initialization.*

1. Go to the Perspective Services URL and confirm that the page loads properly:
https://<localhost>/perspectiveservices, where **<localhost>** is the appropriate local host address on your network.
2. Go to the Perspective Services page and confirm that the page loads properly:
https://<localhost>/perspectiveservices/service.asmx, where **<localhost>** is the appropriate local host address on your network.
3. Go to the Report Manager page and confirm that the page loads properly:
http://<reportservername>/reports, where **<reportservername>** is the appropriate address for the reports server on your network.

*Note: If your Report Manager page does not display correctly, run the **PublishServerReports.bat** file included in the **Perspective Install > Reports Setup** folder.*



4. Log on to the Perspective client—preferably not on the server itself—using your Perspective administrator user name and password.
5. Once you have logged on successfully, click on the **Reports** button in the Navigation pane (on the left-hand side of the screen) and confirm that all reports are listed. The easiest way to confirm that the client-side reports are working is to verify that there are reports listed under the **Detail Reports** heading, such as the Incident, Person and Vehicle Reports.
6. To also confirm you are connected to the correct database, run the **Workgroup List** report and verify the workgroups listed.
7. To confirm that the server-side reports are working, try running the **Test Report** under the **<Administrative Only>** node listed. If you receive an error message, see the

Troubleshooting Perspective & SQL Reporting Services on the Resolver Support site for more information.

Note: Both the Report version and database version should display as 5.0.

Contact Information

Technical Support

Toll Free: 1-877-776-2995
Phone: (780) 448-0616
Email: support@resolver.com
Website: <https://support.resolver.com>

Resolver Inc.

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Website: <http://www.resolver.com>