RESOLVER PERSPECTIVE UPDATE INSTRUCTIONS Version 5.3.1.1

October 2017

Perspective Update Instructions by Resolver Inc.™

Version 5.3.1.1

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SYSTEM REQUIREMENTS Version 5.3.1.1

The following requirements are for Perspective 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.5.3.1.1, Dispatch, and Connect. 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 [®] 7 SP 1, W	/indows [®] 8.1, Windows [®] 10		
.NET Framework	Ve	rsion 4.5.2		
Web Browser – Launch Perspective	Internet E	xplorer® 11, Edge		
Web Browser – Web Portal	Internet Explorer® 11, Edge, Google Ch	rome®, Safari® iOS 9+, Android® Browser 4.2+		
Web Browser – Connect	Goog	gle Chrome®		
Third Party Application	Adobe Reader [®] 9.4.0+, Sun Jav	a® Runtime Environment 7 U71, 8 U25 ¹		
Mobile iOS App	iOS	5 9, iOS 10		
Officer Mobile	iOS 9, iOS 10, Android	4.4, Android 5.1, Android 6.0		
WEB SERVER MAC	HINE ³ (ON PREMISE ONLY)			
Available Disk Space ⁴	1 GB	2 GB		
Processor Speed	2 GHz dual-core	2.5 GHz quad-core		
Memory	8 GB	16 GB		
Operating System	Windows Server [®] 2012, Windows Server [®] 2012 R2 ² , Windows Server [®] 2016, IIS with WebSockets enabled ⁵ and Secure-Channel configured (HTTPS/SSL)			
.NET Framework	Version 4.5 with HTTP and non-HTTP active	ation, .NET Core 1.0.4 or 1.1.1 (Windows Hosting) ²		
C++ Runtime Libraries	C++ 2010 SP1 Runti	me Libraries (x64) 10.40219		
Message Queue ²	RabbitM	Q Server 3.6.9+		
DATABASE SERVER	R MACHINE ³ (ON PREMISE ONLY)			
Available Disk Space	2 GB	20+ GB		
Processor Speed	2 GHz dual-core	64-bit server dual-core or multi-processors		
Memory	2 GB	4+ GB		
Database Server ⁶	SQL Server® 2012 SP3, SQL Set	rver® 2014 SP2, SQL Server® 2016 SP1		
Reporting Services	SQL Server [®] 2012 Reporting Services, SQL Server [®] 2	014 Reporting Services, SQL Server [®] 2016 Reporting Services		

1. This requirement only applies if using Visual Analysis.

2. This requirement only applies to Connect.

3. These requirements apply to systems with up to 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 Workflow.

5. This requirement only applies if using Dispatch.

6. Only SQL Server Enterprise Edition is supported for indexing on audit tables.

Notes:

- Net.TCP binding on port 808 is required only if using DispatchLog.
- For the best Dispatch experience, it's recommended that dispatchers run the application on two monitors with a resolution of 1920x1080.
- Time synchronization is required for Dispatch visual alerts. NTP is strongly recommended for Hosted customers.
- For the best performance, do not run the Indexer on the same server where the database is hosted.

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 5.3.1.1. To update from Version 4.0 or earlier, visit the Resolver Support site and refer to the **Perspective Update Instructions 1.0 to 5.3.1.1** 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.
- Ensure that your database is already upgraded to Perspective v.4.5 (i.e. SELECT DatabaseVersion_NV FROM tblSystemSettings).
- In the Compatibility Settings of your SQL database, ensure your database is in compatibility mode for SQL Server 2012 (110).

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 2012 (110)**.

Ū	Database Properties - Pers	spective_40_Blank 📃 🗖 🗙
Select a page	🔄 Script 🔻 🛐 Help	
Files Filegroups Options		
Change Tracking Change Tracking Permissions Extended Properties Mirroring Transaction Log Shipping	▲ Backup Last Database Backup Last Database Log Backup ▲ Database Name Status Owner Date Created Size Space Available Number of Users ▲ Maintenance Collation	8/15/2013 10:40:31 AM None Perspective_45_Blank Normal INTERNAL 7/12/2013 9:24:41 AM 47.50 MB 9.96 MB 5 Latin1_General_CI_AS
Connection		
Server: QA2012S0B Connection: INTERNAL		
View connection properties		
Progress	Name	
Ready	The name of the database.	
		OK Cancel

- 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.
- 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. Run SQLScript_Update_5.0.0_to_5.1.0.sql.

- f. Run SQLScript_Update_5.1.0_to_5.1.1.sql.
- g. Run SQLScript_Update_5.1.1_to_5.2.sql.
- h. Run SQLScript_Update_5.2.0_to_5.3.1.1.sql.
- Optional: The SQL script BackFIII_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.
- j. **Optional:** The SQL script **Update_Inc_Act_Site_Geos.sql** can be run to populate the Geo Coordinates 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)

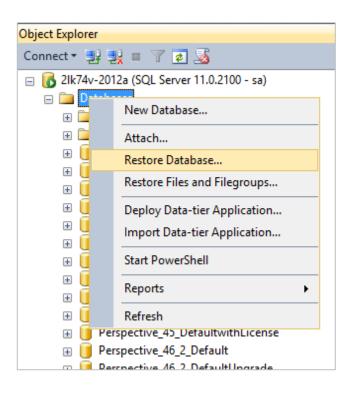
To set up SSL on IIS, follow the instructions on the Microsoft IIS website.

Database Restore (Dispatch Scheduling Services and Service Clustering)

Note: This section applies to users installing an edition of Perspective with the Dispatch application. If you're not installing an edition of Perspective with Dispatch, 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.

1 5	Restore Database	- SchedulingServiceData	abase			- 🗆 ×
\Lambda A tail-log backup of the source d	atabase will be taken. View this setting	g on the Options page.				
Select a page	🔄 Script 👻 📑 Help					
I General I Files I Options	Source O Database:					Ý
	Oevice:	C:\temp\SchedulingServiceDa	atabase.bak			
	Database:	SchedulingServiceDatabase				~
	Destination					
	Database:	SchedulingServiceDatabase				~
	Restore to:	The last backup taken (March	28, 2016 12:5	6:23 PN)	Timeline
	Restore plan					
	Backup sets to restore:					
	Restore Name		Component	Туре	Server	Database
	SchedulingServiceDa	tabase-Full Database Backup	Database	Full	2LK74V-2012A	SchedulingServ
Consulta -						
Connection 21k74v-2012a [sa]						
View connection properties						
Progress Done	<					>
S Done					Verify	Backup Media
			0	к	Cancel	Help

- 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**.

File Edit View Too	ls Window	Communit	y Help		
🔔 New Query 🛅 🚺	e 📬 🔩 🕯	<u>,</u> 🛛 🕯	🖪 🛯 隆 🖉 🖕		
bject Explorer	- -	Summa	эгу		→ ×
발 🛃 🔳 🍸 👩 👘		📬 🛃 .	2 🝸 🔠 📰		
🗉 🐻 BETA\SQLEXPRESS					
🗄 🚞 Databases			Logins		
🖃 🚞 Security			LUYINS		
🗆 🧰 Logins 📥	New Login		ETA\SQLEXPRESS\Security\Lo	ogins	10 Item(s)
Ad Ad	-	h.			
SE SE	Filter	.0 🕨			
Mail BE Mail BE Mail BL Mail BL	Reports	•	r let i	Created	_
SE BL	· · · · · · · · · · · · · · · · · · ·		TrackClient	11/12/2010	
🕺 IN	Refresh		A\SQLServer2005MSFTEU A\SQLServer2005MSSQLU		
🤱 NT AUT	THORITY\		LTIN\Administrators	11/7/2007	
🐣 NT AUT	THORITY		LTIN(Users	11/7/2007	
🧸 psv			ERNAL\ron.fradette	3/5/2009	
📥 sa			AUTHORITY\NETWORK SE		
🛨 🧰 Server Role 🛅 🛨				11/7/2007	
🔄 Credentials	·	a nev		11/28/2008	-

- 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 <u>OR</u> db_datareader and db_datawriter role membership rights, then click OK.

📕 Login - New					
Select a page	Script 🔹	🛚 🚺 Help			
General Server Roles Carl User Mapping	Users ma	pped to this login:			
Securables	Map	Database	User	Default Schema	▲
🚰 Status		model			
	V	Perspective21Sample	remnyakova		
		ReportServer\$SQLExpr			
		ReportServer\$SQLExpr			-
Connection Server: BETA\SQLEXPRESS	Database	account enabled for: Perspe role membership for: Perspe ccessadmin ackupoperator			_
Connection: INTERNAL\svetlana.remnyakov		atareader atawriter			
View connection properties	☐ db_da ☐ db_da ☐ db_da	dladmin enydatareader enydatawriter			
Progress	<mark>√ db_o</mark>	wner ecurityadmin			
Ready		ectiveUserRole			
				ОК	Cancel

Scheduling Services

Note: This section applies to users installing an edition of Perspective with the Dispatch application. If you're not installing an edition of Perspective with Dispatch, skip this section.

 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\5.3.1\Dispatch Scheduling Service. If you completed a custom installation, this location is the path that was specified in the InstallShield Wizard.

Perspective 5.0 Service - InstallShield Wizard							
Custom Setup Select the program features you want installed.							
Click on an icon in the list below to change how a feature is in Perspective Services Integration Services Real Time Services Web Portal Dispatching Schedule Service	stalled. Feature Description Creates scheduled dispatches, purges closed dispatches and removes entity locks. This feature requires 14MB on your hard drive.						
Install to: C:\Program Files\Resolver Inc\Perspective\5.0\Dispatch Scher	duling Service\ Change						
Help Space < Back	Next > Cancel						

- 2. Open the **Connections.xml** file.
- 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.
- 6. 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" />

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

ction View							
	Q 📑 🛛 🖬 🖿 🖬 🕪						
ces (Local)	Services (Local)	-					
	Dispatching Schedule Service	Name 🔺	Description	Status	Startup Type	Log On As	
		Device Install Service	Enables a c		Manual (Trig	Local Syste	
	Start the service	🌼 Device Setup Manager	Enables the		Manual (Trig	Local Syste	
		端 DHCP Client	Registers an	Running	Automatic	Local Service	
	Description:	🎑 Diagnostic Policy Service	The Diagno	Running	Automatic (D	Local Service	
	Creates scheduled dispatches, purges	🌼 Diagnostic Service Host	The Diagno		Manual	Local Service	
	closed dispatches and removes entity	🌼 Diagnostic System Host	The Diagno		Manual	Local Syste	
	locks. If this service is stopped, these services will not function properly.	🌼 Diagnostics Tracking Service	The Diagno	Running	Automatic	Local Syste	
	services will not runction property.	🝓 Dispatching Schedule Service	Creates sch		Automatic	Local Syste	
		🌼 Distributed Link Tracking Cl	Maintains li	Running	Automatic	Local Syste	
		🌼 Distributed Transaction Co	Coordinates	Running	Automatic (D	Network S	
		🔍 DNS Client	The DNS Cli	Running	Automatic (T	Network S	
		🧠 Encrypting File System (EFS)	Provides th		Manual (Trig	Local Syste	
		端 Extensible Authentication P	The Extensi		Manual	Local Syste	
		Function Discovery Provide	The FDPHO		Manual	Local Service	
		Sunction Discovery Resourc	Publishes th		Manual	Local Service	
		🍓 Group Policy Client	The service	Running	Automatic (T	Local Syste	
		🎎 Health Key and Certificate	Provides X.5		Manual	Local Syste	
		鵒 Human Interface Device Ser	Activates an		Manual (Trig	Local Syste	
		🧠 Hyper-V Data Exchange Ser	Provides a	Running	Manual (Trig	Local Syste	
		端 Hyper-V Guest Service Inter	Provides an		Manual (Trig	Local Syste	
		🤍 Hyper-V Guest Shutdown S	Provides a	Running	Manual (Trig	Local Syste	
		🧠 Hyper-V Heartbeat Service	Monitors th	Running	Manual (Trig	Local Syste	

10. Click the bicon or right-click **Dispatching Schedule Service** then click **Start**.

Configure Device Manager for Connect

Note: This section applies to users installing an edition of Perspective with the Dispatch application, along with Connect 2.0. If you're not installing an edition of Perspective with Dispatch and Connect, skip this section.

In order to view the Connect devices in Dispatch, the Device Manager URL in the

Perspective_default.config file must be edited to show the Connect server. Note that Perspective should only use an instance of Connect as its Device Manager if the Connect instance is using Perspective's instance of Integration Services for authentication.

Note: To successfully configure the Device Manager, the **Perspective_default.config** file cannot be encrypted through Service Manager.

- 1. Using Notepad, open the **Perspective_default.config** file. By default, it can be found at *C:\inetpub\wwwroot\Perspective5.3.1\PerspectiveServices.*
- 2. Scroll down to the bottom of the file and locate the **<DeviceManagerURL>** tags.

3. Change the URL in the tags to point to the Connect server.

<DeviceManagerURL>https://<ConnectServerName>/api/</DeviceManagerURL>
</PerspectiveConfig>

Note: Only one Device Manager URL is permitted per config file.

4. Click **File > Save** to save your changes, then close the file.

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):
 - a. Edit the PublishServerReports.bat file to target the SQL Reporting Services server.
 - b. Save and execute the file.

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

SAML Authentication for SSO

The following section provides instructions on configuring Perspective Service Manager to implement SSO, however, prior to completing these steps, you must confirm your identity provider (IdP) supports **SAML 2.0 through service provider initiated SSO**. SSO is supported for use with the Enterprise edition of Perspective.

Your IdP will also need to provide you with instructions on adding and configuring new and existing Perspective users directly through their service, as IdP configurations will vary.

NOTE: If you're using AD FS to configure SAML, see the Set Up SSO with AD FS article on the Resolver Support site for instructions after following the steps below.

- 1. Open Service Manager.
- 2. Click **Configuration** in the pane to the left if it's not already open.
- 3. Select the **Configure Service Provider** checkbox.
- 4. Enter your Perspective Services URL in the **Perspective URL** field, then click **Validate**.

Note: The URL you enter in this field must **exactly** match what has been entered into your IdP's configurations, including the case (upper-case or lower-case letters) and slash (/ or \) direction.

- 5. Enter the server certificate file name in personal exchange format (.pfx) in the Certificate File Name field and enter a password in the Certificate Password field. For testing purposes, a sample .pfx file has been included in the installation package with a file name of sp.pfx and a password of password. This information is required so that the services (Perspective, Dispatch, Dashboard, etc.) can securely communicate with the identity provider.
- 6. Save a copy of the certificate file to

***PerspectiveInstallationPath*\PerspectiveServices\SAML\Certificates**. This file usually has a .pfx extension and will also need to export the private keys.

Note: If you chose the default certificate file, the file was saved at this location during installation.

8	Perspective Service Manager
Service Manager Settings	Configuration Client-Side Configuration Notification Attachments Services AE Tools
Configuration	Location of Server Configuration File C.\inetpub\wwwroot\\5,D\PerspectiveServices\Perspective_Default.config Browse Encrypt Configuration?
Product Validation	QA Advanced Security PCO&EIM25 Version: 5.2.0.51
User Defined Fields	 Enable Client Side Application Insights Configure Service Provider. This is required if you want to use SAML authentication.
	Perspective URL (eg: https://ACME.MyIncidents.com/PerspectiveServices): https://example.ppm2000.com/PerspectiveServices Validate URL Cetificate File Name: sp.pfx Cetificate Password:

After completing the above steps, you'll need to select how you will input the identity provider's details. See the **Identity Provider Configuration** section for information on uploading a metadata file or metadata URL or see **Manual Settings** for instructions on inputting the data manually.

Identity Provider Configuration

The settings below allow you to import your IdP's configurations directly into Service Manager via a metadata file or metadata URL, which is obtained from your IdP.

- 1. In Service Manager, click **Database** in the pane to the left.
- 2. Double-click a database to edit it.
- 3. Click the Authentication Mode tab.
- 4. Select the **SAML Authentication** checkbox.

Note: If this option is unavailable, the service provider information has not been properly configured in steps 3 and/or 4 in the section above.

5. Select how you want to input the identity provider information:

 Metadata file: This option will require that you obtain a metadata file from your IdP to import the SSO configurations into Service Manager. When downloading a metadata file from your IdP, the certificate is usually extracted and saved in your My Documents folder, but it must be moved to *PerspectiveInstallationPath*\PerspectiveServices\SAML\Certificates after it's been downloaded.

To use this option, after downloading the file, enter the name of your IdP in the **Description** field, which will appear to users with the phrase "Login with [IdP]" on the login screens, then click **Choose File** to upload the metadata file.

	Database	Connection		x
Perspective Analy	sis Expert Connection	Report Service	Authentication Mode	
Perspective Aut	nentication			
SAML Authentic	ation			
 Metadata file 	O Metada	ta URL	O Manual settings	
Description				
Example				
Choose File				

Metadata URL: This option will require that you obtain a metadata URL that will import the SSO configurations into Service Manager. After obtaining the URL, enter the name of your IdP in the Description field, which will appear to users with the phrase "Login with [IdP]" on the login screens. Enter a valid metadata URL from your IdP in the Metadata URL field, then click Import. The URL will import the required configurations and should be similar to the following:

https://adfs.example.com/FederationMetadata/2007-06/FederationMetadata.xml

Note: The URL you enter in the Metadata URL field must exactly match what has been entered into your IdP's configurations, including the case (upper-case or lower-case letters) and slash (/ or \) direction.

	C)atabase (Connection		x
Perspective	Analysis Expert	Connection	Report Service	Authentication Mode	
Perspecti	ve Authentication	n			
SAML Au	thentication				
O Metadata	a file	Metada	ta URL	O Manual settings	
Description Example					
Example					
Metadata U	JRL				_
https://adfs	s.example.com/F	ederation Met	adata/2007-08/F	ederat Import	

6. Click **OK**, then save your changes.

Manual Settings

If you're not importing metadata via a file or URL, you must configure your IdP's settings manually. Contact your IdP for instructions on obtaining the required information.

- 1. In Service Manager, click **Database** in the pane to the left.
- 2. Double-click a database to edit it.
- 3. Click the Authentication Mode tab.
- 4. Select the **SAML Authentication** checkbox.

Note: If this option is unavailable, the service provider information has not been properly configured.

- 5. Select the **Manual settings** option.
- 6. Complete the following fields:
 - **Description:** The name of your IdP, which will appear to users with the phrase "Login with [IdP]" on the login screens.
 - Name: The exact name of the IdP as provided by the IdP.

- **Partner Certificate File:** Used to verify the assertions have come from the IdP. This file must be saved to the ***PerspectiveInstallationPath*\PerspectiveServices\SAML\Certificates** folder.
- Single Logout URL: The URL from which the IdP accepts logout requests.
- Single Sign On Service: The URL from which the IdP accepts SSO requests.
- Name ID Format: The username format provided to the IdP.
- Single Sign On Service Binding: The binding used by the IdP to authenticate (usually HTTP Redirect).
- **Sign Authentication Request:** Select this checkbox if the authentication request should be signed.
- **Sign Logout Request:** Select this checkbox if the logout request should be signed.
- Sign Logout Responses: Select this checkbox if the logout response should be signed.
- Sign Assertion: Select this checkbox if the assertions should be signed.
- Encrypt Assertions: Select this checkbox if the assertions should be encrypted.

Database Connection ×
Perspective Analysis Expert Connection Report Service Authentication Mode
✓ Perspective Authentication
SAML Authentication
O Metadata file O Metadata URL O Manual settings
Description
Example
Name
http://adfs.example.ppm2000.com/adfs/servic Sign Authentication Request
PartnerCertificateFile Sign Logout Request
555EF9FF58A8EXAMPLE28D283123634.cer Sign Logout Response
Single Logout Service Url
https://adfs.example.ppm2000.com/adfs/ls
https://adfs.example.ppm2000.com/adfs/ls Export Metadata
Name ID Format
Windows Domain Qualified Name 🗸
Single Sign On Service Binding
HTTP Redirect V
OK Cancel
OK Cancer

7. Click **OK** then save your changes.

Export Metadata

Once you've completed the configurations in the previous sections, your IdP will likely require Perspective metadata in order to complete the SSO process. This information can be exported into a file using the **Export Metadata** tool in Service Manager.

- 1. In Service Manager, click **Database** in the pane to the left.
- 2. Double-click a database to open it.
- 3. Click the Authentication Mode tab.
- 4. Select the Manual Settings option.
- 5. Click Export Metadata.

- 6. Navigate to the ***PerspectiveInstallationPath*\PerspectiveServices\SAML\Certificates** folder, or an alternate location you may have selected in the previous section.
- 7. Select a file name and location to export the metadata.

Note: It's recommended that you save the metadata file in ***PerspectiveInstallationPath*\PerspectiveServices\SAML\Metadata** in the Perspective services installation directory.

8. Click OK and the metadata file will be opened. Either upload a copy of this file to your IdP server or save a copy in the *PerspectiveInstallationPath*\PerspectiveServices\SAML\Metadata folder if you did not choose that location in step 6.

Perspective Configurations

Once the Service Manager and IdP configurations are complete, a Perspective administrator must enter each user's SSO username (as it's configured in the IdP's settings) in the **Corporate ID** field by going to **Administration > Users > User Details**.

Linked Person	Role
🗓 Bernard, Milly R 🛛 🖶 🗙	Chief Security Officer (Director) 🔻
First Name	Last Name
Milly R	Bernard
Perspective Logon ID	Corporate ID
ets2	millybernard
Change Password	Approved By
Change Password On Login	🖻 No Value 🕂 🕂 🗙

If your system was previously configured for Windows authentication, you can use those credentials for SSO, including any values previously saved in the **Corporate ID** field, provided those values match the name ID format selected during setup.

See the Perspective Administrator's Guide for more information on entering this information in a user's profile.

Integration Services

Integration Services should not require any additional configuration as all SAML authentication information should be in the Perspective configuration file.

Perspective Services Update

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

- If you're installing an edition of Perspective with Dispatch, install the WebSocket Protocol on your webserver, if it is not already installed.
- 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.
- 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.
- Install Perspective Services 5.3.1.1 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, 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:
 - To access Perspective Service Manager, open it from your desktop or go to C:|Program Files|Resolver Inc|Perspective|5.3.1|ServiceManager|Perspective.ServerManager.exe. Launch
 Perspective 5.3.1.1 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.

8	Perspective Service Manager	
Service Manager Settings	Configuration Client-Side Configuration Notification Attachments Services AE Tools	
Configuration	Location of Server Configuration File C:inetpub\www.moot\Perspective5.0\PerspectiveServices\Perspective_Default.config Browse	
E Database	Encrypt Configuration?	
Product Validation	QA HighLimit PNS&EIM1000 Version: 5.0.1447	
Quick Find Indexing		
User Defined Fields		
Downloads		

- 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.

 Launch the Perspective Version 5.3.1.1 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 and later 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

Windows Authentication

Perspective 5.2 and later continues to support Windows authentication (non-SAML authentication); however, it is available for **Perspective only** and can no longer be enabled through Service Manager.

Important Note: If you wish to use single sign-on authentication for all Perspective modules (Perspective, Dispatch, Dashboard, and/or Web Portal) you must enable SAML authentication.

- 1. Open the **Perspective_default.config** file. By default, this file is located at *C:\inetpub\wwwroot\Perspective5.3.1\PerspectiveServices*
- 2. Locate the **<WindowsAuthentication>** tag.
- 3. Delete the **false** value in the tag and replace it with **true**.

Note: You cannot enable both Windows authentication and SSO in the Perspective_default.config file by changing the *<SSOAuthentication>* tag's value to *true*.

- 4. Save the file.
- 5. Reset IIS to complete the configuration.

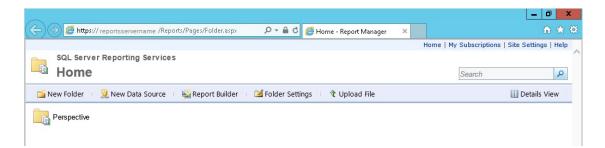
Testing Perspective Implementation

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.

- 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.
- 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.
- 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 5.3.1.1.

Contact Information

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