Perspective™

by PPM 2000

Incident management from every angle.™

Installation Guide

Perspective by PPM 2000™

Version 3.3

Printed April 2013

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Minimum System Requirements

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 configurations are for planning purposes only—please work with your PPM 2000 Account Manager for a specific assessment of your needs. These requirements apply to Perspective v.3.3, Perspective Integration Services™ v.3.3, Perspective DispatchLog™ v.4.0, Perspective e-Reporting™ v.2.0, Perspective Focal Point™ v.1.2, Perspective Mobile™, Perspective Visual Analysis™ v.3.3 and Perspective Workflow™ v.1.0.

	Minimum	Recommended
Client Machine		
Processor Speed	1.5 GHz	3 GHz+
Memory	1 GB	2 GB+
Operating System	Windows® Vista SP 2	Windows® 7 SP 1
.NET Framework	Version 4.0	Version 4.0
Web Browser	Internet Explorer® 7.0	Internet Explorer® 9.0
Third Party Application	Adobe® Reader® 7.0.5+ Microsoft Office® 2007[1] Sun Java™ Runtime Environment 6.0 U7[2] QlikView™ Analyzer Plug-in for Internet Explorer®[3]	Adobe® Reader® 9.4.0+ Microsoft Office® 2010[1] Sun Java™ Runtime Environment 7+[2] QlikView™ Analyzer Plug-in for Internet Explorer®[3]
Mobile Device[4]	See *Perspective Mobile™ Supported Device List*	See *Perspective Mobile™ Supported Device List*
Web Services Server[5, 6]		
Available Disk Space[7]	1 GB	1 GB
Processor Speed	2 GHz	2 GHz multicore or better
Memory	2 GB	4 GB+
Operating System	Windows Server® 2008 SP 2 64 bit	Windows Server® 2008 R2 SP 1 64 bit
.NET Framework	Version 4.0	Version 4.0
IIS—Internet Information Services[8]	IIS 7.0	IIS 7.5
C++ Runtime Libraries	C++ 2010 SP1 Runtime Libraries (x64) 10.40219	C++ 2010 SP1 Runtime Libraries (x64) 10.40219
QlikView™ Server[9]	64 bit Version 9 SR 2	64 bit Version 9 SR 2
SQL Server® Machine[6]		
Available Disk Space	2 GB	20 GB+, SCSI Hard Drive
Processor Speed	3 GHz	64 bit Server Dual Core or Multiple Processors
Memory	2 GB	4 GB+
Database Server[10]	SQL Server® 2008 Standard SP 1 or R2	SQL Server® 2012 Standard or Enterprise
Reporting Services	SQL Server® 2008 Reporting Services	SQL Server® 2012 Reporting Services

Deployment Note: Perspective client is deployed as a ClickOnce application, launched from Internet Explorer®; it has a zero client footprint and does not require administrative rights to launch.

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

DTC Note: Perspective Integration Services requires the Microsoft® Distributed Transaction Coordinator (DTC) service to be installed and enabled on the Internet Information Services (IIS) for Windows® Web Server and the Microsoft® SQL Server® for Perspective.

1. This requirement only applies if using Outlook® email integration.
2. This requirement only applies to Perspective Visual Analysis.
3. This requirement only applies to Perspective Focal Point.
4. This requirement only applies to Perspective Mobile.
5. These requirements apply to Perspective, Perspective e-Reporting, Perspective Focal Point and Perspective Workflow.
6. These requirements are for systems with 5 to 25 concurrent users. For Perspective systems with less than 5 or more than 25 concurrent users, please contact your PPM 2000 Account Manager for a specific assessment of your needs.
7. Depending on the size of your Perspective database, more disk space may be required for Perspective Focal Point and Perspective Workflow.
8. Requires IIS 6 Management Tools installed.
9. This requirement only applies to Perspective Focal Point. A limited QlikView™ Server license is included with Focal Point.
10. SQL Server® 2008 Express is only supported for the Standard Edition of Perspective.

Standard Install

SQL Database Server

1. Ensure Microsoft SQL Server 2008 Standard SP 1 or better has been installed.

   Note: If installing on Windows Server 2008, the database package must be run as an administrator.

2. Install the Perspective database:

   a. Launch Microsoft SQL Server Management Studio.

   b. Right click DBS and select **Restore Database**.

   c. Under **From Device**, click the **Browse** (**...**) button and browse to the appropriate database: default, sample or system.

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

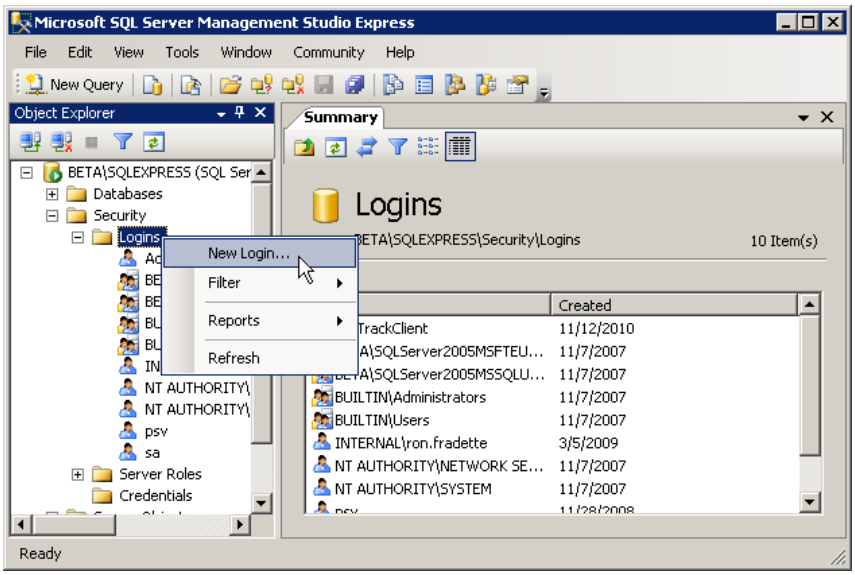
   d. Click **OK**.

   e. Check the **Restore** option.

   f. Enter a database name in **To Database**, then click **OK**. The database should now appear in the database list.

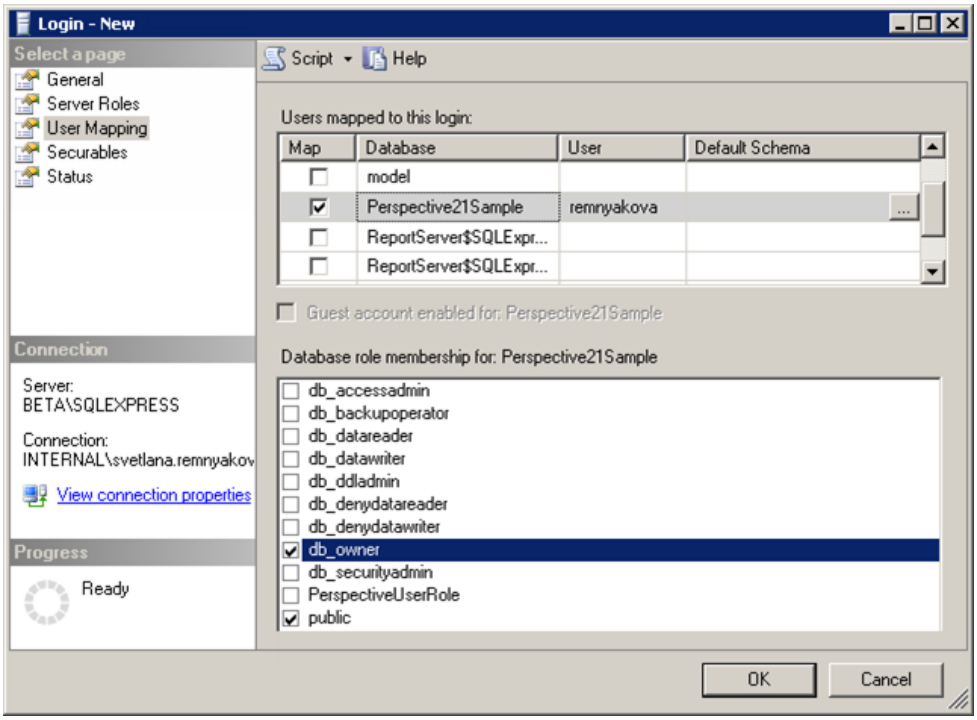
3. Create a new SQL user that will be used by Perspective to connect to the SQL Server:

   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 the **User Mapping** page. Check the appropriate boxes to grant the new account access to the Perspective database with the **db_owner** role membership rights, then click **OK**.

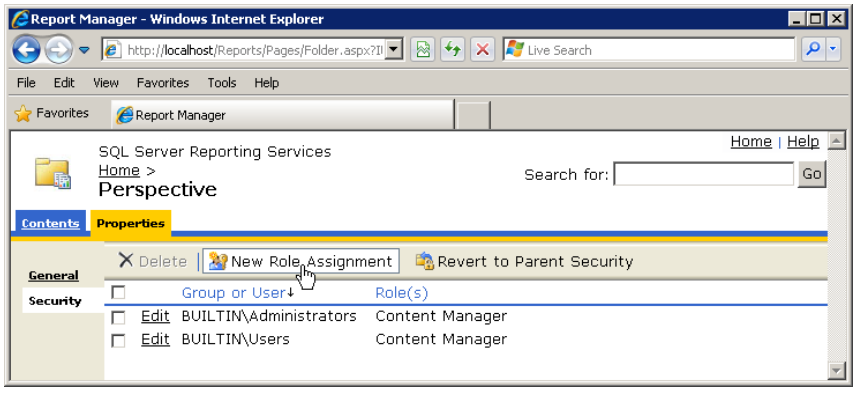


SQL Reporting Services

1. Ensure that SQL Server Reporting Services is installed.
2. From the Perspective install directory, copy the **Reports Setup** folder and all subfolders to a temporary directory on the Reporting Services computer.
3. Edit the **PublishServerReports.bat** file in the temporary directory. Before making any changes, save a backup copy of the original **PublishServerReports.bat** file.
   - Edit **databaseServerName** to <Name_of_Database_Server>.
   - Edit **databaseName** to <Name_of_Database>.
   - Edit **databaseUserId** to <sql_User_Account>.
   - Edit **databasePassword** to <sqlUser_Password>.
4. Save changes and run the **PublishServerReports.bat** file to publish reports to the Report Manager. If the file fails to run, see the "Troubleshooting Tips" section.

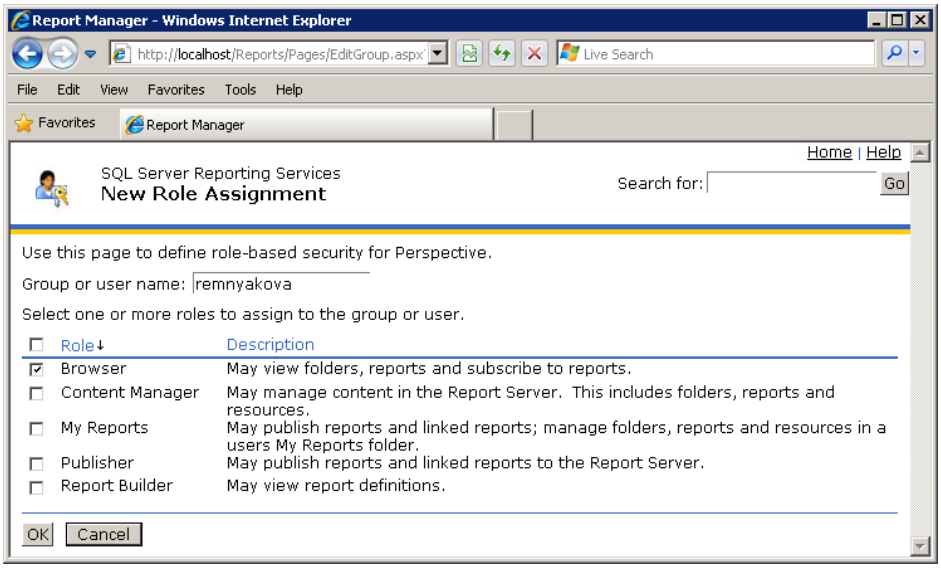
> **Windows Server 2008 Warning**
> If installing on Windows Server 2008, the command contained in the batch file must be run from the Administrator's Command Prompt window as this will require elevated permissions. **The command must be launched from the directory in which the batch file is contained.**

5. Browse to your Reporting Services Web site (e.g., **http://localhost/Reports/**).
   a. On the Contents tab, click the **Perspective** folder.
   b. Click **Properties**, **Security** and **New Role Assignment**, then **Edit Item Security**.



   c. Enter a Service Account for the Perspective application to use when connecting to Reporting Services. Create a new local user, if you do not have one already. Ensure that the password is not set to expire.

d. Select the **Browser** role and click **OK**.



Perspective Services (Application Web Server)

1. Ensure Internet Information Services (IIS) is installed.

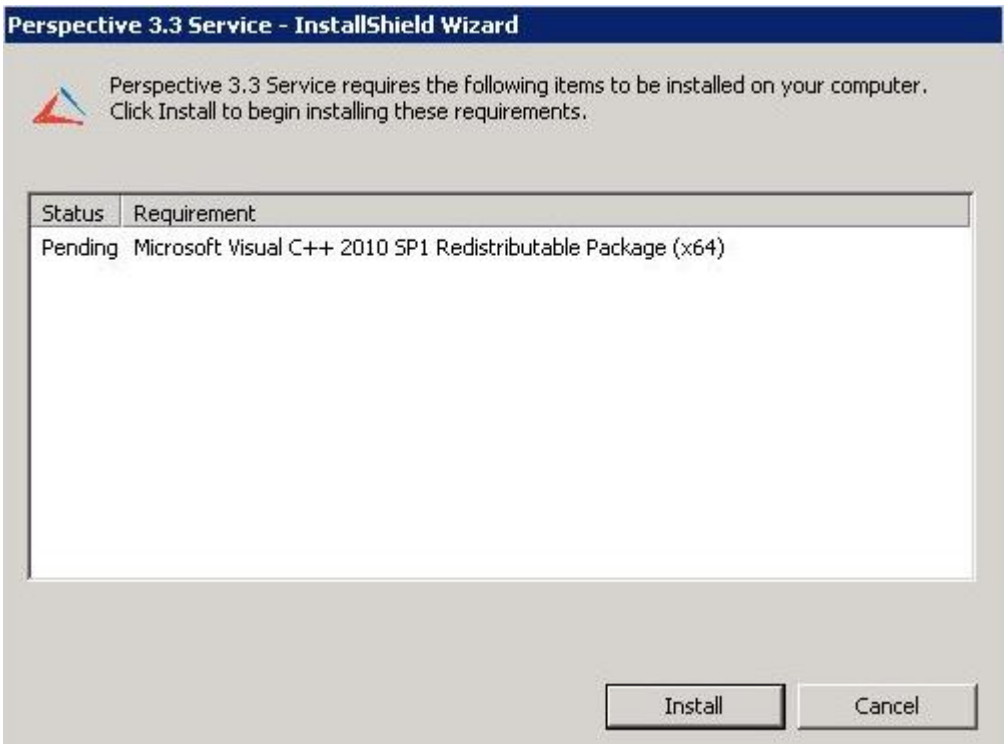
> **Application Pool**
> As of Perspective Version 3.3, the appropriate application pool is set up as part of database setup and doesn't have to be done manually.

2. From the *Perspective Install* > *Web Service Setup* > *Perspective Services* directory, run (as an administrator) **Perspective.Services.exe**. To complete the setup, follow the wizard's guidelines.

   a. If you already have **Visual C++ 2010 SP1 Runtime Libraries (x64)** and **.NET Framework 4.0** installed, skip to step 2c. Otherwise, you will be prompted to install the Runtime Libraries and/or .NET Framework.

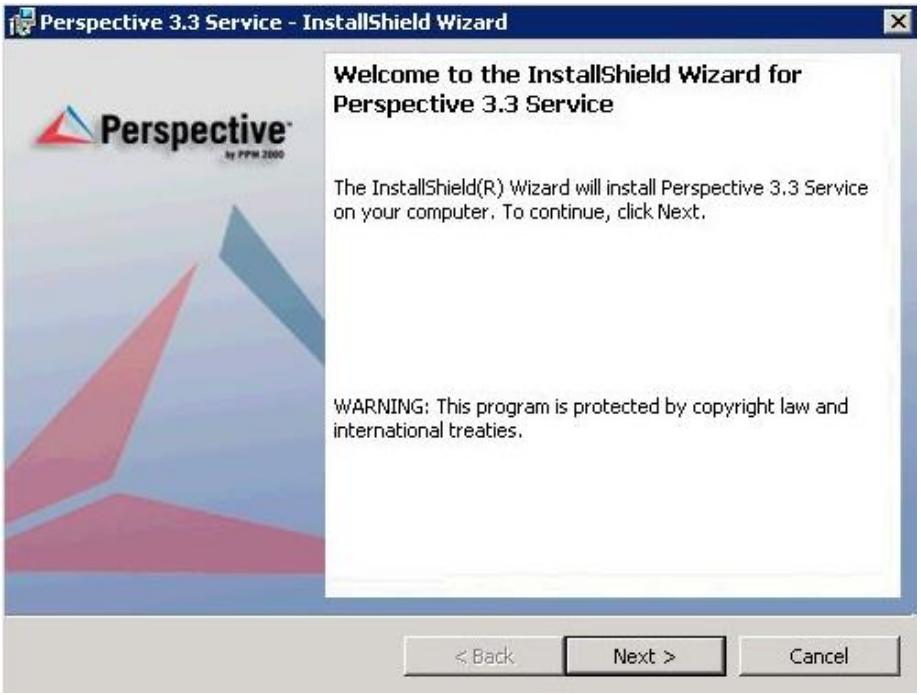
   Note: As of Perspective Version 3.3, the full Microsoft .NET Framework 4.0 pre-requisite installer is bundled into the Perspective installer. .NET Framework 4.0 is required; if it is not yet installed, it can be done so as part of this installation process.

   b. Click **Install** and wait for the process to complete.

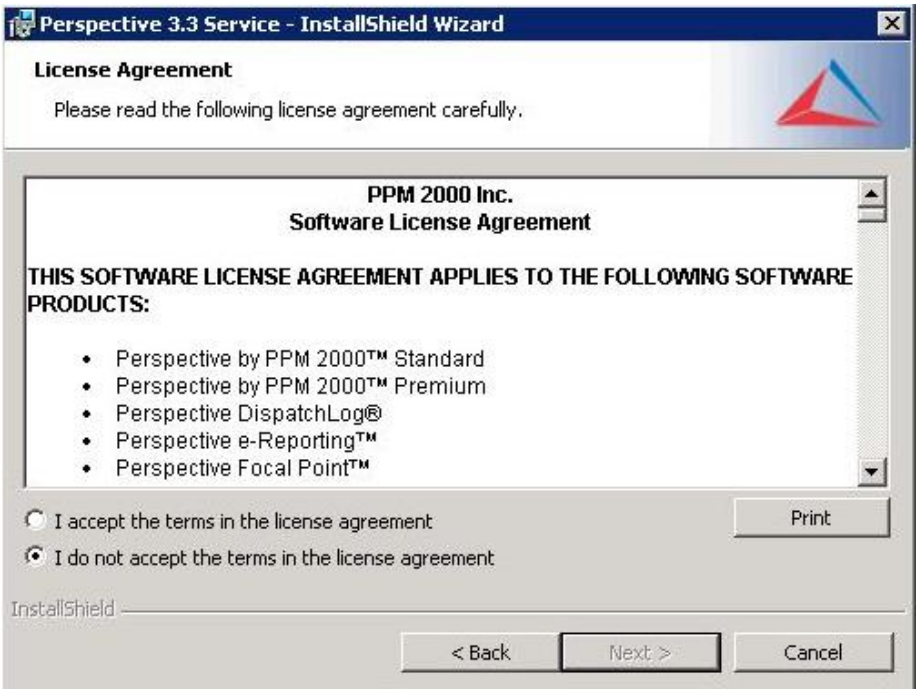


*Note: This process may trigger Windows' UAC (User Access Control) security feature. If prompted, click **Yes** to allow Perspective Services to install.*

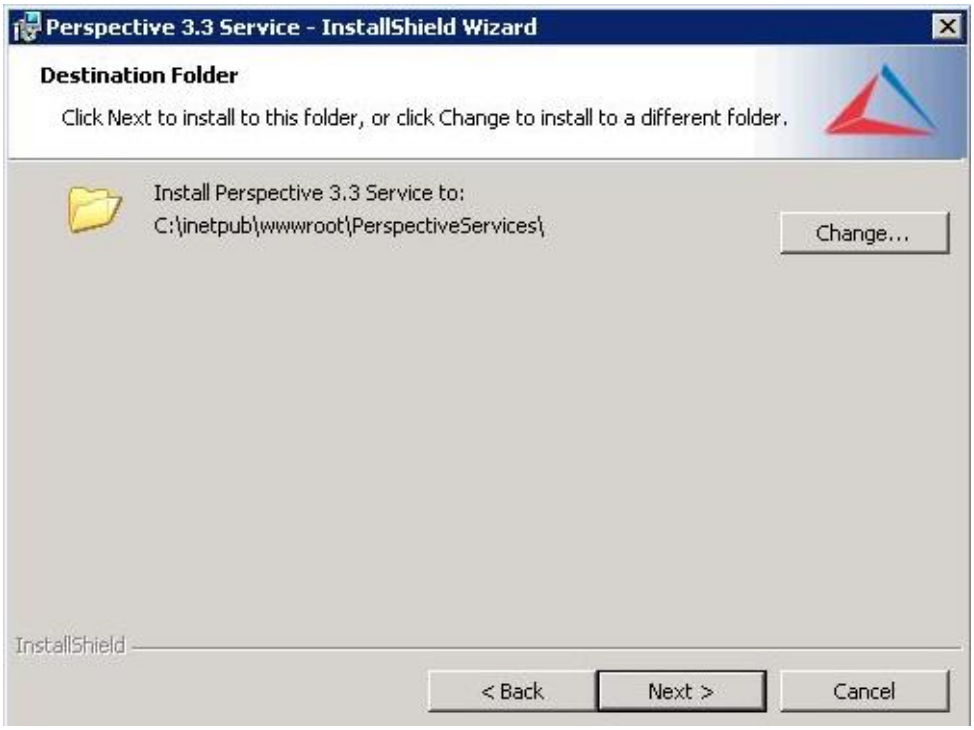
c. Wait for the Perspective Service Setup Wizard to start.



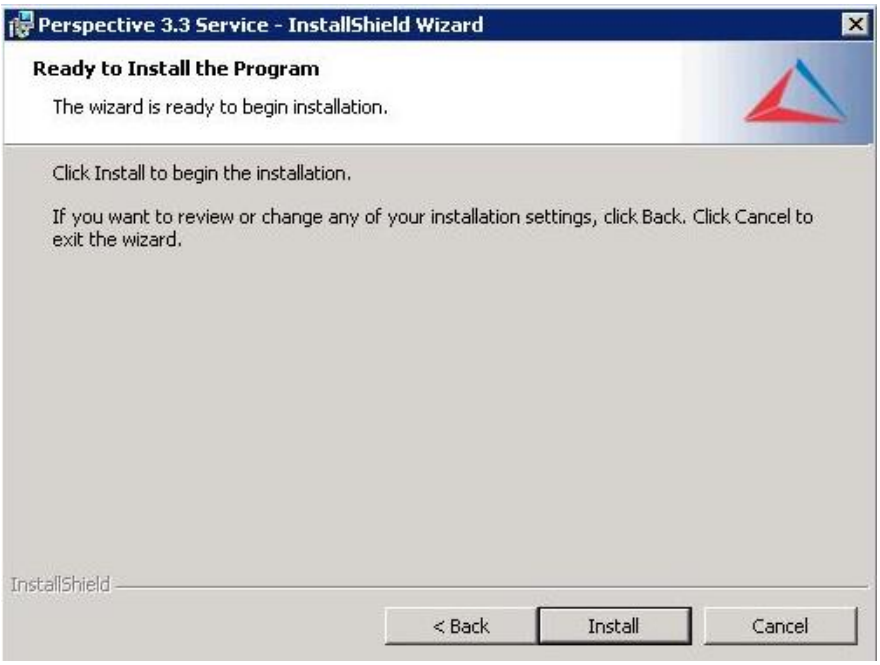
d. Read the License Agreement. If you accept the terms and conditions, select the appropriate radio button and click **Next**.



e. Select the appropriate installation directory. Click **Next**.



f. In the following screen, click **Next** to confirm the installation. Wait while Perspective Services is being installed.

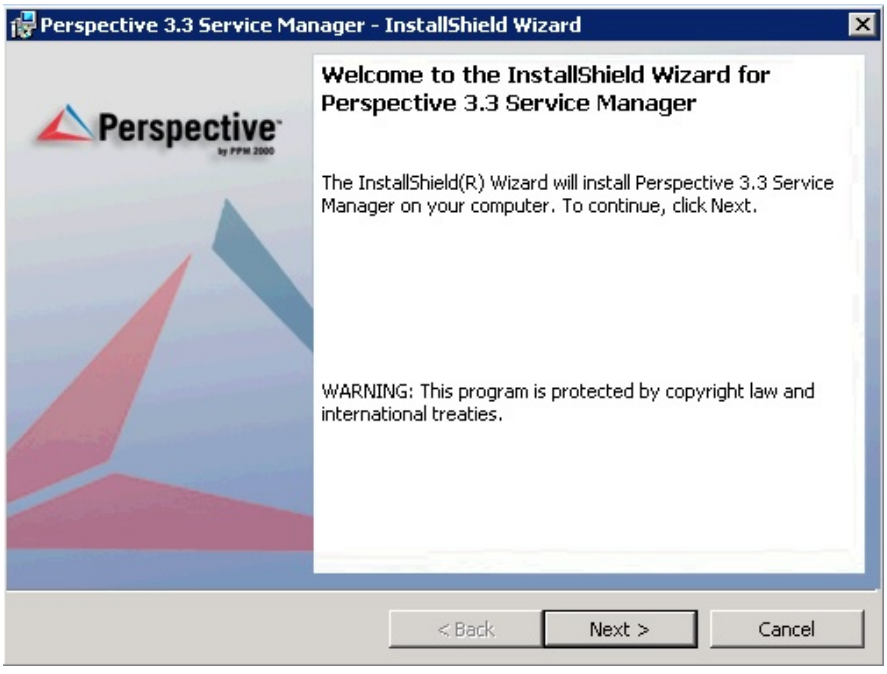


g. Click **Finish** once the installation is complete.

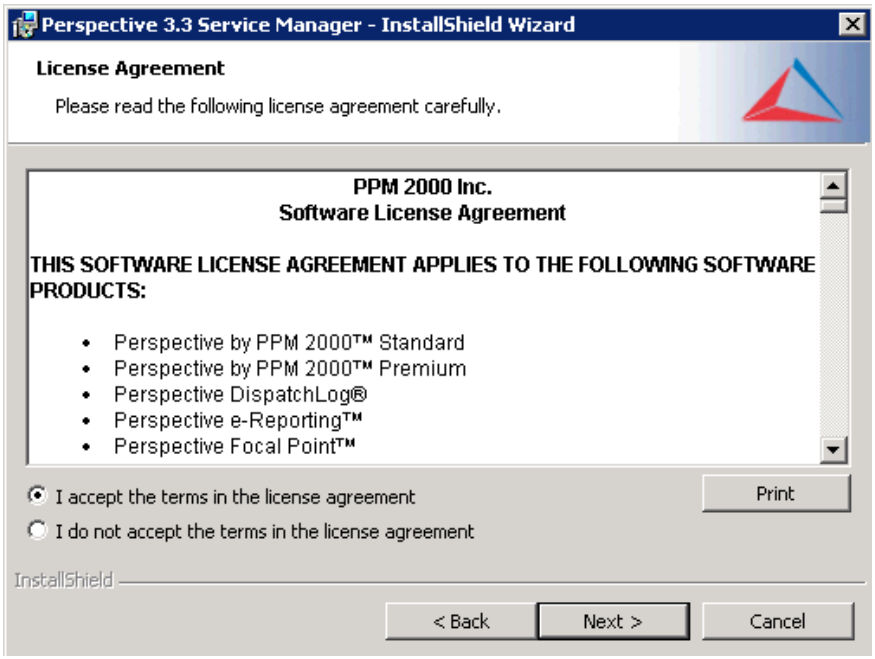
Configure Connections Using Service Manager

1. Install Perspective Service Manager:

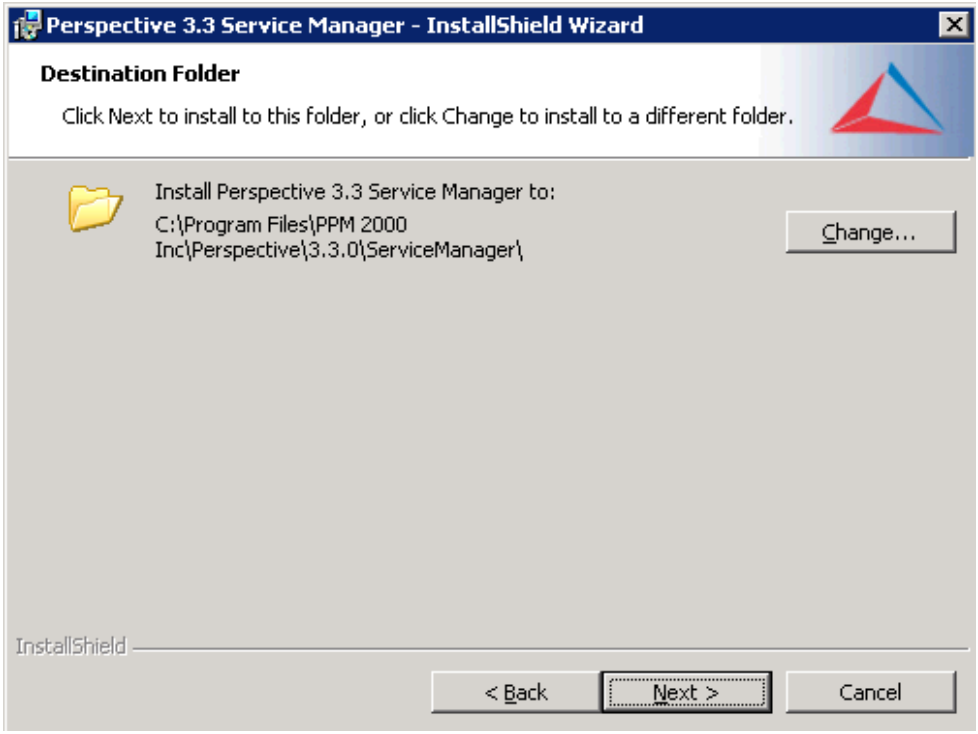
   a. From your Perspective installation folder, run Service Manager Setup. The installation wizard appears; click **Next** to continue.



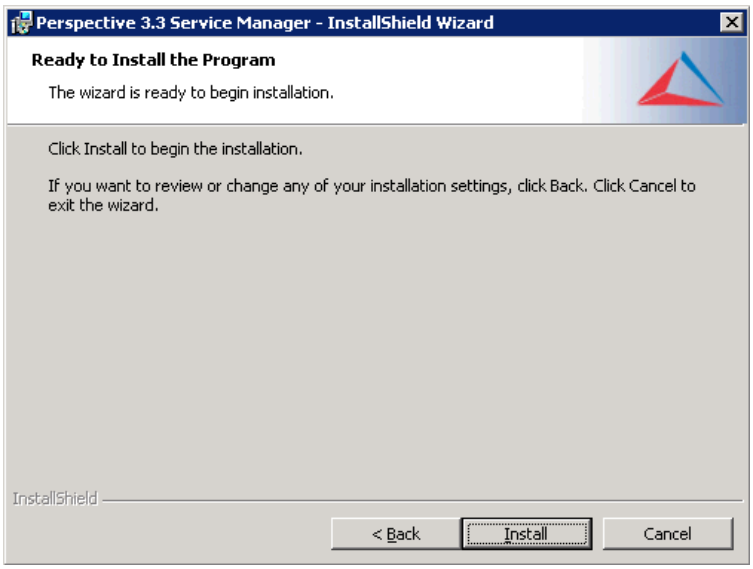
b. Read the License Agreement. If you accept the terms and conditions, select the appropriate radio button and click **Next**.



c. Select the appropriate installation directory. Click **Next**.



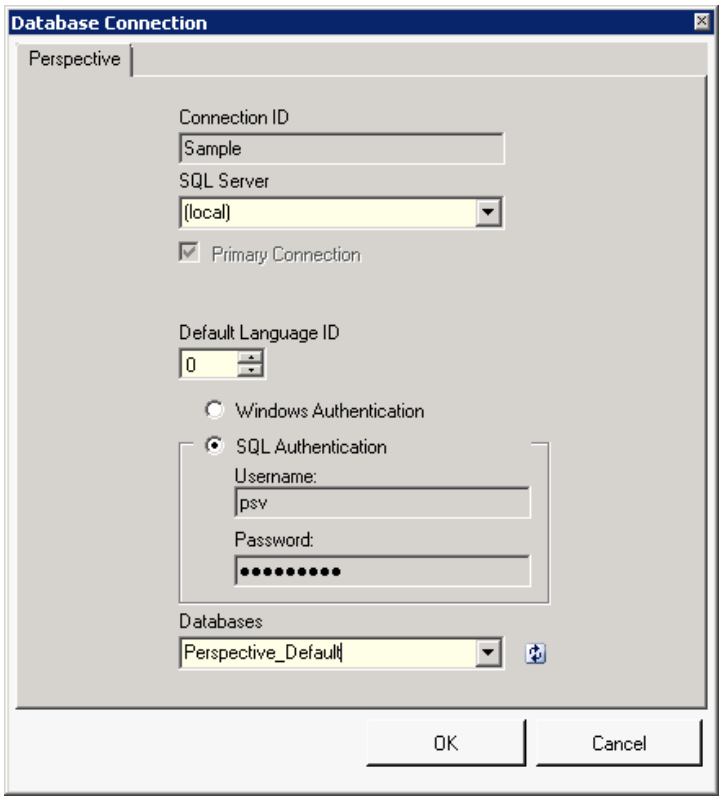
d. In the following screen, click **Next** to confirm the installation. Wait while Perspective Service Manager is being installed.



e. Click **Finish** once the installation is complete.

2. From the Start menu, launch (as an administrator) **Perspective Service Manager**. You'll be prompted to select a Perspective configuration file. Navigate to the installed location of Perspective Services, select the **Perspective_Default.config** (default location: **C:\inetpub\wwwroot\PerspectiveServices**) and open the configuration file.

   You'll be prompted for database information.



3. Enter a new name for **Connection ID.**

   Note: The Connection ID cannot contain the word "Default".

4. In the **SQL Server** lookup list, select your SQL Server or type the name of your server in the text box.

5. Leave **Default Language ID** set to **0**, unless instructed otherwise by PPM 2000.

6. Ensure **SQL Authentication** is selected, and enter the SQL **Username** and **Password** created when installing the database.

7. Select your Perspective database from the **Databases** lookup list.

   Note: If you receive an "Unable to connect to the named server" message, you have entered either the wrong SQL server name or credentials.

8. Open the **Product Validation** component from the menu on the left, then click **OK** to save and add the primary connection.

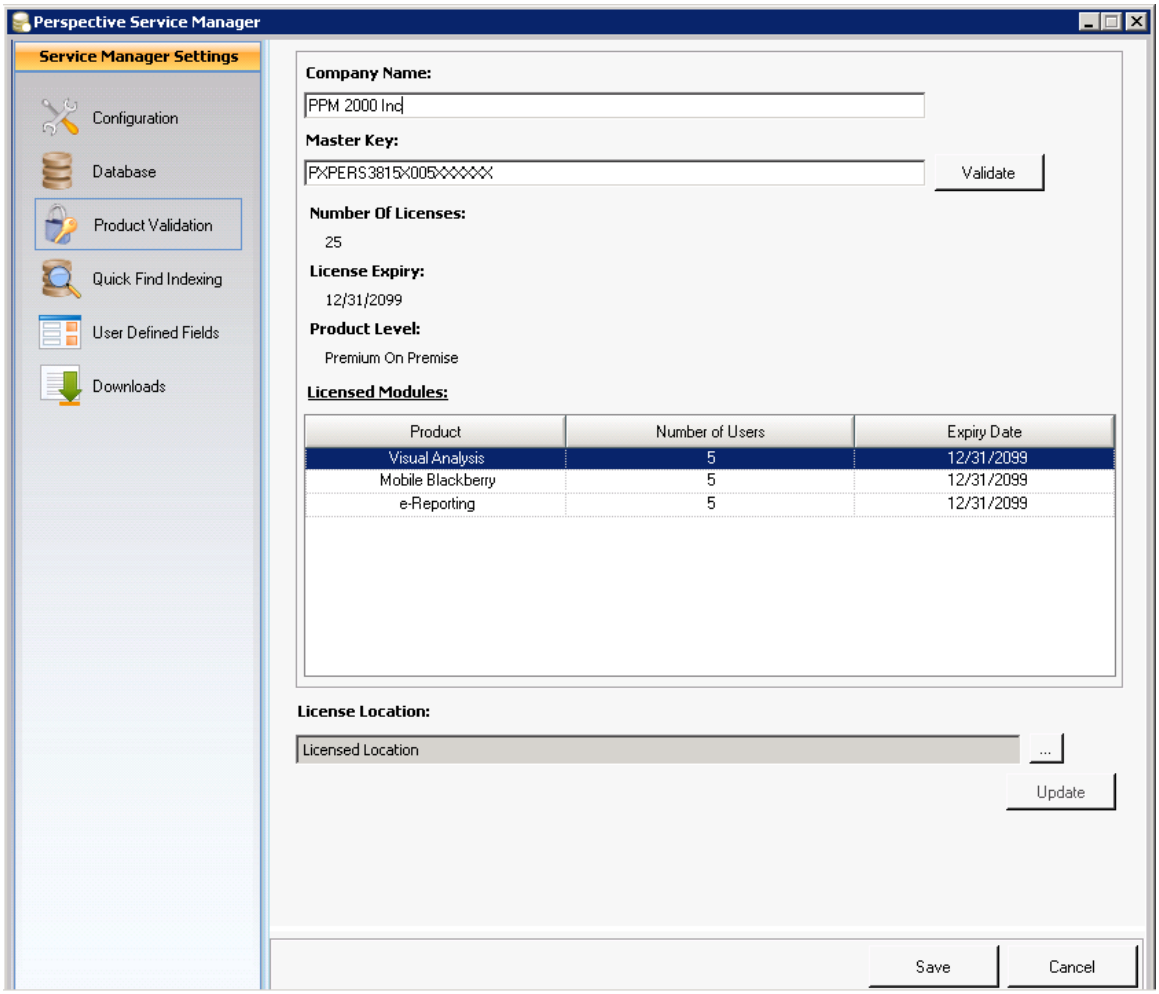
9. In the top field, enter your **Company Name**, as listed on the email provided to you with your license keys.

10. Enter the **Master Key** that applies to the Company Name entered. Note it is case-sensitive.

11. Click the **Validate** button. The fields below will indicate the number of active licenses, **License Expiry Date**, **Product Level** and specifications of individual **Licensed Modules** (i.e., **Product**, **Number of Users** and **Expiry Date**).

    *Note: The **Validate** function will access a central licensing service hosted by PPM 2000 Inc. Internet connection is required to download your license file.*

    *Optional: If you do not have Internet connection available, you may contact Technical Support for your license file and manually update it in the **License Location** field.*



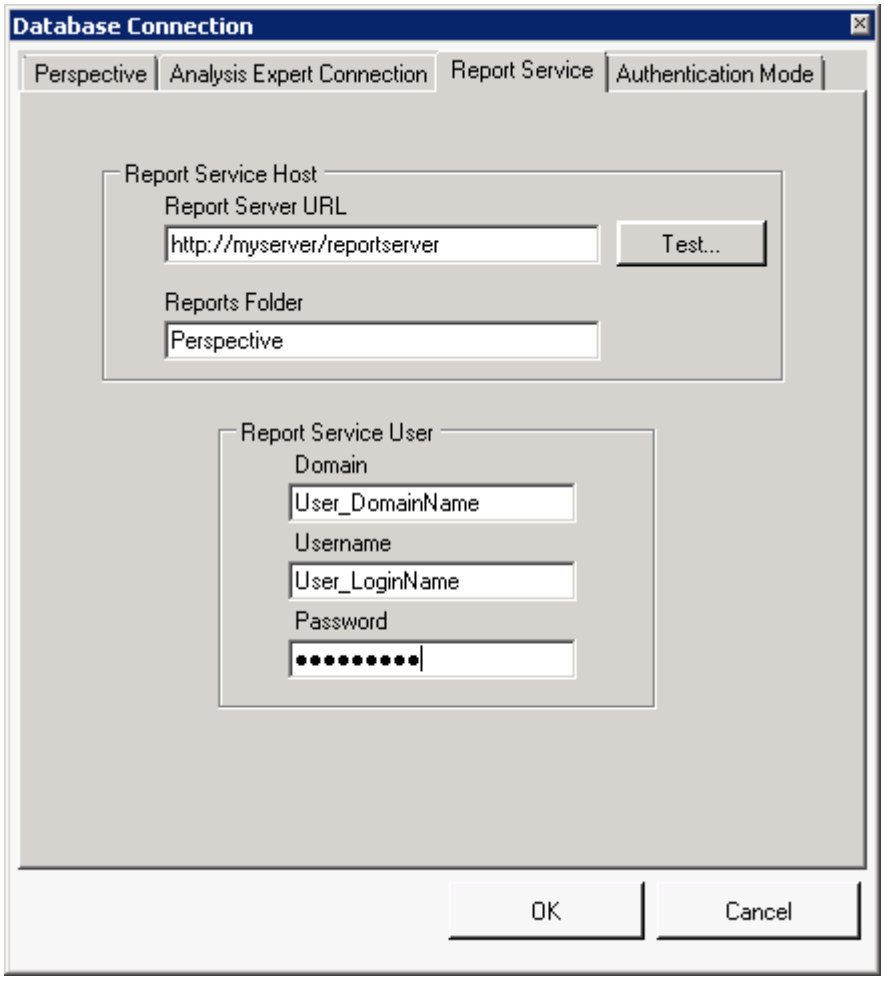
12. Open the Database component from the menu on the left, double-click your database, open the **Report Service** tab and type the report server URL in the **Report Server URL** box.

13. Click the **Test** button. You should receive a prompt telling you the URL is valid. If not, then double-check that your configuration is correct and try again. If you keep receiving an error message, please call the Technical Support team at 1-877-776-2995 for assistance.

14. Enter the name of your **Reports Folder**.

15. Proceed to the Report Service User section below. Enter the **Domain**, **Username** and **Password** that were granted browser rights when setting up the server-side reports.

16. Click **OK**.

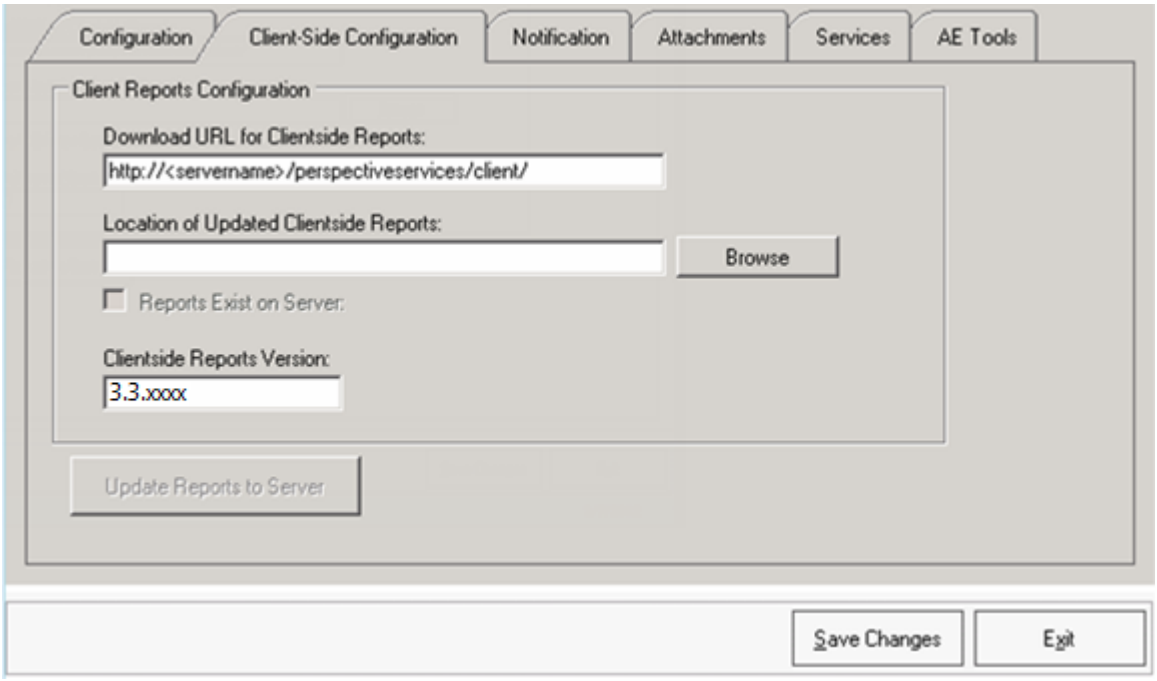


17. Select the **Configuration** component from the Perspective Service Manager menu.

18. To encrypt the Perspective_Default.config file, select the **Encrypt Configuration?** checkbox.

19. Open the **Client-Side Configuration** tab.

20. Enter the **Download URL for Client-Side Reports** for the client reports configuration files to update automatically (i.e., http://<server name>/perspectiveservices/client).



Note: 'xxxx' in the above screenshot denotes the latest Perspective build number.

21. Click **Save Changes** and click **Yes** on the save changes prompt. Then, close the Service Manager.

22. Double check your IIS settings:

    a. View settings of the Perspective Services 3.3 Application Pool.

    b. Ensure **Enable 32 Bit Applications** is set to **FALSE**. If it is not, change accordingly.

23. Restart IIS.

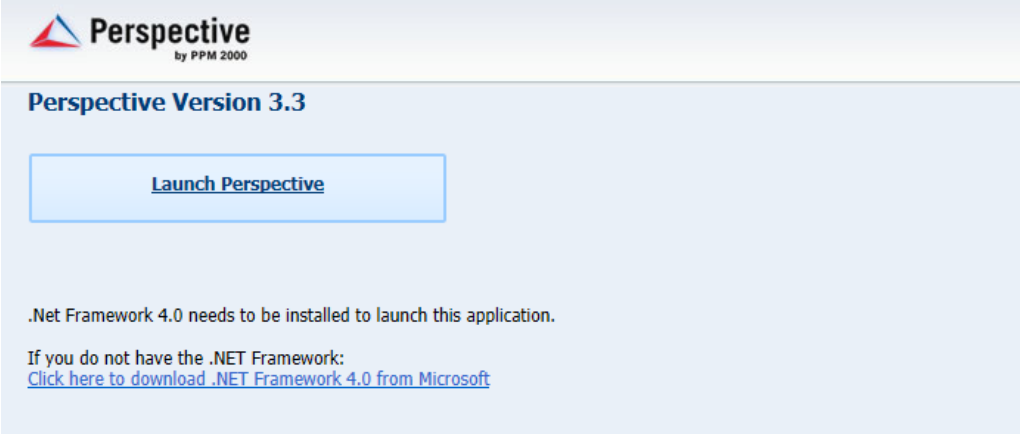
> ⚠ **Advanced Configurations Warning**
> Many options in the Service Manager are not covered in this step-by-step Standard Install walkthrough. For the list of supported advanced setup configuration options, please, refer to the "Advanced Configurations" section that appears later in this guide. It is recommended that all setups follow the standard setup procedures outlined in this section as an initial starting point. Advanced features can then be configured as needed, after the standard setup is running and connections have been verified.

Client Machines

1. Ensure Microsoft .NET 4.0 Framework is installed on the client machine.

2. Browse to the Perspective Services URL: **http://<IISServer>/PerspectiveServices**. "IISServer" refers to the Perspective Web server installed in the previous section.

a. Click the **Launch Perspective** button.



b. In the dialog box that opens, click **Run**.

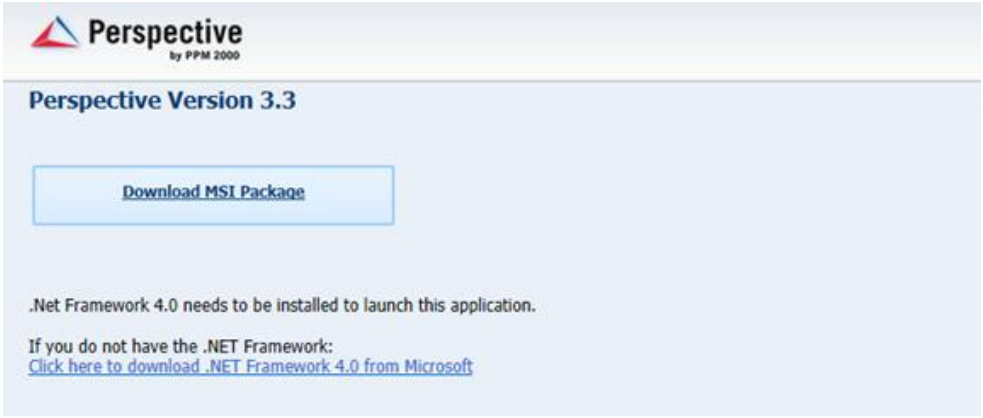
*Note: If you are using the **MSI Package installer**, follow the procedures below.*

i. Browse to the Perspective Services URL: http://<IISServer>/PerspectiveServices/default.aspx**?opt=2**

If you are using **?opt=1**, only the Click-Once installer will be displayed.

If you are using **?opt=0** or if Java Script is disabled or the Web Service is not a trusted site, both the Click-Once and MSI Package installer will be displayed.

ii. Click the **"Click here to Download MSI Package"** and follow the on-screen instructions. If you experience any problems during the download of the MSI Package or the installation of the MSI client, please call the PPM 2000's Technical Support team at 1-877-776-2995 for assistance.



3. After Perspective downloads and installs, you're prompted to enter a URL. The URL should be automatically populated; if so, move to the next step. If not, enter your Perspective Services URL as before: **http://<IISServer>/PerspectiveServices**. <IISServer> refers to the Perspective Web server installed during the installation of Perspective.

Click the icon right of the URL to proceed.

4. Now you should be able to test the default Perspective logon. From this point onward, users must navigate to the Perspective Services URL to launch the Perspective application.

Perspective Default Logon	
User Name:	Admin
Password:	Security

To create a shortcut to the application on the client machine's desktop, proceed as follows:

1. Navigate to the **Perspective Services URL**.
2. Right-click the **Launch Perspective** button and select **Copy Shortcut**.
3. Right-click the client desktop and select **Paste Shortcut**.

Default Admin Master vs. Users with Administrator Rights

As of Perspective Version 3.3, there are differences between the default Admin Master account and a Perspective User with Administrator rights. Specifically, the Admin Master has select features available that other Users, even with Administrator rights, do not.

However, the default Admin Master **can only access the Administration and Dashboard panels of Perspective**. Other components are unavailable to the Admin Master; this account cannot be used for data entry.

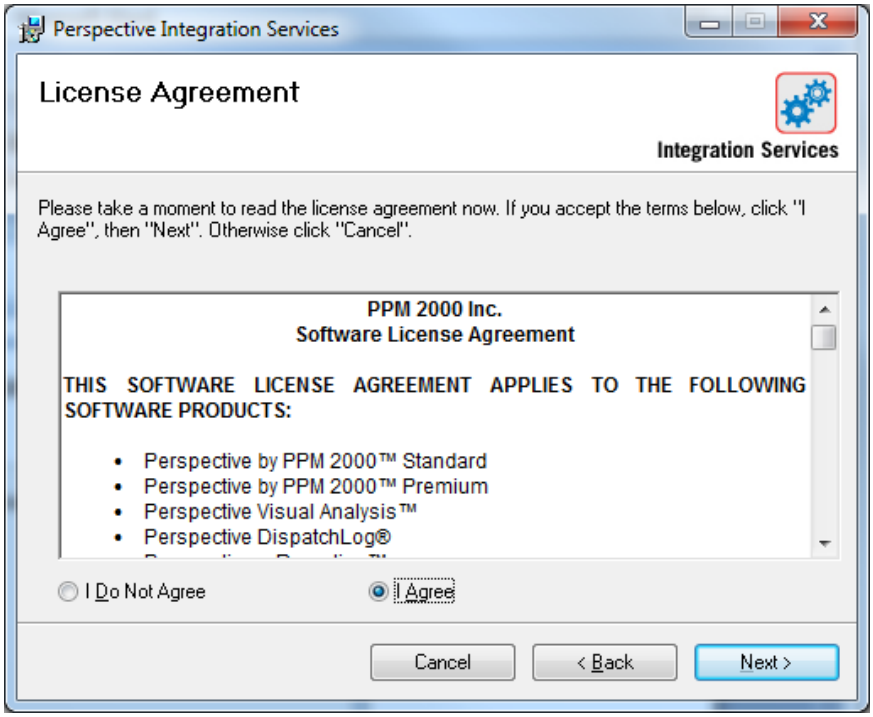
Install Perspective Integration Services (Optional)

DTC Note
Perspective Integration Services requires the Microsoft® Distributed Transaction Coordinator (DTC) service to be installed and enabled on the IIS Web Server and the Microsoft® SQL Server® for Perspective.

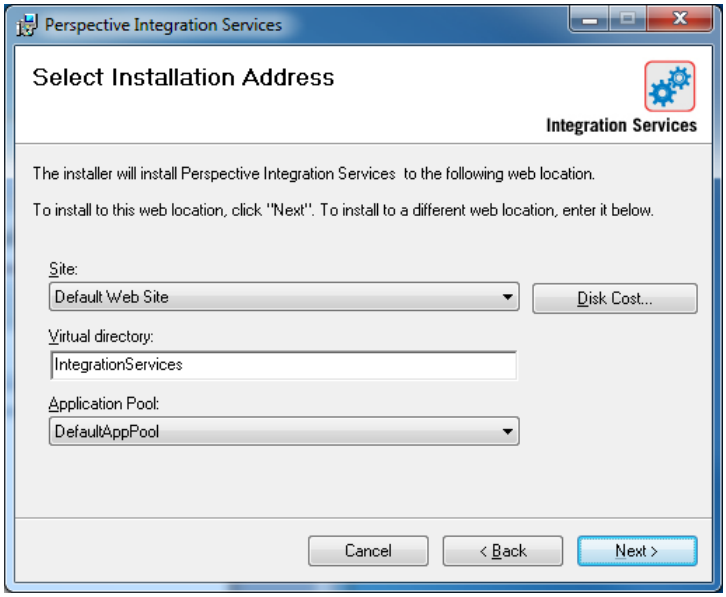
1. From the *Perspective Install* > *Web Service Setup* > *Integration Services* directory, run **setup.exe**.

2. Perspective Integration Services Setup Wizard dialog box will appear. Read the information contained within and proceed to follow the steps in the Wizard required to complete the installation process. Click **Next**.

3. Read the PPM 2000 Software License Agreement in the following dialog box and select **"I agree"** to indicate your agreement with the terms outlined. Click **Next**.

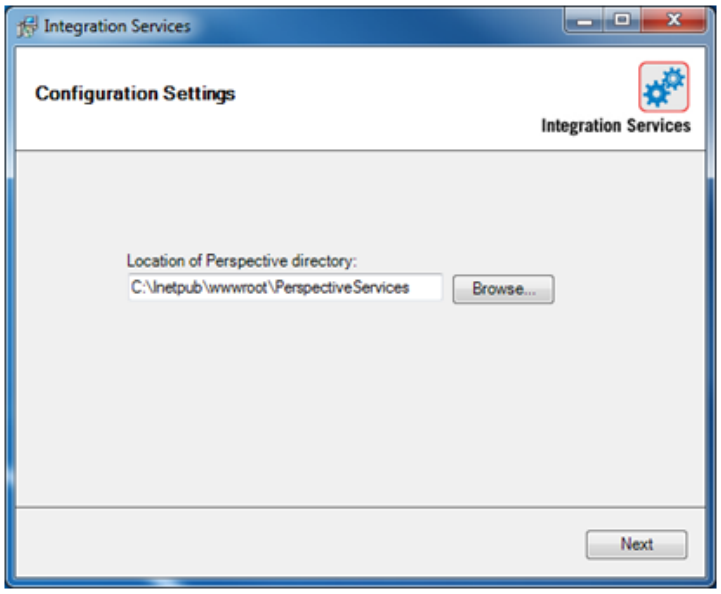


4. Select a Web location for the Integration Services installation by either accepting the provided default values or entering other applicable settings.



5. At this point, the installer is ready to begin the installation. Confirm your intention to start the installation process by clicking **Next**.

6. At some point during the installation you will see another screen appear that will request you to specify the location of the **Perspective directory**.



7. Wait while Integration Services is being installed. Click **Close** once installation is complete.

HTTP and SSL Note
Perspective Integration Services' Standard Install is configured to use the secure HTTPS setting and the SSL protocol. To change these and other default settings, please contact Technical Support at 1-877-776-2995 for the "Technical Support Knowledge Base—Perspective Integration Services Configuration" document.

Testing Perspective Implementation

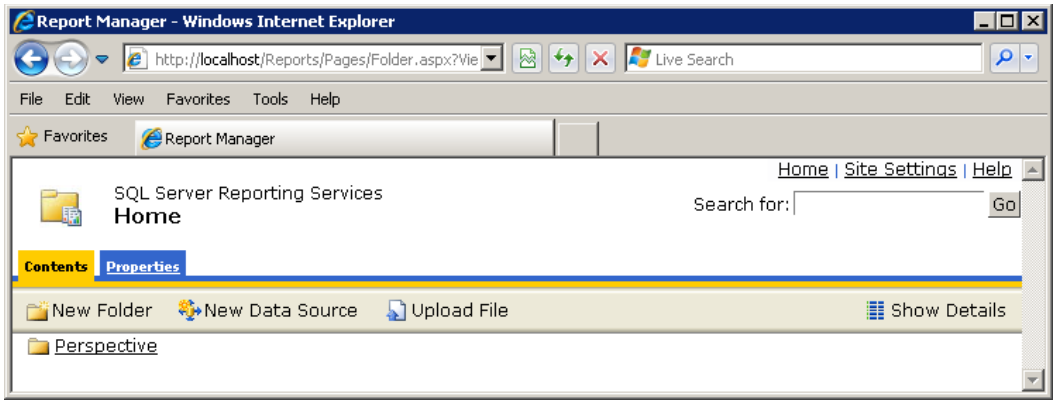
Once you have completed the steps outlined on the previous sections, please, go through the following steps to ensure that all Perspective's components have been set up properly.

1. Go to the Perspective Services URL and confirm that the page loads properly: **http://<localhost>/perspectiveservices**.

2. If the above fails, go to the Perspective Services page and confirm that the page loads properly: **http://<localhost>/perspectiveservices/service.asmx**.

3. Go to the Reports page and confirm that the page loads properly: **http://<reportservername>/reports**.

   *Note: If your Reports 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. Try to run any of the reports by clicking **Preview**.

6. To confirm that the server-side reports are working, try running the **Test Report** under the <Administrative Only> node. If you receive an error message, please call the Technical Support team at 1-877-776-2995 for assistance.

   Note: The Report version should display as 3.3, while the Database version should display as 3.3.0.

Advanced Configurations

With Perspective, your organization has a number of advanced configuration options available. Before attempting to implement any of the following options, we recommend that you complete the standard installation first; then, contact Technical Support (support@ppm2000.com) for further instructions.

SSL on Your Web Service	To secure and encrypt data sent to and from the Web service to client machines.
Windows Authentication	To allow users to log on to Perspective and to connect to SQL service using their Windows authenticated account
IIS Compression	To compress information sent from Web services to the client. (Recommended for installs with remote users who are not connected directly to the network. If all users are internal, compressing data may take longer than sending uncompressed data over a high-speed network.)
Transparent Data Encryption (SQL 2008)	For encrypting data at rest (for use with Microsoft SQL Server 2008 Enterprise Edition only).
Setting up Sample/Training Database	Default setup supports one database only. If additional databases are required, these can be set up with assistance from Technical Support.
AE Mirroring	For sites with high volumes of data that require SQL intensive searches to be executed against a separate SQL server.
Custom Pagination	By default, the pagination feature is set to 100 records per page. This number can be modified (to any value from 20 to 1000 records per page) by manually editing the <PaginationPageSize>100</PaginationPageSize> tag in the Perspective_Default.config file.
Custom Legal Notice and Privacy Statement	To customize Perspective's legal notice and/or privacy statement for your organization, navigate to the Legal folder in the Perspective Services Virtual Directory, open the LegalNotice.mht or PrivacyStatement.mht file in an HTML editor (such as Microsoft Word), apply your edits, and save the file as an MHTML document with the original file name.

Set Up Additional Features Using Service Manager

Perspective Service Manager is an external application available only on the Web server hosting Perspective services. It is used to manage configuration files, databases, licenses and keys, as well as to set up a number of important features in Perspective (i.e., email and mass notifications, attachments, Quick Find indexing, user-defined fields, Custom Search integration and Integration Services URL).

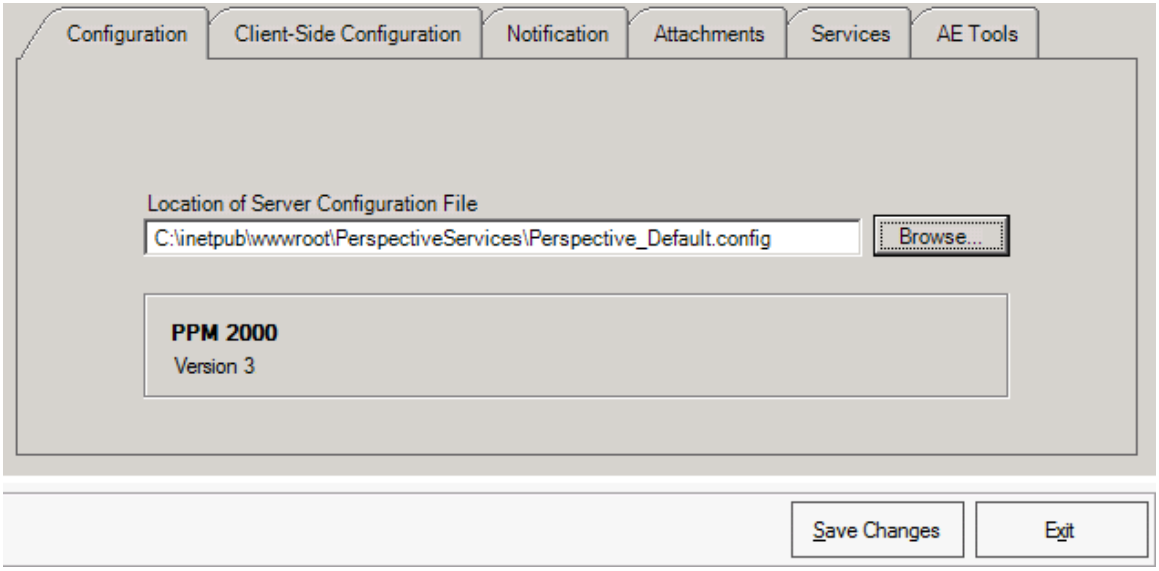
To access Perspective Service Manager, go to **C:\Program Files\PPM 2000 Inc\Perspective Services** or open it from the Startup menu.

Remember to complete each editing action in Perspective Service Manager by clicking **Save Changes**. To implement your settings in Perspective, restart **Internet Information Services** (IIS) (and the Perspective Web server). Note that restarting IIS will affect anyone currently logged on to Perspective. Ensure that all users have saved their work and exited the program prior to completing this step.

Configuration

Select the **Configuration** component from the Perspective Service Manager menu and open the **Configuration** tab. Click **Browse** to navigate to the **Location of Server Configuration File**.

Note: This option would be used when Perspective Services has been installed in a different location than the default options.



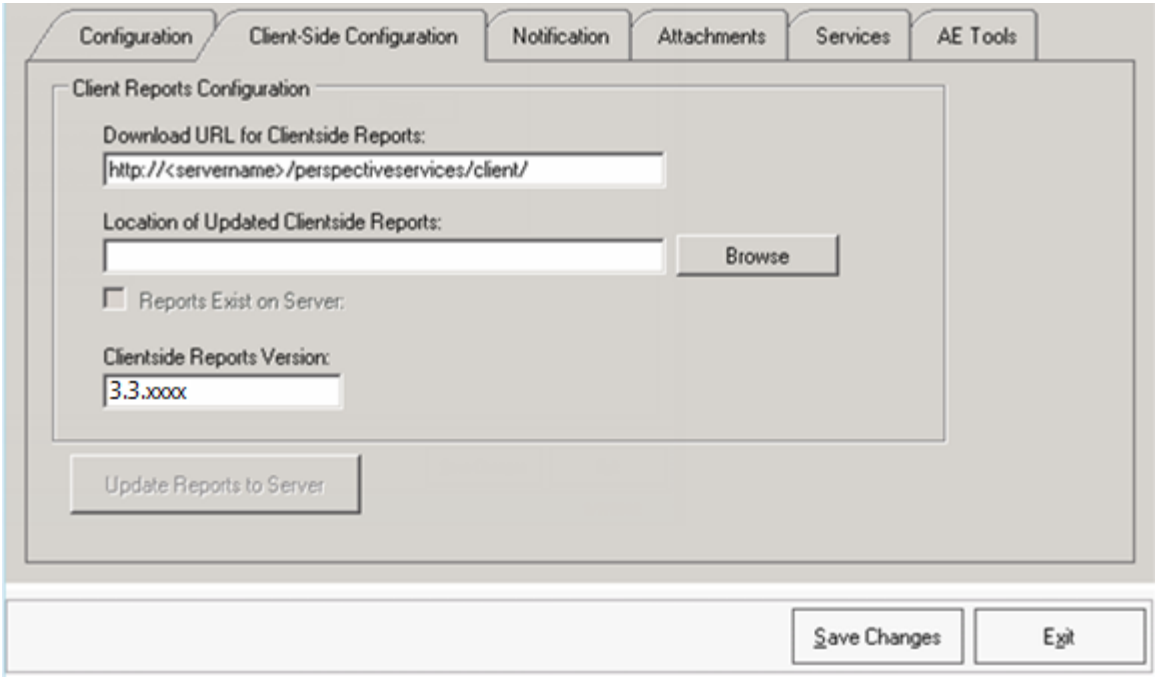
Client-Side Configuration

1. Select the **Configuration** component from the Perspective Service Manager menu and open the **Client-Side Configuration** tab.

2. To update the configuration with a .zip file provided by the Technical Support, click **Browse** to navigate to the **Location of Updated Client-Side Reports**. The field below will indicate the **Version** of the client-side reports.

3. Click **Update Reports to Server** to complete the update.

   Note: This option would be used if a newer version of client-side reports is available.



   Note: 'xxxx' in the above screenshot denotes the latest Perspective build number.

Email Notifications

In Perspective, users may send email notifications containing incident or case details or report attachments. Otherwise, email notifications may be sent, when new investigators are assigned to an investigation, or when assignments are created, modified or completed.

Note: The Case and Investigation components are only available in the Perspective Premium.

To set up email notification options, select the **Configuration** component in the Perspective Service Manager menu and open the **Notification** tab.

There are two options for configuring email settings in Perspective: **Outlook®** or **SMTP** integration. Alternatively, email functionality can be disabled by selecting the **"Do not use mail options"** radio button.

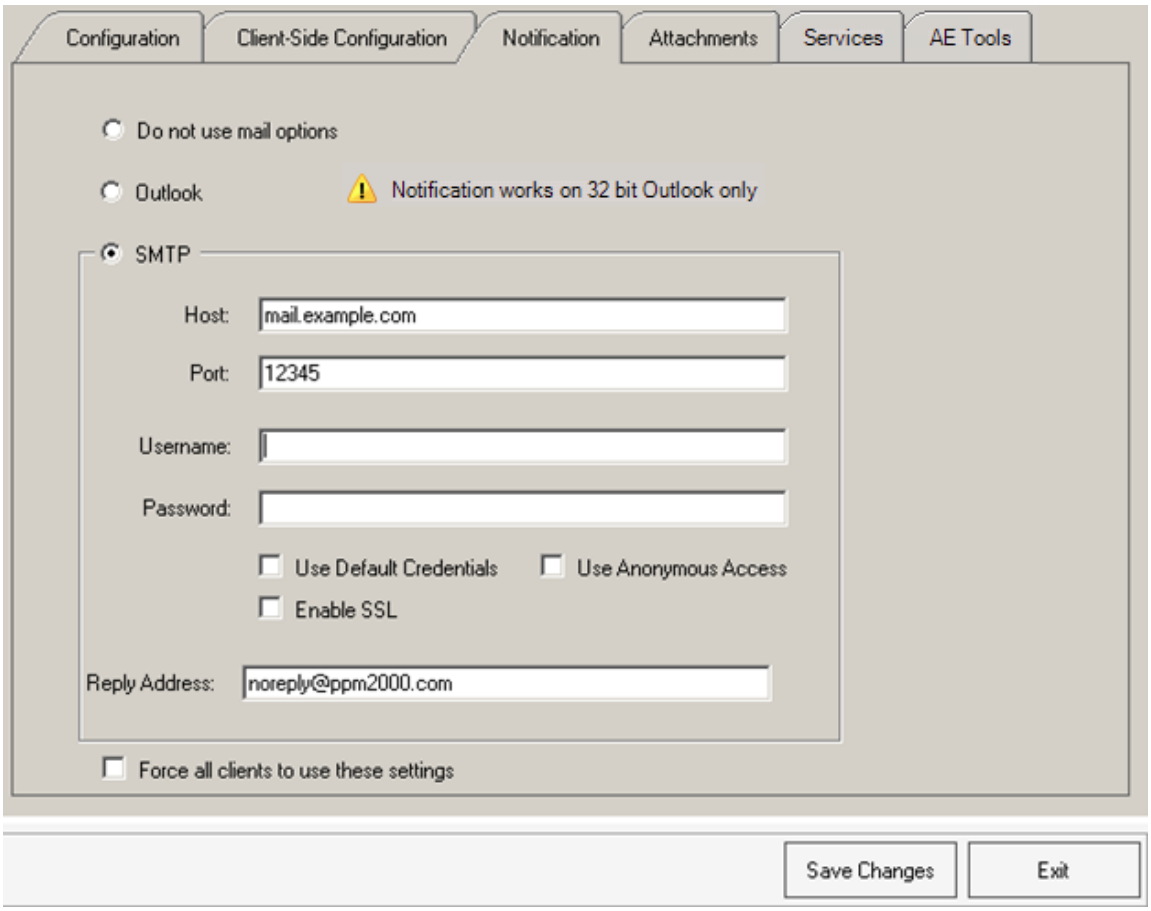
Option A: Outlook Integration

Select **Outlook** (only) to order Perspective to utilize the active user's local Outlook 2007 or 2010 client to send emails. These emails are sent through the central Exchange Server and stored in the user's Sent Items folder.

Option B: Connect to an External SMTP Server

To use an SMTP server to send emails from Perspective, switch the radio button from Outlook to **SMTP** and enter the appropriate information for connecting to the SMTP server:

- **Host**: The domain name of the SMTP service.
- **Port**: The port the SMTP service will be listening on for connections.
- **Username**: A valid user name to connect to the SMTP service.
- **Password**: The appropriate password for the user name.
- **Use Default Credentials**: Rather than entering a particular user name and password, you can specify that a user's Windows credentials be used to connect to the SMTP service.
- **Use Anonymous Access**: As an alternative option, if the SMTP server does not require user credentials to connect and send email, you can enable users to connect anonymously.
- **Enable SSL**: Select this option to encrypt the SMTP connection with Secure Socket Layer (SSL).
- **Reply Address**: When sending email messages, the SMTP service must include a reply address. Enter the email address that you would like to appear on any email messages sent via SMTP.
- The email settings outlined above will be used as system defaults for every client. With the exception of the reply address, all of these settings can be overridden for individual clients by specifying alternative settings under the client's ***Settings > Options*** menu in Perspective. (The reply address is a global setting and will be used for anyone using SMTP.) If you do not want individual clients to have the option of overriding any of these settings, select the **"Force all clients to use these settings"** box.



Uploading Attachments

Perspective allows users to attach any file type to any data record in the application. These files are stored directly in the SQL database and their size can be the greatest factor in determining how much space will be required in SQL.

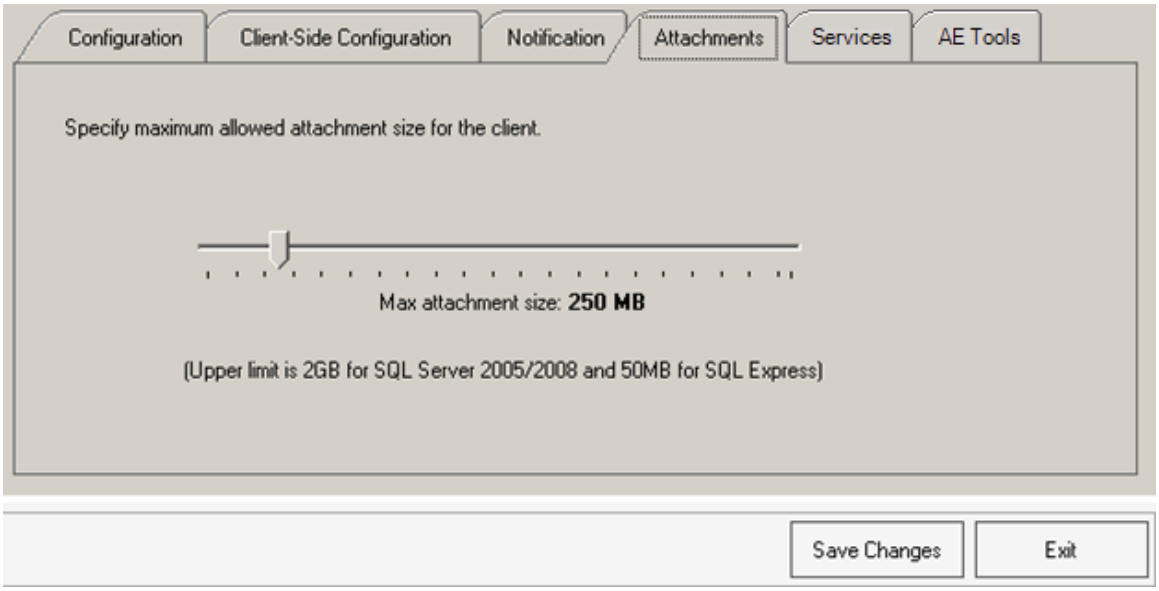
To set up the maximum attachment size, select the **Configuration** component in the Perspective Service Manager menu and open the **Attachments** tab.

Perspective can support files up to 2 GB in size (SQL's limit for binary data types); however, due to restrictions you may have on the space available for your Perspective database or bandwidth in your network, we do include an option to decrease this 2-GB limit to a size that can be better supported in your environment.

- On SQL Standard or Enterprise, this value can be set between 1 MB and 2000 MB. The default is set to 250 MB.
- On SQL Express, this value can be set between 1 MB and 50 MB. The default is 10 MB.

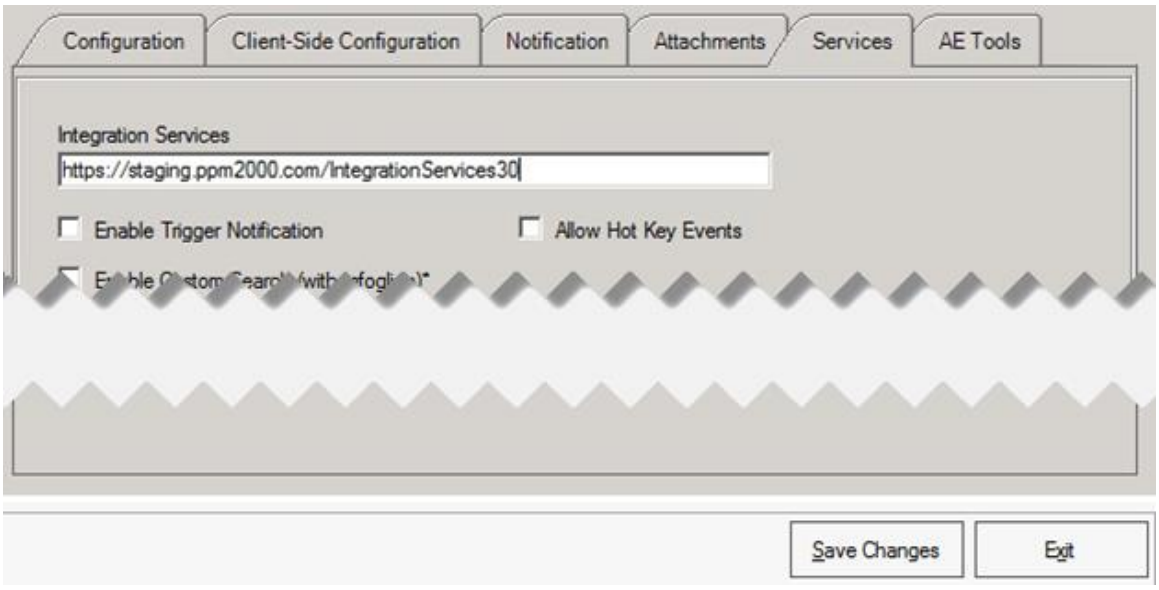
  Note: SQL Server Express is only supported for the Standard Edition of Perspective.

To change this value to an appropriate value for your organization, move the slider.



Integration Services URL

1. To enable event trigger in Integration Services, select the **Configuration** component from the Perspective Service Manager menu and open the **Services** tab.
2. Enter the URL set up with the Integration Services in the **Integration Services** field.
3. To enable trigger events on create and update, check the **"Enable Trigger Notification"** box. To enable context-sensitive events, check the **"Allow Hot Key Events"** box.

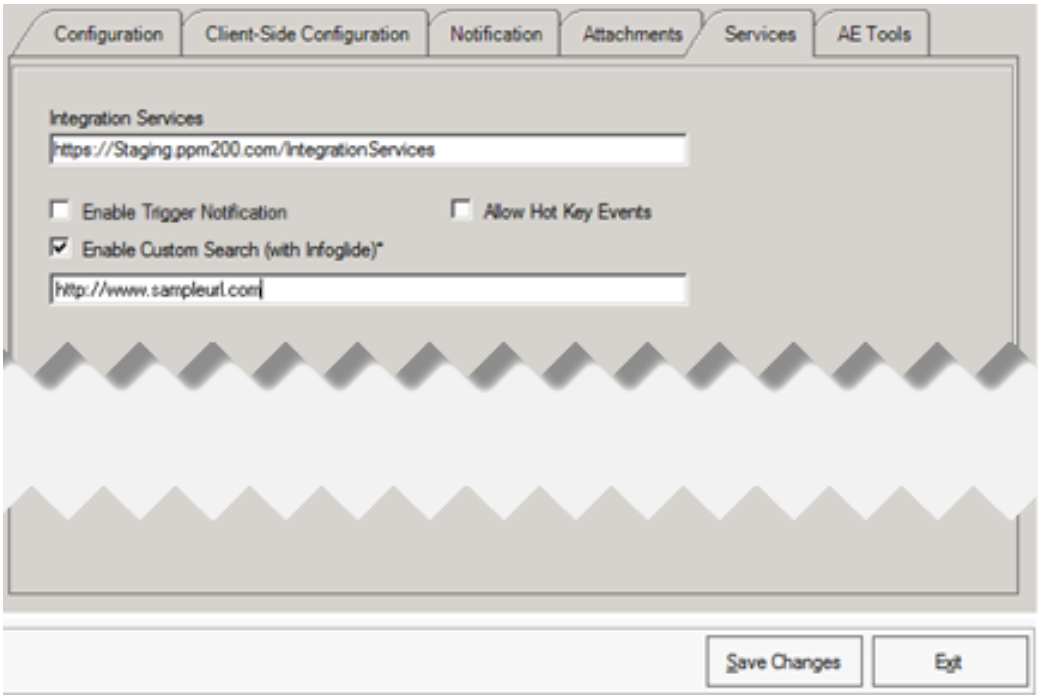


Custom Search Integration

With Perspective's Custom Search feature, you can integrate Perspective with the Infoglide Identity Resolution Engine™ (IRE) to search several data sources at once. Complete the following steps to enable this integration. Note that you must first configure your Perspective database within the Identity Resolution Engine before proceeding.

To set up the Custom Search feature, select the **Configuration** component from the Perspective Service Manager menu and open the **Services** tab. Check the "**Enable Custom Search (with Infoglide)**" box and enter the URL for the Infoglide Identity Resolution Engine in the field below.

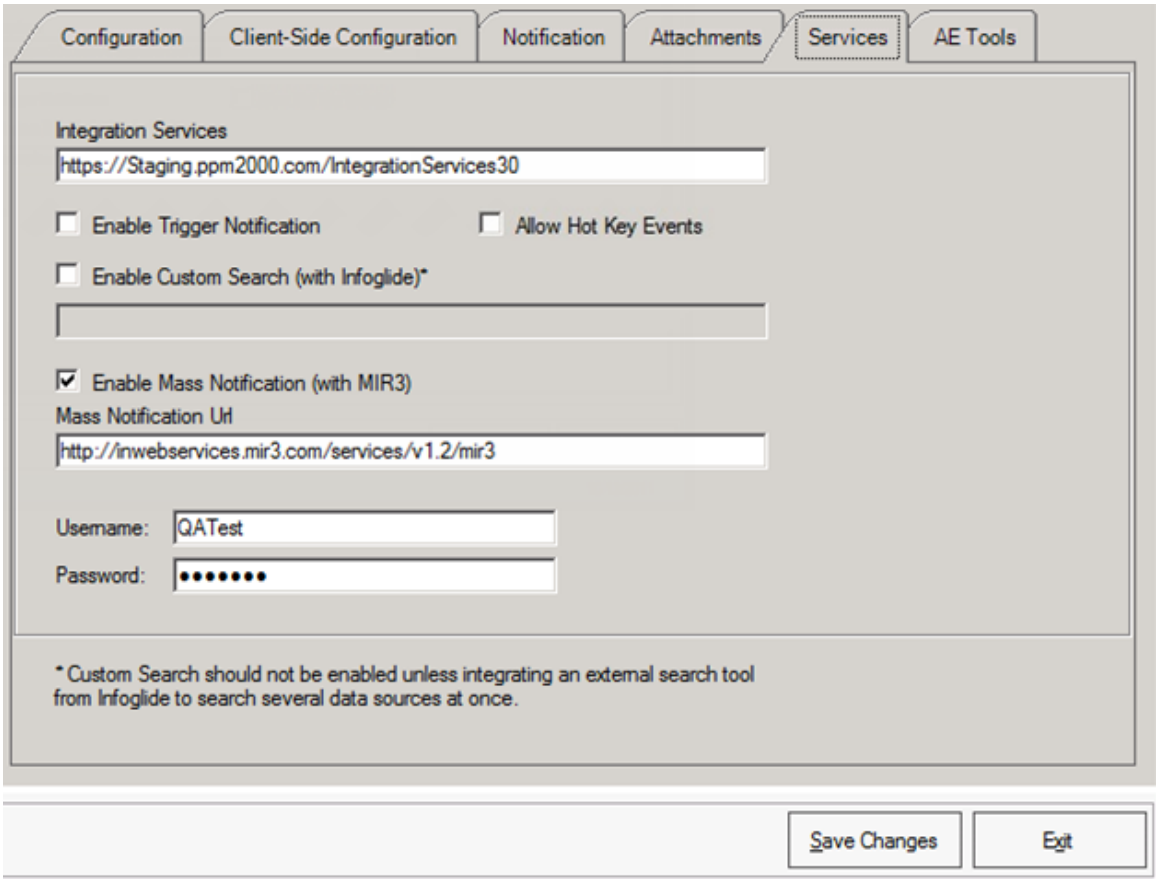
Note: To access the Custom Search feature, users must be granted the appropriate access rights in Perspective. For details on administering Custom Search access for roles and users, see "Select general role rights" and "Set general user rights" in the "Roles" and "Users" sections of the Perspective Administrator's Guide.



Mass Notifications

In Perspective, users can integrate their MIR3℠ inEnterprise™ solution into Perspective in order to send mass notifications about selected activities via Perspective DispatchLog.

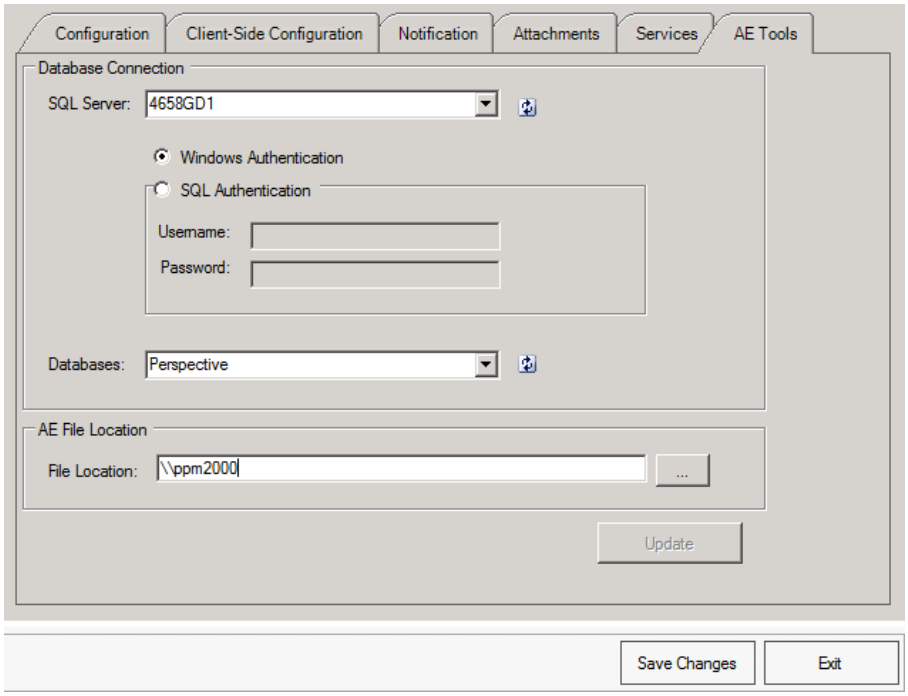
To set up the Mass Notification feature, select the **Configuration** component from the Perspective Service Manager menu and open the **Services** tab. Check the "**Enable Mass Notification (with MIR3)**" box and enter the **Mass Notification URL**, **Username** and **Password** provided by MIR3 in the field below.



Analysis Expert Tools

If you experience difficulties with the correct Analysis Expert (AE) query display, this function must be used to update the AE **.dat file** provided by the Technical Support.

1. Select the **Configuration** component from the Perspective Service Manager menu and open the **AE Tools** tab.
2. Specify the **SQL Server**.
3. Select either the **Windows** or **SQL Authentication**. If you selected SQL Authentication, enter the correct **Username** and **Password**.
4. Choose the **Database** you wish to update your queries on.
5. Specify the correct path to the AE .dat file provided by the Technical Support in the **File Location** field.
6. Click **Update**.



Quick Find Indexing

With Perspective's Quick Find tool, you can quickly search for text anywhere in the database, including text within attachments. This works by scanning an index file generated on the server.

1. To set up indexing on your database, select the **Quick Find Indexing** component in the Perspective Service Manager menu.
2. To enable this feature, select **Allow Quick Find**.
3. Select an **Index Directory** to store the index files. IIS must have access to read this directory.
4. *Optional:* If large index files are expected, you can force the index cache to use a separate directory by checking **"Specify folder in alternate drive to store cache while indexing?"** and then selecting a directory.
5. *Optional:* If you would like certain common words to be ignored when indexing (e.g., a, the, an, at, to, etc.), select **"Use noise word file?"** and specify the directory where your Noise.dat file exists.
6. *Optional:* If you would like hyphenated words to be indexed as two separate words, you can select **"Treat hyphens as spaces"**.
7. *Optional:* If you would like the index files to ignore any numeric text, you can select **"Do not index numeric values"**.

8. Select the **Database** you want to index.

9. Expand the nodes listed under **Tables** and select each table you want data to be indexed from individually. Note that attachments are indexed separately from the main entities and can be found at the bottom of the list.

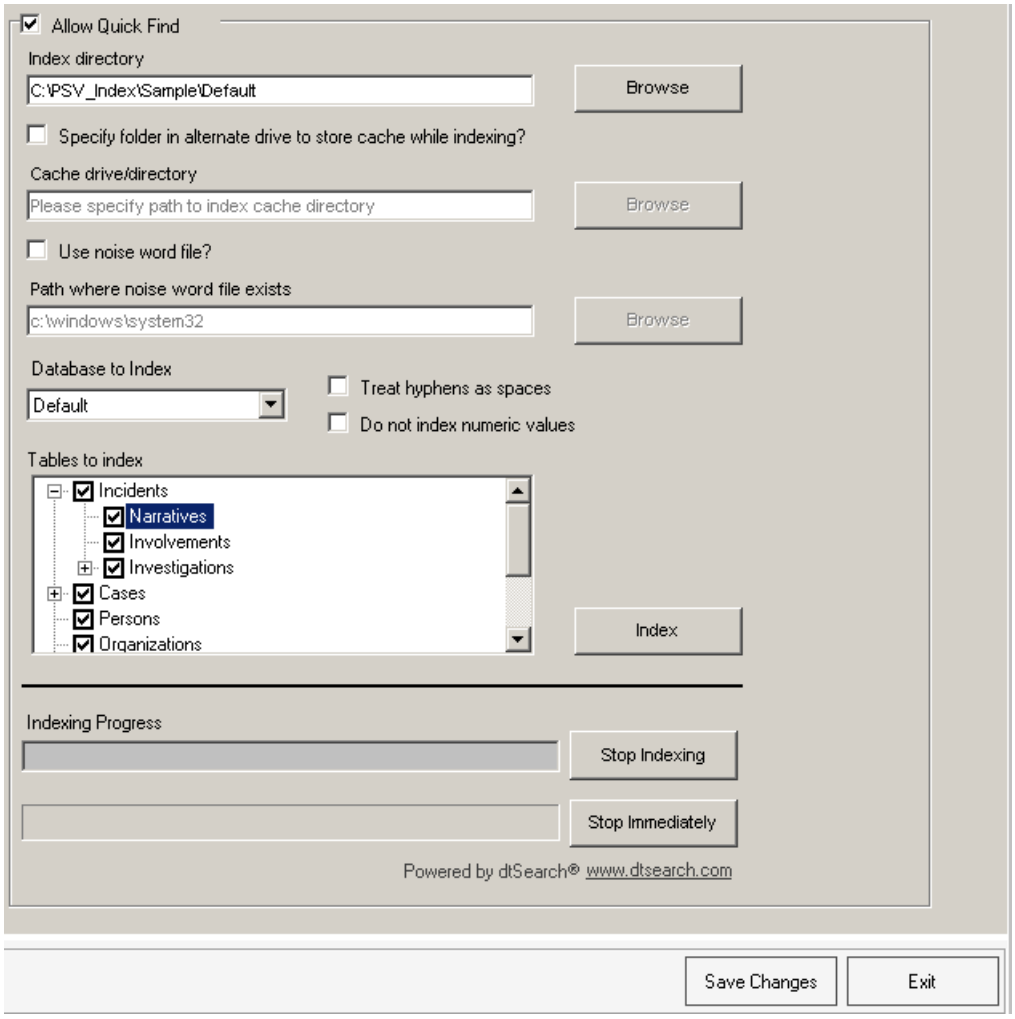
10. Click **Save Changes**.

11. Click **Index** to do an initial index of the database.

12. *Optional:* Repeat steps 8-11 for additional databases.

13. As data is added, deleted, or modified in the database, the index must be kept up-to-date. You can schedule the database to re-index using command line arguments and Windows scheduled tasks. To do this, create a scheduled task to run Perspective.ServerManager.exe with the option ***-index=*** (or use the shorthand ***-i=***) followed by the Database ID.

    For example:
    C:\Program Files\PPM 2000 Inc\Perspective Services
    Perspective.ServerManager.exe -i=Sample



User-Defined Fields

Although user-defined fields (UDFs) can only be created by specialized users with access to both the server machine and the Service Manager, they are maintained by Administrators in the same manner as all other fields within Perspective. Visibility and access rights to a user defined field can be controlled under System Privileges, Role Privileges or User Privileges. UDF labels can be modified and created for other languages under Form Labels. Moreover, if the UDF is a lookup field, lookup values and workgroup visibility for these values can be customized under Lookups.

You may add user defined fields to the Item, Person, Organization and Vehicle forms under the General tab, as well as to numerous sections of the Incident and Case forms.

Note: The case component is only available in the Premium Edition of Perspective.

1. To set up user defined fields for Perspective, select the **User Defined Fields** banner at the bottom of the Perspective Service Manager menu and open the **General** tab.

2. In the Server Authentication section, specify the **Database Name**. Ensure that this information is correct before proceeding. The Form lookup list will become available.

3. From the **Form l**ookup list, select the data form in which you would like the new user defined field to appear. Your options are as follows:

    - Incidents
    - Incident Items (Involved Items)
    - Incident Organizations (Involved Organizations)
    - Incident Persons (Involved Persons)
    - Incident Vehicles (Involved Vehicles)
    - Items
    - Organizations
    - Persons
    - Vehicles
    - Cases
    - Activities

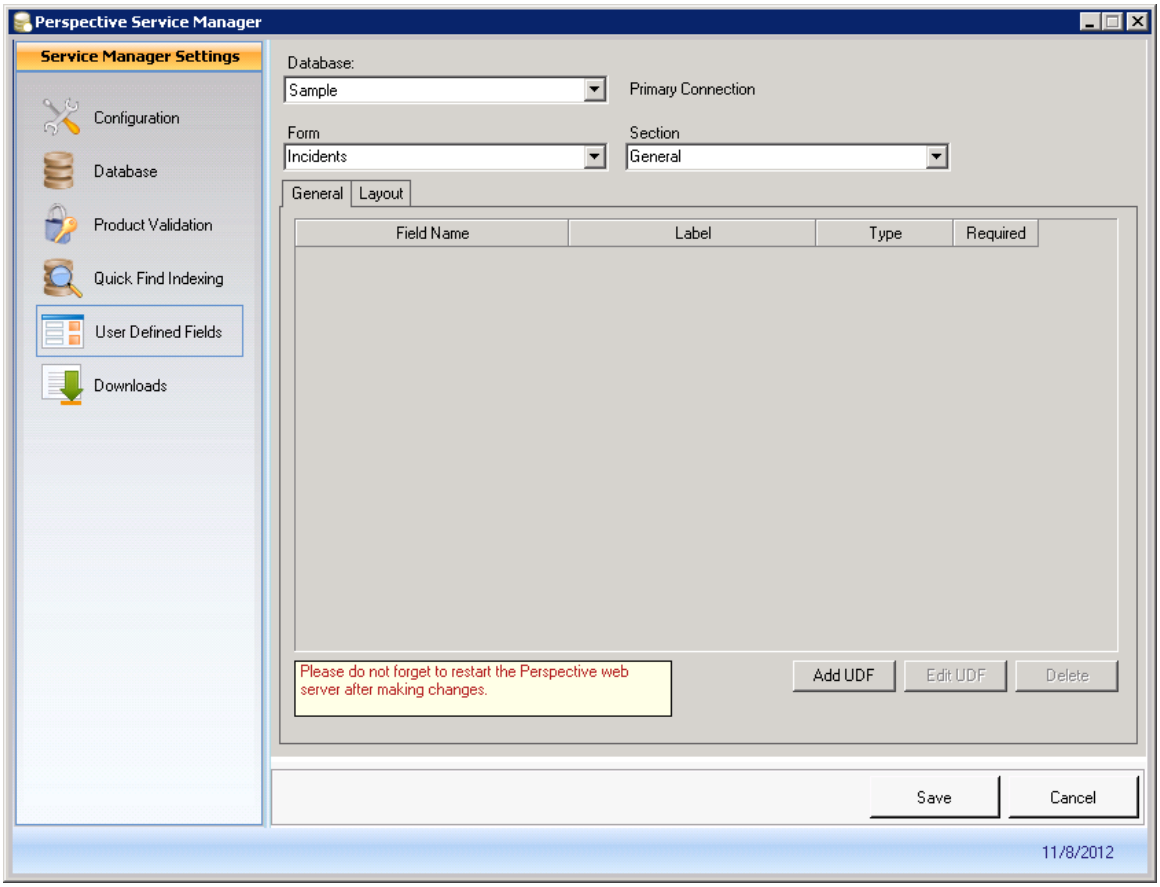
4. From the **Section** lookup list, select the specific section of the form that you would like the user defined field to appear in. For all forms except Incidents and Cases, the only option available is the General tab. For the Incidents form, you may choose the General, Investigations (Details) or Controls tab. For the Cases form, you may choose either the General or Controls tab.

    Note: The Investigations tab is only available in the Premium Edition of Perspective.

5. Click the **Add** button at the bottom of the window. An Add UDF dialog box will open.

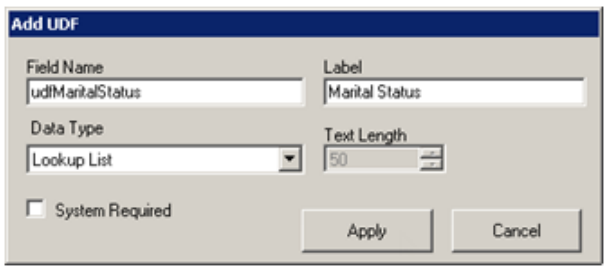
6. Enter the new user defined field's name in the **Field Name** text box. Note that no special characters or spaces may be used—letters only. Then, assign the field its default System English **Label**. The System English label is what users will see on the Perspective form.

7. Choose the field type from the **Data Type** lookup list. The available field type options for UDFs are Number [for whole numbers], Decimal Number [for numbers with up to two decimal places], Text, Date, Yes/No [for a checkbox field] and Lookup List. If you selected Text as the data type, you may also specify the maximum number of characters that can be entered in the field under Text Length.



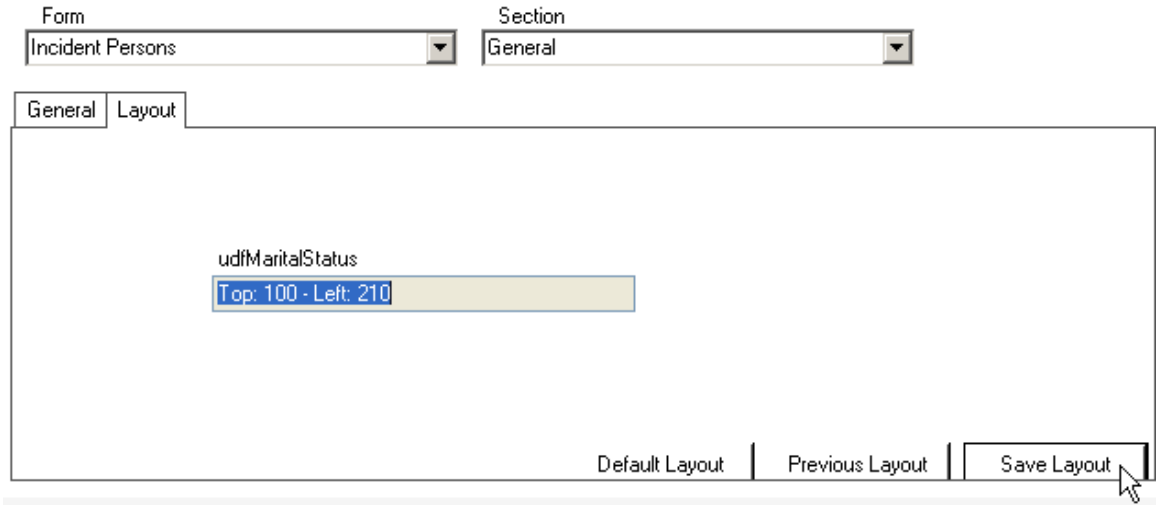
8. *Not Recommended:* If you wish to make the user defined field a required field, check the **System Required** box. If you check this box, you will not be able to adjust the field-level security at any point in the future. If you wish to make the user defined field required, it is best to do so within Perspective at the system, Role or User levels. This allows greater flexibility for the future use of the field.

9. Click **Apply**. The user defined field's details will now appear under the General tab.



- To edit the user defined field, click the arrow to the left of the Field Name to select the entire row and click the **Edit** button. Make changes in the Edit UDF dialog box and click Apply.
- To delete the user defined field, click the arrow to the left of the Field Name to select the entire row and click the **Delete** button. A Delete UDF confirmation window will open warning you of potential loss of data. If you choose to delete the selected UDF and click Yes, any data previously tracked in the UDF will be erased as well. Instead, it is recommended that you hide or lock the UDF within Perspective, if you no longer wish to use it to track data.

10. To view the user defined field with its default form location, select the **Layout** tab. The **Top** and **Left** values indicate the number of pixels that the UDF will be located from the top left corner of the User Defined Fields section of the form. The User Defined Fields section always appears at the bottom of the form.



- Click and drag the UDF label to move the UDF to an alternative location on the form. The entire scrollable window beneath the Layout tab is representative of the User Defined Fields section of the form. Click **Save Layout** to save the chosen UDF location on the form.
- At any time, you may click **Default Layout** to return the UDF to its original assigned position on the form. To return the UDF to its last saved location, click **Previous Layout**.

Troubleshooting Tips

Perspective Server

Ensure Perspective Services are set up

1. Open IIS manager, navigate to the Perspective Services Virtual Directory, and try to browse the **Service.asmx** file.
2. If the page that is displayed reads “Service”, the install was successful.

   If you get an error code page:

   a. Check the properties of the Perspective Services Directory and ensure it is running under Microsoft .NET 4.0 on the ASP.NET tab.

   b. Re-install Microsoft .NET 4.0 with ISS using the following command line: *C:\WINDOWS\Microsoft.NET\Framework\v4.0.30319\aspnet_regiis.exe*

Connect to the database using ODBC

1. Select *Control Panel > Administrative Tools > Data Sources (ODBC)*, and open the **System DSN** tab.
2. Click **Add** to create a data source, select **SQL Server**. Click Finish.
3. Enter the name “Perspective” and select the name of your SQL Server.
4. Click **Finish**, and then click **Test Data Source**.

Test the application pool

An application pool is used to connect to the database server. To test if there is an issue with the Web application pool, change the account to **Network Services** and see if it runs.

Restart IIS

Right-click your Computer icon and select **Manage**. Expand the **Services and Applications** folder and right-click **Internet Information Services (IIS)**. Select **All Tasks**, then restart IIS and click OK. Another way to restart IIS is to run the command line *issreset* from the Start menu.

Database Server

Ensure that the database login account has been assigned DBO access rights

1. In Enterprise Manager, select *Security* > *Logins*.
2. Double-click the domain user account that the Perspective server uses to connect to the database (e.g., the test account “PerspectiveDBCon”).
3. On the **Database Access** tab, select the Perspective database and ensure that **dbo** access is assigned.

Ensure that your database is in compatibility mode for a SQL version other than SQL 2000

In the Compatibility Settings in your SQL Database, ensure that your database is in compatibility mode for a SQL version **other than SQL 2000**. If it is not, follow the steps below:

1. Open the Microsoft SQL Management Studio and expand **Databases**.
2. Right-click on your Perspective Database and select **Properties**.
3. On the left-hand column, select **Options**.
4. In the Compatibility level field, select **SQL 2008**.

Reporting Services Server

For assistance and information on setting up **SQL Reporting Services**, view the deployment guide on Microsoft’s Web site: http://technet.microsoft.com/en-us/library/ms159868(SQL.90).aspx

Check the version of the Microsoft .NET Framework

If .NET Framework 3.5 is enabled on the machine, only client-side components of Reporting Services will be installed. If necessary, remove the .NET Framework 3.5 before installing Reporting Services, and re-install 3.5 afterwards using the following command line: *C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe*

Specify path for .bat file

1. Using the Windows Start menu’s Search function, search for the **rs.exe** file.
2. Place a copy of the rs.exe file in the *Perspective Install* > *Reports Setup* folder.

Perspective Client

Connect to the Web site

Open your Web browser and enter the following URL:

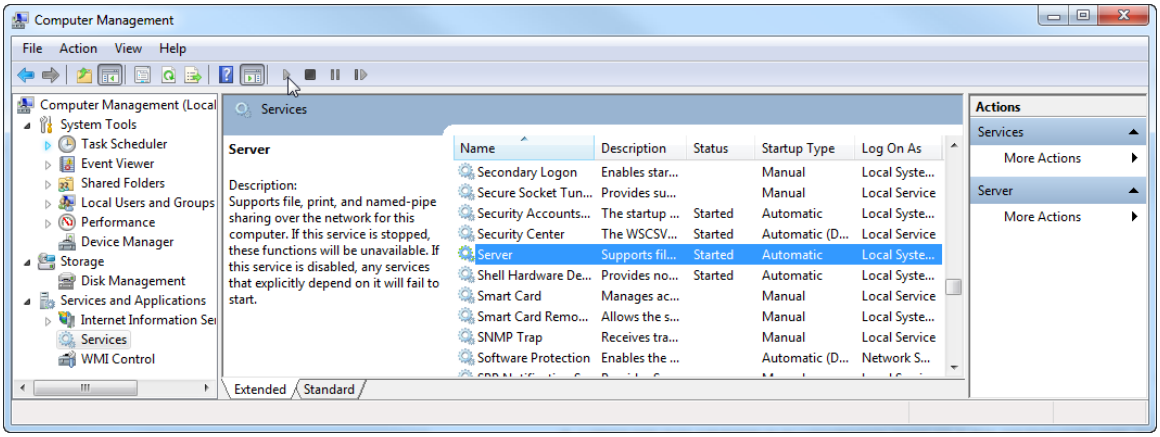
http://<IIS Server Name>/PerspectiveServices/Service.asmx

Ensure SQL login account is configured properly

The SQL login account (e.g., the test account “PerspectiveDBCon”) needs permissions.

Troubleshoot Windows authentication issues

If you are having issues with the Active Directory® single sign-on authentication, verify that the **Server** service has been started on the Web Server.



If the problem persists, switch to the standard Perspective authentication to check if the connection is working.

1. To diagnose if the problem is in the Windows authentication, test with Perspective authentication. On the Perspective Server, edit the Perspective_Default.config file as follows:

   - Change the authentication type to <Perspective>.
   - Change <Integrated Security=SSPI> to the SQL user and password.

2. Restart IIS, and then attempt to logon again.

Troubleshoot application download issues

1. If the client machine’s operating system is **Windows XP**, clear the contents of the following folder: *C:\Documents and Settings\<username>\Local Settings\Apps\2.0*.

   If the client machine’s operating system is **Windows Vista** or **Windows 7**, clear the contents of the following folder: *C:\Users\<username>\AppData\Local\Apps\2.0*.

Note: If you delete the contents of the folders, all Click-Once applications will be deleted.

At any time, contact the Technical Support team at 1-877-776-2995 for assistance.

2. Browse to the Perspective Services URL: *http://<IIS server name>/PerspectiveServices*.
3. Click the **Launch Perspective** button to re-download the entire Perspective application.
4. In the dialog box that opens, click **Run**. The Perspective client will automatically launch.
5. Enter the Perspective Services URL (e.g., *http://IISServer/PerspectiveServices*), and click OK.
6. Proceed to log on.

Integration Services

Integration Services requires MS DTC (Microsoft® Distributed Transaction Coordinator). Ensure the following options are enabled and refer to the information on Microsoft's website using the links provided.

1. Enable Network DTC Access for MS DTC transactions. Follow the instructions in the **To enabled Network DTC Access for MS DTC transactions** section on this page: http://technet.microsoft.com/en-us/library/cc753620(v=ws.10).aspx
2. Enable XA Transactions. While on the same tab opened in the previous step, select the **Enable XA Transactions** check box.
3. Enable Firewall Exceptions for MS DTC. Follow the instructions on this page: http://technet.microsoft.com/en-us/library/cc725913(v=ws.10).aspx

Error Messages

Error Message	Explanation
No Connection.	Perspective Client error
Solution • Launch the Perspective client from the Perspective server and attempt to logon. • Make sure the user account is a member of the IIS_WPG group on the Perspective server.	
Response is not well formed .XML.	Perspective Client error
Solution • May be due to a missing bracket or other formatting issue in the **Perspective_Default.config** file. • May also be a permissions issue. See your local Security Policy.	
Connection to the service not found/SQL Exception/Login failed for user.	Perspective Server error
Solution Ensure the application pool account has access to the database. The account that the Perspective server is using to connect to the database must be specified as the Application Pool identity, and requires membership in the IIS_WPG.	

Contact Information

Technical Support

Toll Free:	1-877-776-2995
Phone:	(780) 448-0616
Email:	support@ppm2000.com

PPM 2000

Toll Free:	1-888-PPM-9PPM (1-888-776-9776)
Phone:	(780) 448-0616
Fax:	(780) 448-0618
Email:	information@ppm2000.com
Website:	http://www.ppm2000.com

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