



ReadSoft REPORTER

# REPORTER 5-4

# Installation Guide

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# Introduction

This document guides you through installation of ReadSoft REPORTER 5-4.

*Notice: Although the intention of this guide is to describe the process to implement and configure all of the required components in as much detail as possible, certain Windows information dialogs may appear that are not covered. If no information is specifically provided, select default options or choices that are appropriate to company policy and personal judgment.*

Note that REPORTER consists of several separate components that are installed and configured separately:

Server-side components:

- REPORTER itself
- QlikView Server

Client-side components:

- REPORTER Plug-in for INVOICES (REPORTER Data Collection Plug-in)
- REPORTER Data Export program for Invoice Cockpit Suite
- Oracle views, installed automatically with INVOICEIT 3.2
- QlikView Analyzer Plug-in for Internet Explorer

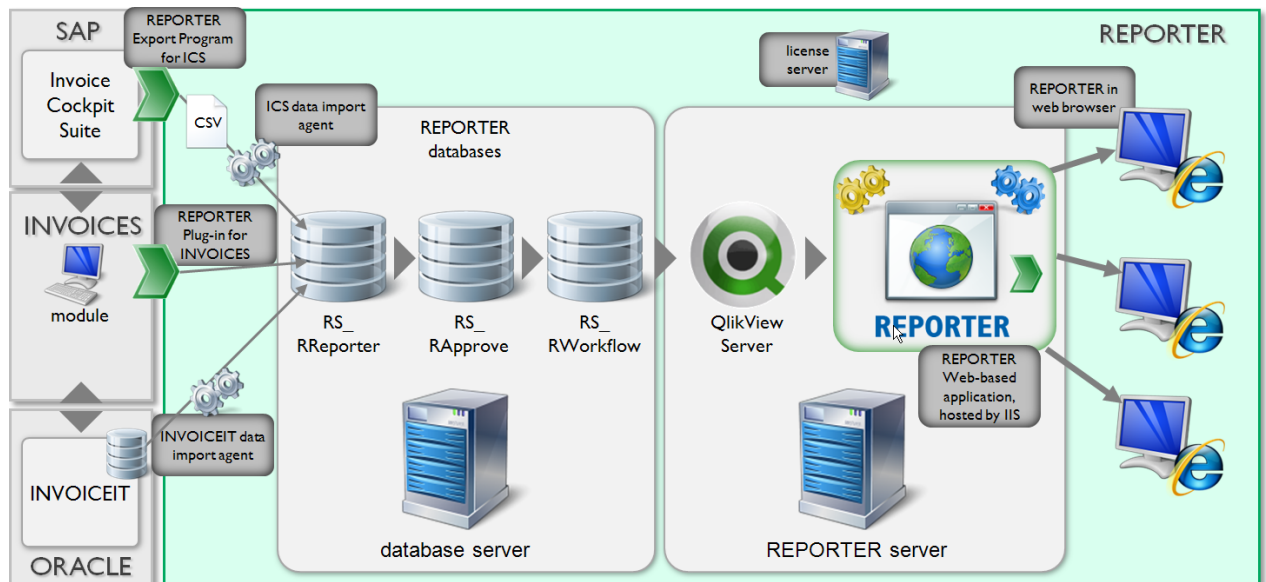
Be sure to follow the respective chapters in this document for a complete set of instructions on how to install and configure the solution.



# Before installation

## Planning your installation

Depending on the size of your installation, the solution may involve one or more servers and workstations. Follow the guidelines specified in this chapter to estimate hardware resources that need to be prepared for the successful REPORTER installation in your environment.



The overall configuration of the solution is shown in the image above. The main servers/workstations involved are:

- REPORTER application server, hosting:
  - Internet Information Services.
  - REPORTER Server.
  - QlikView Server.
- Database server, hosting:
  - Microsoft SQL Server database engine.
  - 3 REPORTER databases.
- One or more computers where INVOICES modules are installed.
- One or more SAP Servers where Invoice Cockpit Suite is installed.
- One or more Oracle Servers where REPORTER views are configured in the database.



- One or more computers used by REPORTER users, with the following installed:
  - Internet Explorer as web browser.
  - QlikView Analyzer Plug-in for Internet Explorer.

The solution configuration and hardware requirements vary depending on the configuration of your system, particularly factors such as:

- The number of INVOICES computers that you monitor simultaneously.
- How many invoices are processed annually by your INVOICES and INVOICE COCKPIT / INVOICEIT systems.
- How long you intend to save the historical invoices data and include them in the reporting scope.
- How many REPORTER users you plan to have.



# The REPORTER application server

## Hardware requirements

These guidelines will help you define the optimal hardware configuration of the REPORTER server.

| Consider   | Recommendation   |
|--|--|
| <b>What are the main criteria for selecting hardware for the server?</b>                               | <p>Sufficient RAM and CPU power are the most essential parameters.</p> <p>Since REPORTER performs all calculations in the memory on the server, the demands put on RAM memory and CPU use increase with the amount of historical data to process.</p>  |
| <b>What can be considered a <i>large</i> REPORTER installation?</b>                                    | <p>REPORTER is a solution that collects, aggregates, and presents the data to users and allows them to interactively work with it. These are the key parameters that influence the size of the installation:</p> <ul style="list-style-type: none"><li>○ The amount of data, which can be estimated based on the number of invoices processed annually by the INVOICES/ICS/INVOICEIT systems.</li><li>○ The number of concurrent users who will be working with REPORTER.</li></ul> <p>Installations with an average annual volume of 300,000 invoices and 5-10 concurrent users and above may be considered large REPORTER installations.</p> |
| <b>Should REPORTER be installed on the stand-alone server, or can it work with other applications?</b> | <p>Technically, REPORTER can work side by side with the other applications (with the exceptions of some web-based software).</p> <p>However, a dedicated server is strongly recommended due to REPORTER's great demands on memory and the CPU.</p>   |





| Consider  | Recommendation  |  |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
|---|---|--|--------------------|---------------------|---------|-------------|-------------|---------|-------------|-------------|---------|-------------|-------------|-----------|-------------|-------------|-----------|-------------|-------------|-----------|-------------|-------------|-----------|--------------|--------------|
| <p><b>What hardware requirements are recommended?</b></p> | <p>QlikView 10 is integrated into REPORTER 5-4 Service Pack 1 and utilizes all available CPU cores to perform calculations.</p> <p>Consequently, the more CPUs that are available, the better the performance will be.</p> <p>Our benchmark testing showed that upgrading from 2 to 4 CPUs contributed significantly to improve the performance achieved: the time it took to reload the full data reload was cut in half.</p> <p>You can use the following matrix to estimate the number of CPUs required:</p> <table border="1" data-bbox="687 663 1404 1137"> <thead> <tr> <th>Volume (# of invoices in the database)</th> <th>5 concurrent users</th> <th>10 concurrent users</th> </tr> </thead> <tbody> <tr> <td>100.000</td> <td>2 CPU cores</td> <td>2 CPU cores</td> </tr> <tr> <td>200.000</td> <td>2 CPU cores</td> <td>2 CPU cores</td> </tr> <tr> <td>500.000</td> <td>4 CPU cores</td> <td>4 CPU cores</td> </tr> <tr> <td>1.000.000</td> <td>4 CPU cores</td> <td>4 CPU cores</td> </tr> <tr> <td>2.000.000</td> <td>8 CPU cores</td> <td>8 CPU cores</td> </tr> <tr> <td>3.000.000</td> <td>8 CPU cores</td> <td>8 CPU cores</td> </tr> <tr> <td>5.000.000</td> <td>16 CPU cores</td> <td>16 CPU cores</td> </tr> </tbody> </table> | Volume (# of invoices in the database) | 5 concurrent users | 10 concurrent users | 100.000 | 2 CPU cores | 2 CPU cores | 200.000 | 2 CPU cores | 2 CPU cores | 500.000 | 4 CPU cores | 4 CPU cores | 1.000.000 | 4 CPU cores | 4 CPU cores | 2.000.000 | 8 CPU cores | 8 CPU cores | 3.000.000 | 8 CPU cores | 8 CPU cores | 5.000.000 | 16 CPU cores | 16 CPU cores |
| Volume (# of invoices in the database)                    | 5 concurrent users  | 10 concurrent users                    |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 100.000   | 2 CPU cores   | 2 CPU cores                            |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 200.000   | 2 CPU cores   | 2 CPU cores                            |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 500.000   | 4 CPU cores   | 4 CPU cores                            |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 1.000.000   | 4 CPU cores   | 4 CPU cores                            |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 2.000.000   | 8 CPU cores   | 8 CPU cores                            |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 3.000.000   | 8 CPU cores   | 8 CPU cores                            |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 5.000.000   | 16 CPU cores  | 16 CPU cores                           |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| <p><b>How much RAM should we have on the server?</b></p>  | <p>You can use the following matrix to estimate the amount of RAM required:</p> <table border="1" data-bbox="687 1256 1404 1731"> <thead> <tr> <th>Volume (# of invoices in the database)</th> <th>5 concurrent users</th> <th>10 concurrent users</th> </tr> </thead> <tbody> <tr> <td>100.000</td> <td>2 GB</td> <td>4 GB</td> </tr> <tr> <td>200.000</td> <td>4 GB</td> <td>6 GB</td> </tr> <tr> <td>500.000</td> <td>8 GB</td> <td>12 GB</td> </tr> <tr> <td>1.000.000</td> <td>16 GB</td> <td>24 GB</td> </tr> <tr> <td>2.000.000</td> <td>32 GB</td> <td>48 GB</td> </tr> <tr> <td>3.000.000</td> <td>48 GB</td> <td>64 GB</td> </tr> <tr> <td>5.000.000</td> <td>96 GB</td> <td>128 GB</td> </tr> </tbody> </table>  | Volume (# of invoices in the database) | 5 concurrent users | 10 concurrent users | 100.000 | 2 GB        | 4 GB        | 200.000 | 4 GB        | 6 GB        | 500.000 | 8 GB        | 12 GB       | 1.000.000 | 16 GB       | 24 GB       | 2.000.000 | 32 GB       | 48 GB       | 3.000.000 | 48 GB       | 64 GB       | 5.000.000 | 96 GB        | 128 GB       |
| Volume (# of invoices in the database)                    | 5 concurrent users  | 10 concurrent users                    |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 100.000   | 2 GB  | 4 GB                                   |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 200.000   | 4 GB  | 6 GB                                   |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 500.000   | 8 GB  | 12 GB                                  |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 1.000.000   | 16 GB   | 24 GB                                  |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 2.000.000   | 32 GB   | 48 GB                                  |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 3.000.000   | 48 GB   | 64 GB                                  |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |
| 5.000.000   | 96 GB   | 128 GB                                 |                    |                     |         |             |             |         |             |             |         |             |             |           |             |             |           |             |             |           |             |             |           |              |              |



| Consider  | Recommendation  |
|---|---|
| <p><b>Should we use a 64-bit or 32-bit server for REPORTER?</b></p>               | <p>For best performance, always use the 64-bit server and 64-bit operating system for REPORTER.</p> <p>32-bit servers should only be used for demo purposes. These systems have a built-in limit of 2GB of RAM, which is the maximum amount of memory that can be used by an application on a 32-bit platform. Since QlikView uses a considerable amount of computer memory, it will stop working once it reaches this limit (which will happen once the number of invoices in your system exceeds 100,000).</p>  |
| <p><b>Is there any specific recommendation for the size of the hard disk?</b></p> | <p>The amount of the free space required on the hard disk can be estimated taking the following into consideration:</p> <ul style="list-style-type: none"> <li>a) Size of the software itself: 30 MB</li> <li>b) Size of temporary files (logs, etc.): allocate at least 20 GB</li> <li>c) Size of the QlikView data files: 3 GB to keep data for 1 million invoices</li> </ul> <p>Allowing 30 GB of free hard drive space on the REPORTER server is sufficient</p> <p>Note that this estimate does not take into account the size of the SQL databases that reside in the SQL Server. The space for those needs to be considered separately.</p> <p><b>Note:</b></p> <p>REPORTER can be configured to store copies of processed invoice images on the disk. If this is the case, make sure you allocate sufficient space for this storage.</p> <p><b>Example:</b></p> <p>Say that you process 500,000 three-page invoices annually, with an average image size of 50 Kb per page, and you plan to keep 2 years of historical data in your system. At least 150 GB will be required just for storing the images (500,000 x 3 x 50 Kb x 2 = 150 GB).</p> |
| <p><b>How fast does the network port need to be?</b></p>                          | <p>Standard TCP/IP network with 100 Mbps is a minimum requirement.</p>  |



## Software requirements

Use this section as a guideline for configuring the server and prerequisites before starting the REPORTER server installation:

| Consider  | Recommendation   |
|---|--|
| <p><b>What operating systems are supported by REPORTER server?</b></p>  | <p>Always use the 64-bit platform for test and production systems. The 32-bit platform should only be used for demo purposes.</p> <p><b>Supported 64-bit operating systems:</b></p> <ul style="list-style-type: none"> <li>• Microsoft Windows Server 2003 x64 Edition</li> <li>• Microsoft Windows XP Professional x64 Edition</li> <li>• Microsoft Windows Server 2008 x64 Edition</li> <li>• Microsoft Vista Professional x64 Edition</li> <li>• Microsoft Windows Server 2012 x64 Edition (REPORTER 5-4 SP1 HF7 or later only)</li> </ul> <p><b>Supported 32-bit operating systems</b></p> <ul style="list-style-type: none"> <li>• Microsoft Windows Server 2003, Standard or Enterprise Edition, with the latest service pack.</li> <li>• Microsoft Windows Server 2008—the latest service pack for the Standard or Enterprise Editions.</li> <li>• Microsoft Windows Server 2008 R2 – the latest service pack for the Standard and Enterprise Editions.</li> </ul> <p><b>Supported operating systems with limitations (both 64 and 32-bit platforms)</b></p> <ul style="list-style-type: none"> <li>• Microsoft Windows XP Professional—the latest service pack</li> <li>• Microsoft Windows Vista—the latest service pack</li> <li>• Microsoft Windows 7—the latest service pack</li> <li>• Microsoft Windows 8—the latest service pack (REPORTER 5-4 SP1 HF7 or later only)</li> </ul> <p><i>Limitations:</i></p> <p>Microsoft Windows XP, Vista, Windows 7, or Windows 8 should only be used for smaller systems. The system is then limited to ten users since the IIS version that is included in these operating systems is limited to ten simultaneous connections. The system is also limited to one website.</p> |
| <p><b>Should IIS, FTP, MSMQ or other services be added during the installation of the operating system?</b></p> | <p>Internet Information Services (IIS) is required. See details in “Prerequisites” on page 29.</p> <p>If IIS 7 or later is installed on the server, it must be configured with IIS 6 compatibility mode.</p>   |



| Consider   | Recommendation  |
|--|---|
| <p><b>Should .NET Framework be installed. If so, which version?</b></p>  | <p>REPORTER requires Microsoft .NET Framework 2.0 with Service Pack 1 or later. If that version of .NET Framework is not found by REPORTER's installation program, then .NET Framework version 3.5 Service Pack 1 is installed automatically. (Version 3.5 SP1 <i>includes</i> version 2.0 SP1, which was not available in a redistributable installation package at the time REPORTER installation program was updated.)</p>   |
| <p><b>Can the server be set up as a virtual server?</b></p>  | <p>REPORTER can run in a virtual environment. However, for the best performance, it is recommended that you run REPORTER in a non-virtual environment for solutions with the large numbers of invoices.</p> <p>Compared to a physical server environment, the results of our benchmark testing shows that the speed of the full data reload operations drops by up to 30% in the virtual environment.</p> <p>Also, considering the amount of RAM and CPU required by the REPORTER solution, it might not be practical to run this virtually, especially when the infrastructure is shared and one host computer is shared by multiple virtual guests.</p> |
| <p><b>What applications will be installed on the server?</b></p>   | <p>REPORTER Server and QlikView Server are both part of the REPORTER application.</p>   |
| <p><b>Can the REPORTER website be exposed to external users (those outside a company network protected by a firewall)?</b></p> | <p>Yes, REPORTER can be configured for use by external users, providing there is a dedicated port open in the firewall for communication with the server. However, details regarding such a configuration and its security aspects are outside of the scope of this document.</p>   |
| <p><b>Are there any requirements specific to the 64-bit platform?</b></p>  | <p>REPORTER is a native 32-bit application that is enabled to run on a 64-bit platform. Thus IIS and .NET Framework must be enabled to run in 32-bit mode. The installation program does this automatically.</p>  |



| Consider  | Recommendation   |
|---|--|
| <p><b>What kind of licensing mechanism does the product use?</b></p>  | <p>REPORTER requires a <code>license.dat</code> file that enables the REPORTER server application. See “Licensing” on page 45 for more information.</p> <p>In addition, a QlikView license is required. Usually this is in the form of a <code>lef.txt</code> file that contains a license key, plus a control number that you also receive from ReadSoft.</p> <p><b>Note:</b> The <code>lef.txt</code> file is not required if you have the license key and control number and can activate the license by Internet connection. See “Configure QlikView Server services to run under dedicated service account” on page 59 for more information.</p> <p>Be sure to obtain both the REPORTER license and the QlikView license from your local ReadSoft representative in advance, so that they are available when you install the product.</p> |
| <p><b>How does the licensing mechanism handle CALs?</b></p>   | <p>The QlikView license determines the number of named user CALs that can be used to access reports. See “Managing Client Access Licenses (CALs)” on page 93.</p>  |
| <p><b>Can REPORTER collect and correctly present data containing local characters?</b></p>  | <p>Yes. REPORTER stores all data as Unicode and can receive and display data (like supplier names) containing local characters coming from several multi-lingual INVOICES and/or several ICS installations.</p>  |
| <p><b>When collecting data from an INVOICEIT system, REPORTER retrieves data from the Oracle database directly. How is this communication setup? Is any additional software required on the server?</b></p> | <p>Yes, to connect to the Oracle database, Oracle Client software (32-bit version only regardless of the operating system) must be installed on the REPORTER Server.</p>   |



## Security / permissions FAQ

| Consider   | Recommendation  |
|--|---|
| <p><b>What kind of security is used by REPORTER?</b></p>   | <p>REPORTER is a standard ASP.NET web-based application hosted by IIS. It supports the same security methods as those natively supported by IIS and ASP.NET, for instance secure communication using SSL.</p>   |
| <p><b>What user management mechanism is used?</b></p>  | <p>REPORTER uses its own built-in user management, with the possibility to set up users and passwords within the product. To log on to the website, users need a valid user name and password.</p> <p>This is controlled by the Workflow Engine, which also ensures that a valid license key is used by the application. The Workflow Engine runs as an NT service. It is automatically installed by the REPORTER server installation program. Related info: “Starting the Workflow Engine service manually” on page 53.</p> <p>Single sign-on (logging on automatically using Windows domain accounts) is not supported.</p> |
| <p><b>What authentication method is used to access SQL database?</b></p>   | <p>All communication to REPORTER’s databases is protected by standard SQL Server authentication. Dedicated SQL login, database users, and database roles are created during the initial system configuration, though these can be changed by the administrators for security reasons.</p>   |
| <p><b>What user account is used to retrieve the files previously exported by the REPORTER Data Export program for ICS?</b></p> | <p>REPORTER imports files with the help of Workflow Service. Imported files are archived and then moved to the folder specified for that.</p> <p>Considering the above, the Workflow Service should be configured to run using an account that has sufficient privileges to list, read, modify, and delete files from the import files location.</p>  |
| <p><b>What other permissions should an account that is used by Workflow Service have?</b></p>                                  | <p>In addition to read and write export to the import and archive folders, the account needs read and write access to the Log folder (default location on Windows Server 2003 and Windows XP: C:\Program Files\ReadSoft\REPORTER\WFE; default location on later operating systems: C:\Users\Public\ReadSoft\WFE). In addition, read-only access may be required to other resources (the Registry, for example).</p> <p>To avoid security issues, make sure that the account used for Workflow Service is a member of the local Users group on the REPORTER server.</p>  |



| Consider  | Recommendation   |
|---|--|
| <p><b>Is it possible to install and run REPORTER in the network where Active Directory is not used?</b></p> | <p>Yes, it is possible to install and run REPORTER in networks where REPORTER server, users, and client workstations are not members of the same domain (for example, belong to Windows workgroup or even different workgroups).</p> <p>In order to do this, internet users logged in to the REPORTER web site must be authenticated by IIS as different Windows users. Related info: “Configuring security in Windows Workgroup network” on page 44</p> |

## The SQL database server

### Hardware requirements

This section helps you define the optimal hardware configuration for the SQL Server that hosts REPORTER’s databases.

| Consider  | Recommendation   |
|---|--|
| <p><b>Does REPORTER require a dedicated SQL Server?</b></p> | <p>Generally, no.</p> <p>Neither the REPORTER application itself nor QlikView use SQL Server heavily. The load on the SQL Server is minimal both during normal use of the REPORTER Web GUI and when the data is being fully reloaded, and as a result, there are no performance benefits from moving the SQL Server to a dedicated server.</p> <p>On most occasions it is practical to use the existing infrastructure and install REPORTER’s databases on an existing SQL Server (the one that hosts the INVOICES database, for example).</p> |



| Consider   | Recommendation  |
|--|---|
| <p><b>Can SQL Server be installed on the same server as REPORTER application?</b></p>              | <p>Yes, but it is not recommended.</p> <p>It is advisable to separate SQL Server from the REPORTER application server in these situations:</p> <ul style="list-style-type: none"> <li>a) If your system is configured to import data from ICS/INVOICEIT/PROCESSIT systems. In these cases, the import agent imports the invoice data into the SQL Server and that work is primarily done using SQL Server resources.</li> <li>b) If your system is configured to use temporary tables for the INVOICES data. In this case, the import agent transfers the invoice data from the temporary tables into the permanent ones and that also occurs in SQL Server.</li> <li>c) Since QlikView demands so many resources, it tries to consume all available resources on the computer where it operates. This forces SQL Server to compete for the hardware resources negatively impacting the overall performance of the system.</li> </ul> |
| <p><b>What would be the minimum and recommended hardware configuration for the SQL Server?</b></p> | <p><i>Installing and Configuring Microsoft SQL Server</i> (file name <i>Installing and Configuring SQL Server.pdf</i>) outlines the minimum and recommended configurations of a SQL Server installation to be used by ReadSoft products.</p>  |
| <p><b>How much space should be allocated for REPORTER's databases?</b></p>                         | <p>REPORTER uses three databases:</p> <ul style="list-style-type: none"> <li>• Message Store database (named RS_RReporter by default)</li> <li>• Configuration database (RS_RAapprove)</li> <li>• Workflow database (RS_RWorkflow)</li> </ul> <p>The Message Store database contains all of the report data. You need about 1.2 GB per 100,000 invoices.</p> <p>The other two are used by REPORTER Server to support operations such as user management, licensing, maintenance routines, and system activity, and they also contain important configuration parameters. Their growth rate is minimal, and it is sufficient to set them up with an initial database size of 20 MB, with a growth rate of 2 MB.</p>  |





## Software requirements

Use this section as a guideline for configuring the database server and checking the prerequisites before installing the REPORTER server application:

| Consider   | Recommendation   |
|--|--|
| <b>What SQL Servers are supported by REPORTER Server?</b>            | <ul style="list-style-type: none"><li>• Microsoft SQL Server 2005, Standard or Enterprise Edition</li><li>• Microsoft SQL Server 2008, Standard or Enterprise Edition</li><li>• Microsoft SQL Server 2008 R2, Standard or Enterprise Edition</li><li>• Microsoft SQL Server 2012, Standard or Enterprise Edition</li></ul>             |
| <b>Are there any extra software requirements for the SQL Server?</b> | REPORTER supports Microsoft .NET Transactions to protect the consistency of the database operations. The mandatory requirement is to have MSDTC configured to allow inbound and outbound network access on both SQL Server and REPORTER Server. Please see “Configuring MSDTC for network DTC access” on page 39 for more information. |



## Operating considerations FAQ

| Consider  | Recommendation   |
|---|--|
| <b>What manual tasks must be done on the database server before we can start using REPORTER?</b>  | <p>REPORTER uses its own configuration tool for most operations, such as initial creation of the databases, logins, users, roles and all objects inside the databases using default values.</p> <p>The DBA or system administrator configuring the solution can change the default values at the beginning of the configuration process or at any later time.</p>  |
| <b>What else must be ready before installation?</b>   | <p>To be able to automatically create databases, logins and other objects, you must have a powerful SQL login account (and know the password for it) with the privileges sufficient to create databases, logins, users, roles and various objects inside databases. These are the minimum required server roles: public, dbcreator and securityadmin (sysadmin is preferred). This account is used by configuration tool only once and is not stored anywhere or used by the system during runtime operation.</p>  |
| <b>Are there any specific operational tasks that need to be run periodically on the SQL Server to help maintain good performance of the REPORTER?</b> | <p>There are several operational procedures that <i>must</i> be regularly performed (scheduled) and that are <i>not</i> automatically set up by REPORTER's installation or configuration programs:</p> <ul style="list-style-type: none"><li>○ Backup and disaster recovery plan. (See page 92.)</li><li>○ Database maintenance. (See page 92.)</li><li>○ Re-indexing of the tables.</li><li>○ Control of the size of the database and availability of the hard disk space.</li><li>○ Deletion of old data (older than the reporting scope) from the Message Store database. (See page 92.)</li></ul> <p><b>ReadSoft does not take responsibility for problems that may occur due to failure to perform such tasks on a regular basis.</b></p> |



# Computers with INVOICES modules

## Hardware requirements

This section helps you find the optimal hardware configuration of the computers with INVOICES modules installed.

| Consider   | Recommendation  |
|--|---|
| <b>How does the installation of REPORTER Plug-in for INVOICES affect the existing INVOICES installation?</b> | <p>This is a data collection plug-in that is installed on each computer where one or more INVOICES modules are installed.</p> <p>For small and medium installations, the plug-in has practically no effect on existing INVOICES installation, and in most cases, INVOICES operators do not even notice it.</p> <p>Large installations, on the other hand, may be affected more significantly, and specific invoice operations (such as interpretation) may become 20-30% slower.</p> <p>To remove the impact of this, you should activate and configure the feature to use temporary tables for the INVOICES data. See the REPORTER Configuration Tool Help file for details on how to do this.</p> |
| <b>Should we upgrade the hardware for the servers where the INVOICES modules are installed?</b>              | <p>No. The REPORTER plug-in does not add any significant load to the RAM, CPU or hardware resources that are used by INVOICES.</p>  |
| <b>How does the REPORTER plug-in for INVOICES affect the total load on the network?</b>                      | <p>Total load generated by the REPORTER plug-in for INVOICE modules is relatively small and will hardly be noticeable in any network environment.</p>   |



## Software requirements

These guidelines help you prepare the INVOICES computers for the REPORTER plug-in:

| Consider  | Recommendation  |
|---|---|
| <b>What operating systems are supported?</b>  | The plug-in can be run on the same operating systems as INVOICES (version 5-4 sp2 and later).   |
| <b>What versions of INVOICES are supported?</b>   | INVOICES 5-4 sp2 or later. We strongly recommend using the latest service pack available for your INVOICES version.   |
| <b>Is it possible to use REPORTER when only some of the INVOICES workstations have the REPORTER Plug-in for INVOICES installed?</b> | Statistics collected from INVOICES installations where not all workstations have the plug-in installed are incomplete. All reports show incorrect numbers in that case. To use REPORTER successfully, <i>all</i> INVOICES workstations in the system must have the plug-in installed.   |
| <b>Will the REPORTER plug-in conflict with the other customized plug-ins that we have set up for INVOICES?</b>                      | The REPORTER plug-in should not conflict with customized plug-ins, if those follow ReadSoft guidelines. Refer to “ <i>Important if customized INVOICES plug-ins are used</i> ” on page 80.  |
| <b>Can the REPORTER plug-in run under Citrix?</b>   | Yes. Both INVOICES and the REPORTER plug-in for INVOICES run well under Citrix, with no limitations.  |
| <b>Are there any specific requirements on how to set up REPORTER plug-in in connection with INVOICES Connector for ICS?</b>         | <p>Yes. REPORTER Plug-in is installed as the last plug-in by its installation program. However, INVOICES Connector for ICS must also be installed as the last plug-in. To avoid conflict, <code>Eilocal.ini</code> must be adjusted manually after REPORTER Plug-in has been installed on those computers where the INVOICES Connector for ICS is installed.</p> <p>In addition, to ensure traceability for the invoices that are processed in the INVOICES and INVOICE COCKPIT products, INVOICES and the Connector for ICS must be set up specifically for this. The setup guarantees that the Invoice GUID that is assigned by INVOICES is successfully transferred to INVOICE COCKPIT.</p> <p>See “Configuring INVOICE COCKPIT Connector to work together with REPORTER” on page 82 for more information.</p> |



## Operating considerations FAQ

| Consider  | Recommendation  |
|---|---|
| <b>How does the REPORTER Plug-in for INVOICES communicate with the REPORTER server?</b>   | The REPORTER Plug-in transmits data using an ADO connection. To ensure reliable and continuous data collection, ensure that the database server is accessible from every computer where INVOICES modules are installed.   |
| <b>What happens if the SQL Server is not accessible, for example during maintenance, rebooting, or any other temporary disconnection?</b> | The system is designed to safely and securely handle these situations. The REPORTER plug-in converts data to XML messages and stores them locally on the disk. As soon as database connection is restored, these stored messages are automatically sent to the Message Store database. This process is fully automated and is not noticeable to INVOICES users. |
| <b>Does INVOICES production need to be interrupted in order to install the REPORTER Plug-in for INVOICES?</b>                             | Yes. When you install the plug-in on a workstation, no INVOICES modules may be running on it. If INVOICES Interpret or Transfer is running as a service, that service must be stopped. The estimated time needed to install the plug-in on one computer, and thus the length of time that production must be stopped, is 5 to 10 minutes.                       |

## SAP Servers with Invoice Cockpit Suite

### Hardware requirements

This section helps you define the optimal hardware configuration of the computers on which SAP and ICS are installed.

| Consider  | Recommendation  |
|---|---|
| <b>How does the installation of the REPORTER Data Export program affect the existing SAP and ICS installations?</b> | The REPORTER Data Export program, which must be deployed in every ICS installation, has no effect on the SAP and ICS installations. Its presence is not noticed by ICS and SAP users. |



## Software requirements

REPORTER 5-4 only supports the use of ICS 3.1 SP1 or later (including PROCESS DIRECTOR 7.1\* or later), but it is also important that you have the correct version of the REPORTER Data Export program that is compatible with the SAP version of the system where it will work:

| SAP release        | ICS or PD version       | Version of main transport needed                     |
|--------------------|-------------------------|--|
| R/3 4.6C – ECC 6.0 | ICS 3.2 + PD 7.1 and SP | ICS transport for ICS includes REPORTER 5-4          |
| R/3 4.7 - ECC 6.0  | ICS 3.1 SP1             | READSOFT_REPORTER_5-4_Extractor_IC3-1_SP1_R3_4_7-6_0 |
| R/3 4.6C           | ICS 3.1 SP1             | READSOFT_REPORTER_5-4_Extractor_IC3-1_SP1_R3_4_6C    |

\* Note that PROCESS DIRECTOR 7.1 can only be used with REPORTER 5-4 or later.

These guidelines help you prepare an SAP system for the installation of the REPORTER Data Export program:

| Consider  | Recommendation  |
|---|---|
| <b>What versions of SAP are supported?</b>  | All versions of SAP from 4.6C and above are supported.<br><br>The COCKPIT/PAYMENT CONTROL program is not included in SAP versions prior to version 4.6C. As a result, statistics collected by REPORTER 5-4 for those versions, if used, would not be complete (payment information, discounts, payment status, etc., will be missing) and lead times may exceed the limits. |
| <b>What versions of ICS are supported?</b>  | The REPORTER data export program supports Invoice Cockpit Suite 3.1 Service Pack 1 or later (including PROCESS DIRECTOR 7.1 or later).  |
| <b>Will it be possible to install/update the REPORTER Data Export program independently from ICS?</b> | Yes. The REPORTER Data Export program is not included with Invoice Cockpit Suite 3.1 Service Pack 1 and is deployed to SAP using its own transport.<br>Starting with Invoice Cockpit Suite 3.2 (including PROCESS DIRECTOR 7.1), the export program becomes part of the ICS transport file.   |



| Consider  | Recommendation  |
|---|---|
| <p><b>Must ICS be configured in a specific way to be able to use it together with REPORTER?</b></p> | <p>Yes, two features must be enabled and one must be disabled in ICS:</p> <ul style="list-style-type: none"> <li>a) The COCKPIT/PAYMENT CONTROL program must run on a schedule in order to update ICS data with the information related to payments from SAP.</li> <li>b) The “Generate last version from SAP document” function must be enabled to ensure that the posted document is continuously updated with information from SAP. (Customizing: <b>Mandatory Settings &gt; Post Define &gt; posting</b> (transaction/COCKPIT/C6)).</li> <li>c) The “Permanently Delete Document” function in ICS must <u>not</u> be enabled to ensure that no documents are deleted without a trace (<b>Menu extras &gt; Display Deleted Documents &gt; Icon “Permanently Delete Document”</b> (Shift + F2)).</li> </ul> |
| <p><b>Will SAP Business Workflow be supported?</b></p>  | <p>No, REPORTER only supports standard WEB CYCLE that is included with ICS.</p>   |
| <p><b>How does the data synchronization mechanism between ICS and REPORTER work?</b></p>            | <p>REPORTER Data Export program generates a set of CSV-files that contain information from a number of ICS tables: primarily Invoice Header, Line items, Account Assignments, and Audit Trail. Files are stored in a shared folder that is accessible to the import agent from the REPORTER server.</p>   |
| <p><b>How are export files transferred when SAP is installed on a UNIX server?</b></p>              | <p>In order to import files, they must be accessible to REPORTER on either the local disk or a shared network location.</p> <p>If SAP is installed on UNIX, an additional step is required. The system must be configured so that exported files are automatically copied to the place where REPORTER can access them (using Secure FTP, for example).</p>  |

## Operating considerations FAQ

| Consider  | Recommendation   |
|---|--|
| <p><b>Is it possible to load all historical data to REPORTER from ICS immediately following the installation?</b></p> | <p>Yes, following the installation of REPORTER and the Data Export program, all historical (not archived yet) invoice data can be uploaded to the REPORTER system.</p> |



| Consider   | Recommendation   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
|--|--|----------------|------------------------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|--------------------|----------|----------------|------------------------|--------------------|----------|--------------------|----------|--------------------|----------|
| <p><b>How long does it take to reload data and make it available in the reports? Is there enough time to get this done during night hours?</b></p> | <p>The reload job is executed by QlikView on the REPORTER application server and can be done during the night for databases with up to 5 million invoices (providing the appropriate hardware is used).</p> <p>Benchmark testing was performed on a medium performance server (Virtual server, 4 CPU, 12 GB RAM) and resulted in the following numbers:</p> <table border="1" data-bbox="639 562 1401 808"> <thead> <tr> <th>Database size:</th> <th>Full data reload time:</th> </tr> </thead> <tbody> <tr> <td>100,000 invoices</td> <td>00:10:36</td> </tr> <tr> <td>200,000 invoices</td> <td>00:19:29</td> </tr> <tr> <td>300,000 invoices</td> <td>00:29:20</td> </tr> <tr> <td>500,000 invoices</td> <td>00:48:17</td> </tr> <tr> <td>900,000 invoices</td> <td>01:25:02</td> </tr> <tr> <td>1,000,000 invoices</td> <td>01:29:59</td> </tr> </tbody> </table> <p>In addition, higher volume databases were tested on a higher performing server (Physical server, 4 CPU, 16 GB RAM) and resulted in these numbers:</p> <table border="1" data-bbox="639 943 1401 1077"> <thead> <tr> <th>Database size:</th> <th>Full data reload time:</th> </tr> </thead> <tbody> <tr> <td>1.000.000 invoices</td> <td>01:05:30</td> </tr> <tr> <td>3.000.000 invoices</td> <td>03:16:08</td> </tr> <tr> <td>5.000.000 invoices</td> <td>06:40:00</td> </tr> </tbody> </table> | Database size: | Full data reload time: | 100,000 invoices | 00:10:36 | 200,000 invoices | 00:19:29 | 300,000 invoices | 00:29:20 | 500,000 invoices | 00:48:17 | 900,000 invoices | 01:25:02 | 1,000,000 invoices | 01:29:59 | Database size: | Full data reload time: | 1.000.000 invoices | 01:05:30 | 3.000.000 invoices | 03:16:08 | 5.000.000 invoices | 06:40:00 |
| Database size:   | Full data reload time:   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 100,000 invoices   | 00:10:36   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 200,000 invoices   | 00:19:29   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 300,000 invoices   | 00:29:20   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 500,000 invoices   | 00:48:17   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 900,000 invoices   | 01:25:02   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 1,000,000 invoices   | 01:29:59   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| Database size:   | Full data reload time:   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 1.000.000 invoices   | 01:05:30   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 3.000.000 invoices   | 03:16:08   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| 5.000.000 invoices   | 06:40:00   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| <p><b>How often should the data be synchronized using the ICS-data extraction tool?</b></p>  | <p>Optimally, the synchronization should be run nightly. This means that the snapshot of the data that REPORTER users see will always be current up to the previous day.</p>   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |
| <p><b>Will it be possible to install REPORTER without INVOICES?</b></p>  | <p>Yes. No OCR-specific statistics are displayed in that case.</p>   |                |                        |                  |          |                  |          |                  |          |                  |          |                  |          |                    |          |                |                        |                    |          |                    |          |                    |          |





# Oracle Servers with INVOICEIT

## Software requirements

These guidelines help you prepare an INVOICEIT system for the installation of the REPORTER views:

| Question   | Answer   |
|--|--|
| <b>What versions of Oracle EBS are supported?</b>  | Oracle E-business Suite Release 11.5.9.X and 11.5.10.X.  |
| <b>What versions of INVOICEIT are supported?</b>   | REPORTER supports ReadSoft INVOICEIT 3.2 or later.   |
| <b>Must INVOICEIT be configured in a specific way to be able to use it together with REPORTER?</b> | The Oracle REPORTER views are included in the standard INVOICEIT installation, so no additional installation or setup is necessary.  |
| <b>How does the data synchronization mechanism between INVOICEIT and REPORTER work?</b>            | There are a number of special views prepared on the INVOICEIT side that allow REPORTER to extract all required information directly from the Oracle database. They contain information from a number of tables, primarily: Invoice Header, Line items, Account Assignments, and Audit Trail. |

## Operating considerations FAQ

| Question   | Answer   |
|--|--|
| <b>Is it possible to load all historical data from INVOICEIT to REPORTER immediately following the installation?</b> | Yes, following the installation of REPORTER all historical (not archived yet) invoice data can be uploaded to the REPORTER system.   |
| <b>How long will it take to synchronize historical data?</b>   | The time it takes to synchronize historical data with REPORTER's database depends on the number of invoices that you have in the system. It can take a long time the first time, if you have a large system. |
| <b>How often should the data be synchronized using the INVOICEIT Import agent?</b>                                   | Optimally, the synchronization should be run nightly. This means that the snapshot of the data that REPORTER users see will always be current up to the previous day.  |



## Oracle clients with INVOICEIT

There are a few issues that need to be considered with the Oracle clients in connection with INVOICEIT:

- The Oracle client must be installed on the REPORTER server in order to connect to the database.  
  
**Note:** If INVOICEIT 3.2 is installed prior to REPORTER on the same server, the correct Oracle version (Oracle 11) is automatically installed.
- If a 64 bit OS is used, the 32 bit version of the Oracle client must be installed.
- Oracle Client version 10 contains a bug that affects any application that is installed to a location where the path includes parentheses (such as `C:\Program Files (x86)\...`). In these cases, it is not possible to connect to the database. To avoid the problem, you can either upgrade the existing Oracle client installation to version 11, or you can install REPORTER to a location that does not include parentheses (`C:\Reporter`, for example).



## Computers used by REPORTER users

### Hardware requirements

These guidelines help you define the optimal hardware configuration of the computers used by users of REPORTER product.

| Consider  | Recommendation   |
|---|--|
| <b>What is the hardware recommendation for computers where users are running REPORTER in a web browser?</b> | <p>To optimize performance of the operations, REPORTER loads portions of the data that selected by the user into the computer's memory. To avoid performance degradation, we recommend that the computers have a minimum of 1 GB of RAM.</p> <p>There are no other specific hardware requirements.</p>                     |
| <b>What is the optimal display resolution?</b>  | <p>The minimum supported display resolution is 1024 x 768.</p> <p>The recommended display resolution is 1280 x 1024.</p> <p>The display of the reports is optimal when the screen DPI is set at 96. If a higher setting is specified, objects in the reports will become crammed and not display correctly in general.</p> |

### Software requirements

These are guidelines for preparing the users' computers for using REPORTER:

| Consider   | Recommendation  |
|--|---|
| <b>Are there any specific operating system requirements?</b> | No.   |
| <b>What web browsers are supported?</b>                      | <p>The only supported web browser is Internet Explorer 6.0 or later.</p> <p>To display and work with reports, REPORTER uses an OCX plug-in for Microsoft Internet Explorer that is installed separately on each client PC. Therefore, at the moment of installation, the user must be using an account that allows the installation of ActiveX components, whether automatically or manually.</p> |



| Consider  | Recommendation   |
|---|--|
| <p><b>Is there any other software that has to be installed on the workstations?</b></p> | <p>REPORTER users can export data from the reports to Microsoft Excel. If your users are to use this functionality, Excel must be installed.</p> <p>If you configure your system to display images (see step 11 on page 75), there must also be an image viewer installed. Set up a file type association so that the extension of your image files is associated with the image viewing software.</p> |

## Keep in mind

- You install the REPORTER Plug-in for INVOICES on each computer that runs ReadSoft INVOICES, after installing INVOICES.

If you reinstall INVOICES at any time, check `Eilocal.ini` afterwards to ensure that there is a `[ModuleName::REPORTERDataCollectionPlugin]` section there that corresponds to each installed module. For more information, see *INVOICES INI File Help* (included with your REPORTER installation). `Eilocal.ini` is also discussed starting on page 79 of this document.

- After you install the REPORTER Plug-in for INVOICES on the INVOICES computers, install the REPORTER server as soon as possible. Otherwise, a queue of messages builds up on each INVOICES computer in production. (The messages cannot be sent to the REPORTER server because it does not exist yet.) The longer you wait to install the REPORTER server, the more messages queue up on the computers.

Alternatively, disable the plug-in as described on page 79.



# Prerequisites

These items must be done before REPORTER can be installed:

- REPORTER server**
  - IIS** (all components must be installed and up and running in IIS6 mode)—see first section below.
  - Microsoft Distributed Transaction Coordination settings (MSDTC)**—see page 39.
  - Configure security** (if you are using Windows workgroup network)—see page 44.
  - Local Admin account** is needed for Qlikview server—see page 55.
  - Oracle client** including database account must be installed (in connection with INVOICEIT only)—see page 26.
- SQL server**
  - Microsoft Distributed Transaction Coordinator settings (MSDTC)**—see page 39.

## Checking whether IIS is installed, and adding required components

Microsoft Internet information Services (IIS) is not included in the REPORTER installation program. Use this procedure to check whether IIS is already installed, to ensure that all required components are present, and to install them if they are missing:

1. Select **Start** menu > **Settings** > **Control Panel**.

In Windows 8 and Windows Server 2012:

- Hover the cursor in the upper/lower right corners of the desktop window, and then select **Settings > Control Panel**.
- Press **Windows key + I** while in the desktop window and click **Control Panel**.

2. Double-click/click:

- **Add or Remove Programs** (Windows Server 2003 and Windows XP)
- **Programs > Programs and Features** (Windows Server 2008, Windows Vista, Windows 7, Windows 8, and Windows Server 2012).

3. Click:

- **Add/Remove Windows Components** (Windows Server 2003 and Windows XP)
- **Turn Windows features on or off** (Windows Server 2008, Windows Vista, Windows 7, Windows 8, and Windows Server 2012).

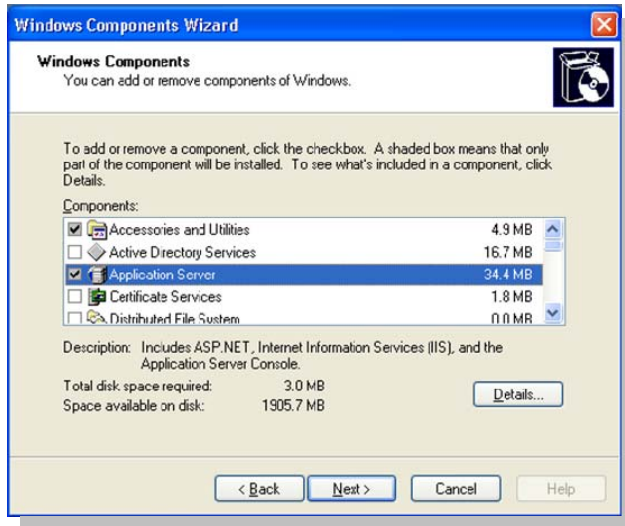
4. See the sections/descriptions below for the respective operating systems:



## 4. Windows Server 2003:

In the **Windows Components Wizard** dialog, look for **Application Server** in the list of components.

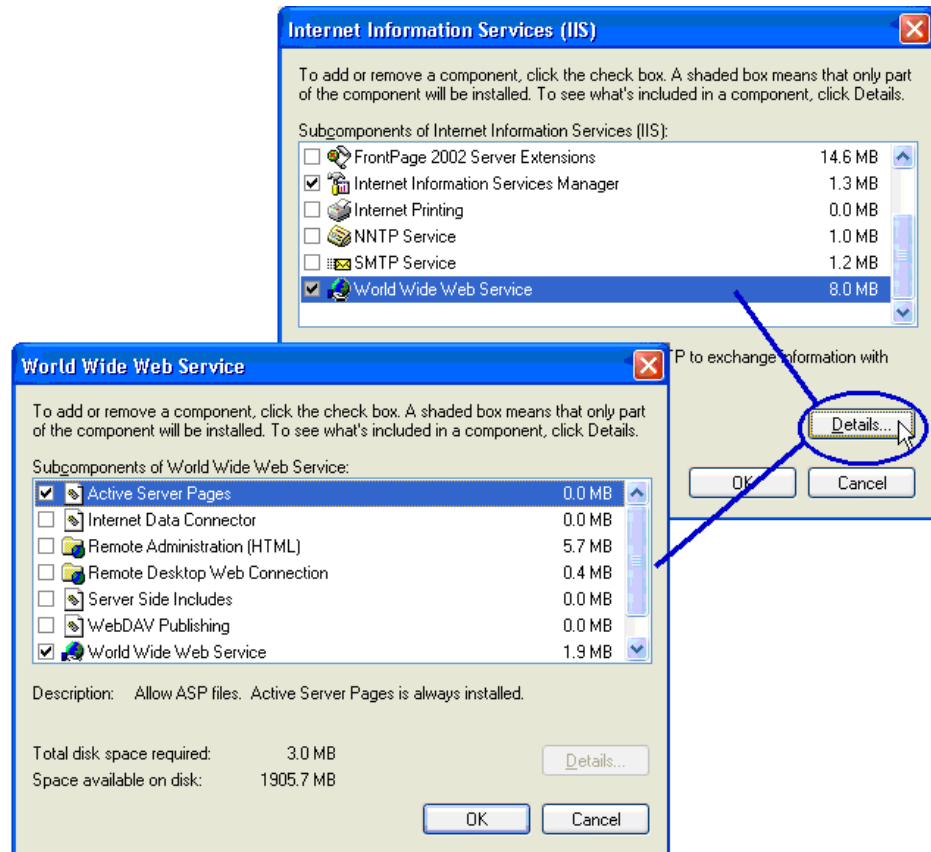
- a. Ensure that the server is configured as Application Server (the box next to it is selected).



If it is not selected, you *can* select it here or (recommended) install IIS using the **Manage Your Server** wizard. Select **Add or Remove a Role** when you start the wizard, and follow all the instruction. Select the **Application server** role to install all required components, including IIS and ASP.NET, in one operation.

- b. Click **Details** to see which components are installed. Ensure that at least these required components are installed. (Select them if they are not installed).
  - Application Server Console
  - ASP.NET
  - Enable network COM+ access
  - Enable network DTC access
  - Internet Information Services (IIS)—and if IIS is only partially installed, select it, click **Details**, and ensure that at least the below items are included.
    - Common files
    - Internet Information Services Manager
    - World Wide Web Service—and if World Wide Web Service is only partially installed, select it, click **Details**, and ensure that at least the below items are included.
      - Active Server Pages
      - World Wide Web Service

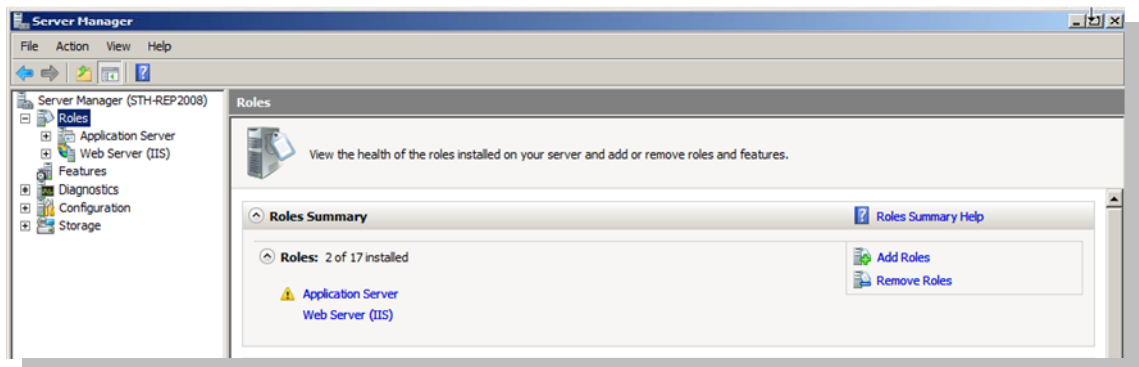




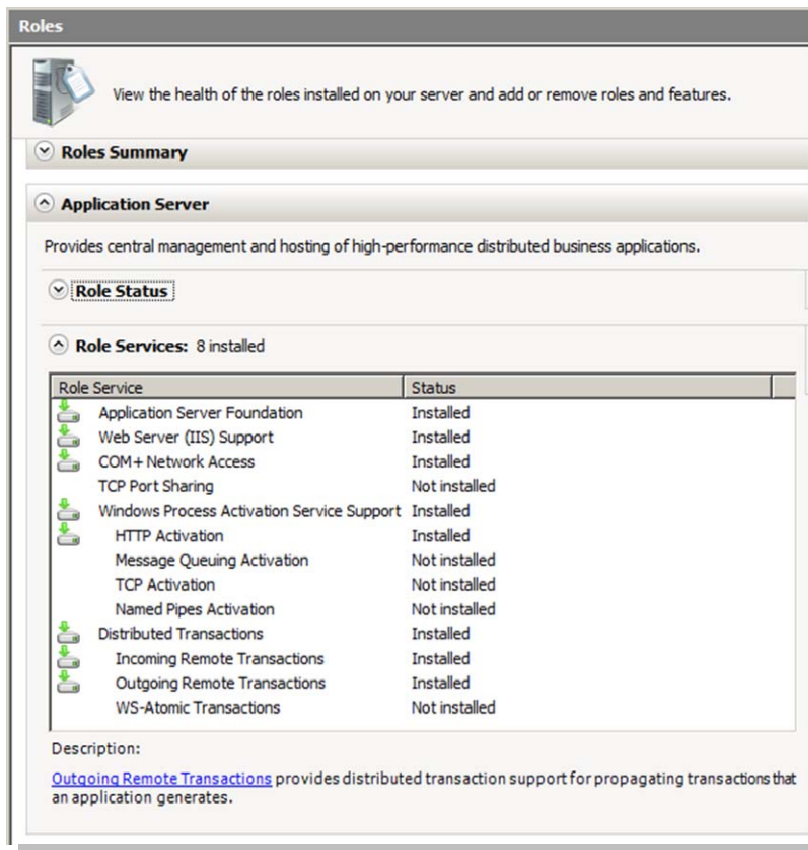
#### 4. Windows Server 2008 / Windows Server 2008 R2:

In the **Server Manager** dialog, look at the list of roles.

- a. Ensure that the server is configured as Application Server and Web Server (IIS)



b. Scroll down to the list of features selected as part of the Application Server.



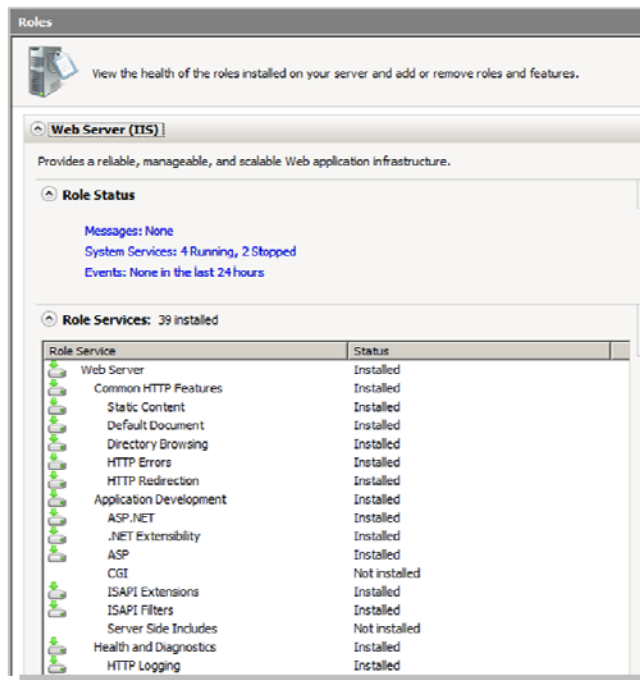
c. Make sure the following are installed (in addition to the features selected by default):

- Application Server Foundation (Windows Server 2008)
- NET Framework 3.5.1 (Windows Server 2008 R2)
- Web Server (IIS) Support
- COM+ Network Access
- Distributed Transactions
  - Incoming Remote Transactions
  - Outgoing Remote Transactions





- d. Scroll down to the list of features selected as part of the Web Server (IIS)



- e. Make sure the following are installed (in addition to the features selected by default):

i. Application Development

1. ASP.NET
2. ASP

ii. Management Tools

1. IIS 6 Management compatibility
  - a. IIS 6 Metabase Compatibility
  - b. IIS 6 WMI Compatibility
  - c. IIS 6 Scripting Tools
  - d. IIS 6 Management Console

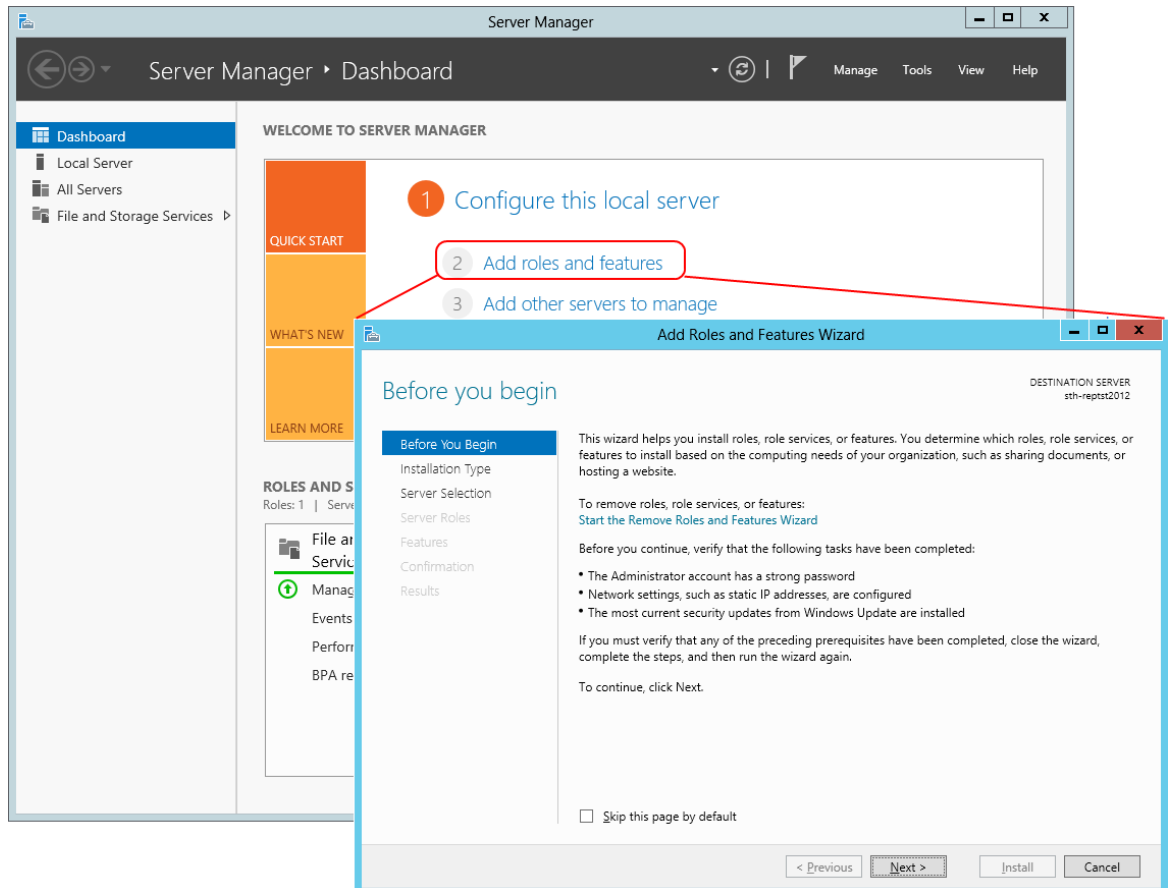


#### 4. In Windows Server 2012:

Note: Windows Server 2012 requires REPORTER 5-4 SP1 HF7 or later for REPORTER to work.

In the **Server Manager** dialog:

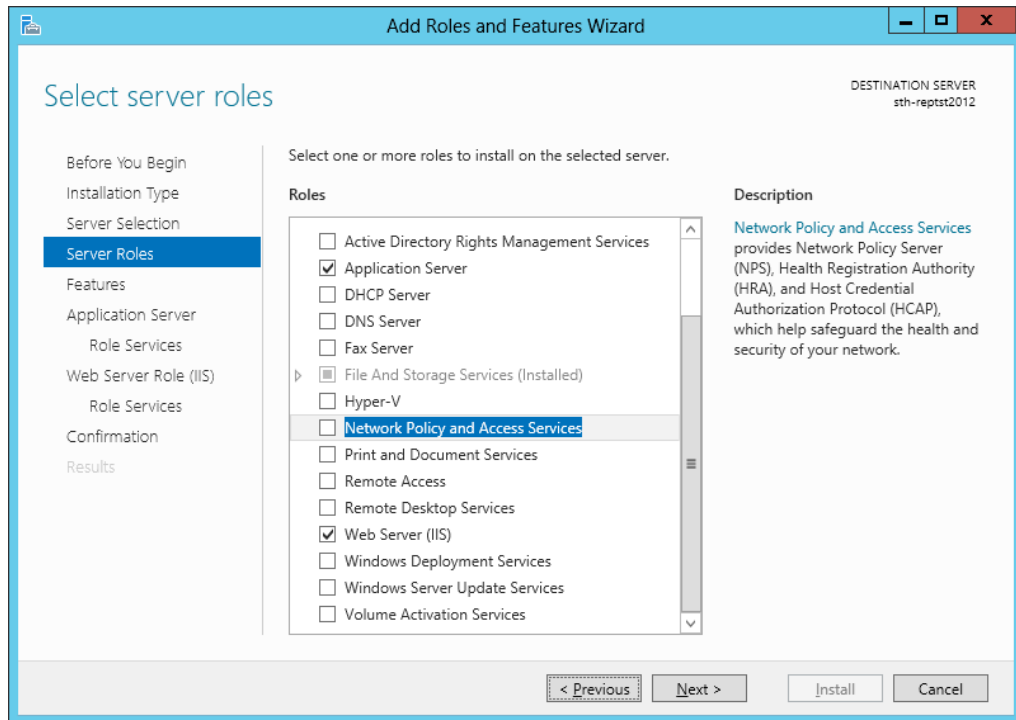
- a) If it does not display automatically, click **2. Add roles and features** to access the **Add Roles and Features Wizard**.



*If **Skip this page by default** was selected at a previous time in this dialog, the **Installation Type** dialog will be displayed instead (see next step).*

- b) Click **Next**. In the **Installation type** settings, select **Role-based or feature-based installation**. Click **Next** again.
- c) In the **Server Selection** settings, ensure that **Select a server from the server pool** is selected, and then click the server in the list on which the features are to be installed. Click **Next**.
- d) In the list of roles in the **Server Roles** settings, select:
  - **Application Server**
  - **Web Server (IIS)** –click **Add Features** in the dialog that is displayed when you select this option.





Click **Next**.

- e) In addition to the default settings, ensure that the following option is selected in the **Features** settings:

- **.NET Framework 3.5 Features**

Click **Next**.

- f) Click **Next** again. In addition to the default settings, ensure that the following options are selected in the **Application Server > Role services** settings:

- **Distributed Transactions**
  - **Incoming Network Transactions**
  - **Outgoing Network Transactions**

Note that **WS-Atomic Transactions** should not be selected here.

- **Web Server (IIS) Support**

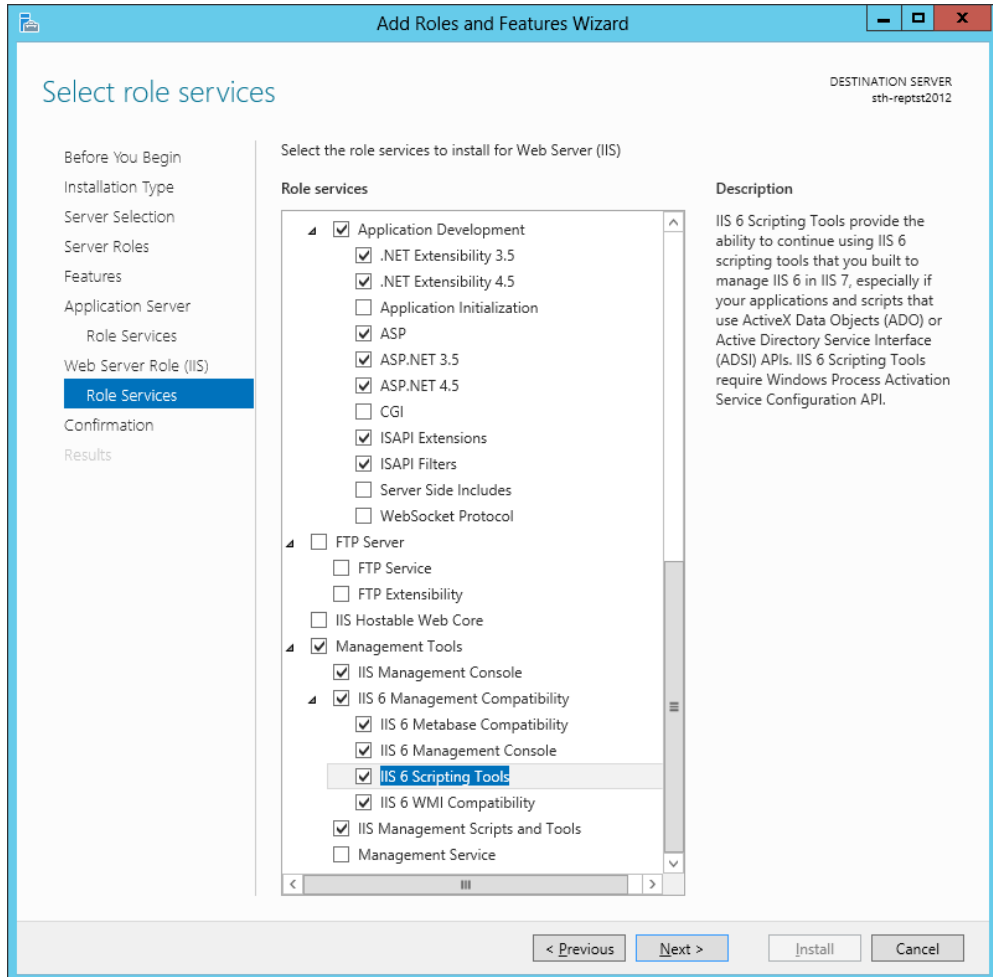
Click **Next**.

- g) Click **Next** again. In addition to the default settings, ensure that these options are selected in the **Web Server Role (IIS) > Role Services** settings:

- **Application development**
  - **.NET Extensibility 3.5**
  - **ASP**
  - **ASP.NET 3.5**
- **Management Tools**
  - **IIS 6 Management Console**



- IIS 6 Management Compatibility
  - IIS 6 Metabase Compatibility
  - IIS 6 Management Console
  - IIS 6 Scripting Tools – click **Add features** in the dialog that is displayed.
  - IIS 6 WMI Compatibility
- IIS Management Scripts and Tools



Click **Next**.

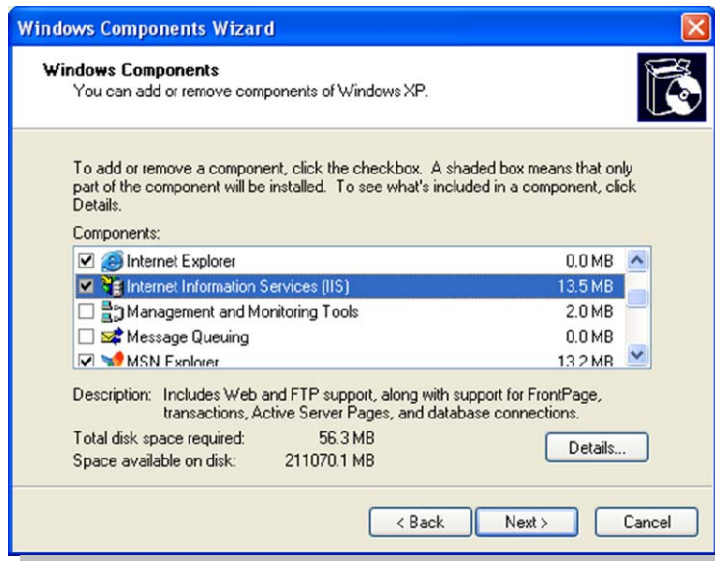
- h) Review the settings, and go back to make any changes if necessary. When you are satisfied, click **Install**.



#### 4. In Windows XP:

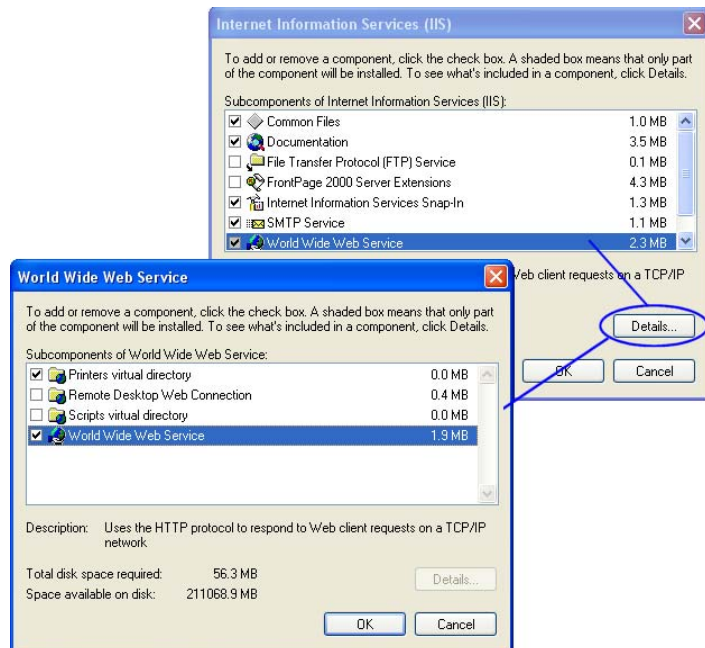
In the **Windows Components Wizard** dialog, look for **Internet Information Services (IIS)** in the list of components.

- a. Ensure that IIS is installed (the box next to it is selected). Select it if it is not installed.



- b. Click **Details** to see which components are installed. Ensure that at least these required components are installed. (Select them if they are not installed).

- Common files
- Internet Information Services Snap-in
- World Wide Web Service—and if World Side Web Service is only partially installed, ensure that at least **World Wide Web Service** is selected in the **World Wide Web Service** dialog.



5. To complete the installation process, click **OK** in the above dialogs. Then click **Next** and **Finish** in the **Windows Components Wizard** dialog.



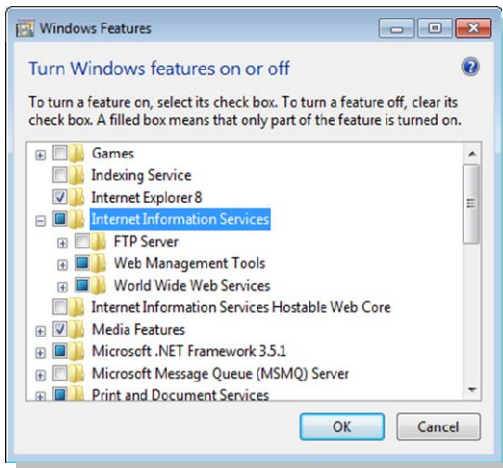
#### 4. In Windows Vista / Windows 7 / Windows 8:

Note: Windows 8 requires REPORTER 5-4 SP1 HF7 or later for REPORTER to work.

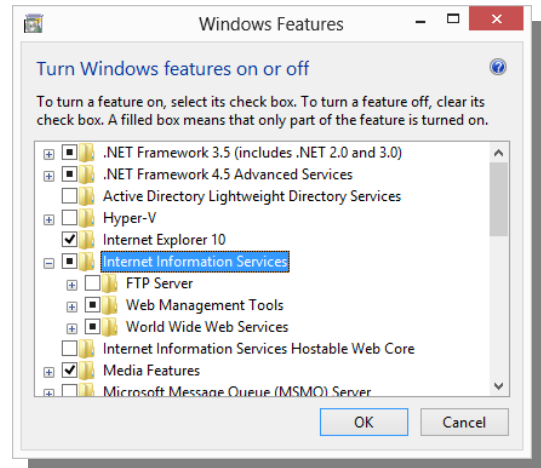
In the **Windows Features** dialog:

- a. Look for **Internet Information Services** in the list of components, and ensure that IIS is installed (the box next to it is selected). Select it if it is not installed.

For Windows 8, also select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)**.



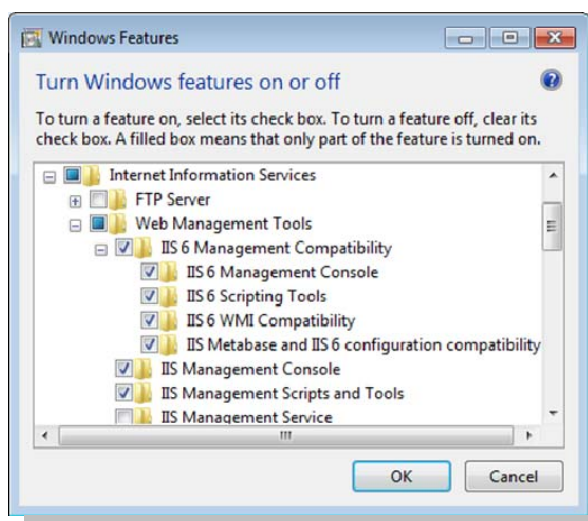
*Windows Vista/Windows 7*



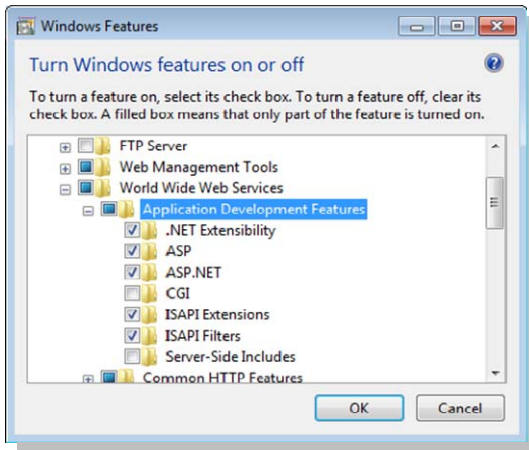
*Windows 8*

- b. Expand to see which components are installed. Ensure that the following required components are installed in addition to the ones selected by default:

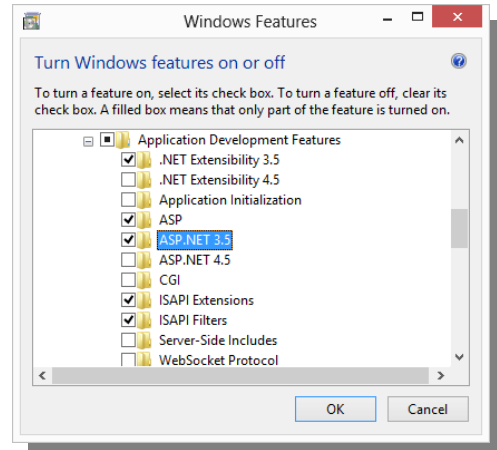
- Web Management Tools
  - IIS 6 Management Compatibility (with all sub-options)
  - IIS Management Console
  - IIS Management Scripts and Tools



- World Wide Web Services
  - Application Development Features
    - .NET Framework 3.5 including .NET 2.0 and 3.0 (Windows 8)
    - .NET Extensibility (Windows Vista and Windows 7)
    - .NET Extensibility 3.5 (Windows 8)
    - ASP
    - ASP.NET (Windows Vista and Windows 7)
    - ASP.NET 3.5 (Windows 8)
    - ISAPI Extensions
    - ISAPI Filters



Windows 7



Windows 8

5. To complete the installation process, click **OK** in the above dialogs and wait while the newly added features are installed.

## Configuring MSDTC for network DTC access

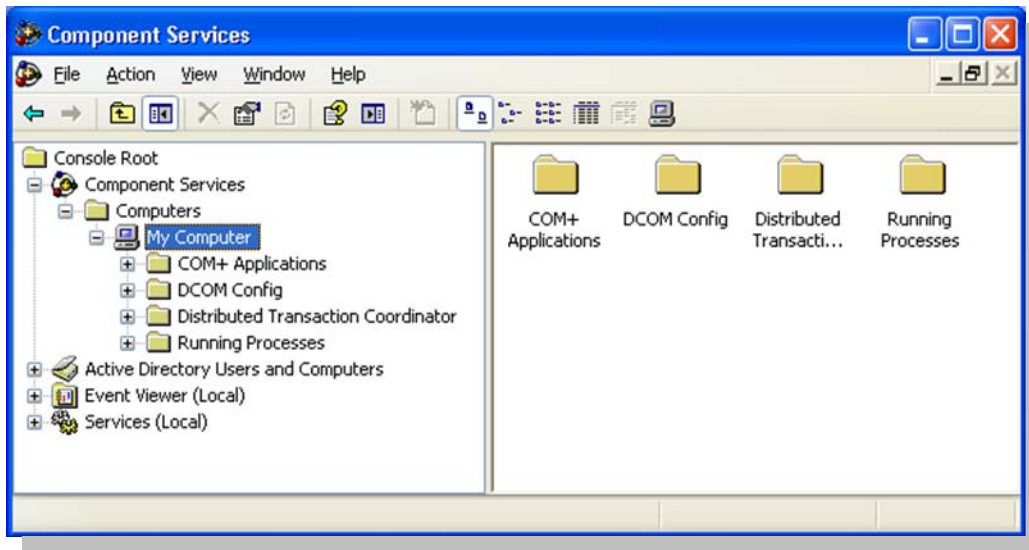
The REPORTER solution uses the System.Transactions namespace of .NET Framework 2.0 to handle distributed transactions and thereby guarantee consistency in the databases. MSDTC (Microsoft Distributed Transaction Coordinator) is used to handle the transaction between REPORTER and the database. In Windows Server 2003 Service Pack 1, Windows Server 2008, and in Windows XP Service Pack 2, the MSDTC service has all transaction communication disabled by default. Therefore, you must configure MSDTC to allow it.

If REPORTER and the databases are installed on separate servers (which is normally the case), use this procedure on *both servers*:

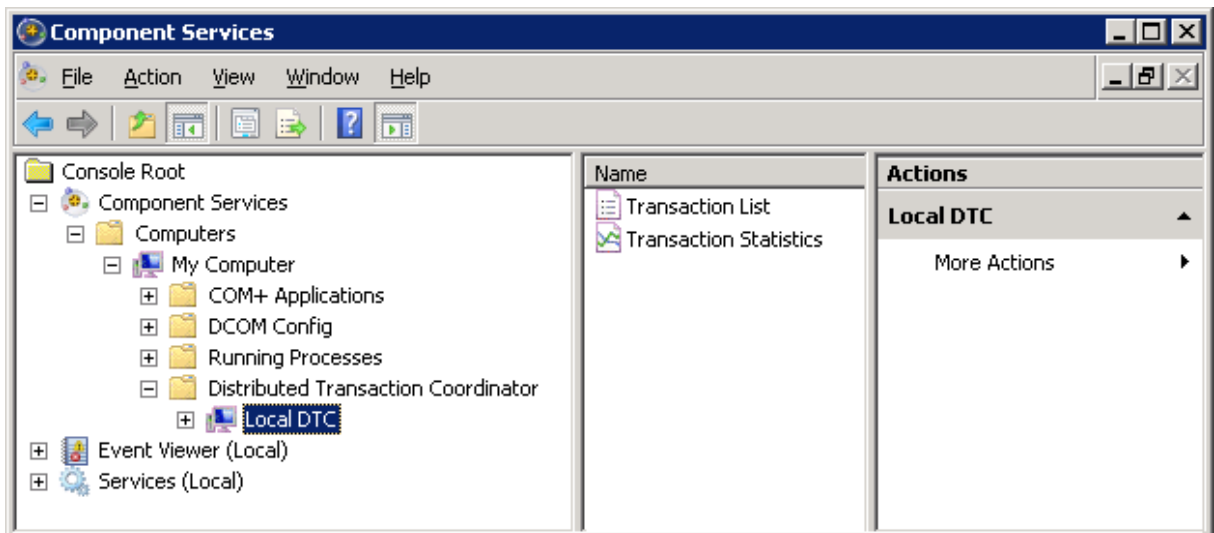
1. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Component Services**.
2. Navigate to **Component Services** > **Computers**.



3. In Windows Server 2003 Service Pack 1 and Windows XP, right-click **My Computer** and select **Properties**. The **My Computer Properties** dialog is displayed.



- In Windows Server 2008, expand **My Computer** and **Distributed Transaction Coordinator**, right-click **Local DTC**, and select **Properties**.



4. Click the **Security** tab and click **Security Configuration** to display the **Security Configuration** dialog.
5. Select these options:
  - **Network DTC Access**
  - **Allow Remote Clients**
  - **Allow Remote Administration**

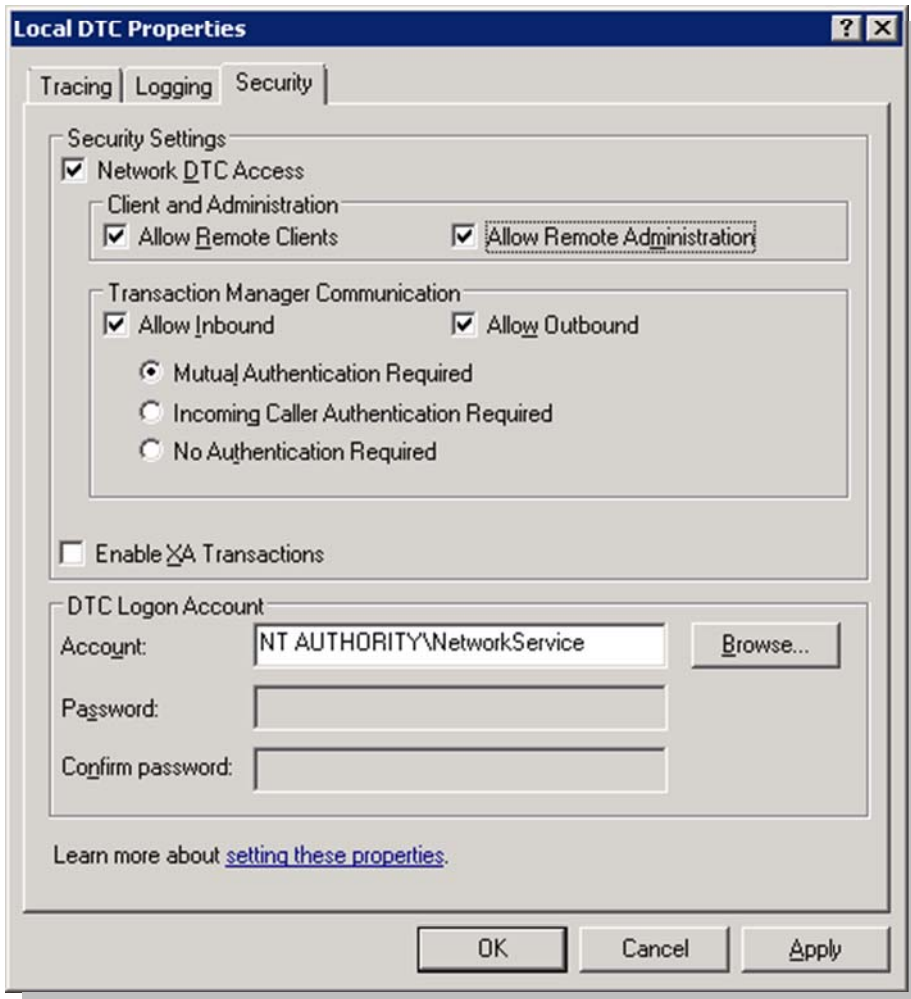




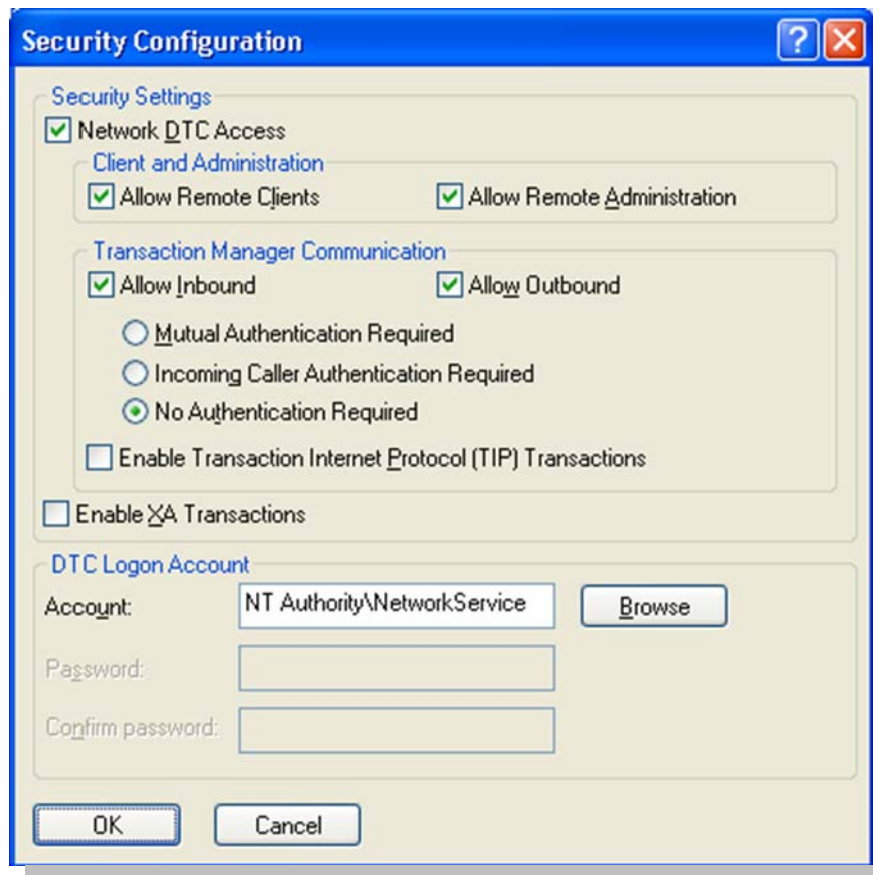
- **Allow Inbound** (on both an SQL Server computer that should allow inbound transaction communication and on the REPORTER computer(s) that needs to communicate with it) – this option should be selected on both the REPORTER and SQL servers.
- **Allow Outbound** (on both an SQL Server computer that should allow inbound transaction communication and on the REPORTER computer(s) that needs to communicate with it) – this option should be selected on both the REPORTER and SQL servers.

(If REPORTER and the databases are installed on the same server, both **Allow Inbound** and **Allow Outbound** are needed.)

- **Mutual Authentication Required** (in cases where both SQL Server and REPORTER use Windows Server 2003, Windows Server 2008, or Windows XP or later, and both are set up within the domain network)



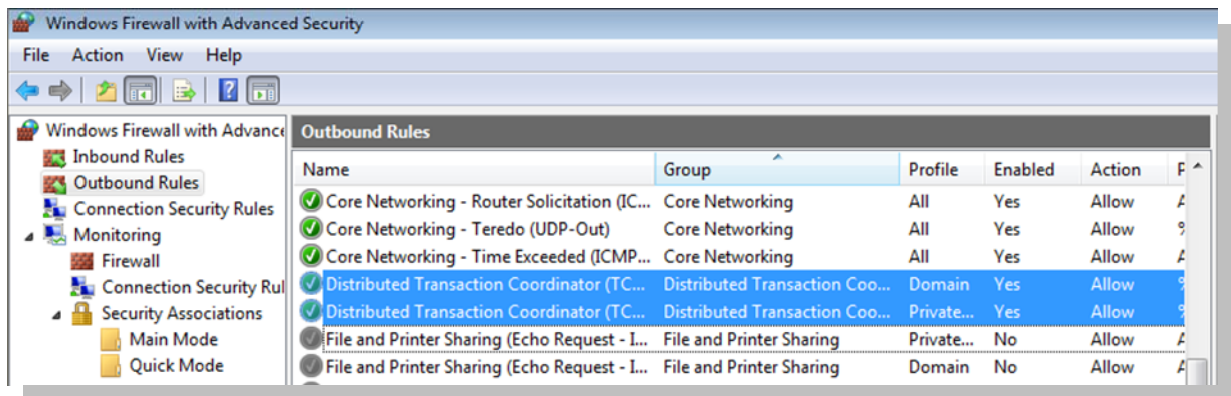
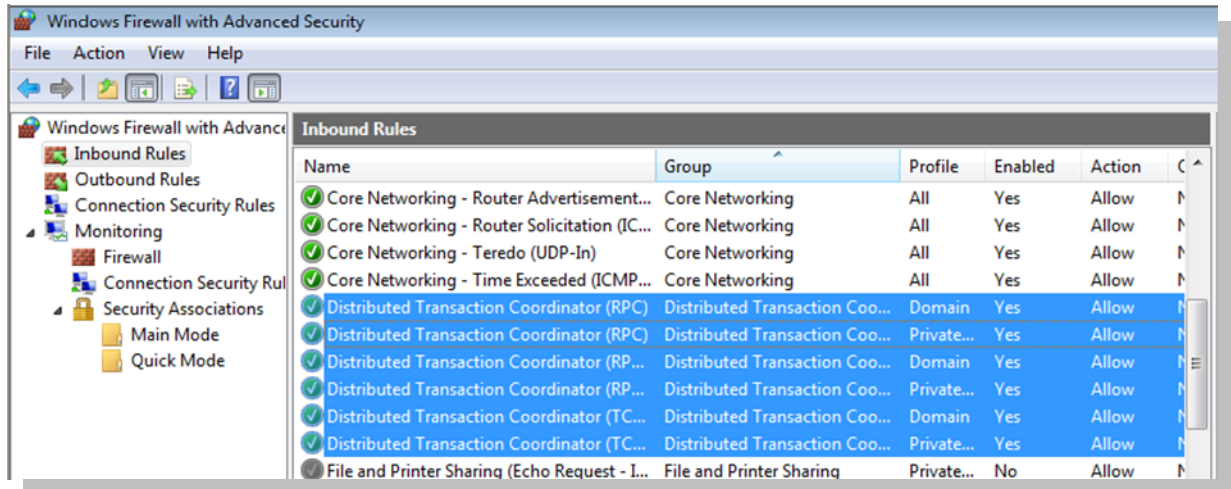
- **No Authentication Required** (in cases where SQL Server is set up using Windows Server 2000 or Windows Workgroup network is used)



6. If you run operating systems with incompatible MSDTC settings, adjust the rest of the **Transaction Manager Communication** settings to suit the requirements of the operating system.
7. Click **OK** in the **Security Configuration** and **My Computer Properties** dialogs to close them.
8. Close the **Component Services** dialog.
9. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Services** and set the “Distributed Transaction Coordinator” service to start automatically.
10. Start the service if it is stopped.
11. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Services** and set the “Remote Procedure Call (RPC) Locator” service to start automatically.
12. Start the service if it is stopped.



13. If you are using Windows Firewall in Windows Server 2008 / Windows Vista / Windows Server 2008 R2 / Windows 7, make sure the Distributed Transaction Coordinator is enabled in the list of extensions.



## Troubleshooting

If troubleshooting is required, you can use Microsoft's DTCTester tool to test DTC traffic on the network and to obtain detailed error messages: <http://support.microsoft.com/kb/293799>

## Additional sources of information

- *New DTC Functionality in Windows Server 2003 Service Pack 1:*  
<http://msdn2.microsoft.com/en-us/library/ms679479.aspx>
- *New functionality in the Distributed Transaction Coordinator service in Windows Server 2003 Service Pack 1 and in Windows XP Service Pack 2:*  
<http://support.microsoft.com/kb/899191>



## Configuring security in Windows Workgroup network

QlikView Server, an essential part of REPORTER, checks licensing by the number of CAL (client access licenses) used. This requires that the users logged in to REPORTER are authenticated as different named accounts.

REPORTER uses IIS as a web server, which, by default, authenticates every logged in user with their own Windows account. This works perfectly fine in the domain network, and no extra setup is necessary.

However, in the workgroup network, logged in users are authenticated as one and the same Guest account, which conflicts with QlikView's license mechanism and blocks the possibility for users to concurrently access reports.

To solve the problem, create a local account on the REPORTER server for every REPORTER user using the same user name and passwords as the user's Windows NT account. In this way, IIS authenticates logged-in users with their real names rather than as Guests.



# Licensing

There are two licensing modes supported by REPORTER, described below:

- FLEXlm server-based licensing
- FLEXlm file-based licensing

Both are implemented using REPORTER's Workflow Engine, which runs as an NT service.

## FLEXlm server-based licensing

In order to use REPORTER, a FLEXlm server must be running on the network and reachable by the REPORTER server. Normally this is already the case, because INVOICES is already installed and running.

In addition, a valid license file that includes the REPORTER product must be available.

FLEXlm makes REPORTER available anywhere on a network and provides a flexible working environment.

If FLEXlm is not installed, you can find it on the REPORTER installation CD, along with installation instructions (*Configuring FLEXlm for use with REPORTER*, file name `Configuring FLEXlm for REPORTER.pdf`).

Some installations also require a USB hardware dongle.

**❗ Important:** Do not insert the USB dongle into the server until you have followed the installation procedure described in *Configuring FLEXlm for use with REPORTER*.

## FLEXlm file-based licensing

Installations that do not have FLEXlm server installed or accessible can use REPORTER with the help of a stand-alone file-based licensing mechanism that is built into the product.

The only requirement is a valid license file that includes REPORTER. You obtain this license file from ReadSoft.



# Installing and configuring REPORTER

## Installing REPORTER

**Tip:** It is possible to install REPORTER in “silent mode.” This is described on page 105.

1. Ensure that you logged on to the server using an account with administrative privileges.
2. Exit all Windows programs.
3. Insert the REPORTER installation CD.
4. When the main menu is displayed, click **Install Software**.



5. Click **ReadSoft REPORTER**.
6. The installation program checks whether .NET Framework 2.0 SP1 is installed on the server, since that is required. If it is not installed, a message is displayed and you can click **OK** to install .NET Framework 3.5 Service Pack 1 (which includes version 2.0 SP1). If you click **Cancel**, REPORTER installation is aborted.

If an “Error 1609” message is displayed at this point, please see troubleshooting information on page 95.

7. When the **Welcome** dialog is displayed, click **Next**.



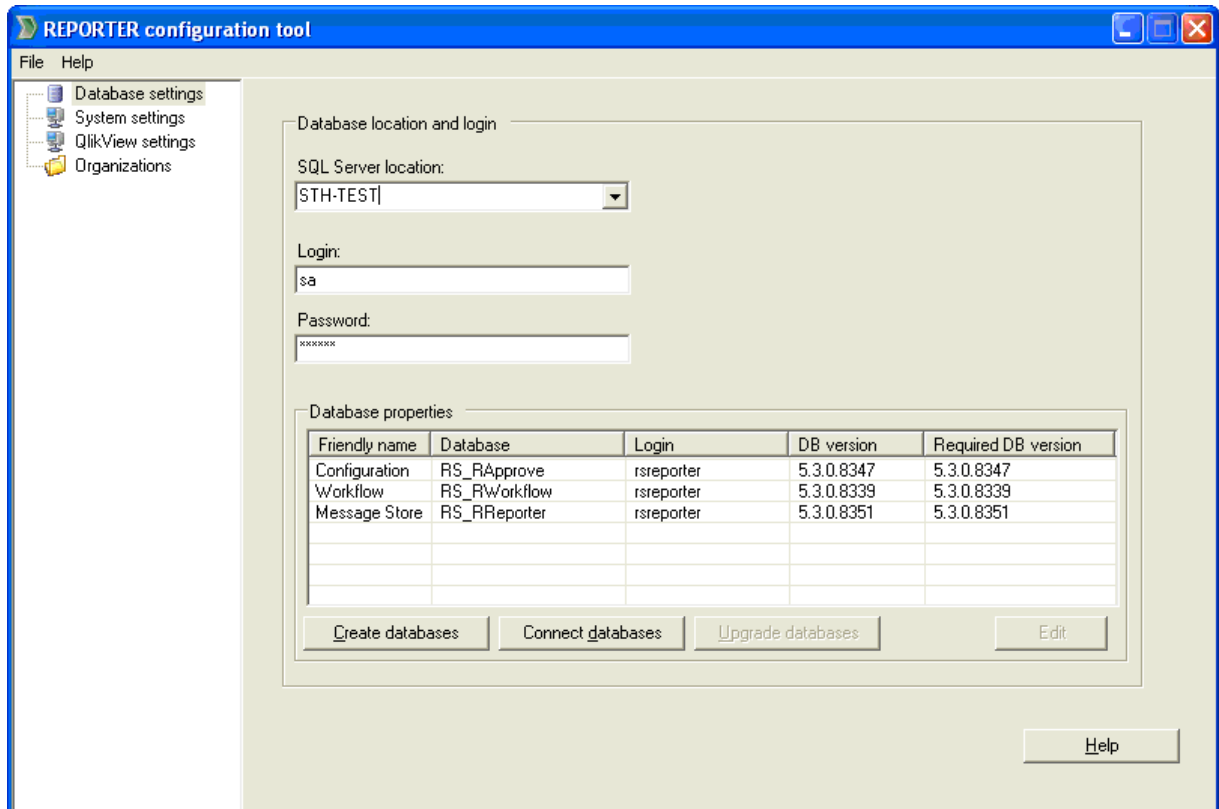
8. Specify the destination folder(s)—this varies depending on the operating system on which REPORTER is being installed:
  - For Windows XP/Windows Server 2003, the default folder is C:\Program Files\ReadSoft\REPORTER). Both installation, configuration, and log files are installed in the same folder.
  - For Windows Vista/Windows Server 2008/Windows 7/Windows 8/Windows Server 2008 R2/Windows Server 2012, installation files and configuration and log files are installed in different default locations due to permission issues.
    - Installation files are installed in C:\Program Files\ReadSoft\REPORTER.
    - Configuration and log files are installed in C:\Users\Public\ReadSoft\REPORTER.
  - Website files are installed at C:\inetpub\wwwroot\REPORTER regardless of the OS.
  - Click **Next**.
9. Specify the name of the server where you plan to install the QlikView Server software. By default this is the same computer where REPORTER is to be installed.

(If a REPORTER client's on-demand installation of the QlikView plug-in fails, the program tries to install it from the location you specify here. If necessary, this can be adjusted later using REPORTER's configuration tool.)
10. Click **Next**.
11. Click **Install** to start the installation process.
12. In the last dialog, select **Launch REPORTER Configuration Tool** and click **Finish**.



## Configuring REPORTER

1. When the configuration tool is launched, log in using the user name “iasa” and the password “secret”.
2. Use **Database settings** to specify the SQL server location. This is the location of the Microsoft SQL Server installation that REPORTER can use.
3. Type the user name and password for the SQL account with privileges sufficient to create databases, logins, users, roles and various objects inside databases. Minimum required server roles are: public, dbcreator and securityadmin (sysadmin is preferred). Click **Apply**.



4. Confirm that you want REPORTER to create new databases, and wait for confirmation that they have been created.
5. Select **System settings**.





6. Select the appropriate licensing mode (see page 44) and provide either the name of the server where the FLEX $lm$  license can be found or the path to the license file. Also select the appropriate settings, depending on whether your REPORTER system is connected to INVOICES, ICS, or INVOICEIT.

Port number:  
13256  
(Use a port number between 10000 and 65535)

License mode:  
 License server: [ ]  
 License file: C:\Users\Public\ReadSoft\REPO [ ]

Connected applications:  
 INVOICES  
 INVOICE COCKPIT [ ]

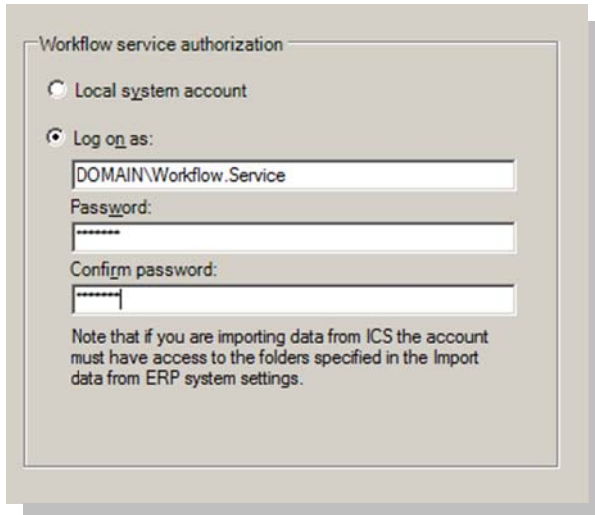
Select a default language for your system. This setting affects what users see when they access REPORTER (before they log in), how reports are displayed, and how certain system error messages are displayed.

Tip: Click 'Culture settings' on the left to adjust how dates, times, and numbers are displayed.

System language:  
English [ ]

7. Select an account that will be used by Workflow Service. Note that if you use Invoice Cockpit Suite and plan to import data from the shared folder on the network, you must configure the service to run under an account that has read and write permissions to that folder. Otherwise, the default Local System account will not be able to access any resources outside of the REPORTER server computer and the import job will fail with an access-denied error. Click **Apply**.





8. Wait for a message that confirms that the system verified the license, configured the service, accessed the database, and successfully started the service.

If there is a license problem, you may have to start the Workflow Engine service manually after fixing the problem. That procedure is described on page 53.

**Note:** if the Windows Security Alert dialog appears, ensure that **unblock** is selected. For REPORTER to function, the port selected (default 13256) has to be open in the firewall.

9. Select **QlikView settings** and check that the correct QlikView Server is specified.
10. Expand **Organizations** and click **Create new organization**.
11. Type the name of your organization (that is, the name of your REPORTER installation/system) in the **Name** box and click **Apply**. Your new organization is displayed and is ready to be configured.

**Note:** You can only have one organization, and the name cannot be changed once it has been configured (that is, you have clicked **Apply**).

12. Select **Import settings**. A list is displayed that shows corresponding INVOICES and REPORTER fields.

Use these settings to specify the fields that you want to use in your reports:

|                |  |
|----------------|--|
| <b>Add</b>     | <b>Displays a dialog for adding a new field that you want to include in your report.</b><br><br><b>Note: INVOICES fields are case sensitive.</b> |
| <b>Edit</b>    | Displays a dialog for editing the selected field mapping.  |
| <b>Delete</b>  | Deletes the selected field mapping.  |
| <b>Default</b> | Returns the mapping list to the original state of a newly installed system.  |



13. Click **Apply** to save your changes.
14. Select **Currency settings**. In the **System currency** field, provide the name of the default currency to be used by the REPORTER system when displaying monetary amounts.
15. Click **Apply** to save your changes.
16. Select **Culture settings**. In the **Culture template** field select the culture that best suits your installation. Adjust some of the formats, delimiters, or names, if needed.
17. Click **Apply** to save your changes.
18. When connecting to ICS, select **Import data from ICS system settings**.
  - In the **Configure folders to import data from** section, specify the paths to the folders where the CSV files that are exported from your ICS systems are kept. An import folder needs to be configured for each distinct combination of System and Client IDs for the SAP system you are importing data from.

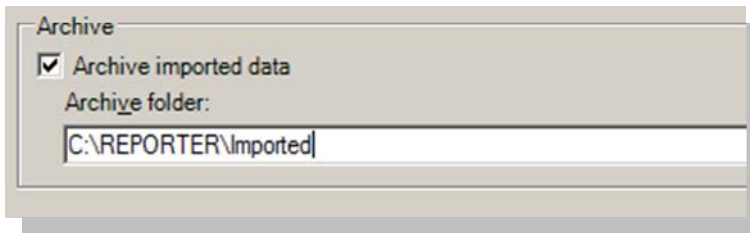
| System and client ID | Import folder           | Code page                                   |
|----------------------|-------------------------|---|
| DEV:500              | \\sapshare\export\dev\  | Western European (Windows) - Code page 1252 |
| QA:500               | \\sapshare\export\qa\   | Western European (Windows) - Code page 1252 |
| PROD:500             | \\sapshare\export\prod\ | Western European (Windows) - Code page 1252 |

For each import folder, specify the correct code page to match the corresponding SAP installation.

**Notes:**

- To import files from the specified locations, Workflow Service must be configured to run using an account that has both read and write permissions to those folders. For more information, see step 7 above on page 49.
- To import files from a shared folder that is not on the same domain as the REPORTER server, an additional step is required. The domain with the shared resource can either be set up to trust the domain where REPORTER is installed, or if this is not possible, you can set up a user on the target machine with the same credentials as the user of the Workflow Service. The Local System account cannot be used in either case.
- Mapped network drives cannot be used, since they belong to the interactive login session and not to the session of the service.
- **Important!** The path for every folder should not be longer than 25 characters! This is currently a limitation of the export program.
- In the **Archive** section, specify if you want to archive the successfully imported files. If yes, provide the path to the folder where the archive files will be placed upon completion of the import process.

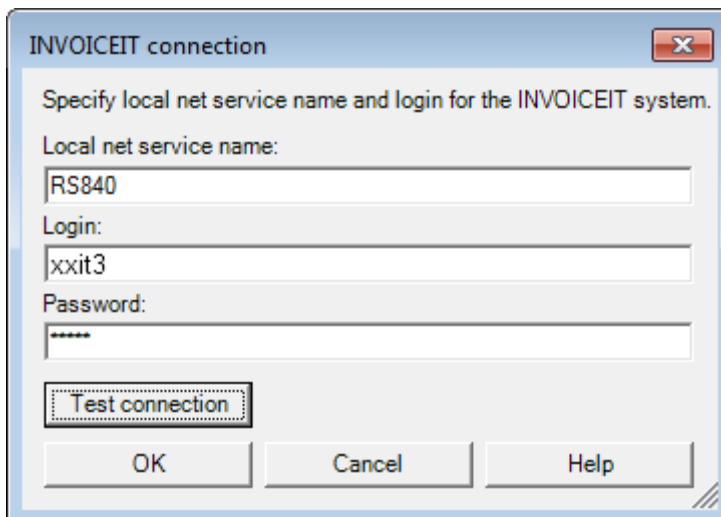




Note that to archive files to the specified locations, Workflow Service must be configured to run using an account that has both read and write permissions to those folders. For more information, see step 7 above on page 49.

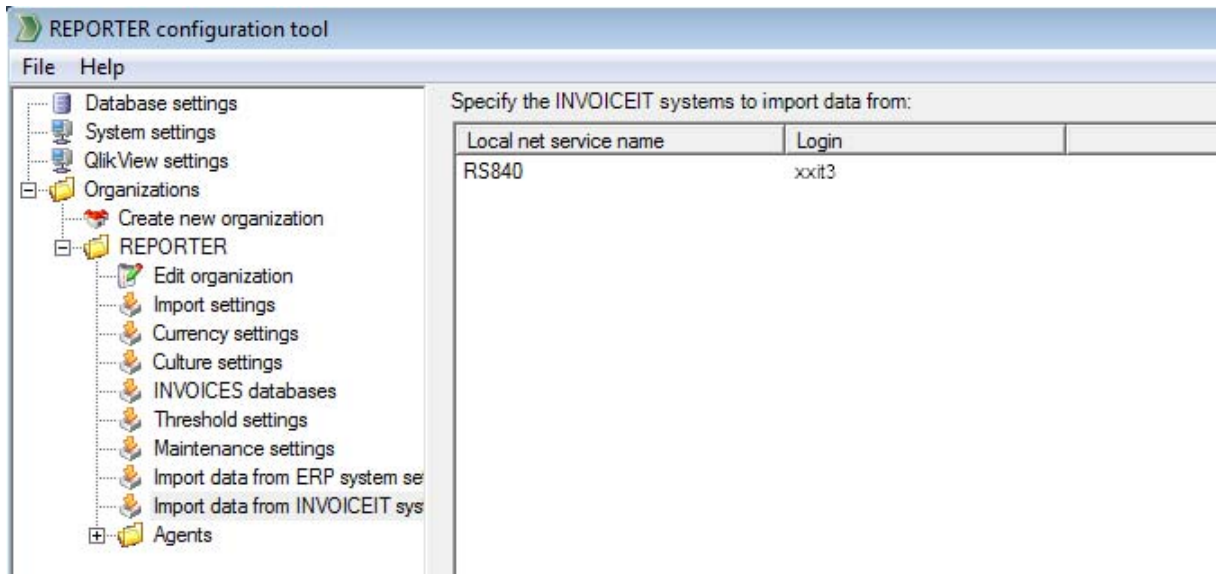
19. When connecting to INVOICEIT, select **Import data from INVOICEIT system settings**.

- ❗ Before configuring the system, make sure you have installed Oracle Client (32-bit version only, regardless of the operating system) of the same or later version than your database is.
- In the **Specify the INVOICEIT systems to import data from** section, specify the parameters for the connection to the Oracle systems, where the REPORTER specific views reside.



- By default, use login “XXIT3” with the password “XXIT3” (no quotation marks).





20. Click **Apply** to save your changes.

## Starting the Workflow Engine service manually

The Workflow Engine runs as a Windows service. It normally starts automatically, but if it does not start automatically (for example in step 8 in the previous section), then something is wrong. For examples: the name of the server was misspelled, the account does not exist, a different password is used, or the license is not valid.

Use this procedure if you need to start the Workflow Engine manually after fixing such problems:

1. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Services**.
2. Double-click **ReadSoft Workflow Engine**.
3. In the dialog that is displayed, click **Start**.

## Testing REPORTER

At this point, the installation and basic configuration of REPORTER itself is complete and can be tested to ensure that it can be accessed from Internet Explorer. Use this procedure:

1. Start Microsoft Internet Explorer on the same server or on any other computer where the users plan to use REPORTER.
2. Navigate to: `http://ComputerName/REPORTER`, where *ComputerName* is the name of the computer where REPORTER is installed.
3. When the login page is displayed, specify a user name and password. These users are installed by default:
  - **iasa** – with “system administrator” authorization.
  - **iauser** – with normal user authorization.



They all have the same password, “secret”. For security reasons, we recommend that you create new users as soon as your system is up and running. See *REPORTER Help* for more information.

4. Click **Log in**.
5. After a successful login, you can click any tabs *except* the **Reports** tab in the main menu and use various functions, for example to manage user properties, view *REPORTER Help*, etc. This shows that REPORTER is successfully installed and you are ready to install QlikView components.

**ReadSoft REPORTER** User: IASa - Thursday, March 11, 2010 4:46 PM  
Organization: Perfest

Reports My setup System setup System overview Help Exit

REPORTER users | Currencies | Users of connected applications

### Users

1 to 10 of 10 results

Conditions: None

Add condition...

| Name   | Employee ID | Language |
|--------|-------------|----------|
| IASa   | 2           | en-US    |
| IAUser | 3           | en-US    |

New user Help



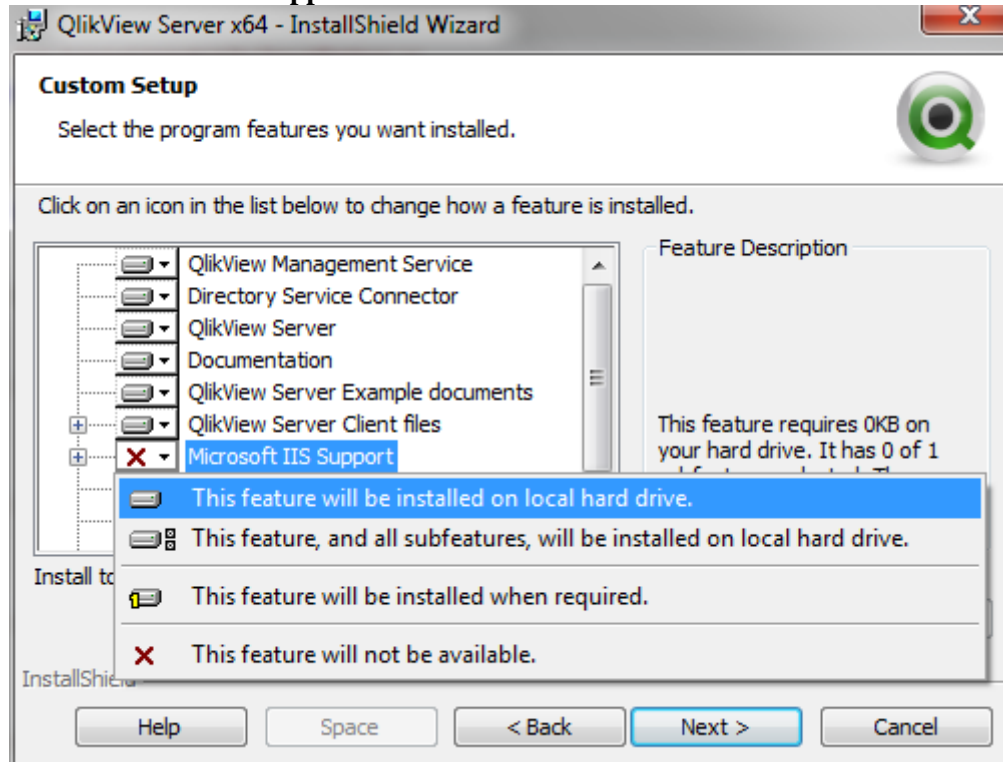
# Installing and setting up QlikView Server

## Installing QlikView Server

1. Ensure that you logged on to the server using an account with administrative privileges.
2. Exit all Windows programs.
3. Insert the REPORTER installation CD.
4. When the main menu is displayed, click **Install Software**.
5. Click **QlikView Server 32-bit** or **QlikView Server 64-bit**.  
If your server's processor supports the 64-bit architecture and a 64-bit operating system is installed, install the 64-bit version of QlikView Server (recommended).
6. When the **Welcome** dialog is displayed, click **Next**.
7. Select your region and click **Next**.
8. Read the license agreement. Continue by selecting **I accept the license agreement**, and then click **Next**.
9. Enter user information for QlikView Server and click **Next** to continue.
10. Optional: Adjust the destination folder for the QlikView software. (By default C:\Program Files\QlikView is specified, and the installation program adds \Server to the path.)
11. Click the **Config** button to customize the configuration.



- Click **Microsoft IIS Support** and select **This feature will be installed on the local hard drive**.



Click **Next** to continue.

- Click **Support Tools** and select **This feature will be installed on the local hard drive**. Click **Next** to continue.
- If you are prompted to choose which website to install the software on, select **Default Web site**.
- In the **Logon Information** window, specify the account that will be used for the services.

**Note:** On some systems, the installation program fails to configure services to use the specified account. If that happens, select the checkbox **I want to specify the account to be used for the services later** and proceed with the installation by skipping this step. Doing this configures all services to run as a Local System account, and you will have to manually change that to the designated user after the installation.

- Click **Install** in the **Ready to install the Program** dialog.
- Click **Finish** in the last dialog.





## Completing the QlikView Server installation

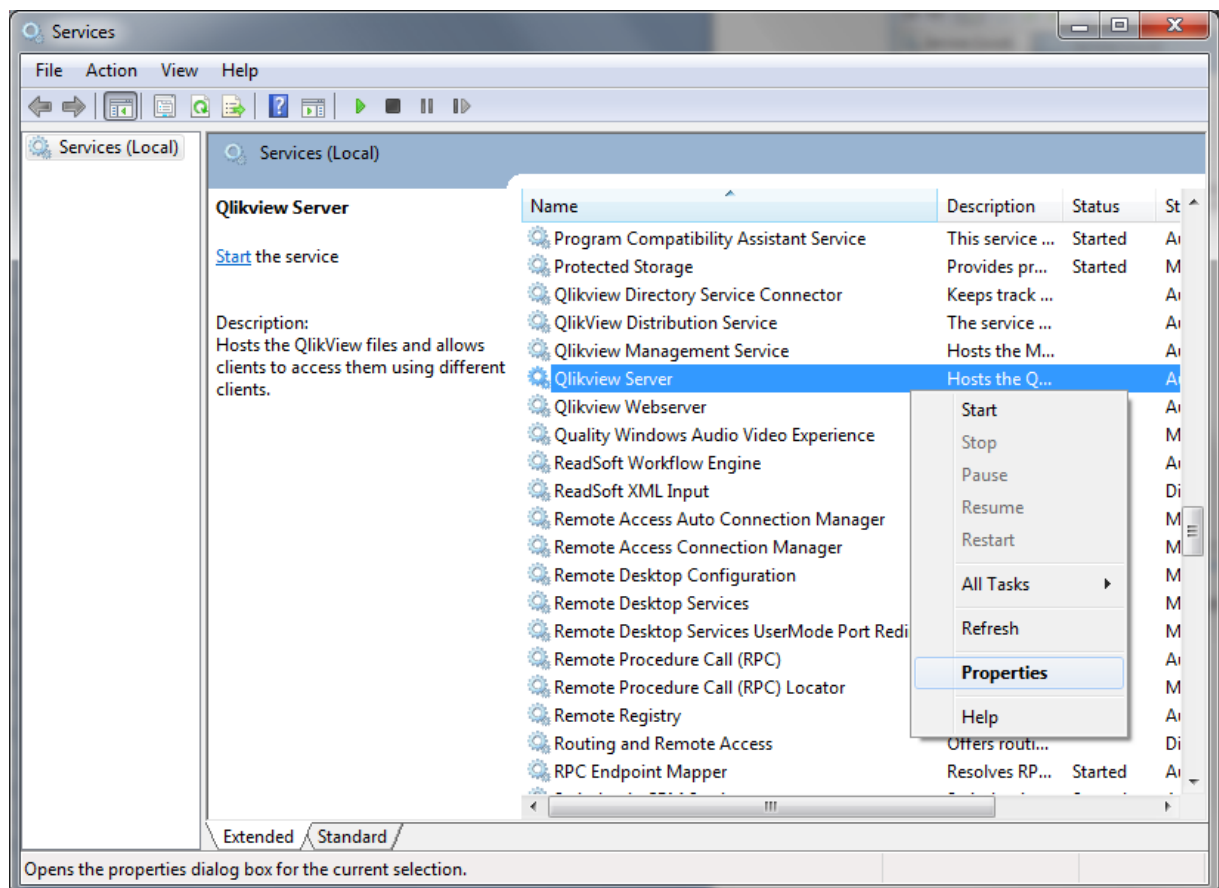
After installing QlikView Server, you must complete these procedures (each described further below) to activate it:

1. Set the **Recovery** settings for the QlikView Server service.
2. Configure QlikView Server services to run under a dedicated service account.
3. Disable the QlikView WebServer service.
4. Add the dedicated service account to the **QlikView Administrators** user group.
5. Restart the server for all the changes to take effect.

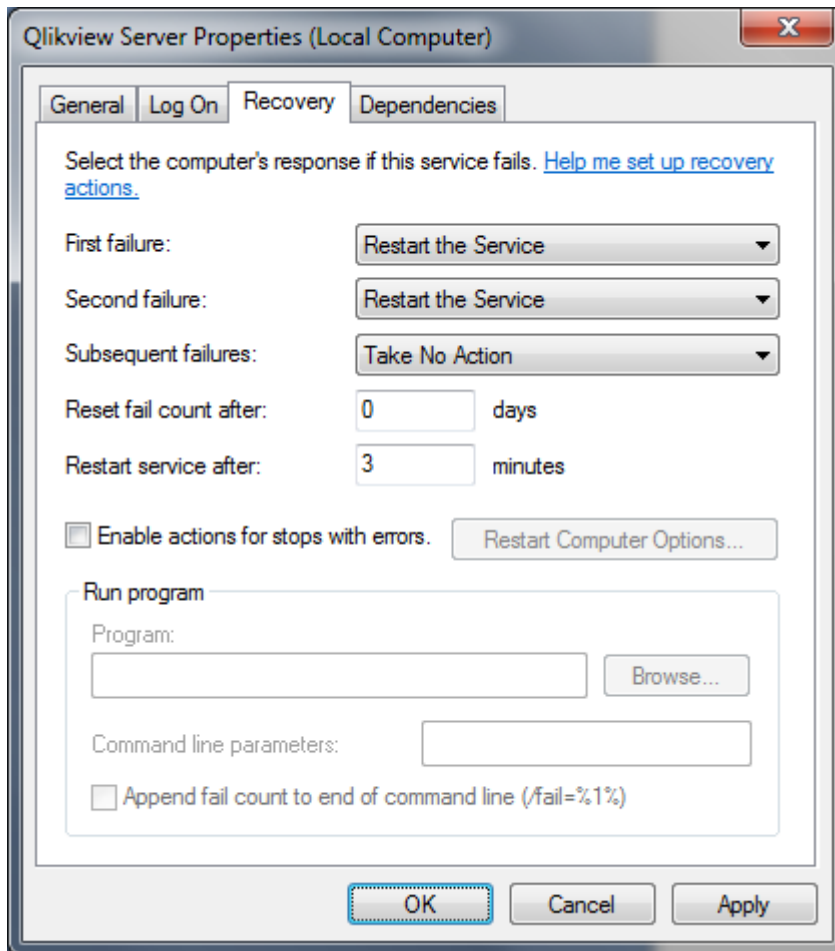
### Set the Recovery settings for the QlikView Server service

QlikView Server runs as a Windows service. In order for the internal QlikView Server service recovery function to operate properly, you need to set the Windows service Recovery setting. Use this procedure:

1. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Services**. The **Services** dialog is displayed.



2. Right-click the **QlikView Server** service and select **Properties**. The **QlikView Server Properties** dialog is displayed.
3. On the **Recovery** tab, change **First failure** and **Second failure** to **Restart the Service**.



4. Change **Restart service after** to 3 minutes (or more).

Recommended: Leave the **Subsequent failures** setting at **Take No Action**.

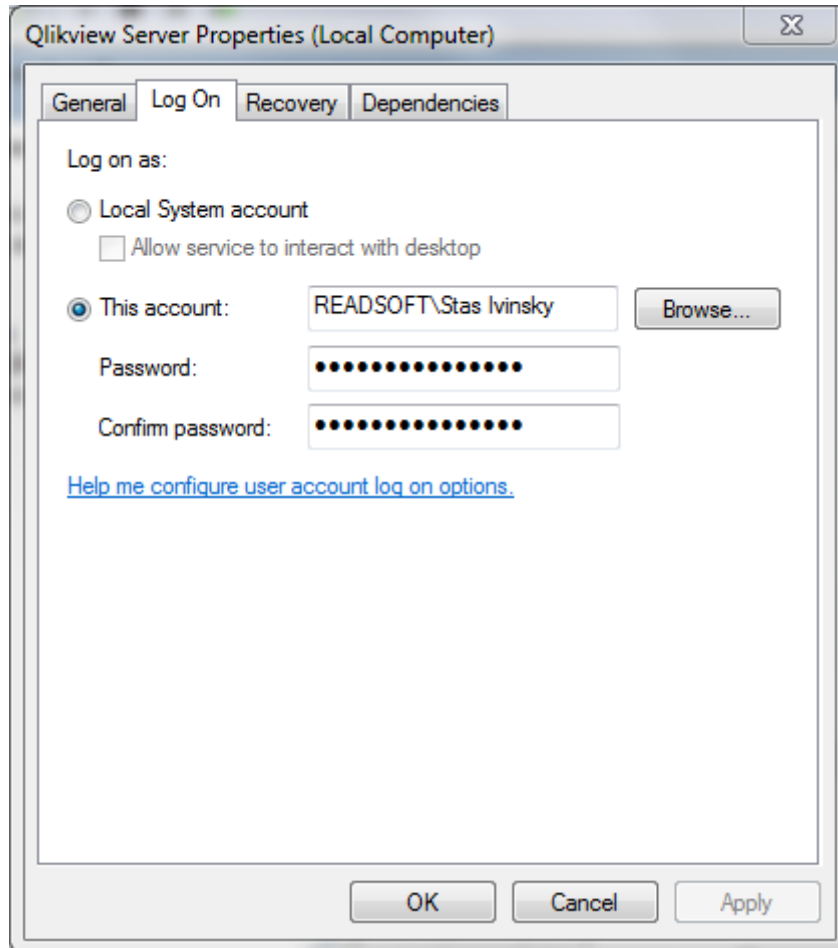
(Continue to the next section without closing the **QlikView Server Properties** dialog.)



## Configure QlikView Server services to run under dedicated service account

Make sure your QlikView services are configured to run using the dedicated service account:

1. On the **Log On** tab of the **The QlikView Server Properties** dialog, specify logon as this account and provide the name and password for the dedicated account.



2. Make the same adjustment for these services:
  - a. QlikView Directory Service Connector
  - b. QlikView Distribution Service
  - c. QlikView Management Service

(Continue to the next section without closing the **Services** dialog.)

## Disable the QlikView WebServer service

The QlikView WebServer service is not used because REPORTER uses IIS.

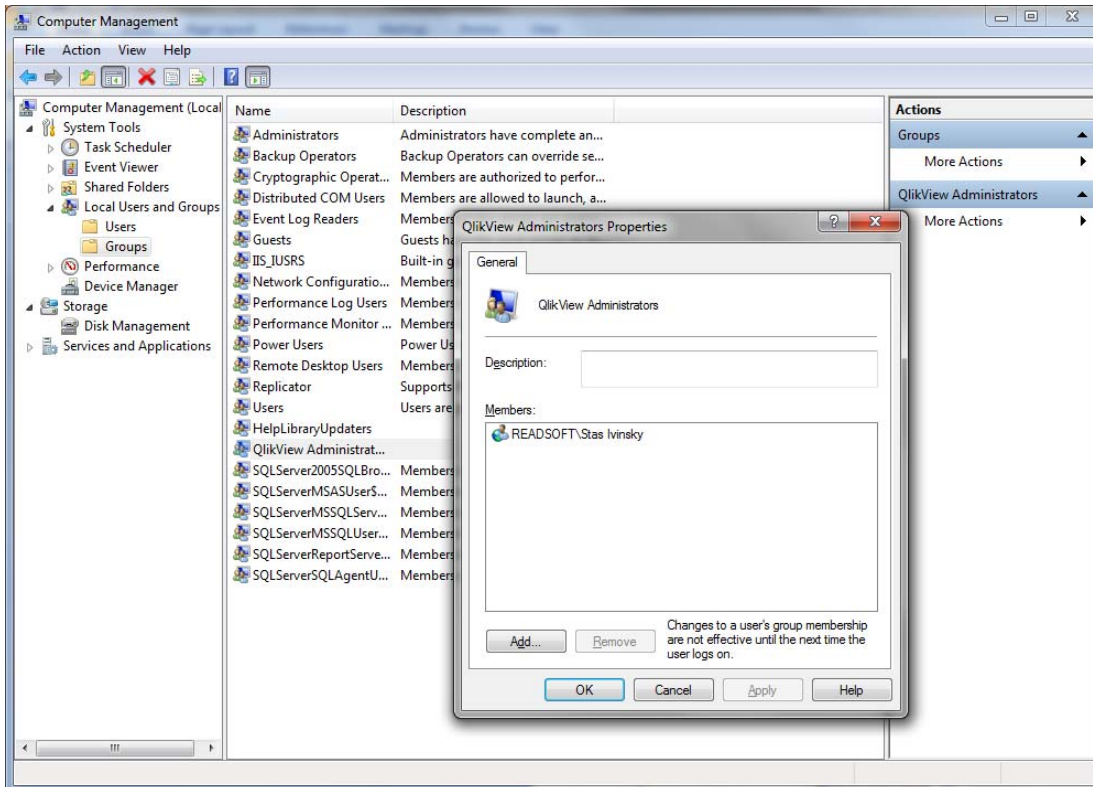
1. In the **Services** dialog, right-click the **QlikView WebServer** service and select **Properties**.
2. On the **General** tab, change **Startup Type** to **Disabled**.



## Add the dedicated service account to the QlikView Administrators users group

In the **Computer Management** dialog, select **Local Users and Groups**.

Under the Groups folder, find **QlikView Administrators** and make sure that the dedicated account that was used to run QlikView services is a member.



## Restart the server for all the changes to take effect

Restart the computer where the server resides for all changes to take effect.

You may have to start the Qlikview server manually afterwards.

## Configuring and testing QlikView Server

After installing QlikView Server, these configuration steps must be performed:

1. Registering the QlikView Server license (described below).
2. Adjusting the QlikView Server settings (page 61).
3. Configuring QlikView Documents reload schedule (page 65).
4. Testing the installation (page 70).
5. Testing reload documents by QlikView Server (page 70).

For additional information concerning the installation, configuration, security, and troubleshooting of QlikView Server, see *QlikView Server Reference manual.pdf*, found in `C:\Program Files\QlikView\Documentation`.



## Registering the QlikView Server license

Registration authenticates your copy of QlikView Server and allows it to run on a computer.

Use the same procedure when you need to renew the license.

### Start QlikView Enterprise Management Console and register QlikView Server

1. Select **Start** menu > **All Programs** > **QlikView** > **QlikView Enterprise Management Console**.
2. Select the **System** tab.
3. Click **Licenses** and **QlikView Server** type. In the **QlikView Server license, Serial and Control** section, type the QlikView Server serial number (a 16-digit number) and control number (a 5-digit number) that you received from ReadSoft in the file [QlikviewServerLicenseYourCompanyName.pdf](#).
4. Copy the blue text in the file below in the *License Enabler* heading, and paste it into the edit box. Then press **Apply license**, and your system is registered and ready to use.

The screenshot shows the QlikView Enterprise Management Console interface. The 'System' tab is selected, and the 'Licenses' sub-tab is active. A table lists the installed licenses:

| Type               | Name               |
|--------------------|--------------------|
| QlikView Publisher | QMS@sth-stasiv-lap |
| QlikView Server    | QVS@sth-stasiv-lap |

The 'QlikView Server License' section is expanded, showing the 'Serial and Control' fields. The 'Serial number' field contains '4600460680644988' and the 'Control' field is empty. Below these fields is a text area for pasting the contents of the LEF file, which contains the following text:

```
4600460680644988
NUMBER_OF_DOCUMENTS;1;;
NUMBER_OF_USERCALS;3;;
PRODUCTLEVEL;10;;2010-11-26
SPECIAL_EDITION;RESELLER;;
Z2MH-ZKM2-BAFR-BQXL-HZML
```

The 'Owner Information' section shows the 'Name' field containing 'Stas Ivinsky' and the 'Organization' field containing 'ReadSoft'.

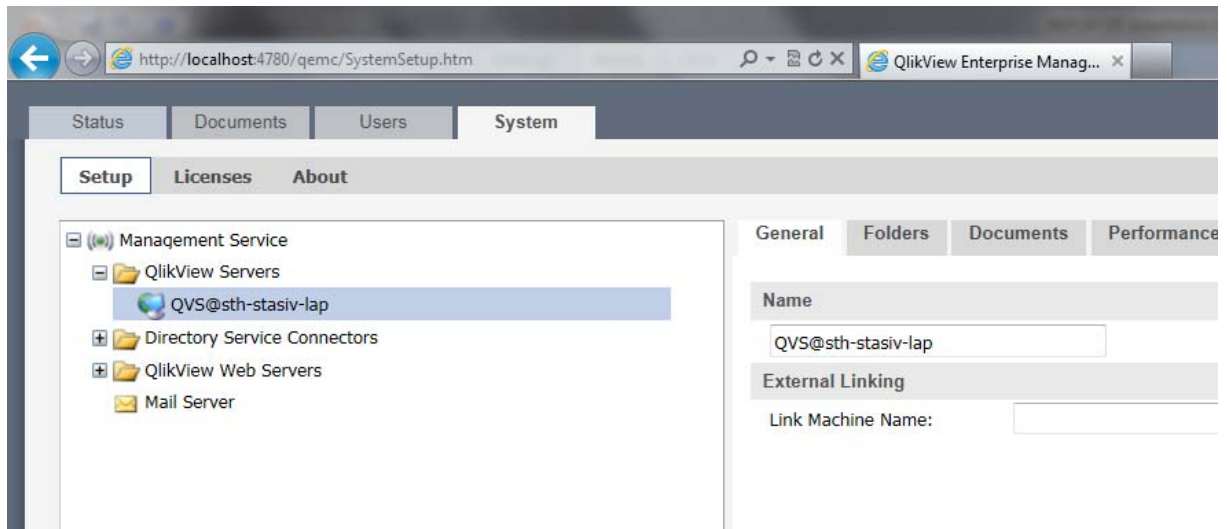
## Adjusting the QlikView Server settings

To configure the settings in the **QlikView Enterprise Management Console** window:

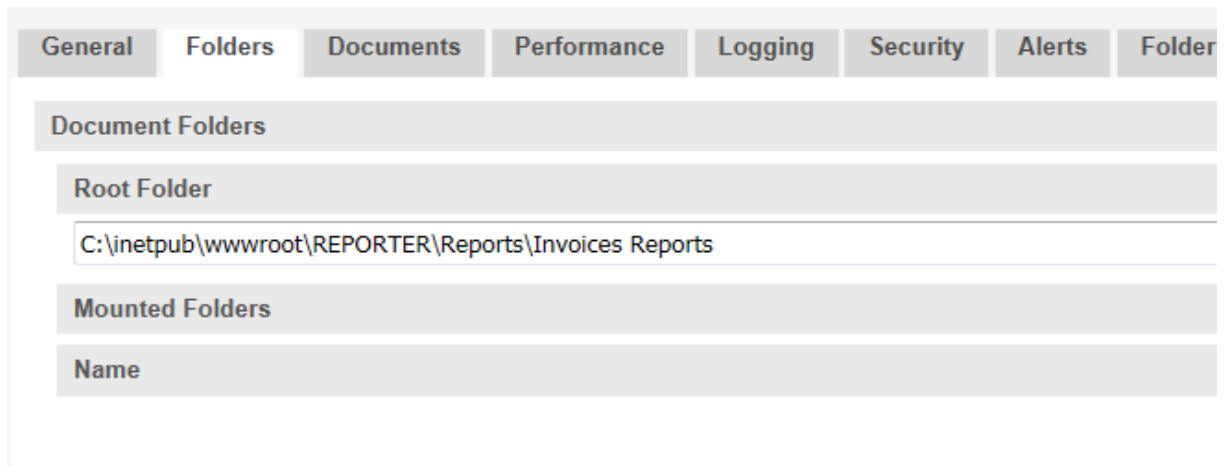
1. Switch to **System** tab.



2. Click **Setup** and expand **Management Service > QlikView Servers > name of your QlikView Server**.



3. On the **Folders** tab, use the **Root Folder** setting to specify where the REPORTER documents are located (the default location is C:\inetpub\wwwroot\REPORTER\Reports\Invoices Reports). Click **Apply** to save the changes.



4. Switch to the **Documents** tab. Unless data is to be loaded during the night (you will schedule this later—see page 70), deselect **Allow Only One Copy of a Document in Memory**. This allows users to work with reports while data is being reloaded. Users will see a message saying that the data is being updated, but they can continue working instead of being disconnected from the server. Click **Apply** to save the changes.

The screenshot shows the configuration interface for the QlikView Server, specifically the **Documents** tab. The interface has a top navigation bar with tabs for **General**, **Folders**, **Documents**, **Performance**, **Logging**, **Security**, and **Alerts**. Below the navigation bar, there are two main sections: **Server** and **Objects**.

**Server** section:

- Document timeout: 480 minutes
- Allow only one copy of document in memory
- Allow server objects
  - Allow anonymous server bookmarks
- Allow document upload
- Allow document download
- Prohibit Session Recovery

**Objects** section:

- Allow moving and sizing objects
- Default label for "Total": Total
- Default label for "Others": Others

5. Recommended. On the **Logging** tab, enable all three types of logging with **Medium** verbosity. Type the path to the **Log Folder** where the log file is to be stored. It needs to be in a location that can be accessed by the account that is used by QlikView Server. The default path on Windows Vista / Windows Server 2008 / Windows 7 / Windows Server 2008 R2 is `C:\ProgramData\QlikTech\Qvs`.



Click **Apply** to save the changes.

General Folders Documents Performance Logging Security Alerts Fol

**Log Level**

- Enable session logging
- Enable performance logging every  minutes
- Enable event logging
- Enable audit logging of client activity

**Log Folder**

C:\ProgramData\QlikTech\QVS

**Event log verbosity**

- Low
- Medium
- High

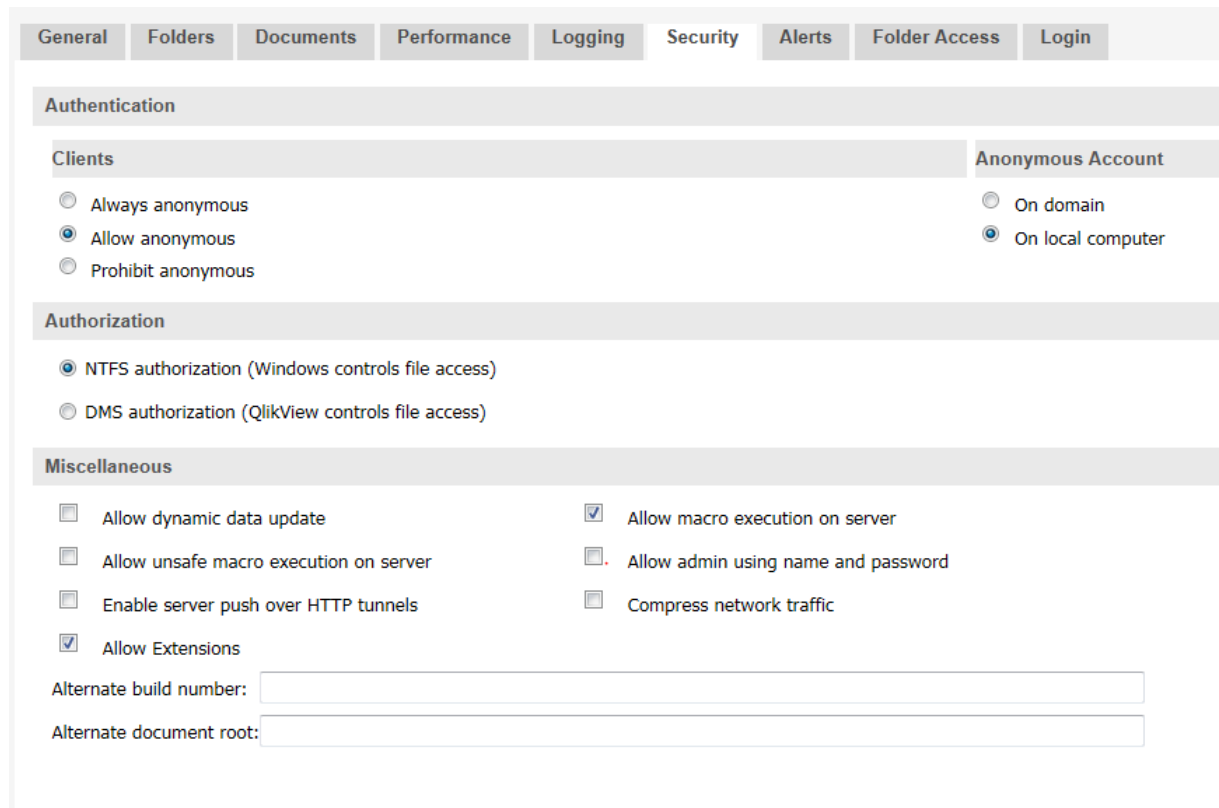
**Split Files**

- Never
- Daily
- Weekly
- Monthly
- Yearly



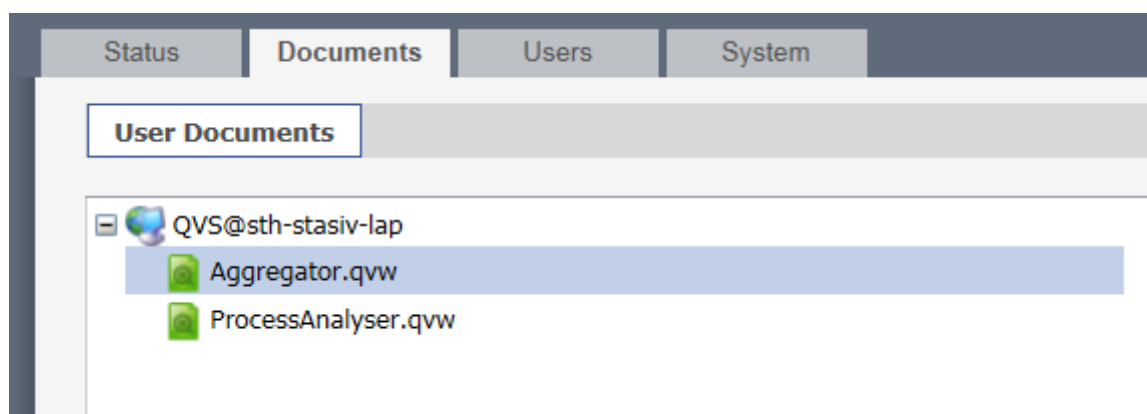


6. Recommended: On the **Security** tab, deselect **Compress Network Traffic**. Compression routines often require more resources when sending large packages of data over the network. Click **Apply** to save the changes.



## Configuring QlikView Documents reload schedule

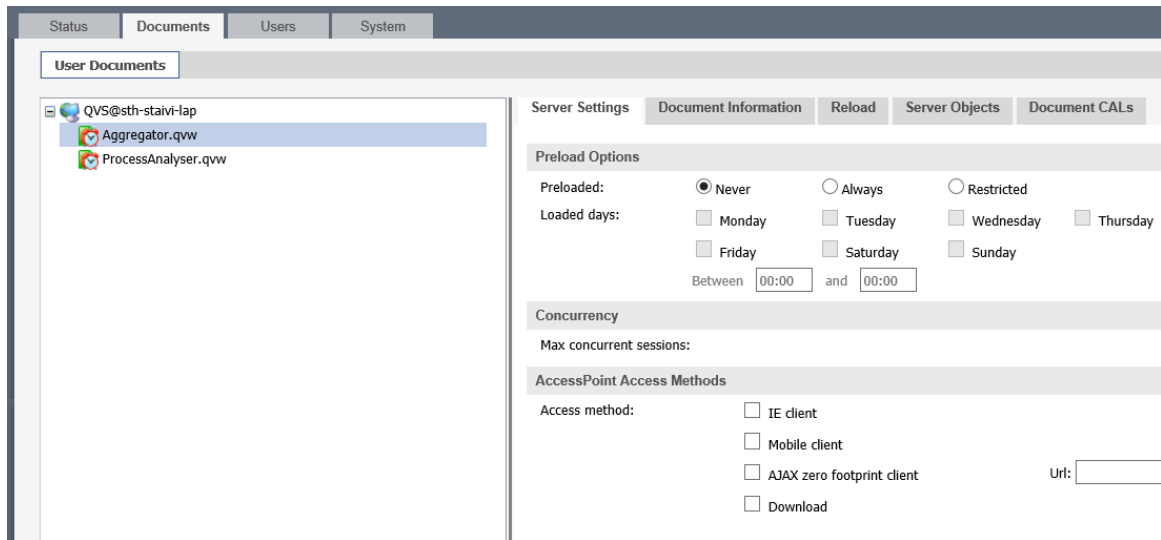
1. Select **Start** menu > **All Programs** > **QlikView** > **QlikView Enterprise Management Console**.
2. Select the **Documents** tab and expand the server in the left pane so that the two documents, `Aggregator.qvw` and `ProcessAnalyser.qvw`, are displayed.



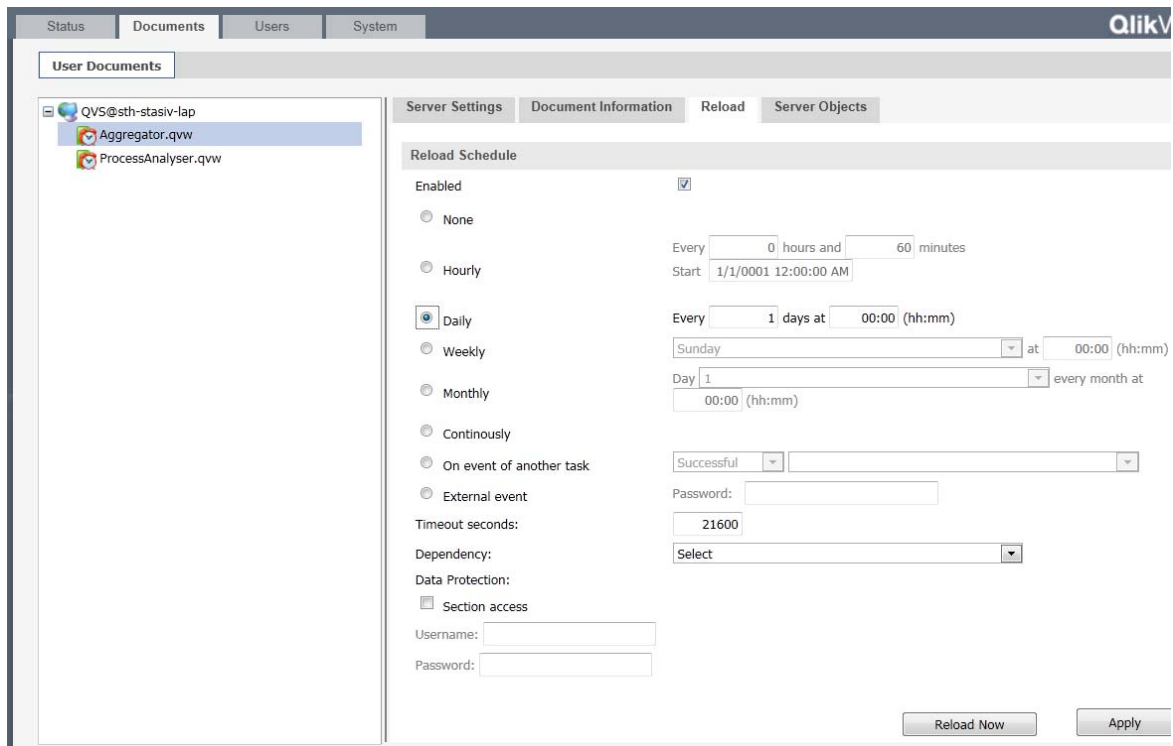
3. Select `Aggregator.qvw`.



- On the **Server Settings** tab, deselect all **AccessPoint Access Methods** settings . Click **Apply** to save the changes.



- Click the **Reload** tab and specify the desired synchronization schedule (daily, for example). Click **Apply** to save the changes.



**Note:**

The **Timeout seconds** setting in this dialog determines how long the publisher is allowed to run. If you have a large amount of data to load or other problems in the system that cause the reload to

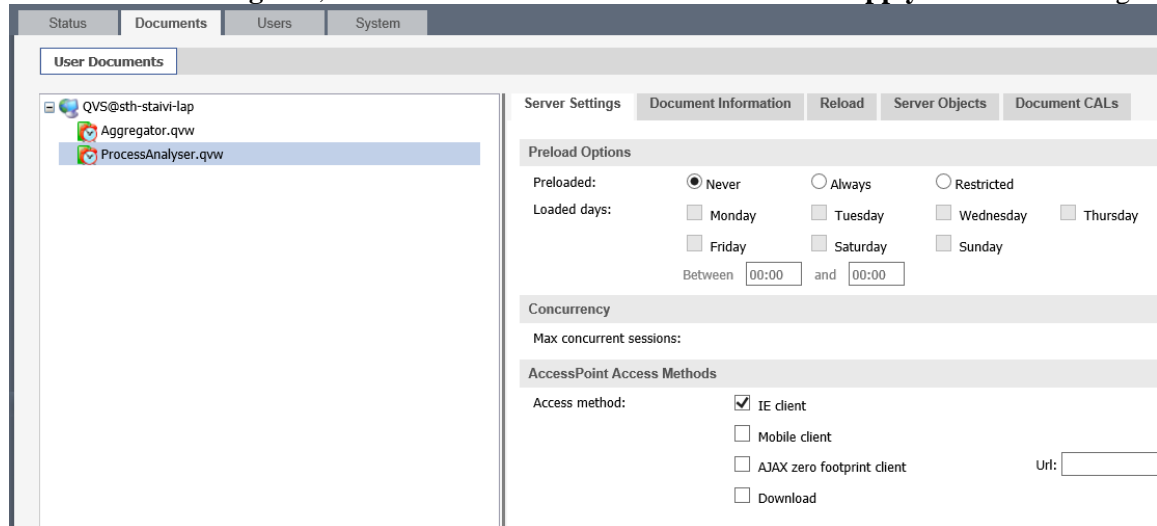


take a long time (more than the default six hours—21600 secs, for example), you need to increase the setting.

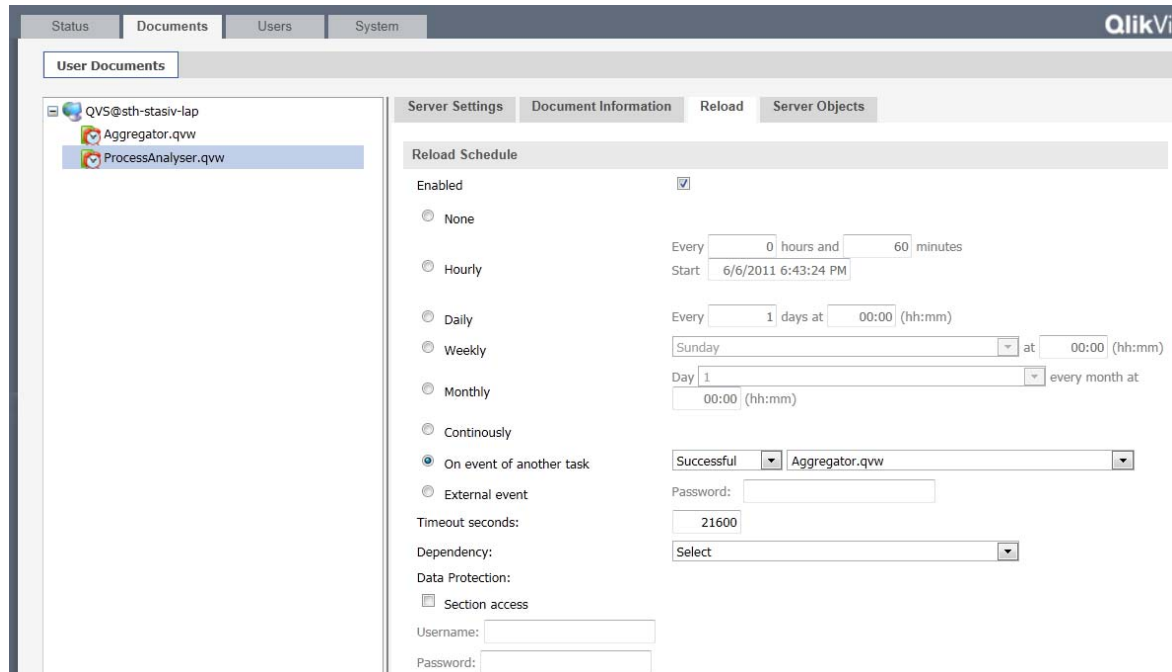
If the timeout is reached, it is noted in the QlikView log that the job was aborted manually, but you can see why in the event log:

"The task 'Aggregator.qvw' has been requested to abort.  
Trigger=Aborts a task if runtime is more than 360 minutes."

6. Select ProcessAnalyzer.qvw.
8. In the **Server Settings** tab, select **IE client** and deselect the rest. Click **Apply** to save the changes.



9. Click the **Reload** tab and select **On event of another task = Successful** in the reload schedule. In the next field, select the name of the other document: **Aggregator.qvw**. Click **Apply** to save the changes.

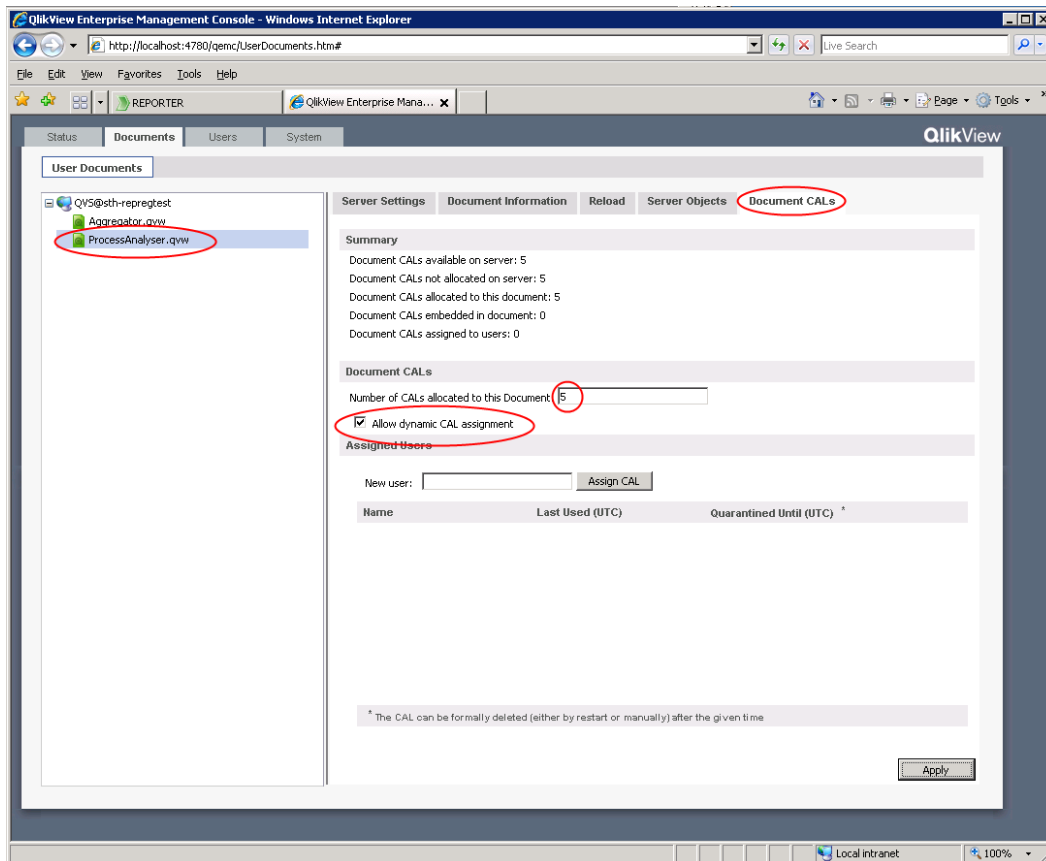


## Specifying the number of Document CALs

Due to a change in the licensing agreement with QlikView starting in the spring of 2012, only the Small Business Edition Server version of QlikView (which includes five or more Document CALs) may be distributed with default new REPORTER installations. The number of Document CALs that apply to `ProcessAnalyser.qvw` (that is, the number of named users that can access the reports in REPORTER) must also be specified in the setup or a *No User CAL* error message will be displayed the first time a user attempts to access the reports.

To specify the number of Document CALs:

1. Select **Start** menu > **All Programs** > **QlikView** > **QlikView Enterprise Management Console**.
2. Select the **Documents** tab and expand the server in the left pane so that the two documents, `Aggregator.qvw` and `ProcessAnalyser.qvw`, are displayed.
3. Select `ProcessAnalyser.qvw`, and click the **Document CALs** tab.



4. Under the **Document CALs** heading, set the **Number of CALs allocated to the Document** setting to five (or whatever is the total number of CALs available with the QlikView SBE license).
5. Select **Allow Dynamic CAL assignment** if you want users to be able to access the reports dynamically (or you can specify them manually, if desired).



6. Click **Apply**.

This allows specified number of users to access the reports.

**Notes:**

- The *No User CAL* message can also appear if a user has been specified incorrectly when entered manually (the name is misspelled, for example).
- It is possible to purchase additional document CALs if required.



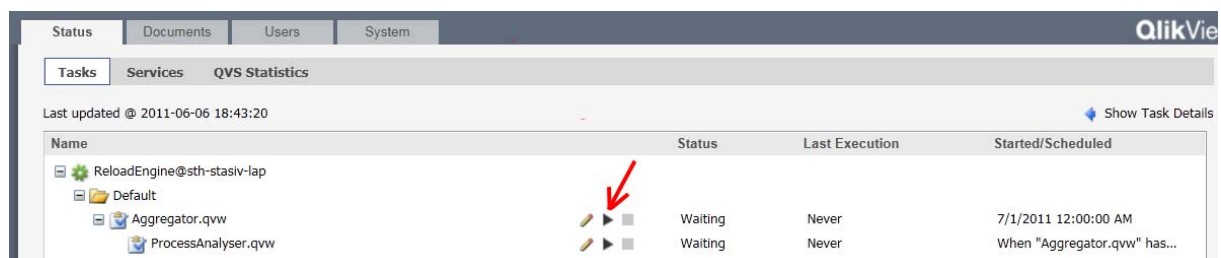
## Testing the installation

1. Start Microsoft Internet Explorer.
2. Navigate to: `http://ComputerName/REPORTER/default.aspx`, where *ComputerName* is the name of the computer where REPORTER is installed. If REPORTER is located on the computer you are working on, you can type `localhost`.
3. When the login page is displayed, specify a user name and password. These users are installed by default:
  - **iasa** – with “system administrator” authorization.
  - **iauser** – with normal user authorization.

They all have the same password, “secret”. For security reasons, we recommend that you create new users as soon as your system is up and running. See *REPORTER Help* for more information.
4. Click **Log in**.
5. Select the **Reports** tab.
6. If you are launching REPORTER for the first time, you are prompted to download and install the QlikView Analyzer Plug-in for Internet Explorer. Install the plug-in using the instructions provided on page 91.
7. When installation is complete, you can see the report with some sample data, provided for your convenience to explore before the rest of the components are installed and configured. This data is deleted automatically as soon as “real” data enters the system.

## Testing reload documents by QlikView Server

1. Unless you are continuing from the previous section, select **Start** menu > **All Programs** > **QlikView** > **QlikView Enterprise Management Console**.
2. Select the **Status** tab.
3. Select **Tasks**.
4. Expand all of the + symbols and find the **Aggregator.qvw** document.
5. Click the black arrow (**Run this task**) that starts the job manually.



The system executes the job sequentially:

- `Aggregator.qvw`
- `ProcessAnalyzer.qvw`
- Then data is reloaded into the reports.

When the data is reloaded successfully, the status changes from **Running** to **Waiting** (or **Warning** or **Failed**):

6. Log on to REPORTER and see that the sample data has been replaced by data from your database (which is empty in the new installations).

## Upgrading to QlikView 10.0

REPORTER 5-4 Service Pack 1 uses QlikView 10.0 SR3, so if you have a previous version installed, you need to upgrade to this version. There are a number of important issues to address when upgrading.

### Uninstall QlikView 9 before installing QlikView 10

1. **Important!** Stop all running QlikView services! The QlikView Publisher will be uninstalled regardless, but if it was running at the time, a process will continue and interfere with the installation of the new QlikView Server.
2. Uninstall QlikView Server and the plugin for Internet Explorer. Restart the computer to ensure that all processes are dropped.
3. Delete the QlikView folder under `\Documents and Settings`. The REPORTER-specific settings will remain in the `\REPORTER` folder and can be used after the upgrade.
4. Remove all virtual folders from the IIS administration console that are related to QlikView, or they will interfere with the installation of QlikView 10.

### Installing QlikView 10

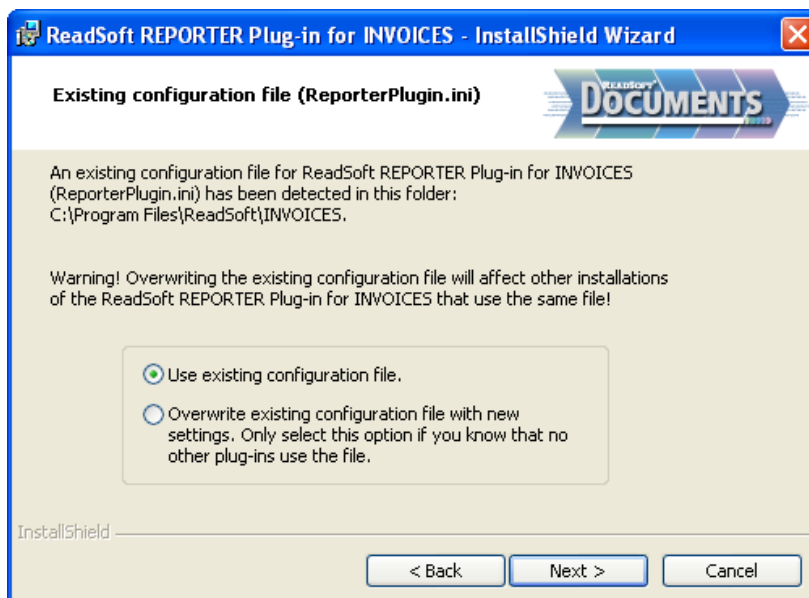
See “Installing QlikView Server” starting on page 55.



# Installing the REPORTER Plug-in for INVOICES

This procedure installs the REPORTER Plug-in for INVOICES (REPORTER Data Collection Plug-in). Perform these steps at every computer where *any* INVOICES module is installed:

1. Recommended:
  - Make a backup copy of `Eilocal.ini`. The file is normally located in the Windows or Winnt folder.
  - Make a backup copy of `ReporterPlugin.ini`. The file (if available) is located in the folder specified in the `GlobalPath` setting in `Eilocal.ini`.
2. Exit all Windows programs.
3. Insert the REPORTER installation CD.
4. When the main menu is displayed, click **Install Software**.
5. Click REPORTER Plug-in for INVOICES.
6. When the **Welcome** dialog is displayed, click **Next**.
7. If, during installation, an existing `ReporterPlugin.ini` file is found in the `GlobalPath` location specified in `Eilocal.ini`, the **Existing configuration file** dialog is displayed. Specify if you want to use the existing configuration file or if you want to overwrite it.



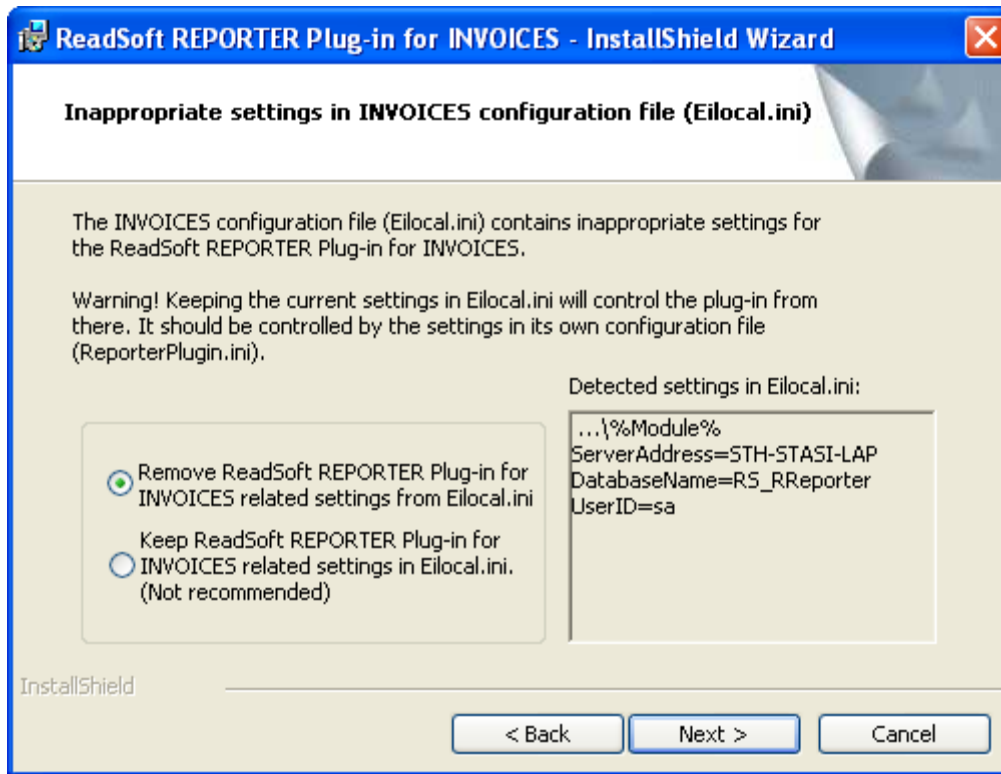
- Select the **Overwrite** option *only* if you know that it is not used by any other plug-ins.

Click **Next**.





8. If redundant settings concerning the plug-in are found in your `Eilocal.ini` file during installation, this dialog is displayed:

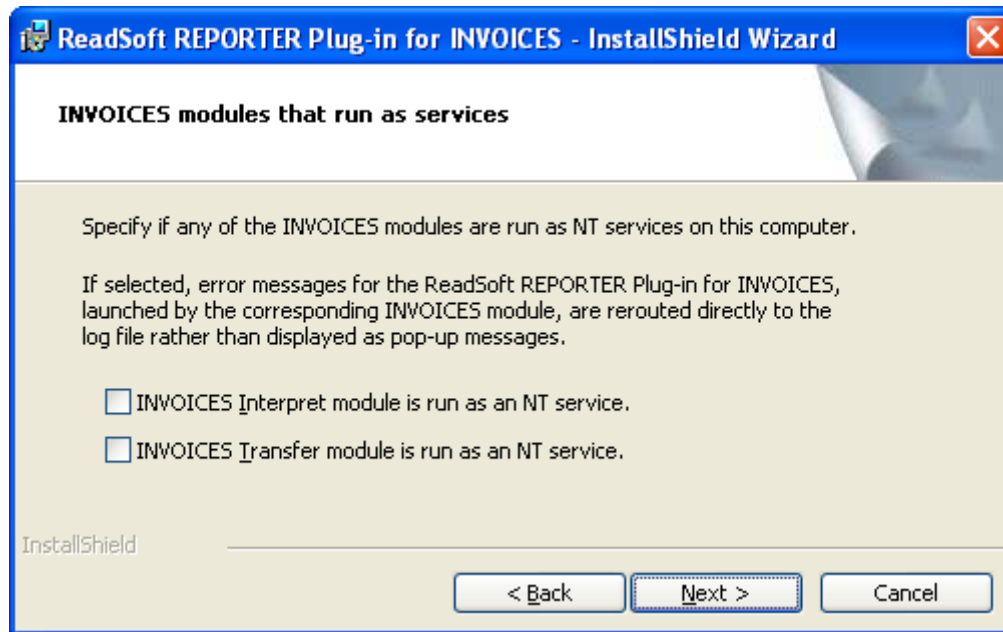


- !** Strongly recommended: Remove all REPORTER-related settings from your `Eilocal.ini` file. Otherwise, the plug-in will be controlled from that file, and the installation will be more difficult to maintain.

Click **Next**.



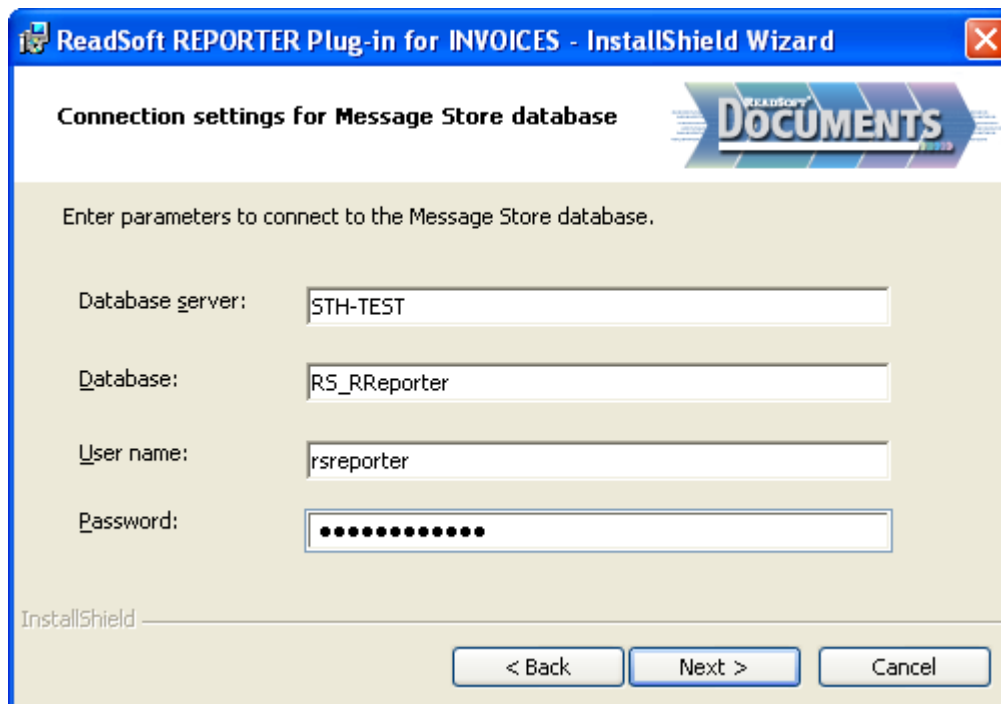
9. In the **INVOICES modules that run as services** dialog, specify whether the Interpret or Transfer, modules (or both) are run as NT services on the computer on which you are installing the plug-in.



Click **Next**.

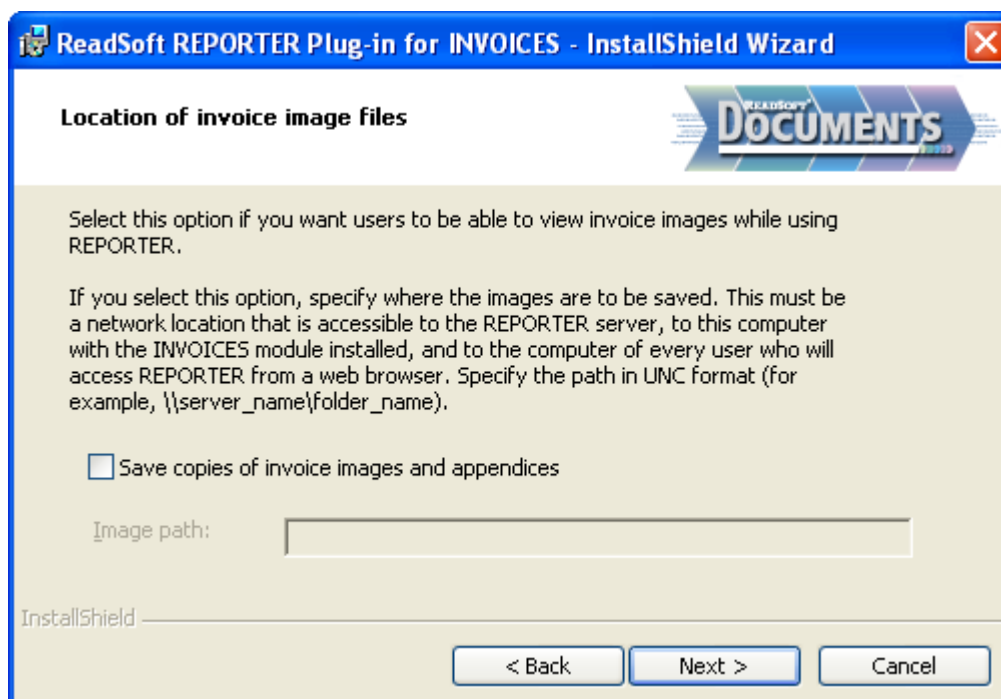
10. In the **Connection to the Message Store database** dialog, type:
- **Database server:** The name of the computer where REPORTER's database server is installed.
  - **Database:** The name of the Message Store database (by default that database is named RS\_RReporter).
  - **User name and Password:** The user name (rsreporter) and password (VerySecret2\*) to connect to the Message Store database. (This user name and password were created during installation.)





Click **Next**.

11. In the **Path to image files** dialog, specify whether you want copies of invoice images and appendices to be saved so that REPORTER users can view them. Such images are commonly produced by the INVOICES Scan, Interpret and Transfer modules.



If you select that option, also specify the path to the folder where the images are to be saved. (The images will be saved in *subfolders* at the specified location.)



Use *UNC notation* to point to a shared folder that is accessible to the REPORTER server, to this computer with the INVOICES module installed, and to the computer of every user who will access REPORTER from a web browser. Example:

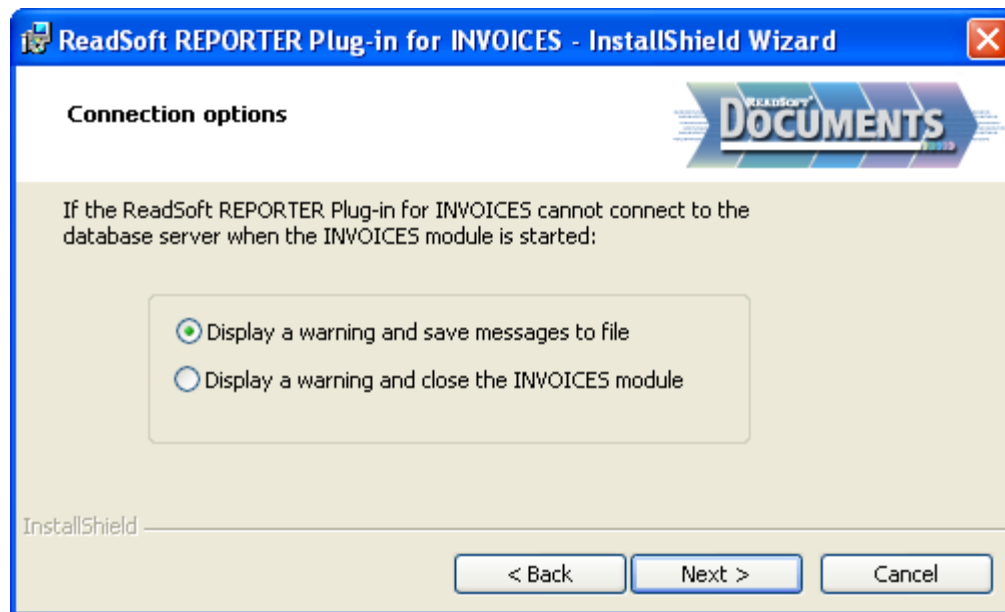
```
\\server_name\folder_name
```

**Important:** If you select the **Save...** option, images must be deleted from the specified location at regular intervals. Otherwise, the computer will eventually run out of disk space. This is done automatically by REPORTER's Delete Old Messages agent. For more information, please refer to "Deleting old invoice images" in *REPORTER Configuration Help*.

**Note:** Computers where users are to view these images should have an image viewer installed. Set up a file type association so that the extension of your image files is associated with the image viewing software.

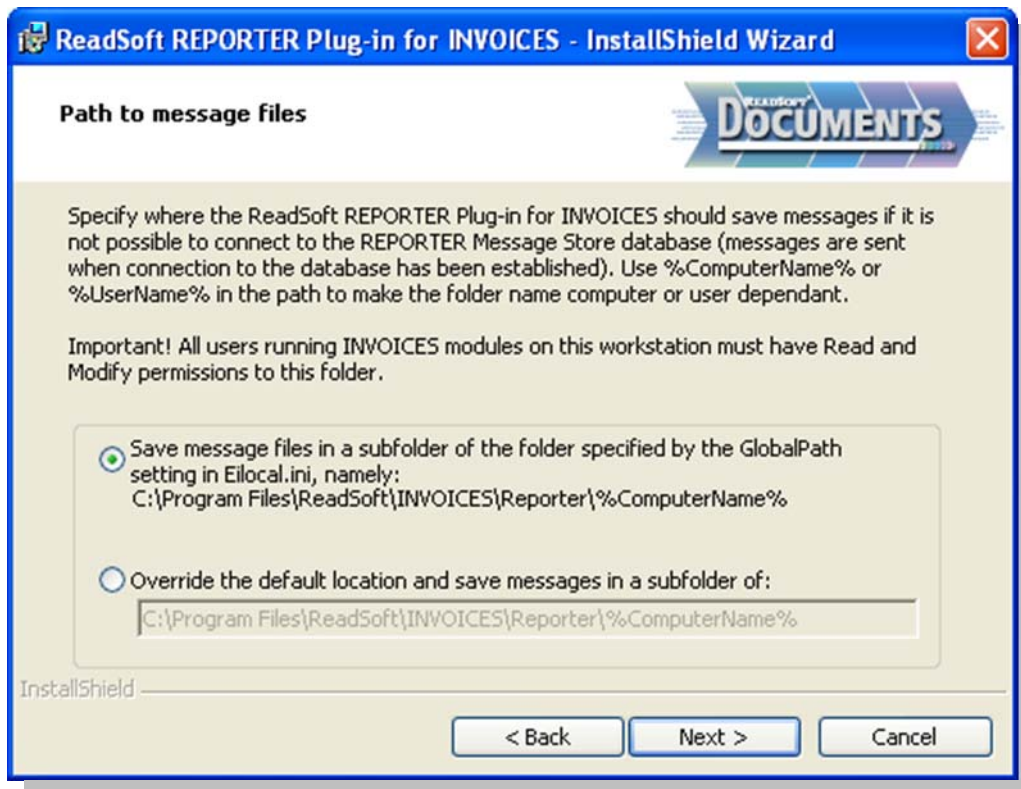
Click **Next**.

12. Use the **Connection options** dialog to specify what action the plug-in should take when no connection can be established between the INVOICES module and the Message Store database *when a user starts the module*. (If connection with the databases is lost while INVOICES work is already in progress, messages are saved to file and no warning is displayed.) Click **Next**.



13. In the **Path to message files** dialog, specify where the plug-in should save messages that are waiting to be sent to REPORTER. Note that you can specify %ComputerName% and %UserName% variables in the path to make it dynamic. The correct path is automatically resolved by the plug-in during run-time.

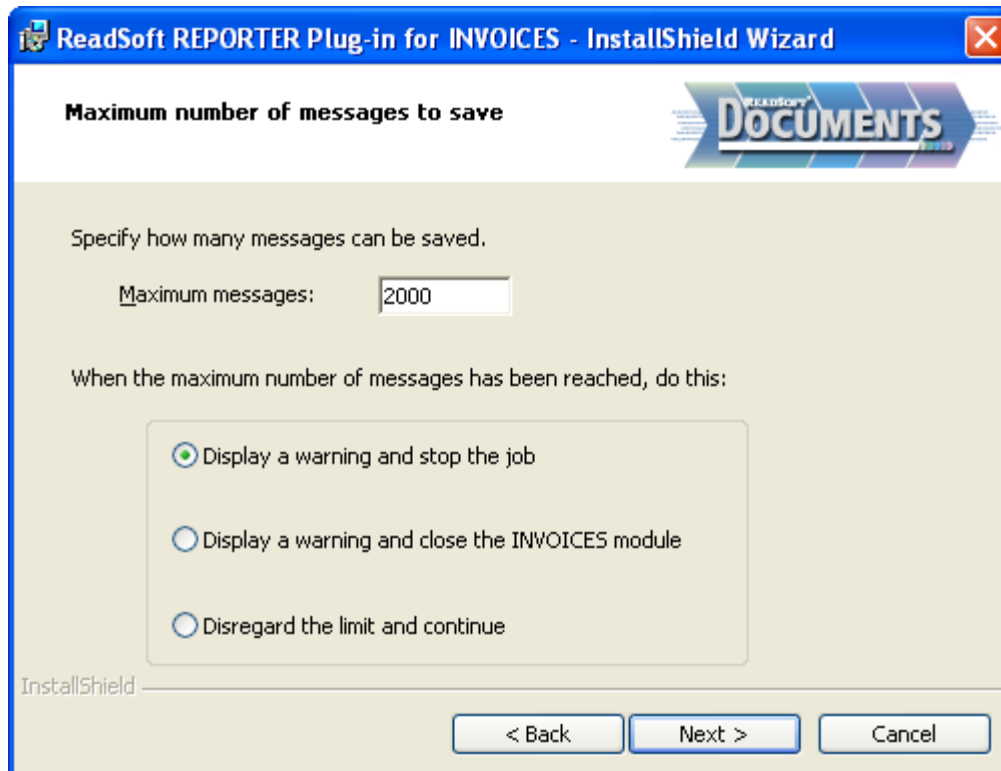
**❗ Important:** Ensure that all users running INVOICES modules on this computer have “Read” and “Modify” permissions to the specified folder.



Click **Next**.



14. Specify how many messages can be kept on the computer when there is no connection between the plug-in and the REPORTER server.



In addition, specify what the plug-in should do when the number of spooled messages reaches the specified limit.

Click **Next**.

15. Review the settings and click **Install**.

After plug-in installation, the computer begins sending messages to the REPORTER server when an INVOICES module is started.



***Important if the plug-in is installed before the REPORTER server***

If the REPORTER Plug-in for INVOICES is installed before the REPORTER server, and if the server cannot be installed soon, we recommend disabling the plug-in to prevent messages from building up. Use this procedure:

1. Find and open `Ei1ocal.ini` (INVOICES). It is normally located in the `Windows` or `Winnt` folder.
2. Find the `PluginN=REPORTERDataCollectionPlugin` setting and comment it out by adding a semicolon (;) to the beginning of the line.

Also update the plug-in numbering, if necessary. For example:

| Before  | After  |
|---|--|
| <code>[Plugins::eitran]</code>                    | <code>[Plugins::eitran]</code>                     |
| <code>Plugin1=Common</code>                       | <code>Plugin1=Common</code>                        |
| <code>Plugin2=JobScheduler</code>                 | <code>Plugin2=JobScheduler</code>                  |
| <code>Plugin3=REPORTERDataCollectionPlugin</code> | <code>;Plugin3=REPORTERDataCollectionPlugin</code> |
| <code>Plugin4=SomeOtherPlugin</code>              | <code>Plugin3=SomeOtherPlugin</code>               |

3. Save and close the file.
4. Repeat on each computer.

**⚠ You must undo this change after the REPORTER server is installed.**



### ***Important if customized INVOICES plug-ins are used***

This section is important if customized plug-ins are used in your INVOICES installation.

To ensure the best match between INVOICES and REPORTER data and ensure that the logic of your customized plug-ins is not disturbed:

- Set LogicalEventOrder in `Eiglobal.ini` to 1. This guarantees the sequential order of calls to plug-ins.

For information about LogicalEventOrder and other INVOICES INI settings, please refer to *INVOICES INI File Help*, which is included with your REPORTER installation (file name `INVOICES-INI-File-Help.chm`).

- Ensure that customized plug-ins use the `CancelEventChain` method to prevent further calls to plug-ins when they return `evtCancel` or `evtOkAbort`. For example, if your customized plug-in subscribes to the `InvoiceApproved` event and returns `evtCancel` or `evtOkAbort`, INVOICES does not consider the invoice to be *Approved*. Using `CancelEventChain` ensures that INVOICES does not receive `evtOk` from the REPORTER plug-in at `InvoiceApproved`.

Consult whomever developed the customized plug-in to ensure that the `CancelEventChain` method is used to prevent further calls to plug-ins when `evtCancel` or `evtOkAbort` is returned.\*

- Ensure that the REPORTER plug-in is called *after* your customized plug-ins.

If you installed the plug-in after your customized plug-ins, then this is already done. If not, change the order of the plug-ins in the `[Plugins::ModuleName]` section at each computer, using a procedure similar to the one described on page 79. Ensure that `REPORTERDataCollectionPlugin` is listed *after* your own customizations. If you rearrange the list, do not forget to change the numbering, as well.

**\* If it is not possible to verify that your customized plug-ins use `CancelEventChain` method**, it is safer to have the REPORTER plug-in called first. The statistics may not be correct when the customized plug-ins return `evtCancel` or `evtOkAbort`, since REPORTER will not know about those. However, calling the REPORTER plug-in first ensures that it will not interfere with the logic of the other plug-ins.

To have the REPORTER plug-in called first, change the order of the plug-ins in the `[Plugins::ModuleName]` section at each computer, using a procedure similar to the one described on page 79. Ensure that `REPORTERDataCollectionPlugin` is listed *before* your own customizations. If you rearrange the list, do not forget to change the numbering, as well. (Set LogicalEventOrder to 1 in this case, too.)



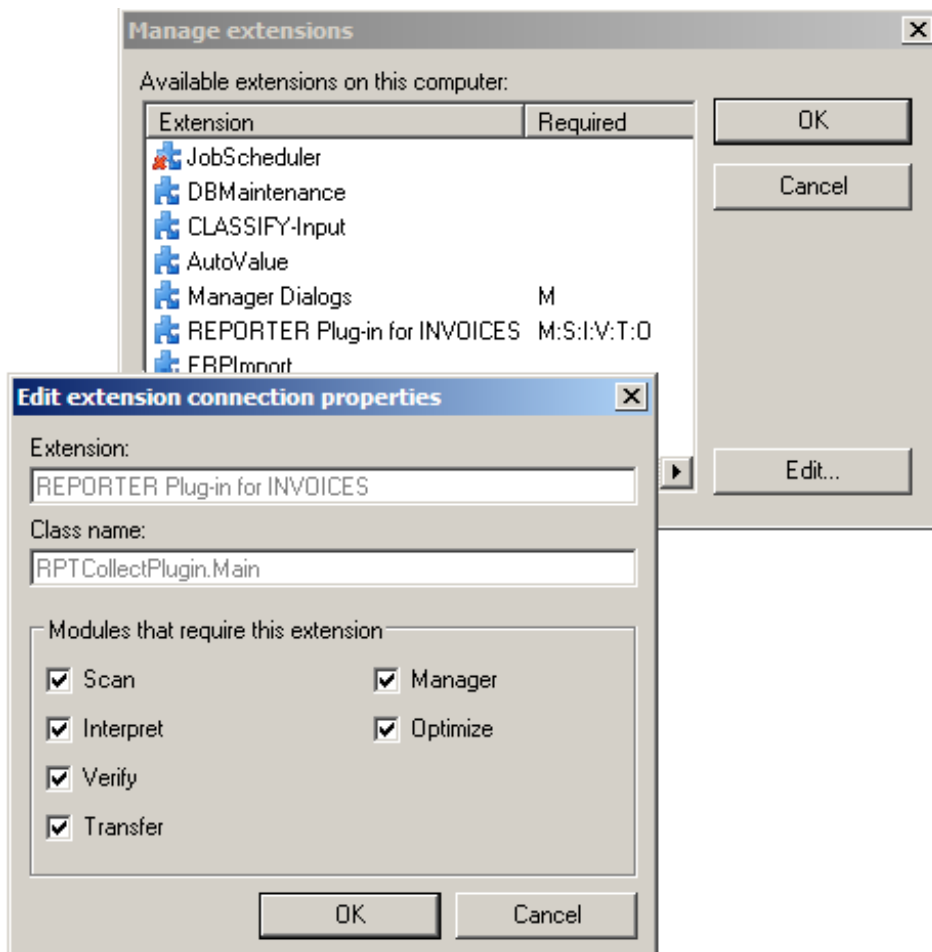


## Preventing INVOICES modules from starting unless REPORTER Plug-in is installed

In INVOICES 5-5 SP4 and later, you can prevent an INVOICES module from starting unless the required REPORTER Plug-in for INVOICES is installed and loaded. You can also reverse that setting.

1. Open the INVOICES Manager module.
2. Select **Administration** ☺ **Manage extensions** to display the **Manage extensions** dialog.
3. Select the **REPORTER Plug-in for INVOICES** extension and click **Edit** to open the **Edit extension connection properties** dialog.
4. Select all modules, since all of them need to be prevented from starting if the REPORTER Plug-in is not installed or cannot be loaded.

Alternatively, deselect modules that you want to be able to run without the REPORTER Plug-in. This does not disable the extension, nor does it control how the plug-in is loaded on a specific computer. It only permits the INVOICES module to run even if the plug-in is unavailable.



5. Click **OK** in two consecutive dialogs to close them.



## Configuring INVOICE COCKPIT Connector to work together with REPORTER

To make sure INVOICE COCKPIT Connector works together with REPORTER, do the following:

1. Install INVOICE COCKPIT Connector following the separate installation guide provided with this product.
2. Install REPORTER Plug-in following the section “Installing the REPORTER Plug-in for INVOICES” on the page 71.
3. Adjust `Eilocal.ini` to make sure the INVOICE COCKPIT Connector is the last plug-in listed.
4. Configure INVOICES to include the Invoice GUID field in the transfer file.
5. Configure `Eicc.ini` to transfer the Invoice GUID field to ICS tables.

### ***Adjust Eilocal.ini to make sure the INVOICE COCKPIT Connector is the last plug-in listed***

1. On the computer where the INVOICES Transfer module operates, find and open `Eilocal.ini` (INVOICES). It is normally located in the `Windows` or `Winnt` folder.
2. In the `[Plugins::eitran]` section, find the `PluginN=REPORTERDataCollectionPlugin` and `PluginK=Eicc` settings, and ensure that they are next-to-last and last in the list, respectively.

In addition, update the plug-in numbering, if necessary. The text in the section in `Eilocal.ini` should look similar to the following example:

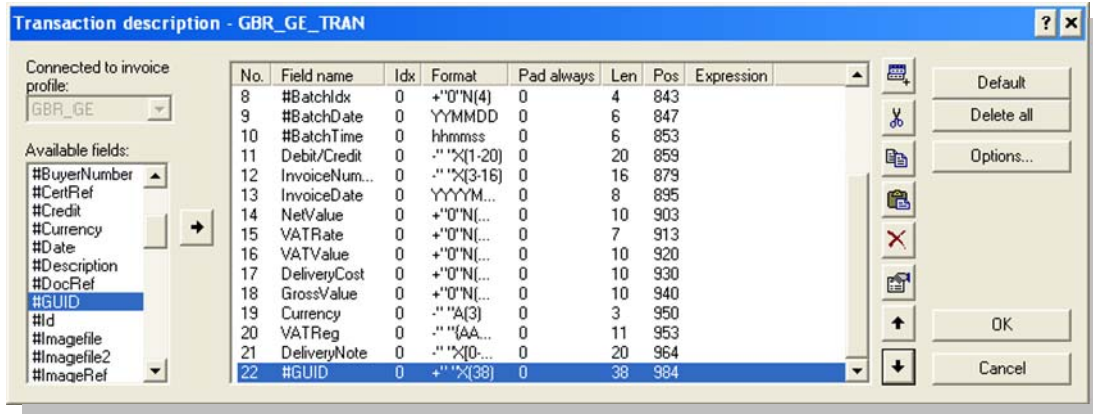
```
[Plugins::eitran]
Plugin1=Common
Plugin2=JobScheduler
Plugin3=REPORTERDataCollectionPlugin
Plugin4=Eicc
```

3. Save and close the file.
4. Repeat the process on each computer where INVOICES Transfer module is installed.

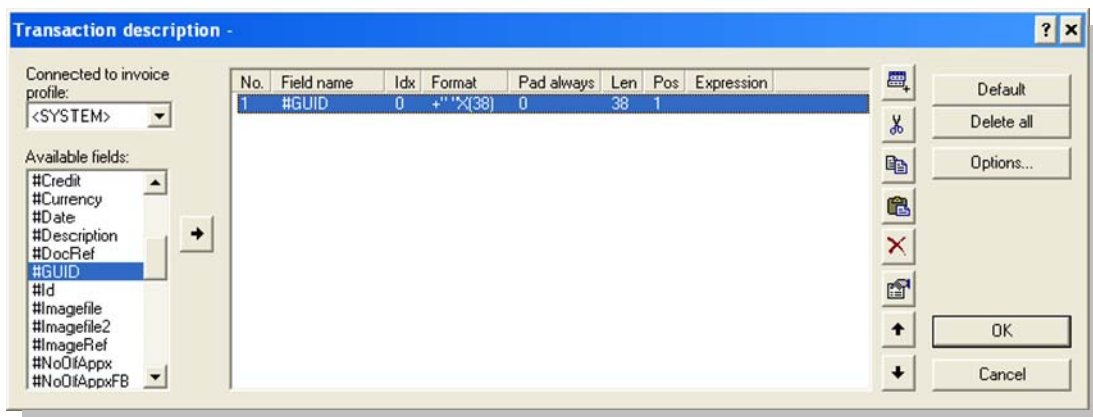


## Configure INVOICES to include the Invoice GUID field in the transfer file

1. Open **INVOICES Manager** module.
2. Make sure existing transaction descriptions contain the field called **#GUID**. If it is not included, add it by double clicking it in the list of available fields and then adjust its position using the up and down arrows on the right panel.



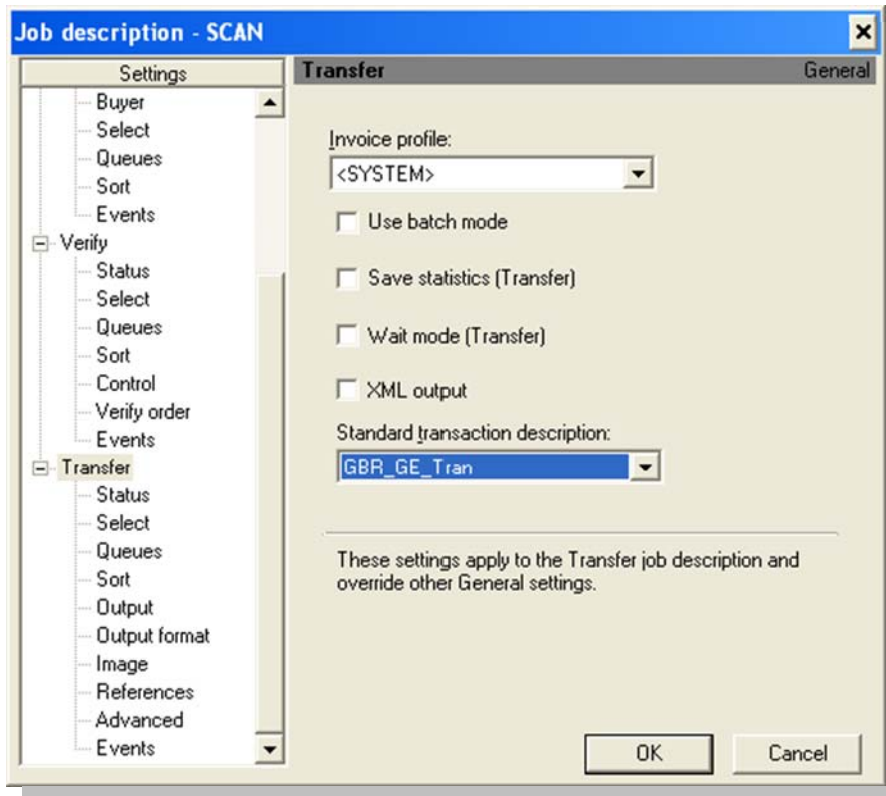
3. If there are no transaction descriptions in your INVOICES installation yet, create one and make sure it contains at least the **#GUID** field.



4. Open the job description that is used to transfer invoices to ICS, and select Transfer properties.



5. Make sure that **XML Output** is deselected and that **Standard transaction description** is used instead.



6. See INVOICES help for information on how to connect the job with the correct transaction description (that is, the one that contains the #GUID field).

### **Configure Eicc.ini to transfer the Invoice GUID field to ICS tables**

1. Find the `Eicc.ini` file by looking in the folder specified by the `GlobalPath` setting in `Eilocal.ini`.
2. Set `ExternalGuid` in `Eicc.ini` to `%#GUID`. This parameter guarantees that the Invoice GUID value is passed by INVOICE COCKPIT Connector to the ICS tables.



```

Eicc.ini - Notepad
File Edit Format View Help

; set name of mapping profile in R/3 system
; $ = internal application values
; % = transaction description values
; & = single item field
; ^ = user defined variable
; ! = environment variable, e.g. !%COMPUTERNAME%
; @ = concatenate fields
; + = sum amount fields
; AUTOMATIC = create Guid during transfer,
;               every document must transfer twice,
;               first attempt set guid, second attempt transfer data
; ExternalGuid=AUTOMATIC
; ExternalGuid=^InvoiceGuid
ExternalGuid=%#GUID
; ExternalGuid=&InvoiceGuid
; ExternalGuid=^INV_GUID

```

- Find the [AUTOMODIFY::BOTH] section in Eicc.ini and add three extra lines:

```

EICCEXTERNALGUID1=DEL*-
EICCEXTERNALGUID2=DEL*{
EICCEXTERNALGUID3=DEL*}

```

This guarantees that the Invoice GUID value is formatted according to SAP requirements (that is, no dashes and no brackets).

```

Eicc.ini - Notepad
File Edit Format View Help

[AUTOMODIFY::BOTH]
; define substitution rules for any INVOICES 5-x or Autoadd field
; fieldname=value|substitution,value|substitution,value|substitution, [...]
; see handbook for more examples
;_RG1=SUB*1| ,0|X,GUTSCHRIFT| ,RECHNUNG|X
;GUTSCHRIFT1=SUB*1| ,0|X,GUTSCHRIFT| ,RECHNUNG|X
;MwstSatz1=DEL*%
;_crep1=SUB*Transf_I50|PV,Transf_P50|PV
; remove this x55 x58 is implemented
;Kopfzeile1=SUB*replaceThis|withThat
;Kopfzeile2=RIJ*5
;Kopfzeile3=ADP*simplePrefix
;Kopfzeile4=DEL*Prefix
EICCEXTERNALGUID1=DEL*-
EICCEXTERNALGUID2=DEL*{
EICCEXTERNALGUID3=DEL*}

```

- Save and close the file.



# Setting up Invoice Cockpit Suite

## Installing REPORTER Export program for ICS

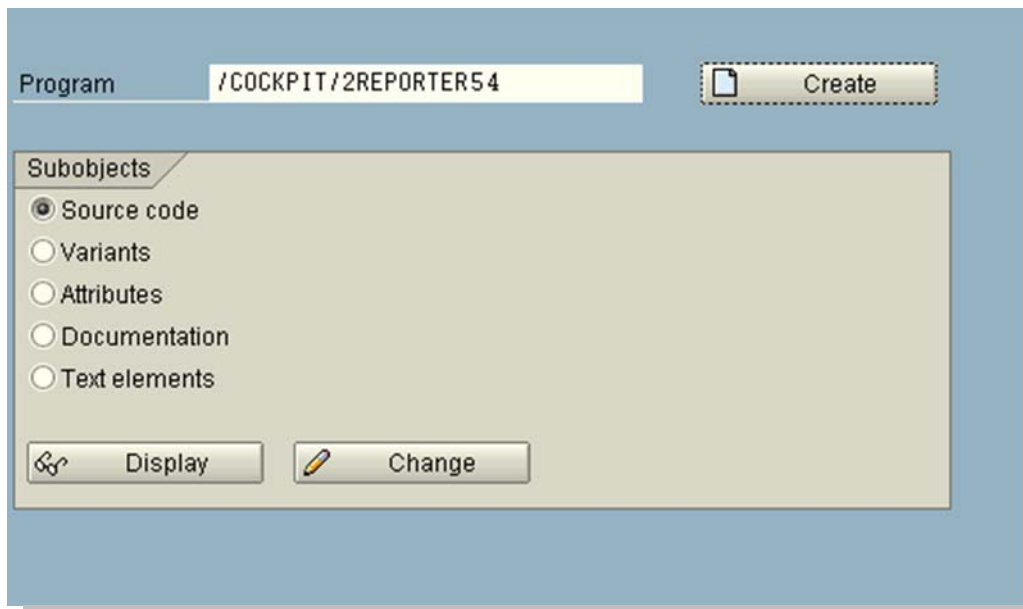
REPORTER Export program for ICS is not included in the Invoice Cockpit Suite package. Its installation to the SAP server is done by deploying the separate transport file for it.

See SAP documentation for details on how to deploy transport files.

## Launching REPORTER Export program for ICS

When deployed, the REPORTER Export program for ICS is available in your SAP installation via transaction SE38. Follow the steps below to launch the program and generate the output CSV-files:

1. Log in to SAP.
2. Run transaction SE38.
3. In the **Program** field, type /COCKPIT/2REPORTER54 and click **Create**.



4. Specify the parameters for this particular running of the export program:

The screenshot shows a SAP dialog box titled "Export INVOICE COCKPIT data to REPORTER". The dialog has a menu bar with "Program", "Edit", "Goto", "System", and "Help". Below the menu bar is a toolbar with various icons. The main area of the dialog contains the following fields and options:

- Separator: ;
- Separator mask: ,
- Server file path: C:\TEMP\REP\
- Save files at client side
- Client file path: c:\
- Extract again paid documents
- Creation date: 01.04.2009 to 04.05.2009

- a. **Separator** = ;

A semicolon is used to separate fields in the exported CSV files. If you use any other symbol, the import program will not work.

- b. **Separator mask** = ,

A comma is used as a replacement symbol when semicolons are used in the exported text strings. This substitution is necessary to prevent unexpected semicolons from appearing in the exported data which may corrupt the structure of the CSV-files.

- c. **Server file path** = <Path>

Server Path defines the folder on the SAP Server in which the Export program will output the generated CSV files. This parameter is primarily used for the scheduled execution of the program and should point to a folder that the SAP scheduled job will find.

Ideally, the specified path should point to the same folder that is used by REPORTER Server to import files.

**Warning:** The maximum number of characters in the path to this folder must not be more than 50. This is a current limitation of the Export program.

- d. **Save files at client side** = On/Off

This setting determines where the export program stores the output files—on the client if the setting is selected, and on the server if the setting is not selected. If **Save files at client side** is selected, the program can only be run in manual mode via the SAP GUI. Never select this setting when setting up the program to run on schedule.



e. **Client file path** = <Path>

Client Path defines the folder (on your workstation or shared drive) where the Export program will output the generated CSV files. This path is only active when **Save files at client side** is selected and is primarily used for troubleshooting, when manual execution of the program and fast access to the output files are necessary.

**Warning:** The maximum path to this folder must not exceed 50 characters. This is a current limitation of the Export program.

f. **Extract again paid documents** = On/Off

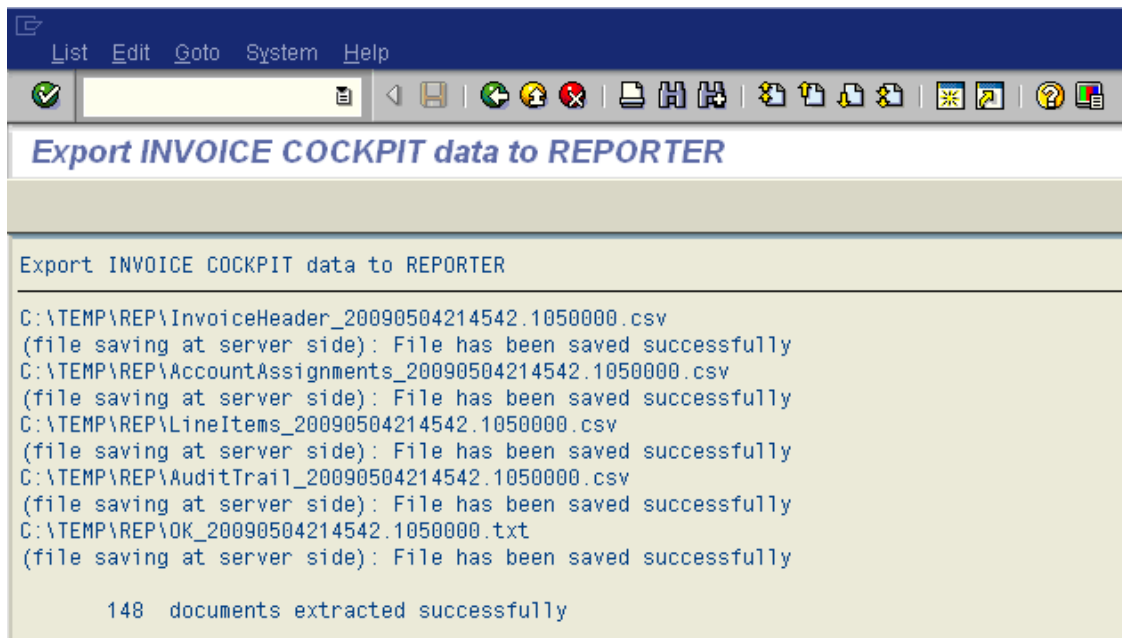
This setting determines whether the export program exports all data, including invoices that have already been paid and synchronized earlier. By default (setting is deselected), invoices that have been paid, are exported only once, and they are not included in the output for any additional runs of the export program. For troubleshooting purposes, when the full re-synchronization of the data is required, it can be practical to select this option for a one-time manual export. Never select this setting when setting up the program to run on schedule.

g. **Creation date** = <date range>

It is possible to limit the amount of exported data by defining the date range: based on the minimum and maximum creation dates. When defined, only invoices that meet the criteria are exported. Use these parameters only when you are launching the program manually for troubleshooting purposes.

Leave these values blank when you set up the program to run on schedule.

Click the **Execute** button and wait for confirmation that displays a summary of how many invoices were exported and what the file names would be.



5. Exit the program.

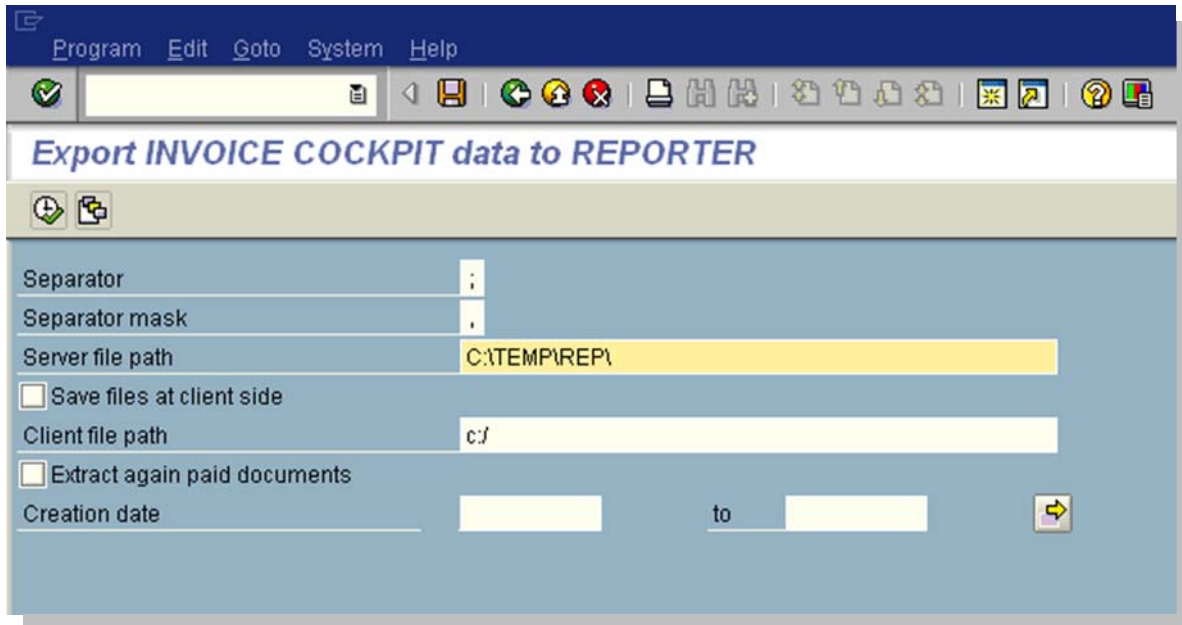




## Configure the REPORTER Export program for ICS to run on schedule

See the SAP documentation for information on how to set up the REPORTER Export program as a scheduled job.

Note that when launched according to schedule, the used variant must export files on the server, again-paid documents should not be exported, and creation dates should remain blank:



**Important!** If SAP is installed on UNIX, the server folder will not be accessible from the REPORTER Server. This means that the exported files will have to be moved first to a location where the Workflow Service can pick up and import them to the REPORTER database.

Such work can be done by the second batch launched after the export program and that will move all generated files to another location with the help of e.g. Secure FTP.

## Configure Invoice Cockpit Suite to run together with REPORTER

### Updating payment details from posted SAP documents

Make sure that the COCKPIT/PAYMENT\_CONTROL program in ICS is used on a scheduled basis to update payment details, discounts, etc., on invoices in Invoice Cockpit Suite following any changes in SAP.

This can be done using the INVOICE COCKPIT Customizing tree, *Schedule background processing* > *Schedule payment status synchronization*



## Updating changed documents, posted via SAP online transactions (MIRO, FB60)

To ensure that only current data is exported for REPORTER, the INVOICE COCKPIT feature “Generate final version from SAP document” must be activated. It can be found in the INVOICE COCKPIT customization tree (transaction /COCKPIT/CI) under **Mandatory settings > Post > Define posting** (transaction /COCKPIT/C6).

The screenshot shows the SAP configuration screen for 'Customizing for posting'. At the top, the title is 'Change View "Customizing for posting": Details'. Below the title bar, there are icons for 'New Entries' and other functions. The main area contains several input fields and checkboxes. The 'Company Code' field is empty, and the 'IC doc type' field contains 'AA'. The 'Customizing for posting' section is divided into two columns: 'Document type' and 'Posting key'. The 'Document type' column has four rows: 'Invoices (FI)' with value 'AA', 'Credit memo (FI)' with value 'RF', 'Invoice (MM)' with value 'AA', and 'Credit memo (MM)' with value 'RF'. The 'Posting key' column has four rows: 'Vendor debit' with value '24', 'Vendor credit' with value '34', 'G/L account debit' with value '40', and 'G/L account credit' with value '50'. Below these columns, there are several checkboxes: 'Calculate tax' (unchecked), 'Use FI posting-interface instead of FI BAPI to post' (checked), 'FI Posting-Interface: Deactivate authorisation check' (unchecked), 'Support mult account assignm.' (set to '2 Support multiple account ...'), 'Planned Del. Costs' (checked), 'generate final version from SAP document' (checked and highlighted with a red box), 'MM item suggestion' (set to 'only billable'), 'IC tax code' (unchecked), 'CO-PA segment during FI entry' (unchecked), and 'Company code dependent value validation' (unchecked).

Using this function, the INVOICE COCKPIT document is updated from the SAP document created after posting. This is most important if the INVOICE COCKPIT Perform feature is used to do the posting outside of INVOICE COCKPIT using SAP online transactions (for example, MIRO, FB60, FB01...).

Other than that there are no specific settings that need to be configured in Invoice Cockpit Suite to be compatible with REPORTER.



# Installing QlikView Analyzer Plug-in for Internet Explorer

The ReadSoft REPORTER solution requires a plug-in (OCX) to be installed on the client web browser in order for the user to be able to view and work with reports. The target browser is Microsoft Internet Explorer (IE) version 6.0 or later. This section describes the settings needed to make the REPORTER solution work from a client perspective.

There are three basic ways to get the QlikView Analyzer Plug-in for IE installed on a client computer. Each is described below.

## Installation from the REPORTER installation CD

**Note:** The logged-in user must have the appropriate privileges to install software on the computer.

1. Insert the REPORTER installation CD.
2. When the main menu is displayed, click **Install Software**.
3. Click **QlikView Analyzer Plug-in for IE**, and proceed as prompted by the installation program.

**Note:** The installation can behave differently depending on the operating system. Windows Vista may require multiple deployments depending on the system setup. Other Windows versions should provide machine-global installations.

## Automatic installation from ASP/ASPX page

1. Navigate to REPORTER and click one of the reports. If installation of ActiveX components is allowed by your company's group policy, installation of the required component starts automatically. This is the same built-in IE mechanism that allows the browser to download and install the software required to view a document.

## Group policy installation

In organizations where individual users are not allowed to install new software on their computers, the system administrator can create a group policy to install QlikView Analyzer Plug-in for IE.



# Saving and restoring the demo data

Demo data is included with each REPORTER installation. This data is automatically deleted as soon as new data is imported to REPORTER from an INVOICES system by running Publisher. To save the demo data (or any other data at any time), make a backup copy of `ProcessAnalyzer.qvw`. In a standard installation, this file is located in `C:\inetpub\wwwroot\REPORTER\Reports\Invoices Reports`.

To restore the data at a later time, replace the existing QVW file with the copy you made.

## Maintaining the system

### Implementing backup routines

To protect your installation from damage caused by power failure, disk crashes, software errors, incorrect user changes, and so on, it is important to set up routines for backing up each part of the REPORTER system. For recommendations and instructions, please refer to “Backing up the REPORTER system” in *REPORTER Configuration Help*.

### Maintaining your SQL Server database

A routine maintenance plan for your SQL Server database is essential. There are instructions and recommendations in ReadSoft’s *Installing and Configuring Microsoft SQL Server* (file name `Installing and Configuring Microsoft SQL Server.pdf`). This document is available when you click **Installation guides** in the main menu on the installation CD.

### Deleting old data from the Message Store database

Keeping large amounts of old historical data can affect performance of the system and is not usually required by the business.

Use REPORTER’s configuration tool to schedule the Delete Old Messages agent to delete old data from the Message Store database. Adjust the Maintenance setting **Maximum age of data in the Message Store Database**, and schedule this agent to run at regular intervals, for example during the weekend, when there is little or no activity.

### Deleting QlikView data files

QlikView data files (QVD files) improve performance by saving data from a previous “load” so that it does not need to be completely reloaded each time. Even when old data is deleted from the database, the QVD files still contain that data, so it is best to delete them occasionally so that they do not continue to grow.

Use REPORTER’s configuration tool to schedule the Delete QlikView Data Files agent to delete QVD files, for example, once during the weekend, when there is little or no activity. It should run just before the next QlikView Server job (task) that reloads data (see page 65). For example, if the reload task is configured to execute hourly at 13:00, 14:00, 15:00, etc., you could schedule the Delete QlikView Data Files agent to execute on Saturday at 13:55.



## Managing Client Access Licenses (CALs)

The QlikView license determines the number of CALs that can be used simultaneously to view reports.

**Recommendation:** Check the number of free CALs at regular intervals. Client Access Licenses (CALs) are handled using QlikView Enterprise Management Console:

1. Select **Start** menu > **All Programs** > **QlikView** > **QlikView Enterprise Management Console**.
2. On the **System** tab, click **Licenses**.
3. Select **QlikView Server**.
4. Click **Client Access Licenses (CALs)**.
5. Click **Assigned CALs**. Here you can see the number of available CALs and how many are in use.

If you find that the number is approaching your limit, follow the procedures described in *QlikView Server Reference Manual.pdf* found on the server (normally, C:\Program Files\QlikView\Documentation).

The screenshot displays the QlikView Enterprise Management Console interface. The 'System' tab is selected in the top navigation bar. Under the 'System' tab, the 'Licenses' sub-tab is active. A table lists the QlikView Servers, with 'QlikView Server' selected. The 'Client Access Licenses (CALs)' section is expanded, showing the 'Assigned CALs' tab. Below this, there is a 'New user:' input field and an 'Assign CAL' button. A table lists the assigned users:

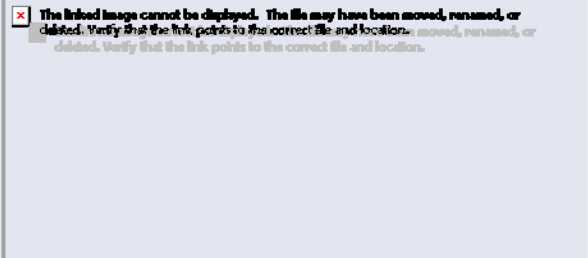
| Name                   | Last Used (UTC)     | Quarantined Until (UTC) * |
|------------------------|---------------------|---------------------------|
| READSOFT\LINUS JAGRELL | 6/1/2011 1:53:55 PM |                           |
| READSOFT\STAS IVINSKY  | 6/6/2011 3:28:23 PM |                           |



# Troubleshooting

## Troubleshooting data collection and transfer

The **INVOICES** modules start, but no information is sent to the **REPORTER** server

| Possible cause  | Solution  |
|---|---|
| <b>The REPORTER plug-in is not installed or is the wrong version.</b> | <p>First check the log located in the folder specified by the LogFile setting in <code>Eilocal.ini</code>. This normally tells you what is wrong. It could be that REPORTER's built-in consistency check failed. Every time an INVOICES module is started, the REPORTER Plug-in for INVOICES checks to ensure that it is connecting to a Message Store (RS_RReporter) database version that it is compatible with. When this consistency check fails, error messages are displayed to the INVOICES user, saying that the REPORTER Plug-in for INVOICES failed to initialize and then failed to load. However, the INVOICES modules still run.</p> <p>If no log exists, ensure that the plug-in is installed by selecting <b>Help &gt; About INVOICES</b> in any INVOICES module. In the dialog that is displayed, click <b>Extensions</b>. The REPORTER plug-in should be listed as follows:</p>  <p>Either way, the remedy is to install the correct version of the plug-in (see "Installing the REPORTER Plug-in for INVOICES" on page 71).</p> |
| <b>The computers are not properly configured.</b>                     | <p>Open <code>Eilocal.ini</code> (INVOICES) and ensure that the plug-in sections exist (they might not if you reinstalled INVOICES).</p> <p>Open <code>ReporterPlugin.ini</code> (location specified in INVOICES GlobalPath) and ensure that the name of the REPORTER server is correct.</p> <p>For more information, see <i>INVOICES INI File Help</i> (included with your REPORTER installation). <code>Eilocal.ini</code> and <code>ReporterPlugin.ini</code> are also discussed starting on page 79 of this document.</p>   |



## Other problems

Log files created by the REPORTER Plug-in for INVOICES can help you troubleshoot. The log files are located in the folder specified by the LogFile setting in `Eilocal.ini`. **Note:** Old log files must be deleted from this location at regular intervals.

## Troubleshooting the REPORTER server

### Error 1609 while installing REPORTER server

Full message: “Error 1609. An error occurred while applying security settings. ASPNET is not a valid user or group...”

Possible reasons for this message:

- IIS is not installed. You must install it before proceeding with the installation of REPORTER.
- IIS is installed, but the ASP.NET client is missing. Create an ASP.NET user. To do this, enter these commands at a command prompt:

```
cd C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727  
  
aspnet_regiis -i
```

**Note:** Depending on your operating system, you may need to change “WINDOWS” to “WINNT”, and the path may vary.

After you enter these commands, installation can proceed.

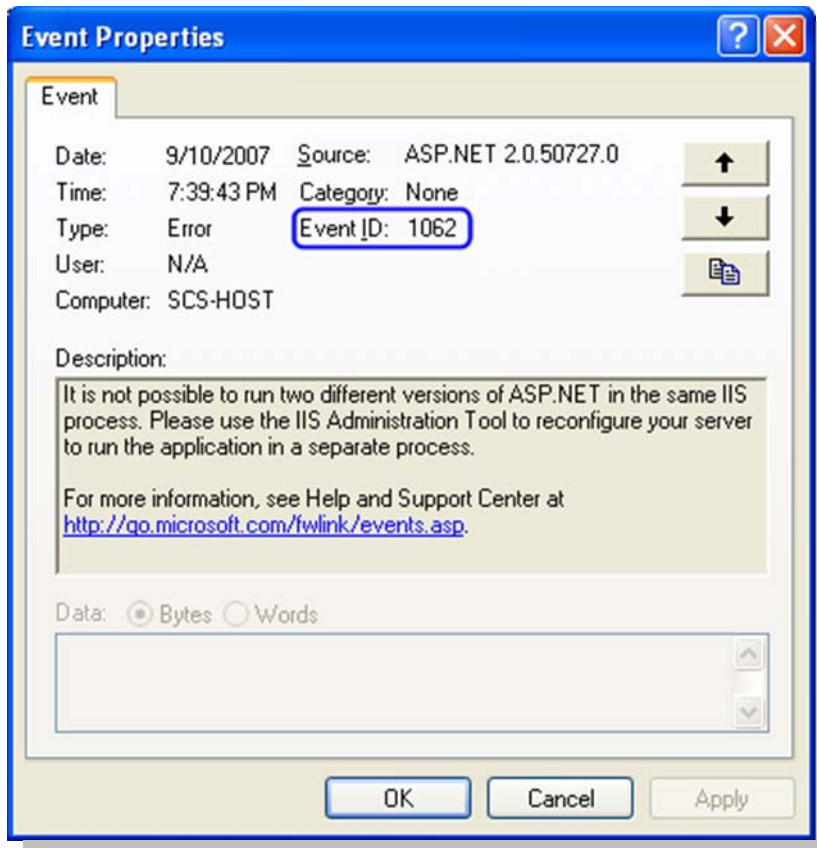


## “Server Application Unavailable”

One situation in which you might see this message when you browse to REPORTER is when multiple ASP.NET applications created for different versions of .NET Framework are running on the same Windows Server 2003 server. (This problem does not occur on Windows XP.)

First, confirm that this is the problem by checking the Windows Event Viewer for error number 1062:

1. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Event Viewer**.
2. Click **Internet Explorer** and look for this event:



If you find event 1062, reconfigure REPORTER to use its own new application pool, separating it from other .NET applications running on the same server. Use this procedure:

1. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Internet Information Services**.
2. Right-click **Application Pools** and select **New** > **Application Pool**.
3. In the **Application pool ID** box, type a name for the new pool (for example ReadSoftAppPool).
4. Click **OK**.
5. Verify that the new application pool is displayed in the list of registered application pools and that its **State** is “Running.”





6. To configure REPORTER to use the new application pool, expand **Web Sites** and **Default Web Site**.
7. Right-click **Reporter** and select **Properties**.
8. Select the **Virtual Directory** tab and change **Application pool** to the newly created application pool (for example ReadSoftAppPool).
9. Click **OK**.
10. Close the **Internet Information Services** dialog.

### The Workflow Engine service does not start

If the Workflow Engine service does not start properly when the server is booted:

1. Select **Start** menu > **Settings** > **Control Panel** > **Administrative Tools** > **Services**.
2. Look for **ReadSoft Workflow Engine** in the list of services and ensure that the **Startup Type** is “Automatic.” If it is not, you can double-click it and change this detail, or you can start the service manually. (For instructions on starting the service manually, see page 53.)

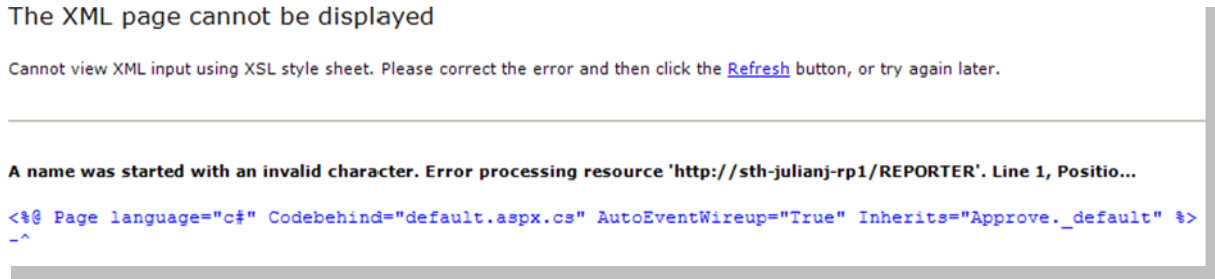
### No web pages are displayed

| Possible cause   | Solution  |
|--|---|
| <b>In IE’s address bar, you mistyped the name of the computer where the REPORTER server is installed.</b>                  | Ensure that you type the name of the computer where you installed the REPORTER server and not SQL Server (unless they are the same).  |
| <b>Proxy settings are enabled in the browser.</b>  | Ensure that the browser does not have a proxy enabled.  |
| <b>There is a problem with the QlikView license. (The error message states that there is no connection to the server.)</b> | <ul style="list-style-type: none"> <li>• Ensure that the number of CALs specified by the license has not been exceeded. This is a standard maintenance procedure (see “Managing Client Access Licenses (CALs)” on page 93).</li> <li>• Ensure that the QlikView license has not expired. Renew the expired license.</li> <li>• Ensure that QlikView Server was not installed twice in the same domain using the the same license.</li> </ul> <p>If license problems persist, please refer to <i>QlikView Server Reference Manual</i> (file name <code>QlikView Server Reference Manual.pdf</code>), located in the <code>Documentation</code> folder of your QlikView installation.</p> |



## “A name was started with an invalid character” error message is displayed in Web page

When logging in to the REPORTER Web page, you receive the following error:



| Possible cause  | Solution  |
|---|---|
| <b>.NET Framework 2.0 is not installed</b>  | Make sure that Microsoft .NET Framework 2.0 is installed with the latest available Service Pack.  |
| <b>.NET Framework 2.0 is installed, however the ASP.NET registered on the server is from the .NET Framework version 1.1</b> | <p>Unregister all versions of ASP.NET, and register the ASP.NET version 2.0.</p> <p>To do this, apply the following two commands in the Command prompt:</p> <pre>C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis -ua</pre> <pre>C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis -i</pre> <p>Note that depending on the version of the operating system, you may have to use C:\WINNT to reach the Microsoft.NET folder.</p> |

### Performance problems

If REPORTER clients report problems browsing the REPORTERS, try disabling Adobe PDF Reader or other add-ons used by Internet Explorer. For more information, please refer to “Troubleshooting: Internet Explorer is slow when using REPORTER” in *REPORTER Help*.

### FLEXlm problems

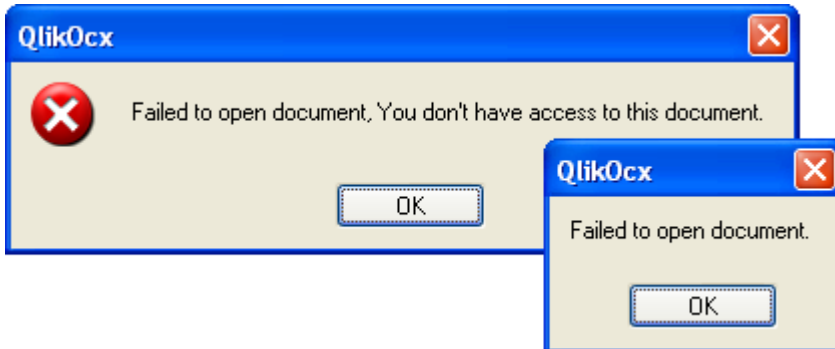
Please refer to *Configuring FLEXlm for use with REPORTER*, available on the CD (file name *Configuring FLEXlm for REPORTER.pdf*).

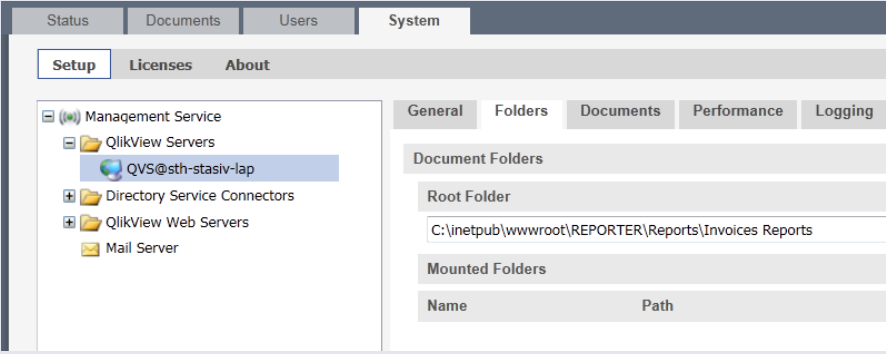


# Troubleshooting QlikView Server

## Failed to open document (no access)

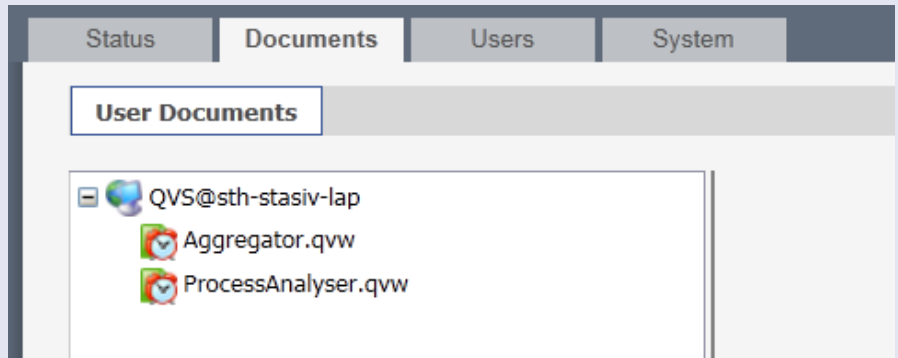
If you receive an error that the QlikView's OCX control cannot open a document:



| Possible cause   | Solution   |
|--|--|
| <b>Incorrect path to the documents is specified in QlikView Server</b> | <ol style="list-style-type: none"><li>1. Select <b>Start</b> menu &gt; <b>All Programs</b> &gt; <b>QlikView</b> &gt; <b>QlikView Enterprise Management Console</b>.</li><li>2. Switch to the <b>System</b> tab.</li><li>3. Under <b>Setup</b>, expand the <b>QlikView Servers</b> folder and select the server. Ensure that the path specified in the <b>Root Folder</b> setting points to the REPORTER documents. The default path is <code>C:\inetpub\wwwroot\REPORTER\Reports\Invoices Reports</code>.</li></ol>  |



| Possible cause  | Solution   |
|---|--|
| <p><b>Your license is limited to one document and you have previously opened another QlikView document.</b></p> | <ol style="list-style-type: none"> <li>1. Select <b>Start</b> menu &gt; <b>All Programs</b> &gt; <b>QlikView</b> &gt; <b>QlikView Enterprise Management Console</b>.</li> <li>2. Switch to the <b>Documents</b> tab.</li> <li>3. If there is any other document in the <b>User documents</b> list besides <code>ProcessAnalyser.qvw</code>, <i>or</i> if the path to <code>ProcessAnalyser.qvw</code> does not match the path defined in the <b>Folders</b> tab, remove the document from the list. Doing this releases the license. Then you can open the document from the user's computer.</li> </ol> |



### Failed to open document (not in document list)

This section applies if you receive an error “Failed to load because not in document list.”

| Possible cause   | Solution  |
|--|---|
| <p><b><i>Allow this document to be loaded by QlikView server is not selected</i></b></p> | <p>Select <b>Allow this document to be loaded by QlikView server</b> as described in step 8 on page 67.</p> <p>If you cannot select it, and the “Failed to load because not in document list” error message is displayed, use this procedure to resolve the problem:</p> <ol style="list-style-type: none"> <li>1. Stop the QlikView Server service.</li> <li>2. Delete <code>FDL.dat</code>, which in a default installation you can find in <code>C:\Documents and Settings\All Users\Application Data\QlikTech\Qvs</code>.</li> <li>3. Restart the QlikView Server service.</li> <li>4. Now try again to select <b>Allow this document to be loaded by the QlikView Server</b>.</li> </ol> |



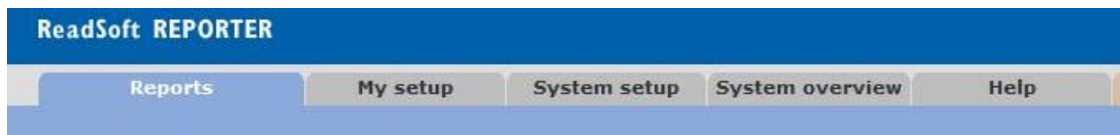
## Task to reload documents is missing in QlikView Management Console after upgrade (Windows XP only)

If QlikView server is installed on Windows XP, and it is upgraded, the task to reload the documents may no longer be available on the **Status** tab in QlikView Management Console after installation. To include the reload tasks again:

1. Open QlikView Management Console by clicking **Start** menu > **All programs** > **QlikView** > **QlikView Management Console**.
2. Click the **User documents** tab, select the **Aggregator.qvw** document, and click the **Reload** tab in the right pane.
3. Under the **Reload schedule** settings:
  - a. Select **Enabled**.
  - b. Select **Weekly** and specify the day and time when the document should be reloaded (Sunday at 00:00 (hh:mm), for example).
  - c. Click **Apply**.
4. Now select the **ProcessAnalyzer.qvw** document and specify these **Reload schedule** settings:
  - a. Select **Enabled**.
  - b. Select **On event of another task, Successful** in the first dropdown list, and **Aggregator.qvw** in the second dropdown list.
  - c. Click **Apply**.
5. The reload tasks should now be available on the **Status** tab.

## The reports cannot be opened from an external computer, because you do not have access to the document

The problem in question is when opening the reports from a computer other than the server itself, you get this error message:



qvp://reporter-54/ProcessAnalyser.qvw?TranslationVariable=enUS could not be opened

Failed to open document, You don't have access to this document.

And these messages are included in the logs:

“700 Information Document Open: Open document: \User has no access to document *ProcessAnalyser.qvw*.

500 Warning Document Load: The document C:\inetpub\wwwroot\REPORTER\Reports\PrecessAnalyser.qvw failed to load because of no file access [19].”



To be able to open the reports on an external computer when this happens, a specific user (created automatically in the format `IQVS_server name` when QlikView server is installed) needs to be set up for the `Invoice Reports` folder on the server where QlikView is installed:

1. To find the name of the user that needs to be specified, open **Computer management** under **Administration Tools** on the computer where QlikView server is installed, expand **Local Users and Groups** and click **Users**. In the list of users on the right, note the name of the user that starts with **IQVS\_** (in the format `IQVS_computer name`).
2. Continuing on the server where QlikView is installed, open Windows Explorer and navigate to `C:\inetpub\wwwroot\REPORTER\Reports\Invoice Reports`.
3. Right-click the `Invoice Reports` folder and select **Properties** in the popup menu.
4. Click the **Security** tab, and then click **Edit**.
5. In the **Permissions for Invoice Reports** dialog that is displayed, click **Add** under the **Group or user names** box.
6. Under **Enter the object names to select** in the **Select Users, Computer, Service Accounts, or Groups** dialog that is displayed, type the name that was found in step one above (starting with `IQVS_`).
7. Click **Check Names** and if the name was entered correctly, it is added successfully to the box.
8. Click **OK**.
9. Again in the **Permissions for Invoices Reports** dialog, select the name you added under **Group or user names**, and select **Full control** in the **Allow** column in the **Permissions for IQVS\_computer name** dialog.
10. Click **OK**.



# Upgrading REPORTER

## REPORTER server and databases

1. Install the new version of REPORTER using the procedure described on page 46.

The installation program saves your settings (including parameters for connection to the database, license, etc.), uninstalls the software, installs the new version of REPORTER, and restores the saved settings.

In addition, QlikView files are deleted and upgraded to the latest version. (As a result, if you view reports at this point, you see the demo data instead of your own company's data.)

2. QlikView Server does not normally need to be upgraded. If you received specific information that it must be upgraded, use this procedure:
  - Using **Add/Remove Programs**, uninstall QlikView Server.
  - Install and configure the new version of QlikView Server using the procedure described on page 55. Most of your settings are restored automatically.
3. Start the REPORTER configuration tool. The **Database settings** panel is displayed by default.
4. Required if databases are moved to a different location in connection with the upgrade: Reconnect REPORTER to the databases.
5. If the **Upgrade databases** button is active, click it to upgrade the databases.
6. Access the QlikView Enterprise Management Console and reload the `Aggregator.qvw` file. (See "Configuring QlikView Documents reload schedule" on page 65.)

Alternatively, wait until the job runs automatically according to its schedule (specified in step 5 on page 66).

This restores your data.

## INVOICES clients

1. At every computer where *any* INVOICES module is installed, reinstall REPORTER Plug-in for INVOICES. (There is no need to uninstall it first. Settings in `Eilocal.ini` and `ReporterPlugin.ini` are not disturbed.)

## REPORTER users

If QlikView Server software is upgraded, REPORTER users are prompted to upgrade the QlikView Analyzer Plug-in for Internet Explorer. The procedure is the same as the initial installation described on page 82.



# Uninstalling REPORTER

## INVOICES clients

Perform this step at every computer where *any* INVOICES module is installed, to uninstall the REPORTER Plug-in for INVOICES:

1. Using **Add/Remove Programs**, uninstall ReadSoft REPORTER Plug-in for INVOICES.

## REPORTER users

This step can be performed at every computer where users have used REPORTER:

1. Using **Add/Remove Programs**, uninstall QlikView Analyzer Plug-in for Internet Explorer (called **QlikView Plugin** in the program list).

## REPORTER server

1. Using **Add/Remove Programs**, uninstall:
  - ReadSoft REPORTER
  - QlikView Server

## Databases

These instructions are for Microsoft SQL Server 2005/2008/2012 (MS SQL Server 2000 is no longer supported).

1. Select **Start** menu > **All Programs** > **Microsoft SQL Server 2005/2008/2012** > **SQL Server Management Studio**.
2. Expand folders in the **Object Explorer** navigation pane and click **Databases**.
3. Delete REPORTER's databases:
  - Configuration database (named RS\_RAapprove by default)
  - Message Store database (RS\_RReporter)
  - Workflow database (RS\_RWorkflow)

If you have trouble deleting the databases, try restarting IIS.

4. In the navigation pane, expand **Security** and click **Logins**.
5. Delete the rsreporter login.





# Silent installation and uninstallation

Use silent mode to run the REPORTER installer without any user interaction. Pass parameters that are normally entered in dialogs during installation (in this case the installation path for the product and the server where QlikView is installed) to the installer as command-line parameters.

To install REPORTER in silent mode:

1. At a command prompt, change directories to `Software\ReadSoft\ReadSoft` REPORTER\Install on the REPORTER CD.

2. Run this command:

```
setup.exe /s /v"/qb INSTALLDIR="C:\Program Files\ReadSoft\REPORTER\  
DATADIR="C:\Program Files\ReadSoft\REPORTER\  
WEBSITEDIR="C:\Inetpub\wwwroot\REPORTER" QVSERVER="QlikView_Server_Name"
```

To uninstall REPORTER in silent mode:

1. At a command prompt, change directories to `Software\ReadSoft\ReadSoft` REPORTER\Install on the REPORTER CD:.

2. Run this command:

```
Setup.exe /s /x /v"/qn"
```



# REPORTER installation and setup checklist

This checklist is provided for installers who have completed the process several times and no longer need detailed instructions.

- IIS is installed, and required components are also installed. (See page 29.)
- MSDTC is configured to allow transaction communication over the network. (May need to be done on two servers. See page 39.)
- Licensing is set up. (See page 44.)
- REPORTER is installed. (See page 46.)
- REPORTER is configured. (See page 48.)
- QlikView Server is installed (see page 55), including:
  1. Set the *Recovery* settings for the QlikView Server service. (See page 57.)
  2. Registering the QlikView Server license. (See page 61.)
  3. Adjusting the QlikView Server settings. (See page 61.)
- Scheduled data for reloading. (See page 65.)
- Installed the REPORTER Plug-in for INVOICES at every computer where any INVOICES module is installed. (See page 71.)
- No customized INVOICES plug-ins are used, OR appropriate steps are taken. (See page 80.)
- INVOICE COCKPIT Connector is configured to work together with REPORTER at every computer where INVOICES Transfer module is installed. (See page 82.)
- The REPORTER Export program for ICS is deployed, configured, and set up to run on schedule. (See page 86.)
- REPORTER views are configured on Oracle database servers. (See page 25).
- REPORTER is configured to import data from Oracle/SAP. (See pages 52 and 51 respectively.)
- Installed QlikView Analyzer Plug-in for Internet Explorer on users' computers. (See page 91.)
- Maintenance routines are in place. (See page 92.)
- Tested the system (See page 70.).

Completed by: \_\_\_\_\_

Date: \_\_\_\_\_

