



**QAComplete**

Upgrade Guide

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## About This Document

This document guides you through updating from QAComplete Release 11.0 or 11.1 to Release 11.2.

Instructions are based on a standard installation, using all default settings.

Please review all instructions carefully before proceeding. If you have any questions, contact our support team PRIOR to proceeding with the upgrade.

**NOTE:** All references to "SoftwarePlanner" refer to engine and database that support QAComplete.

Please review and follow all instructions carefully.

## Contacting Support

To contact the QAComplete Customer Care team, please submit your request on the [Contact Customer Care](http://smartbear.com/support/product-list/choice?prod=ALMComplete) form on our web site (<http://smartbear.com/support/product-list/choice?prod=ALMComplete>).

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## Prerequisites

Please ensure the following prerequisites are met prior to performing the upgrade.

### Schedule the Upgrade During a Quiet Time

Make sure all users are logged off, because critical services will be stopped and restarted during the upgrade process.

### Perform All Tasks as an Administrator

Perform the upgrade on the application server as a member of the local Administrators group. This will ensure that services can be created, file system permissions can be set and properties for various objects can be configured as needed when the upgrade is applied. The account should also be able to connect to the SQL Server instance where SoftwarePlanner databases are hosted with full sys admin rights to ensure database updates are applied successfully

### Confirm 2008/2012 Windows Server Operating System and SQL Server

Release 11.2 is supported on Windows Server operating system and SQL Server versions 2008, 2012, or 2014. If the server hosting the application is running an earlier OS or SQL Server, **STOP** and contact Customer Care immediately. You must migrate the system to a server running Windows Server 2008 or 2012 before you upgrade.

### Open Port 3831

The product includes the **qacNotification** component that the product's Test Runner uses for communication. The component uses port **3831**. Make sure that your Firewall allows traffic through that port.

### Take a Complete Database & System Backup

Be sure to back up your web server and SoftwarePlanner database. Information about backing up a database can be found here:

[http://msdn.microsoft.com/en-us/library/ms187510\(v=sql.105\).aspx](http://msdn.microsoft.com/en-us/library/ms187510(v=sql.105).aspx)

The update instructions include a step for backing up the application file system, but to be absolutely safe, perform your routine full system backup before applying the upgrade.

### Verify Current Version

Go to the Setup tab and verify your version is listed in the table below:

Release	11.0	11.1	11.2
Version	11.0	11.1	11.2
Build	11.0.101 or 11.0.102	11.1.244 or 11.1.269	11.2.348
AppCode	agSPEnt	agSPEnt	agSPEnt

If you do not see exactly these values, **STOP**. This release can only be applied to the builds above.

# Upgrade Procedure

## Preparing Application Server

Release 11.2 includes only an installation executable. Follow the link below to download this file to your application server.

### [11.2 Installation Utility](#)

Before starting the upgrade, ensure all users are logged off before applying the upgrade. Then, open a command prompt and issue an `iisreset` command on the application server to terminate any open connection to the server.

## Back Up Your Data

To avoid possible issues, please create a full backup of your data:

- The SoftwarePlanner database,
- The `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Pragmatic Software` registry key,
- The FileExchange IIS application (located in the `C:\inetpub\wwwroot\FileExchange` directory by default).

**Note:** If you installed FileExchange to a non-default location, please manually specify the actual FileExchange installation path in these values in the Windows registry after the upgrade:

- `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Pragmatic Software\agSPent\FDir,`
- `KEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Pragmatic Software\Server Information\FDir.`
- **Note:** If you use custom Crystal Reports, make sure to also create the backup of the `C:\inetpub\wwwroot\Common\Reports\agSPent\CrystalReports` directory.

**ATTENTION:** In order to improve the process of updating your QAComplete instance in the future, we have changed the procedure for this release. We realize that these one-time additional steps in the process will make this update take a little longer than normal, but this investment will allow future updates to be quicker and easier to manage for you. Thank you for your patience, and as always please reach out to us with any questions.

## Automatic Upgrade

The automatic upgrade is available **only** if you have **QAComplete 11.0 installed from scratch**, or **one of the builds of the 11.1** version.

If you have QAComplete upgraded to version 11.0 from an earlier version, you will have to upgrade it **manually**. See the *Manual Upgrade* section below.

On your application server, open Windows Explorer and navigate to the directory to which you have downloaded the installation executable. Double-click it and follow the wizard instructions.

**Note:** During the installation, all components of your previous QAComplete installation will be removed automatically. Your database and user data will be preserved.

## Manual Upgrade

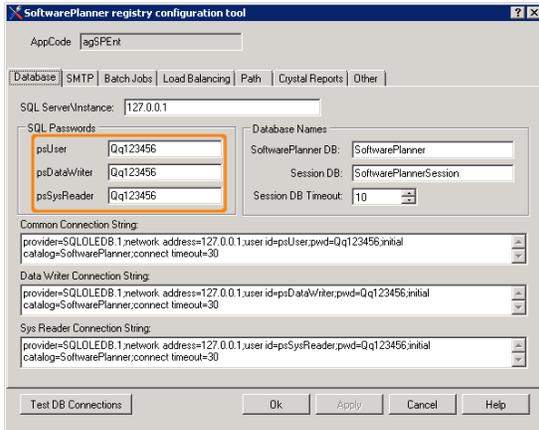
**If you have QAComplete 11.0 upgraded from an earlier version, upgrade your QAComplete version manually.**

### Removing Previous Installation

Before upgrading to QAComplete 11.2, remove components and files from the previous installation mentioned below.

**Note:** Some of the entities mentioned below may not appear on your application server since they are the legacy components of previous QAComplete versions.

1. On your application server, open the Windows Explorer and go to **<QAComplete Installation Directory>\swpRegistryConfigurationTool**. Run the `swpRegistryConfigurationTool` application.
2. Here, copy your SQL passwords stored in the `psUser`, `psDataWriter`, `psSysReader` fields and save a copy of them somewhere else.



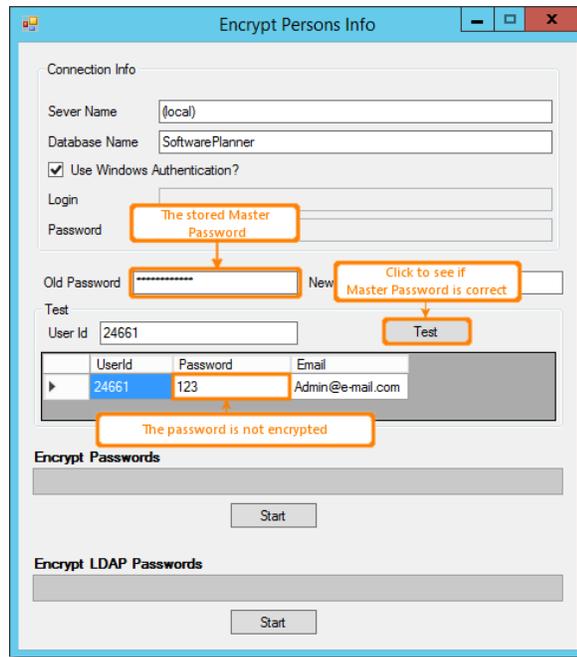
- If you use a Master Password, make a copy of it. You can retrieve it from the registry if you have forgotten it. If the password is missing from the registry, you can change it.

**Note:** If you are not sure whether you use the Master Password or not, you may use the Password Encryptor to find it out.

- Go to the **swpPasswordEncryptor** directory of your QAComplete installation.
- Run the **EncryptPersonsInfo** application as an administrator.
- Type in your server name and database name (*SoftwarePlanner* for the latter). If you do not use Windows Authentication, also type your login and password.
- Check the **Old Password** field. If there is a value available, then the Master Password was set before.

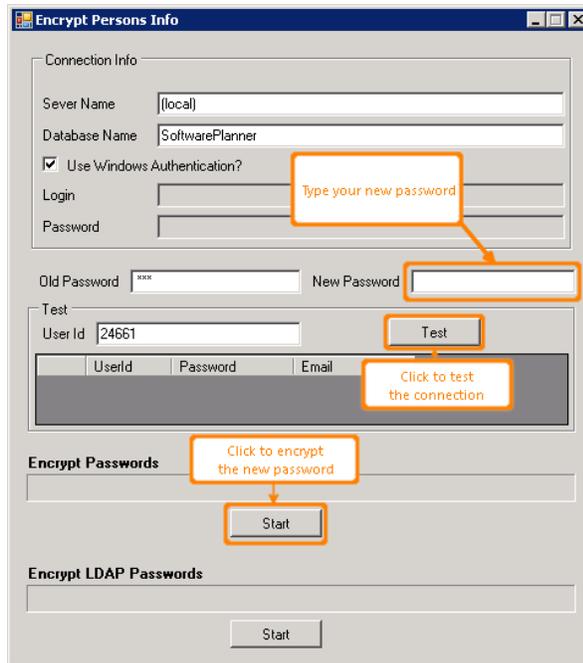
You can also try to connect with the existing Master password. Click **Test** to do this.

- If the password you get in the **Password** field is plain text, then the specified Master Password is correct.

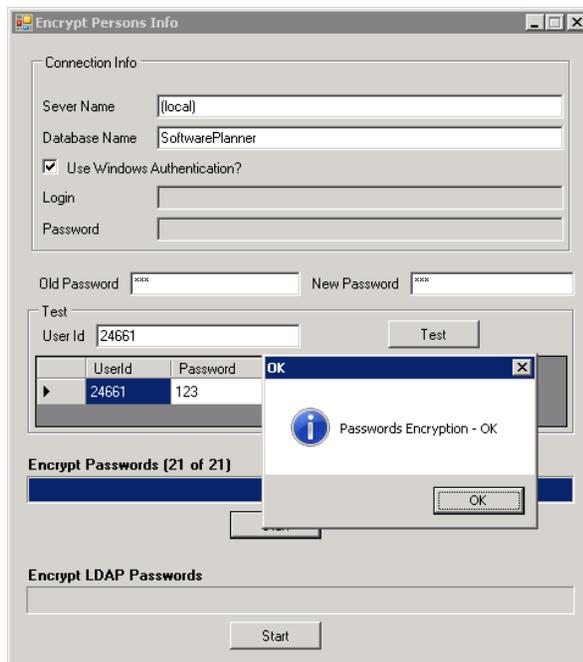


- If that password is encrypted, you need to set up another Master Password.

- **To retrieve the password:** Open the Windows registry, then find your Master Password value under the **HKEY\_LOCAL\_MACHINE\SOFTWARE\Wow6432Node\Pragmatic Software\Server Information\Master Password** key.
- **To change the password:**
  1. Run the **EncryptPersonsInfo** application and set it up as described above.
  2. Type the new password in the **New Password** field.
  3. Click **Start** under the **Encrypt Passwords** progress bar.



If the password has been changed successfully, you will see a notification dialog.

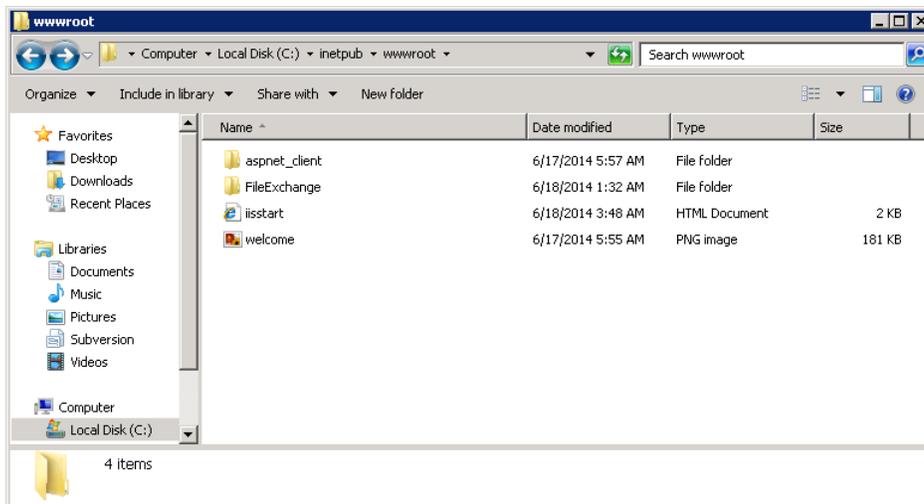


4. If you use LDAP passwords, also click **Start** under the **Encrypt LDAP Passwords** progress bar.
  5. **Restart** your IIS application to apply changes.
  6. Save a copy of your Master Password somewhere else.
4. Open the **Services** console and stop *AQAServiceManager* and *Escalation Rule Executer* services. Then, open the Task Manager and stop all *psBatchJobs.exe* \*32 processes under the Processes tab.
  5. Go to **<QAComplete Installation Directory>/Bin** and run the **unreg\_ps\_DLLs.bat** batch file as an

administrator.

**Note:** If you cannot find the batch file in the installation directory, go to **C:\Windows\SysWOW64\\_\_Pragmatic** and run **unreg\_ps\_DLLs.bat** from here.

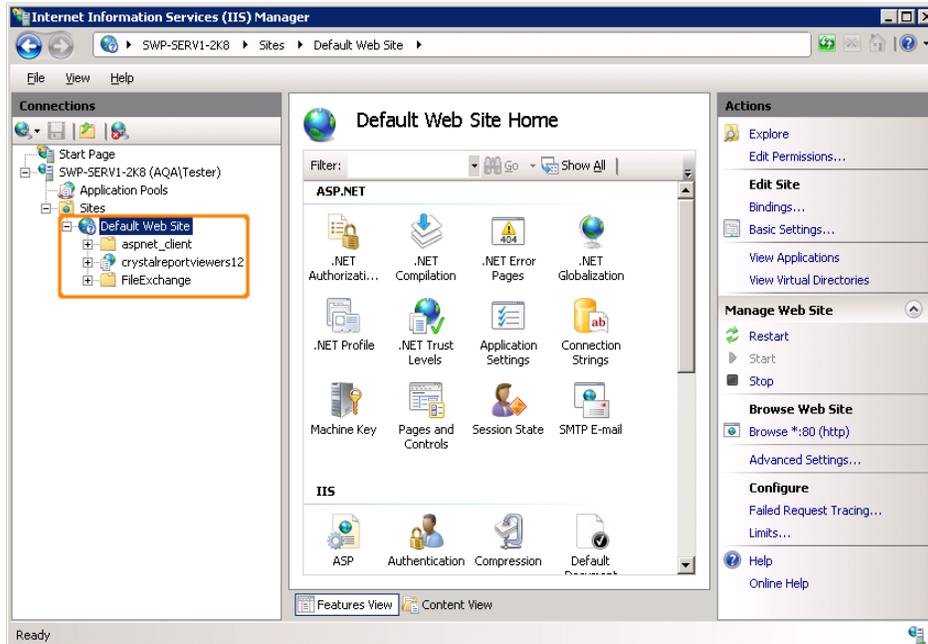
6. Go to **Control Panel | Programs and Features** and uninstall all QAComplete components manually. Please check the application list below to be sure you did not miss anything:
  - ActiveDirectoryAuthenticationLib,
  - Escalation Rule Executer Service,
  - FileExchange,
  - qacReportEngine,
  - ServiceManager,
  - SmartBear QAComplete,
  - SoftwarePlanner,
  - SoftwarePlanner Common Library,
  - SoftwarePlanner Database setup,
  - SoftwarePlanner Update Utility,
  - SoftwarePlanner Web Service,
  - swpCRWrapper,
  - swpCrystalReports,
  - swpPasswordEncryptor,
  - swpRestAPI.
  
7. Delete all remaining QAComplete files in these directories (you may need to enable the "Show Hidden Files" option):
  - C:\Program Files (x86)\SmartBear (the default QAComplete installation location)
  - C:\Windows\SysWow64\\_\_New
  - C:\Windows\SysWow64\\_\_Pragmatic
  - C:\inetpub\wwwroot (the default website files location): *Common*, *psWS*, *swpCrystalReports*, *rest-api* folders, all ASP, TXT, and CONFIG files. Check the following screenshot to be sure you have not missed anything:



8. Remove the following QAComplete applications from the IIS Console DefaultWebSite directory:

- swpCrystalReports,
- qacReportEngine,
- psWS,
- rest-api,
- FileExchange,
- Common.

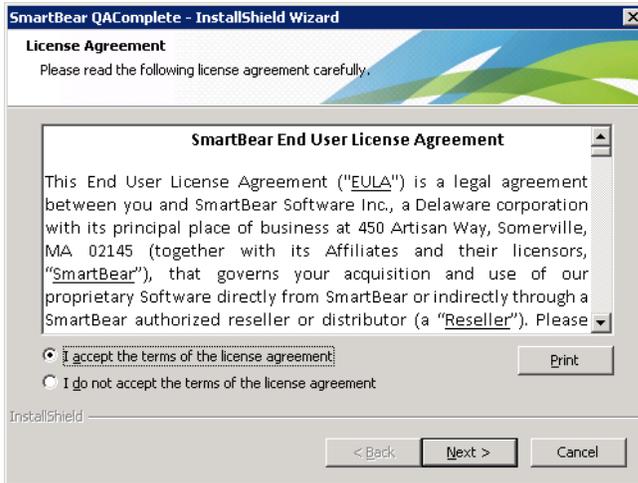
Your IIS screen should look like this:



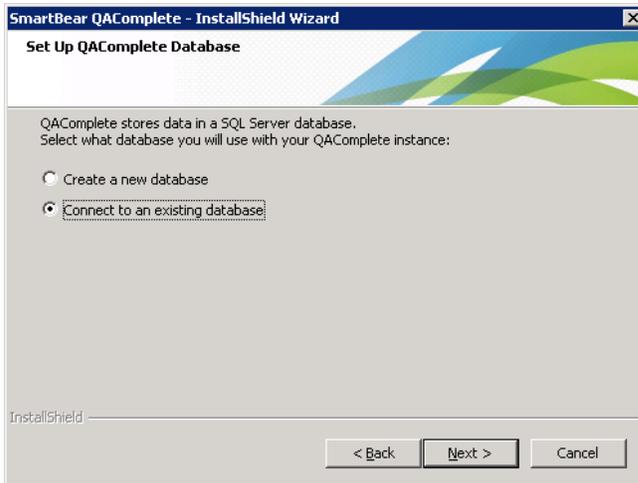
9. Delete the **HKEY\_LOCAL\_MACHINE\SOFTWARE\Wow6432Node\Pragmatic Software** and the **HKEY\_LOCAL\_MACHINE\SOFTWARE\Pragmatic Software** registry keys.

### Installing the Application

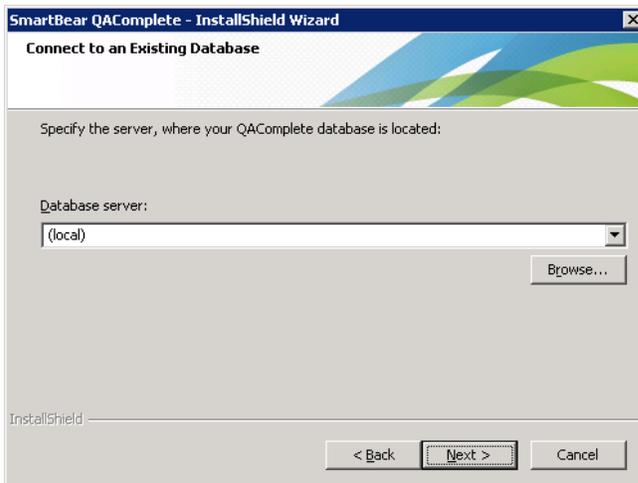
1. Go to the directory containing the QACComplete installation executable, and run this executable.
2. Install Microsoft .NET Framework 4.5.2, if needed. Download and installation routines will be performed automatically. Your server will be restarted after the framework installation.
3. Read the terms of the End User License Agreement. If you agree with them, select **I accept the terms of the license agreement** and click **Next**.



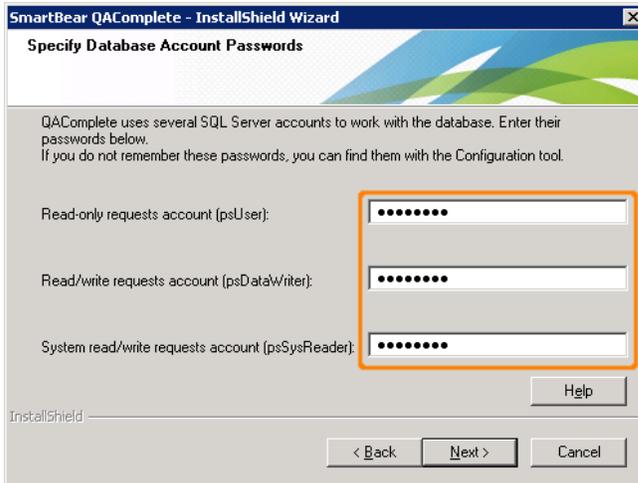
4. Select **Connect to an existing database**.



5. Type in your database server address. You can also click **Browse** to select a server from your local area network.



6. Type in the **psUser**, **psDataWriter**, and **psSysReader** passwords you have saved before. You will be notified if any of them is incorrect.



SmartBear QAComplete - InstallShield Wizard

### Specify Database Account Passwords

QAComplete uses several SQL Server accounts to work with the database. Enter their passwords below.  
If you do not remember these passwords, you can find them with the Configuration tool.

Read-only requests account (psUser):

Read/write requests account (psDataWriter):

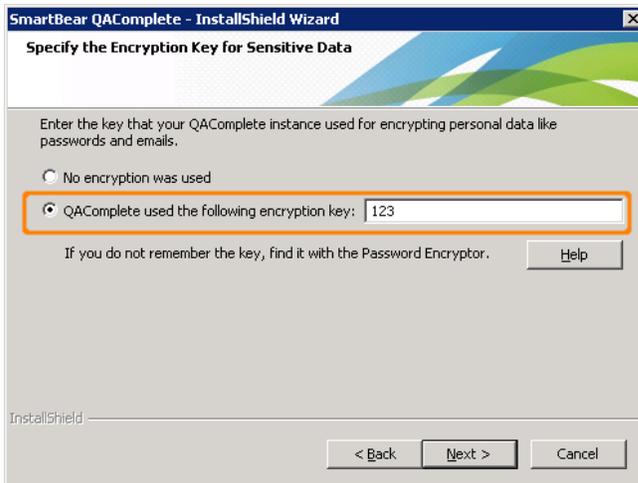
System read/write requests account (psSysReader):

Help

InstallShield

< Back Next > Cancel

7. If you use the Master Password, select **QAComplete used the following encryption key** and type it in the field.



SmartBear QAComplete - InstallShield Wizard

### Specify the Encryption Key for Sensitive Data

Enter the key that your QAComplete instance used for encrypting personal data like passwords and emails.

No encryption was used

QAComplete used the following encryption key:

If you do not remember the key, find it with the Password Encryptor. Help

InstallShield

< Back Next > Cancel

8. Specify your default *From* address.
9. Specify an installation directory.

**Note:** We highly recommend using a default installation directory.

The remaining steps of the installation process will be performed automatically. QAComplete will be installed to the default location of the default website.

Please restart the application server after the installation to avoid any possible issues.

Do not forget to check if the upgrade was successful. To learn how to do this, see [Upgrade Validation](#).

## Upgrade Procedure for Legacy Versions

If you use a **legacy** version of QAComplete (a version **prior to 10.2**), you have to upgrade your version to 11.0 before you can upgrade it to version 11.2.

We recommend that you contact our **Support Team** for assistance:

<https://support.smartbear.com/message/?prod=ALMComplete>

After you upgrade your QAComplete version to version 11.0, follow the *Manual Upgrade* instruction to upgrade it to version 11.2.

## Upgrade Validation

You can do a few simple things to validate the upgrade.

1. **Check the Version and Build:** Log in to the application and select the Setup (gear) icon. You should see Version 11.2 and Build 11.2.370.

### Setup and Administration

Welcome to the setup and administration area. From here, you can set system options and preferences for the software. Use the table of contents to access the area you wish to administer.

**Version:** 11.2  
**Build:** 11.2.370  
**AppCode:** agSPEnt  
**Edition:** QAComplete  
**Current Projects:** 40  
**Maximum Projects:** Unlimited  
**Current Users:** 85  
**Maximum Users:** Unlimited  
**Number of Licenses:** 99 concurrent

2. **Verify Permissions for Security Administrators:** While logged in to the application, select the Setup icon (gear) and go to **Security > Security Groups** in the left side navigation panel. Click on the **Manage Security Rights** icon for your Security Administrator's group. Ensure that Full Access is checked, so that your Security Administrators have permission to all features.

**IMPORTANT:** Always have at least one user in a Security Administrator group will full permissions to all features.

3. **Check Email Delivery:** Navigate to any module (Defects, Requirements, etc.), select the Show option. Click the email icon (yellow envelope) next to a record and send yourself an email. Verify the email arrives in your inbox.
4. **Check Email Alerts:** Update a record that will trigger an email alert for you. Verify the email arrives in your inbox (this may take up to 10 minutes for the alert to be sent).
5. **Check the Web Service:** Log in to your application server and go to the Web Service page:

<http://localhost/psWS/psWS.asmx>

## Service

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [Attachments\\_Add](#)
- [Attachments\\_Delete](#)
- [Attachments\\_GetAttachment](#)
- [Attachments\\_GetAttachmentsList](#)
- [Audits\\_Add](#)
- [Audits\\_LoadElevated](#)
- [AutomationHosts\\_Add](#)
- [AutomationHosts\\_Delete](#)
- [AutomationHosts\\_Load](#)
- [AutomationHosts\\_LoadByCriteria](#)
- [AutomationHosts\\_Update](#)
- [AutomationRuns\\_Add](#)
- [AutomationRuns\\_Delete](#)
- [AutomationRuns\\_Load](#)
- [AutomationRuns\\_LoadByCriteria](#)
- [AutomationRuns\\_Update](#)
- [AutomationSchedules\\_Add](#)
- [AutomationSchedules\\_Delete](#)
- [AutomationSchedules\\_IsTestsByTimeSpanExist](#)
- [AutomationSchedules\\_Load](#)
- [AutomationSchedules\\_LoadByCriteria](#)
- [AutomationSchedules\\_LoadTestsByTimeSpan](#)
- [AutomationSchedules\\_Update](#)
- [AutomationTestItems\\_Add](#)

Scroll down and click the `GetLoginInfo` method.

Click [here](#) for a complete list of operations.

### GetLoginInfo

**Test**

To test the operation using the HTTP POST protocol, click the 'Invoke' button.

Parameter	Value
AppCode:	<input type="text"/>
Email:	<input type="text"/>
Password:	<input type="text"/>

**SOAP 1.1**

The following is a sample SOAP 1.1 request and response. The **placeholders** shown need to be replaced with actual values.

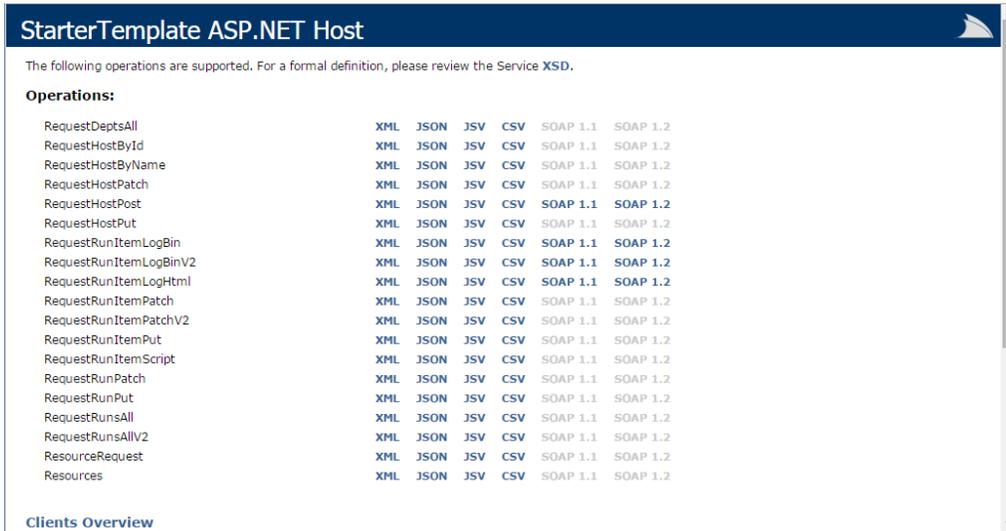
```
POST /pws/pws.asmx HTTP/1.1
Host: localhost
Content-Type: text/xml; charset=utf-8
Content-Length: length
```

Enter the AppCode **agSPent**, and the email and password you use to log in to the application. Click **Invoke**.

The Web Service will return an XML document with your **UserId**, **AppCode**, **ProjId** and **DeptId**:

```
<?xml version="1.0" encoding="UTF-8"?>
- <LoginInfo xmlns="http://www.pragmatics.com/" xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <UserId>24661</UserId>
  <AppCode>agspent</AppCode>
  <ProjId>11873</ProjId>
  <DeptId>8162</DeptId>
  - <Projects>
    - <Project>
      <DeptId>8162</DeptId>
      <DeptName>NotProvided</DeptName>
      <ProjId>11873</ProjId>
      <ProjName>Sample Project</ProjName>
    </Project>
  </Projects>
</LoginInfo>
```

6. Check the Rest-SPI Service: Open a browser on your application server and enter the following URL:  
http://localhost/rest-api/service



## QAComplete - JIRA Connector

If you are interested in using the new QAComplete - JIRA Connector to synchronize QAComplete items with JIRA issues, please see [Integration with JIRA](#) for installation and configuration instructions.

## Install Updated Test Agent

If you use the Test Agent for Test Management or other automated tool integration, please install the updated version: [About Automated Tests](#).

## Technical Support and Resources

If you have questions, problems, or need assistance with QAComplete, you can either contact our **Customer Care Team**, or try to search for the needed information using the help resources on our web site.

### Contacting the Customer Care Team

Please submit your request on the [Contact Customer Care](https://support.smartbear.com/message/?prod=ALMComplete) form on our web site (<https://support.smartbear.com/message/?prod=ALMComplete>).

### More Resources

#### QAComplete Documentation

<http://support.smartbear.com/qacomplete/docs/default.htm>

#### Video Tours & Demos

<https://support.smartbear.com/screencasts/qacomplete/>

#### SmartBear Community Forums

<http://community.smartbear.com/>

#### Technical Articles

<http://support.smartbear.com/articles/almcomplete/>

What's New This Release

<http://support.smartbear.com/qacomplete/docs/default.htm#WhatsNew/WhatsNewforUserGuide.htm>

#### QAComplete Web Service API

<http://support.smartbear.com/viewarticle/66788/>

#### QAComplete Data Dictionary

<http://support.smartbear.com/viewarticle/66042/>

#### Test Automation

[http://support.smartbear.com/qacomplete/docs/default.htm#UsersGuide\\_SP/About Automated Tests.htm](http://support.smartbear.com/qacomplete/docs/default.htm#UsersGuide_SP/About Automated Tests.htm)

#### JIRA Connector (integration with JIRA)

[http://support.smartbear.com/qacomplete/docs/default.htm#UsersGuide\\_SP/JIRA Integration/Integration With JIRA.htm](http://support.smartbear.com/qacomplete/docs/default.htm#UsersGuide_SP/JIRA Integration/Integration With JIRA.htm)

## Maintenance Recommendations

Several factors will impact and determine how best to install and maintain the SQL Server instance hosting the QAComplete databases (named SoftwarePlanner). Here are just a few of them:

- The number of users who will be working in QAComplete on a given day.
- The presence of other databases on the servers.
- Your company's network policy.
- The physical resources upon which the SQL Server instance will reside.

The databases themselves can be maintained differently due to the data they store:

- The **SoftwarePlanner** database is the primary database of the application. This database includes all QAComplete data, traceability, security permissions, and other settings. You should implement a backup strategy that best meets your organizations expectations regarding data loss for this critical database.
- The **SoftwarePlannerWS** database stores Performance Logs and Database Logs each time the psWS web service is invoked. A nightly differential backup for this database may be sufficient, but this should be determined by your internal organization. Since this data is historical, quotas and a job could be used to "flush" the data when the database reaches a certain size.
- The **SoftwarePlannerSession** database primarily stores end user session specific information that is temporal in nature. It also includes a VersionLogs table and BaseCodes table which rarely change but could be updated in an upgrade. Since a majority of the data in this database is temporal, the size of this database remains fairly consistent. Typically, you would backup this database each time the main SoftwarePlanner backup is performed, so that in the event of a failure of the system, you have a common restore point for both.

### What Backup Approach to Use

Every client, every environment has unique characteristics which can impact what kind of backup strategy you implement. It is difficult to provide a specific detailed set of recommendations that would work in large and small companies throughout the world. Instead, we can point you to the resources which we believe can help you develop best practices for your organization:

#### Microsoft SQL Server 2008 R2 Best Practices Analyzer:

<https://www.microsoft.com/en-us/download/details.aspx?id=15289>

This is a tool that your SQL Server administrator can download and run on the server to analyze how the software is installed and configured, identify differences in the configuration from Microsoft recommendations, and provide options for resolving those differences.

#### Monitoring and Tuning for Performance:

[https://technet.microsoft.com/en-us/library/ms189081\(v=sql.100\).aspx](https://technet.microsoft.com/en-us/library/ms189081(v=sql.100).aspx)

This Technet article provides guidance for tuning an SQL Server performance.

#### DBCC Commands:

[https://technet.microsoft.com/en-us/library/aa258281\(v=sql.80\).aspx](https://technet.microsoft.com/en-us/library/aa258281(v=sql.80).aspx)

This is a list of commands that can be run to check the integrity of various database objects. These can be scheduled by your SQL Server administrator to be executed on a routine basis to ensure the health of your databases.

#### Backing Up and Restoring Databases in SQL Server:

[https://technet.microsoft.com/en-us/library/ms187048\(v=sql.100\).aspx](https://technet.microsoft.com/en-us/library/ms187048(v=sql.100).aspx)

This provides an overview of the different strategies you can implement to ensure your data is protected.

Also, we recommend checking out our [Community page](#), where you may be able to get an idea how other clients have implemented a backup strategy.

If, after reviewing the information above, you feel you need additional help, professional guidance and services are available via a third-party consulting group. Please contact our Customer Care Team, if you are interested.