



ArtenaBI Deployment Guide



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Proprietary Information

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Intended Audience

SMSS Client IT staff who are responsible for the deployment of Artena.

Revision History

Description	Revision date	Version	Author
Initial draft	04 Feb 2014	1.0	George Drayer
Reviewed and updated	26 Feb 2015	2.0	Daniel Dixon
Final			

Prerequisites

1. **Windows 2008 R2 SP1** or another operating system supported by SQL Server 2008 R2
2. **SQL Server 2008 R2** (recommended: **SP2**)

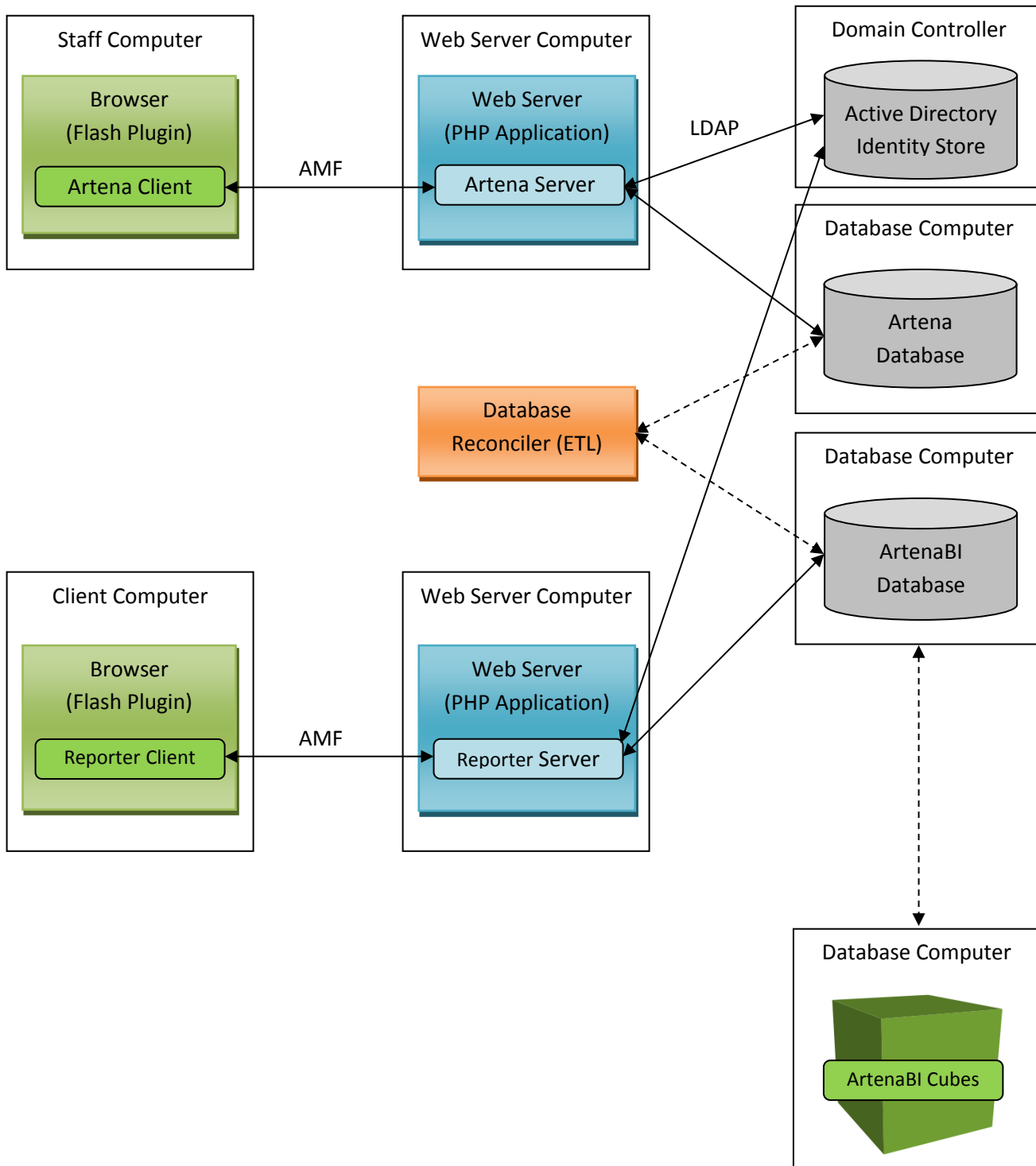
Please refer to Microsoft's minimum Hardware and Software Requirements for Installing SQL Server 2008 R2. ([http://msdn.microsoft.com/en-us/library/ms143506\(v=sql.105\).aspx](http://msdn.microsoft.com/en-us/library/ms143506(v=sql.105).aspx))

Additional Prerequisites

None

Architecture

ArtenaBI uses a separate database to Artena. This guarantees the performance of both databases and allows for better security and more flexible deployment scenarios. A reconciler component is used to keep both databases in sync. (Note: optional Reporter and Cubes components shown here)



Release Package

The release package contains the following items:

- etl_packages
- sql_scripts
- wap_artena

Installation

1. Database

Create a new database on the database server with an appropriate name (for purposes of this guide we will use the name **ArtenaBI**).

Execute the following scripts against the database in the order given below (there should be no errors)

- ArtenaBI_CreateScript.sql
- ArtenaBI_UpdateScript-XX.YY.ZZ.sql (Where applicable: run each script in sequence according to the version number)

2. ETL

The ArtenaBI ETL is comprised of three files:

- ArtenaBI.dtsConfig (the ETL configuration)
- ArtenaBI.dtsx (the ETL package)

ArtenaBI.SSISDeploymentManifest (the deployment utility, for SQL Server deployments)

The ArtenaBI configuration file is an XML document defining the various options that may be enabled or disabled for the ArtenaBI process. This file may be edited in a text editor.

Name	Purpose	Default Value
source_server	The server that hosts the Artena database.	(local)
source_db	The name of the Artena database.	Artena2008
dest_server	The server that hosts the ArtenaBI database.	(local)
dest_db	The name of the ArtenaBI database.	ArtenaBI
revenue	To enable/disable the Course, Programme and Miscellaneous Revenue calculation.	False
reporter	To enable/disable the processing of various data sets to support Reporter.	False
process_epis	To enable/disable the extraction of SDR data and to make use of it to calculate	True

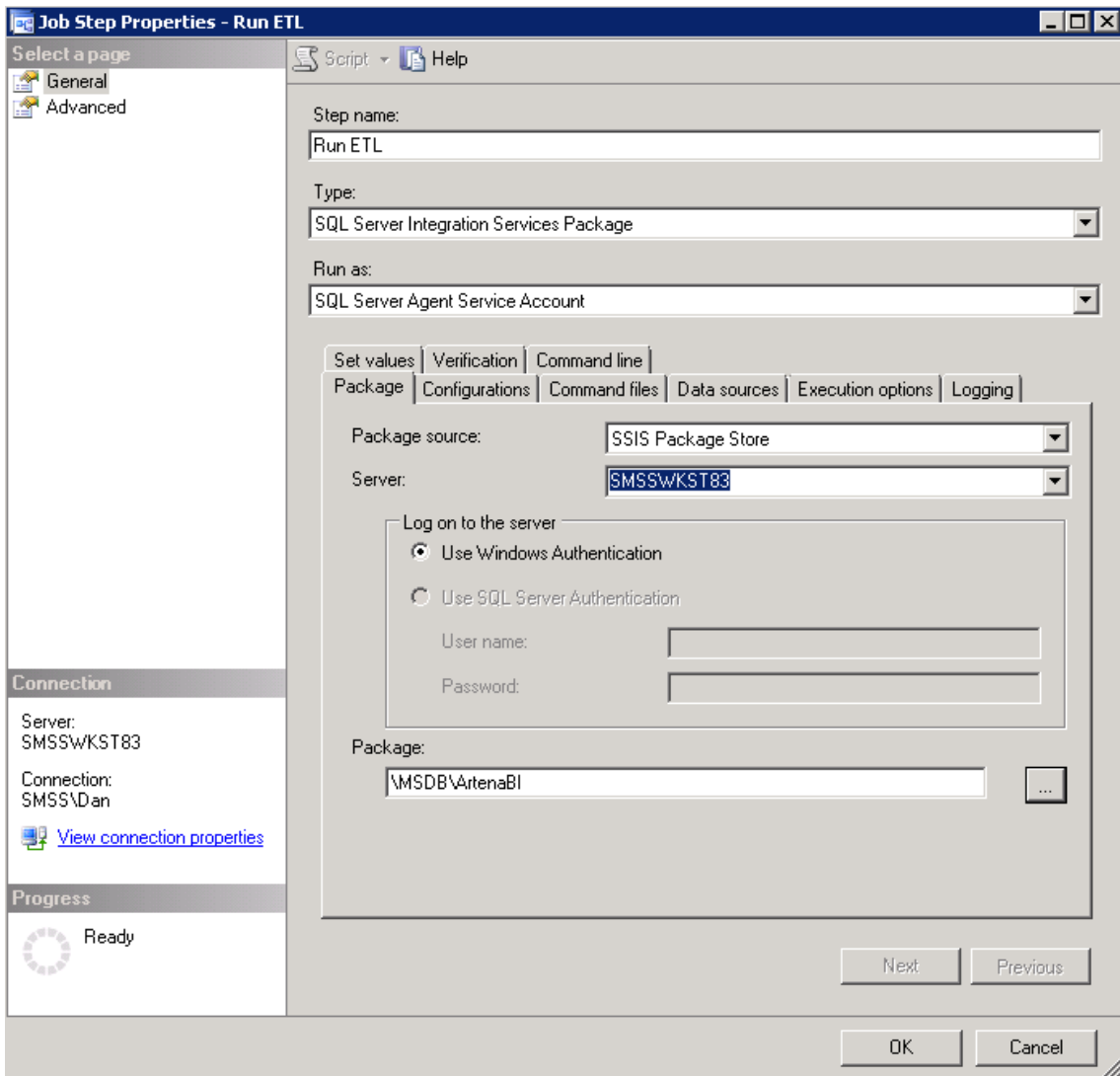
	the EPIs	
cubes	To enable/disable the processing of the ArtenaBI Cubes.*	False
cubes_server	The server that hosts the ArtenaBI Cubes database*	(local)
cubes_db	The name of the ArtenaBI Cubes database.*	ArtenaBICubes

*Applicable only to ArtenaBI Cubes users.

2.2 The ETL File

Create the job

Create a SQL Server Agent job with a single step of type SQL Server Integration Services Package.



Add the Configuration file to the step.

Job Step Properties - Run ETL

Select a page: [General](#) | [Advanced](#)

Script | Help

Step name:

Type:

Run as:

Set values | Verification | Command line | Package | Configurations | Command files | Data sources | Execution options | Logging

Configuration files:


Connection

Server: SMSSWKST83

Connection: SMSS\Dan

[View connection properties](#)

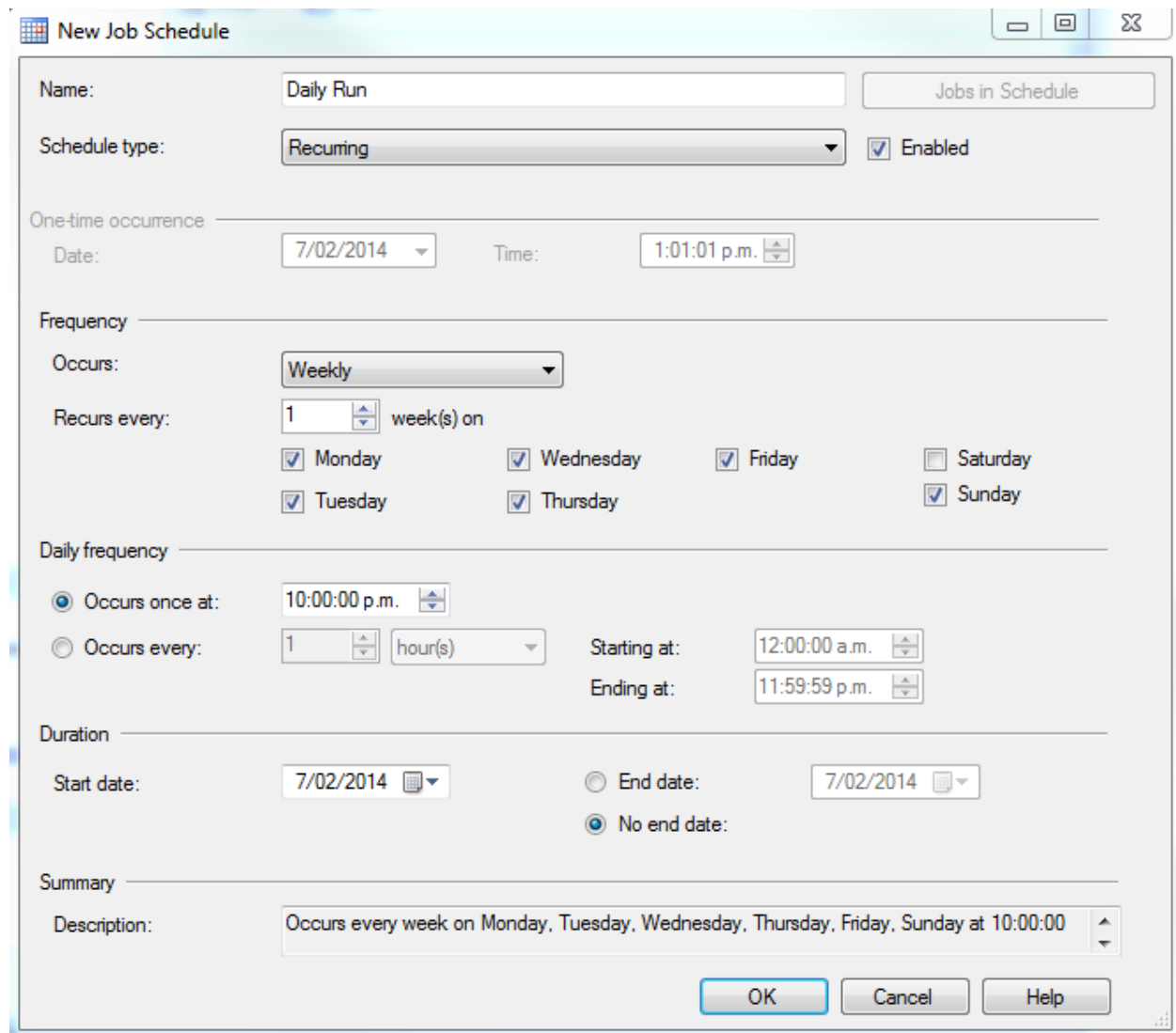
Progress

 Ready

Click OK.

Schedule the job

Schedule the job to meet your business requirements.



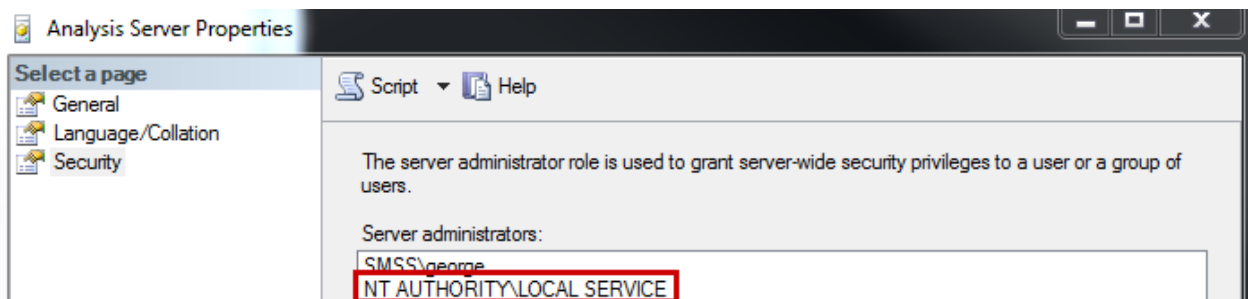
The image shows a 'New Job Schedule' dialog box with the following fields and options:

- Name:** Daily Run
- Jobs in Schedule:** (button)
- Schedule type:** Recurring
- Enabled:** ☒
- One-time occurrence:**
 - Date:** 7/02/2014
 - Time:** 1:01:01 p.m.
- Frequency:**
 - Occurs:** Weekly
 - Recurs every:** 1 week(s) on
 - ☒ Monday
 - ☒ Tuesday
 - ☒ Wednesday
 - ☒ Thursday
 - ☒ Friday
 - ☐ Saturday
 - ☒ Sunday
- Daily frequency:**
 - ☒ Occurs once at: 10:00:00 p.m.
 - ☐ Occurs every: 1 hour(s)
 - Starting at:** 12:00:00 a.m.
 - Ending at:** 11:59:59 p.m.
- Duration:**
 - Start date:** 7/02/2014
 - ☐ **End date:** 7/02/2014
 - ☒ **No end date:**
- Summary:**
 - Description:** Occurs every week on Monday, Tuesday, Wednesday, Thursday, Friday, Sunday at 10:00:00
- Buttons:** OK, Cancel, Help

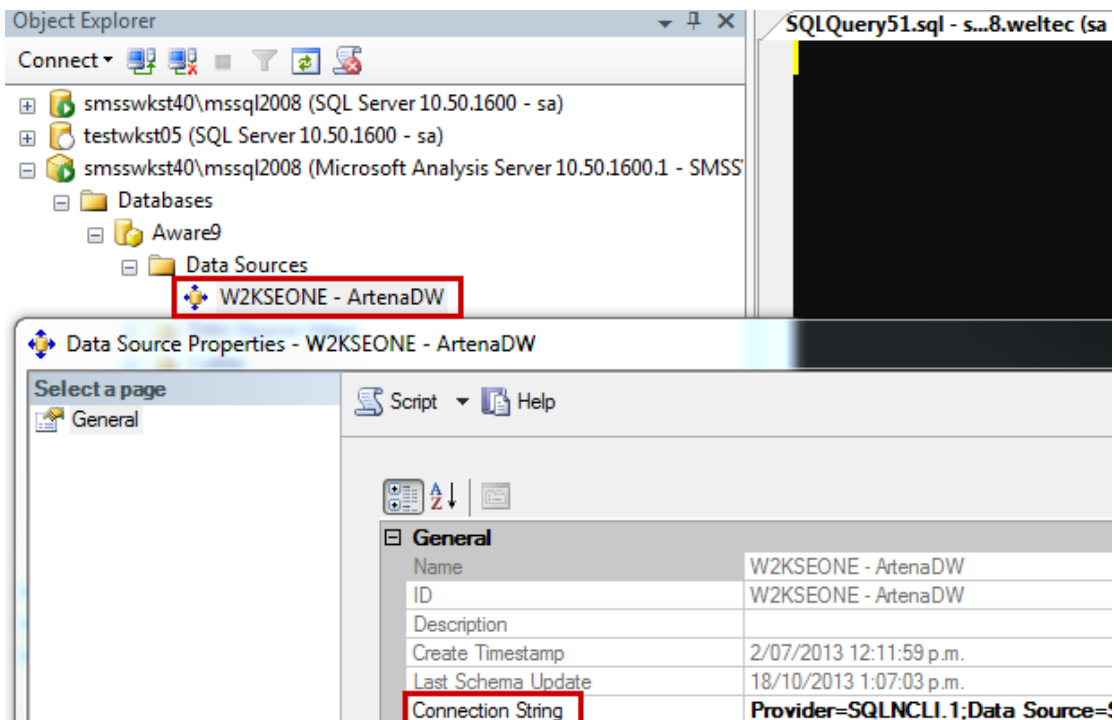
Appendix One: Artena BI Cubes Configuration

Database

- Open a connection to the Analysis Server.
- Open a XMLA query window on the server.
- Execute the ArtenaBICubes.xml script against the server.
- Add the local service as an administrator on the server:



- Configure the data source for the ArtenaBI Cubes database to point to the ArtenaBI database:
- Ensure ArtenaBI.dtsConfig is pointing to the ArtenaBI Cubes database on the cubes_db line



Appendix Two: Artena BI Reporter Configuration

1. Accounts and Groups

1.1. Service Account

This is a **domain user account** that is used to run the IIS Application Pool or the Apache Service and connect to the database.

For the purpose of this document “**test\artena**” is used.

To create a new domain user account use the Active Directory Users and Computers tool.

Give the account an appropriate name, for example, **abireporter**. Clear the User must change password at next logon and select Password never expires.

Use a strong password for the account. Strong passwords should include at least seven characters with a mixture of uppercase and lowercase letters, numbers, and other characters such as *, ?, or \$.

1.2. Reporter Security Group

This is a **domain user group** used to authorize access to Reporter. Only users that are members of this group are able to login into Reporter. The name of the group is not important. It is commonly referred to as the "Artena Group" or "Artena Security Group".

2. Database

Execute the following scripts against the ArtenaBI database in the order given below (there should be no errors)

- Reporter_CreateScript.sql
- (Optional) AwareLite_MigrateScript.sql
 - Only run this if you were previously a user of AwareLite.
 - For this script to function correctly your AwareLite database must be on the same server as your ArtenaBI database and must be named AwareLite.
- ArtenaBI_UpdateScript (Run each script in sequence according to the version number)

3. ETL

In the ArtenaBI configuration file (ArtenaBI.dtsConfig) set the reporter flag to True.

4. WAP – Web Server and PHP Setup

4.1 Unpacking the release

There are two versions of the web application:

- **reporter_ion** - PHP files encoded for **ionCube Loader**
This version is for use with **Apache** and the Thread Safe (**TS**) PHP **Apache module**.
- **reporter_zgl** - PHP files encoded for **ZendGuard Loader**
This version is for use with **IIS** and the Non-Thread Safe (**NTS**) PHP **FastCgi module**.

Note: Although it is possible to run PHP NTS as FastCgi under Apache and PHP TS as ISAPI module under IIS, it is recommended to use the combinations listed above.

Extract the package and place the web application files that match your web server and PHP version within the existing WAP structure on **C:** drive. This should result the following folder structure being created.

```
C:
|-- wap_artena                < Read & Execute, List Folder Contents, Read
|
|  |-- reporter
|  |  |-- private
|  |  |  |-- file_temp        < Write   (Temporary files)
|  |  |  |-- logs             < Write   (Application logs folder)
|  |  |  |-- server
|  |  |  |  |-- conf          <          (Application configuration and admin scripts)
|  |  |  |  |-- ...           <          (Some directories not listed for clarity)
|  |  |-- public              <          (Reporter Client application files)
|  |  |  |-- docs             <          (Reporter help documents)
|  |  |  |-- server           <          (Reporter Server application files)
|
|  |-- wap
|  |  |-- apache
|  |  |-- php
|  |  |  |-- x.x.xx-nts
|  |  |  |-- x.x.xx-ts
|  |  |  |-- logs             < Write
|  |  |  |-- sessions         < Write
|  |  |  |-- temp             < Write
|  |-- www
```

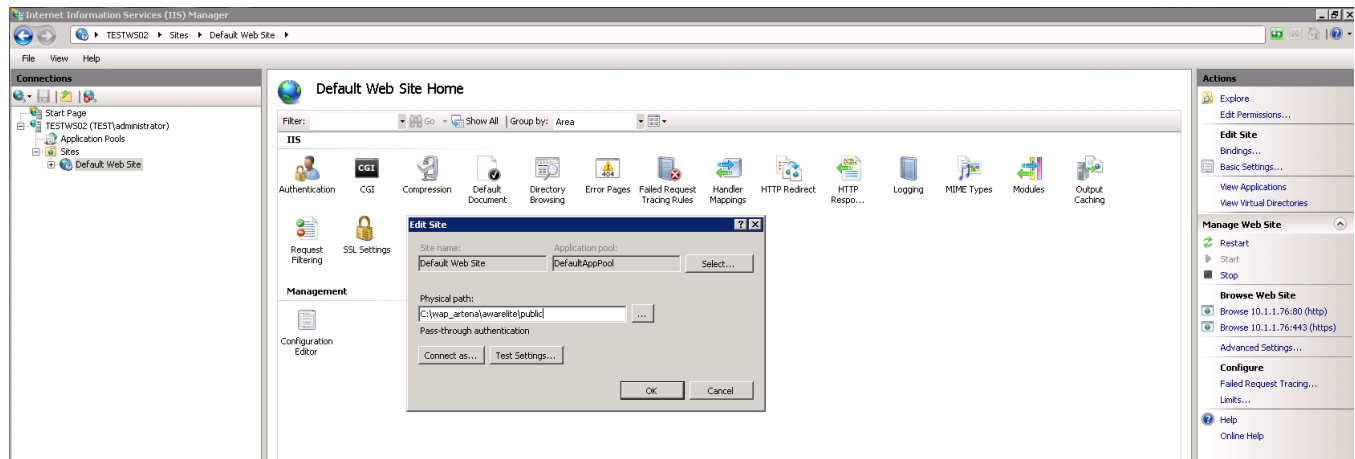
4.2 Assign file system privileges

The **test\artena** service account must be given the privileges as indicated above. The **Read & Execute, List Folder Contents, and Read** permission should apply **recursively**. Additionally the PHP **logs** and **temp** folder require **Write** permissions, as does the Reporter **file_temp** and **logs** folder.

4.3 Web Site Setup

4.3.a IIS 7, 7.5 - Website Setup

If the website is dedicated to Reporter, then you can simply change the **Default Web Site's** physical path to point to the **C:\wap_artena\reporter\public** folder.

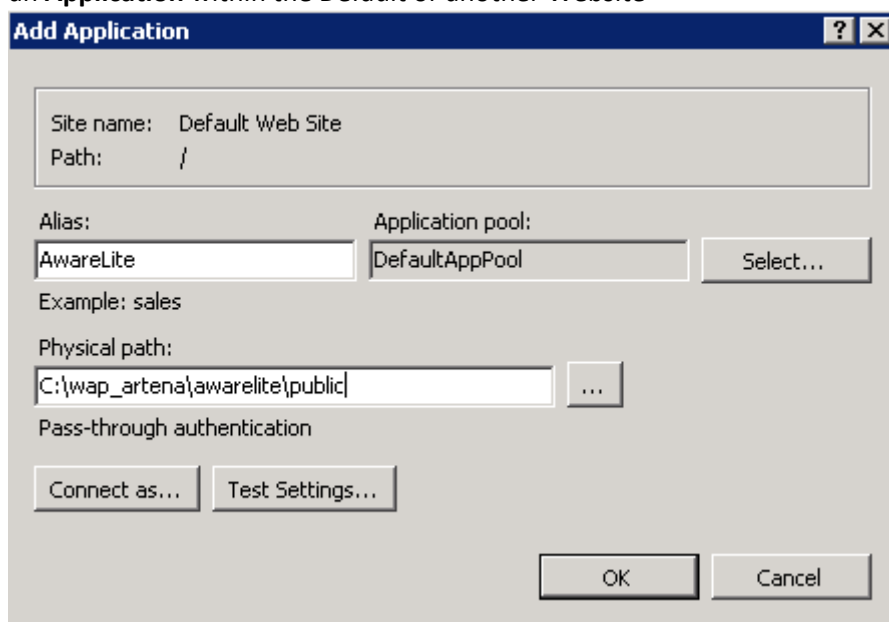


While setting up WAP you would have already setup and configured

- a FastCgiModule mapping for PHP
- a FastCgi application
- Application Pool identity
- Anonymous authentication

Reporter can also be setup as

- a **Website**
- an **Application** within the Default or another Website



- a **Virtual Directory** within the Default or another Website (not recommended)

4.3.b Apache 2.4 - Website Setup

No special group membership required.

- The **test\artena** service account must be set as the account the **Apache service** runs under.

4.3.b.1 Create and Configure the Reporter Virtual Host

Copy the **C:\wap_artena\wap\apache\conf\conf.d\Reporter.conf.dist** file to

C:\wap_artena\wap\apache\conf\conf.d\Reporter.conf

Edit the **C:\wap_artena\wap\apache\conf\conf.d\Reporter.conf** virtual host configuration file

```

1 # _ipaddress_ #####
2 Listen _ipaddress_:80
3
4 <VirtualHost _ipaddress_:80>
5     DocumentRoot "C:/wap_artena/awarelite/public"
6     ServerName _ipaddress_or_domainname_
7     ErrorLog logs/awarelite-error.log
8     CustomLog logs/awarelite.log common
9     Timeout 300
10    KeepAlive On
11    KeepAliveTimeout 300
12    MaxKeepAliveRequests 100
13
14    <Directory "/">
15        Options None
16        AllowOverride None
17        Order allow,deny
18        Allow from all
19    </Directory>
20 </VirtualHost>
21
22 Listen _ipaddress_:443
23
24 <VirtualHost _ipaddress_:443>
25     DocumentRoot "C:/wap_artena/awarelite/public"
26     ServerName _ipaddress_or_domainname_
27     ErrorLog logs/awarelite-error.log
28     CustomLog logs/awarelite-access.log common
29     Timeout 300
30     KeepAlive On
31     KeepAliveTimeout 300
32     MaxKeepAliveRequests 100
33
34     <Directory "/">
35         Options None
36         AllowOverride None
37         Order allow,deny
38         Allow from all
39     </Directory>
40
41     SSLEngine on
42     SSLCipherSuite ALL:!ADH:!EXPORT56:RC4+RSA:+HIGH:+MEDIUM:+LOW:+SSLv2:+EXP:+eNULL
43     SSLCertificateFile conf/ssl.crt/server.crt
44     SSLCertificateKeyFile conf/ssl.key/server.key
45     #SSLCertificateChainFile conf/ssl.crt/ca.crt
46     #SSLCACertificatePath conf/ssl.crt
47     #SSLCACertificateFile conf/ssl.crt/ca-bundle.crt
48     #SSLCACRevocationPath conf/ssl.crl
49     #SSLCACRevocationFile conf/ssl.crl/ca-bundle.crl
50     #SSLVerifyClient require
51     #SSLVerifyDepth 10

```

Replace all instances of **_ipaddress_** with the IP Address dedicated to Reporter.

Replace the all instances of **_ipaddress_or_domainname_** with the IP Address or Domain Name.

Replace the **server.crt** and **server.key** with the certificate and key for your server.

Restart the Apache Artena service for your changes to take effect.

Configuration

1. Reporter Application Configuration

Reporter uses the configuration for database, file storage, reports, and email settings. Configuration options are set in the **C:\wap_artena\ArtenaBI\Reporter\Server\private\server\conf\config.php** application configuration file. Please take care when editing.

On initial setup copy the **C:\wap_artena\ArtenaBI\Reporter\Server\private\server\conf\config.php.dist** file to

C:\wap_artena\ArtenaBI\Reporter\Server\private\server\conf\config.php

Edit the **C:\wap_artena\ArtenaBI\Reporter\Server\private\server\conf\config.php** application configuration file and configure the application for your environment.

When upgrading, read the Release Notes, and compare the new **config.php.dist** with your active configuration and merge the changes as required. (New configuration options may have been introduced, or existing ones removed/renamed.)

1.1. Configuration Options

All Reporter configuration options are detailed in the Configuration Options Table in the following layout/format

//section comment(for visual grouping)-----	
option_name	Option description
	Allowed Values: value1 value2 or An explanation of the allowed values. Example (Syntax): sample value Detail:

The Reporter configuration options are listed in the table below

Configuration Options Table

//global -----	
PRODUCTION_SERVER DEBUGGING_ENABLED	<p>Global Reporter configuration</p> <p>Allowed Values:</p> <p>PRODUCTION_SERVER = true/false DEBUGGING_ENABLED = true/false</p> <p>Example (Syntax):</p> <pre>if (!defined('PRODUCTION_SERVER')) define('PRODUCTION_SERVER', false); if (!defined('DEBUGGING_ENABLED')) define('DEBUGGING_ENABLED', true);</pre> <p>Detail:</p> <p>PRODUCTION_SERVER should be set to true in live environment. Debugging can be enabled in order for the application to log debug and error messages.</p> <p>In production, messages passed back to the client are filtered, in order not to reveal sensitive information.</p>
//databases -----	
databases	<p>The database configuration settings for the ArtenaBI database.</p> <p>Allowed Values:</p> <p>Mandatory:</p> <p>driver => sqlsrv dbhost => (local), hostname, or IP address dbname => the name of the database</p> <p>Optional:</p> <p>username => the username to connect with password => encrypted password drivername => SQL Native Client or SQL Server Native Client 10.0</p> <p>Example:</p> <pre>\$cfg->databases = array ('reporter' => array('driver' => 'sqlsrv', 'dbhost' => '(local)', 'dbname' => 'ArtenaBI'));</pre> <p>Detail:</p> <p>Both username and password configuration options must be present and not blank in order to use username and password authentication. Keep the database configuration on one line as per the example.</p>

//authentication -----	
auth_provider	<p>The authentication provider to use.</p> <p>Allowed Values:</p> <p>ldap</p> <p>Example:</p> <pre>\$cfg->auth_provider = 'ldap';</pre>
//site information -----	
site_name	<p>The site name to use for email subject lines.</p> <p>Example:</p> <pre>\$cfg->site_name = 'Artena';</pre>
//mail -----	
mail_provider	<p>Provider that is used to send emails.</p> <p>Example:</p> <pre>\$cfg->mail_provider = 'smtp';</pre>
smtp_host	<p>IP Address or hostname of the SMTP server.</p> <p>Example:</p> <pre>\$cfg->smtp_host = '192.168.0.3';</pre>
smtp_port	<p>SMTP port is optional. Can be used if SMTP server is listening on a non-default port.</p> <p>Example:</p> <pre>\$cfg->smtp_port = '25';</pre>
smtp_username	<p>Optional username if SMTP authentication used to send emails.</p> <p>Example:</p> <pre>\$cfg->smtp_username = 'root';</pre>

smtp_password	<p>Encrypted password of the account used to authenticate and send emails.</p> <p>Example:</p> <pre>\$cfg->smtp_password = 'ABCXYZ=';</pre> <p>Detail:</p> <p>Password must be encrypted using encrypt_password.php command line file. To do so run run_script.cmd batch file and enter encrypt_password.php when prompted, then enter the password, and use the generated encrypted value.</p>
from_name	<p>From name to use when sending emails.</p> <p>Example:</p> <pre>\$cfg->from_name = 'Reporter';</pre>
from_email	<p>Email address of the account used to authenticate and send emails.</p> <p>Example:</p> <pre>\$cfg->from_email = 'reporteruser@server.domain';</pre>
//security -----	
maintenance_mode	<p>In maintenance mode only the user specified by the maintenance_mode_user configuration option is allowed to login and perform operations.</p> <p>Allowed Values:</p> <pre>true or false</pre> <p>Example:</p> <pre>\$cfg->maintenance_mode = true;</pre> <p>Detail:</p> <p>Default is false.</p>
maintenance_mode_user	<p>The username of the user allowed to login and perform operations in Reporter during maintenance mode.</p> <p>Example:</p> <pre>\$cfg->maintenance_mode_user = 'AA';</pre>
session_timeout	<p>Time out for a session in minutes</p> <p>Example:</p> <pre>\$cfg->session_timeout = 30;</pre> <p>Detail:</p> <p>Value is in minutes.</p>
//ldap -----	

ldap_host	<p>IP Address of ldap Server</p> <p>Allowed values: IP address</p> <p>Example: \$cfg->ldap_host = '10.1.1.120';</p>
ldap_domain	<p>Domain Name of ldap Server</p> <p>Allowed Values: Domain name</p> <p>Example: \$cfg->ldap_domain = 'test';</p>
ldap_base_query	<p>Fully qualified domain name for ldap</p> <p>Example: \$cfg->ldap_base_query = 'DC=test,DC=domain';</p>
ldap_application_group_name	<p>Example: \$cfg->ldap_application_group_name = 'CN=ArtenaGroup,OU=Groups,DC=Test,DC=Domain';</p>
ldap_login_name_attribute	<p>Example: \$cfg->ldap_login_name_attribute = 'sAMAccountName';</p>
ldap_memberof_attribute	<p>Example: \$cfg->ldap_memberof_attribute = 'memberOf';</p>
ldap_display_name_attribute	<p>Example: \$cfg->ldap_display_name_attribute = 'cn';</p>
ldap_sync_user_loginname	<p>Example: \$cfg->ldap_sync_user_loginname = 'AA';</p>
ldap_user_in_group_method	<p>The method used to determine if a user belongs to a group.</p> <p>Allowed Values: userinfo or searchfilter</p> <p>Example: \$cfg->ldap_user_in_group_method = 'userinfo';</p>

	Detail: This setting is optional. If not set userinfo is used by default.
ldap_use_ssl	Connect to the ldap server with secure LDAP. Allowed Values: true or false Example: <code>\$cfg->ldap_use_ssl = true;</code> Detail: This setting is optional. If not set false is used by default. The server must support LDAPS connections.
//file management -----	
temp_directory	Directory for creating temporary files. Example: <code>\$cfg->temp_storage = 'D:\\path\\to\\file_temp\\';</code>
//help docs -----	
docs_root	Contains the Reporter Help Docs content. Example: <code>\$cfg->docs_root = 'D:\\path\\to\\docs_root\\';</code>