AA Adaptor v2.2 User's Guide

A utility for "AA OrgChart Web Part" for Corporate Organizational Chart

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Release 2.2

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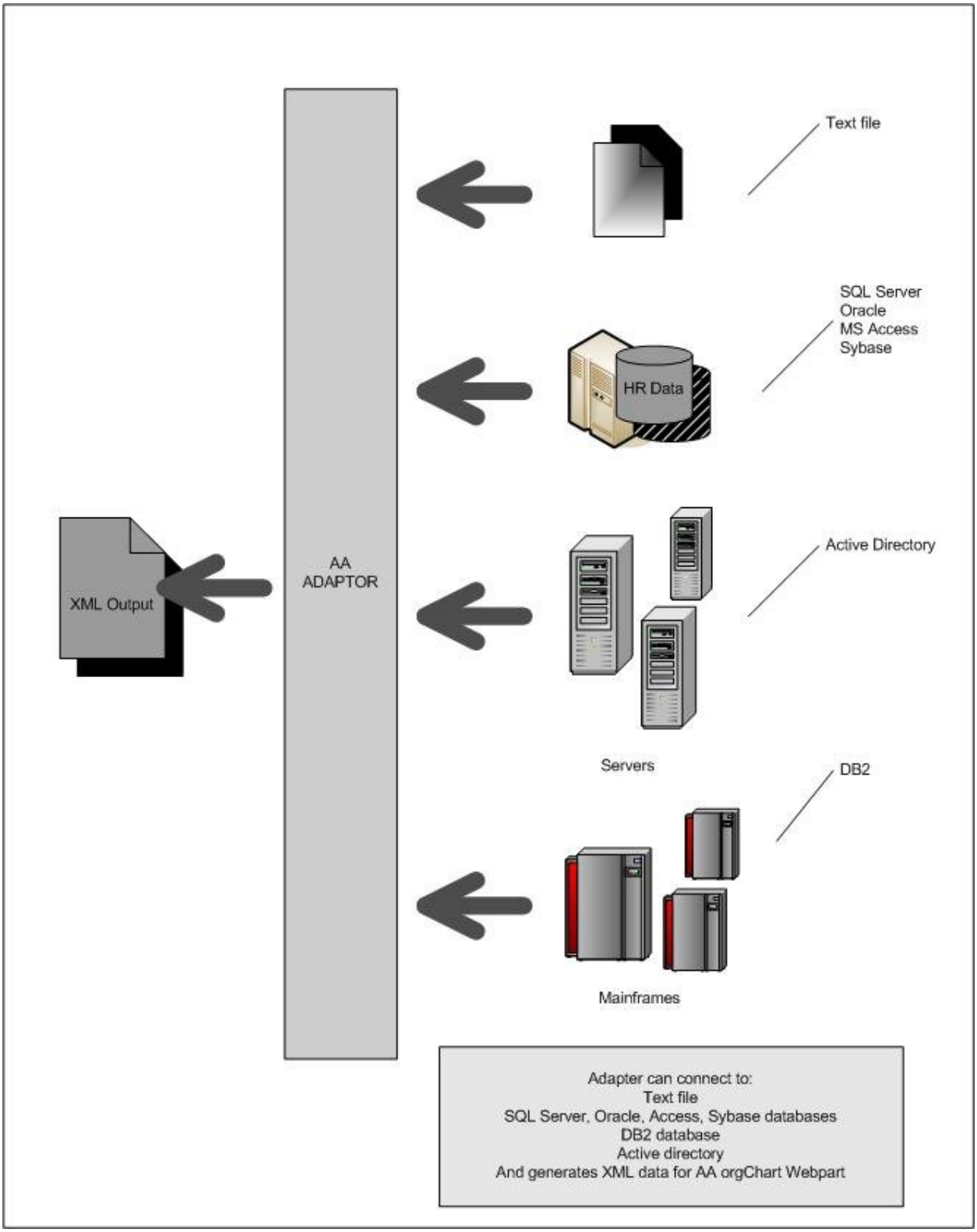
Chapter 1: General Overview

Overview:

"AA Adapter" utility program is used to connect to the HR data in a database, Excel file, text file, active directory, SharePoint User profile or SharePoint List. It generates HR data in the XML format that "AA OrgChart Webpart" or "XML Organization Chart .Net" requires.


Text file
SQL Server
Oracle
MS Access
Sybase
HR Data
XML Output
AA
ADAPTOR
Active Directory
Servers
DB2
Mainframes
Adapter can connect to:
Text file
SQL Server, Oracle, Access, Sybase databases
DB2 database
Active directory
And generates XML data for AA orgChart Webpart

"AA Adapter" is an application program that can be scheduled to run at a specific time and generates the XML required for the above programs.

The application uses AAAdaptor.XML file to get the configuration information such as connection string, data media, table, and fields in the database.

AA Adaptor comes with a sample access database (Chart.mdb) with a table (ReportTable), as well as a sample Excel file (OrgChart.xls) and a sample text file (ReportTable.txt) that contain personal information.

You need to change application configuration (AAAdaptor.XML file) to point to your data storage and your HR table or HR View. If all your HR information doesn't exist in one table you can create a view and use the View as your HR data table to AA Adaptor.

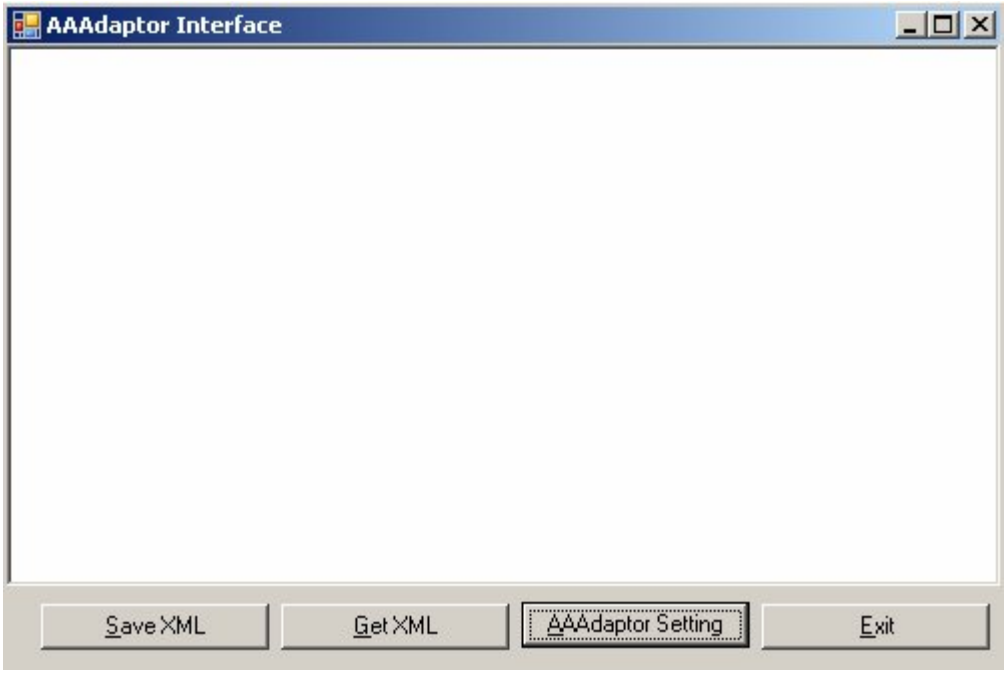
AA Adaptor has the option to log its activity in the log file defined in the configuration file. If the log file is not available, the application has the option to write the events to the event log.

AA Adaptor can be executed either as interactive mode or silent mode.

In the Interactive mode you can see the adaptor wrapper and can use the interface to:

- Configure the connection string and other settings.
- Test your connection to the database.
- Get the XML file extracted from the database in the memory
- Save XML data in the hard drive.

AA Adaptor wrapper has a simple interface to perform one of the above functions, as you can see in below.



By changing the interactive mode in the AAAdaptor.XML file you can run the application in silent mode.

When the application is set to run in silent mode, you can schedule the program to run at a certain time.

It is recommended to test the application in the interactive mode before running it in silent mode.

How to configure AA Adaptor:

AA Adaptor uses AAAdaptor.XML as the configuration file.

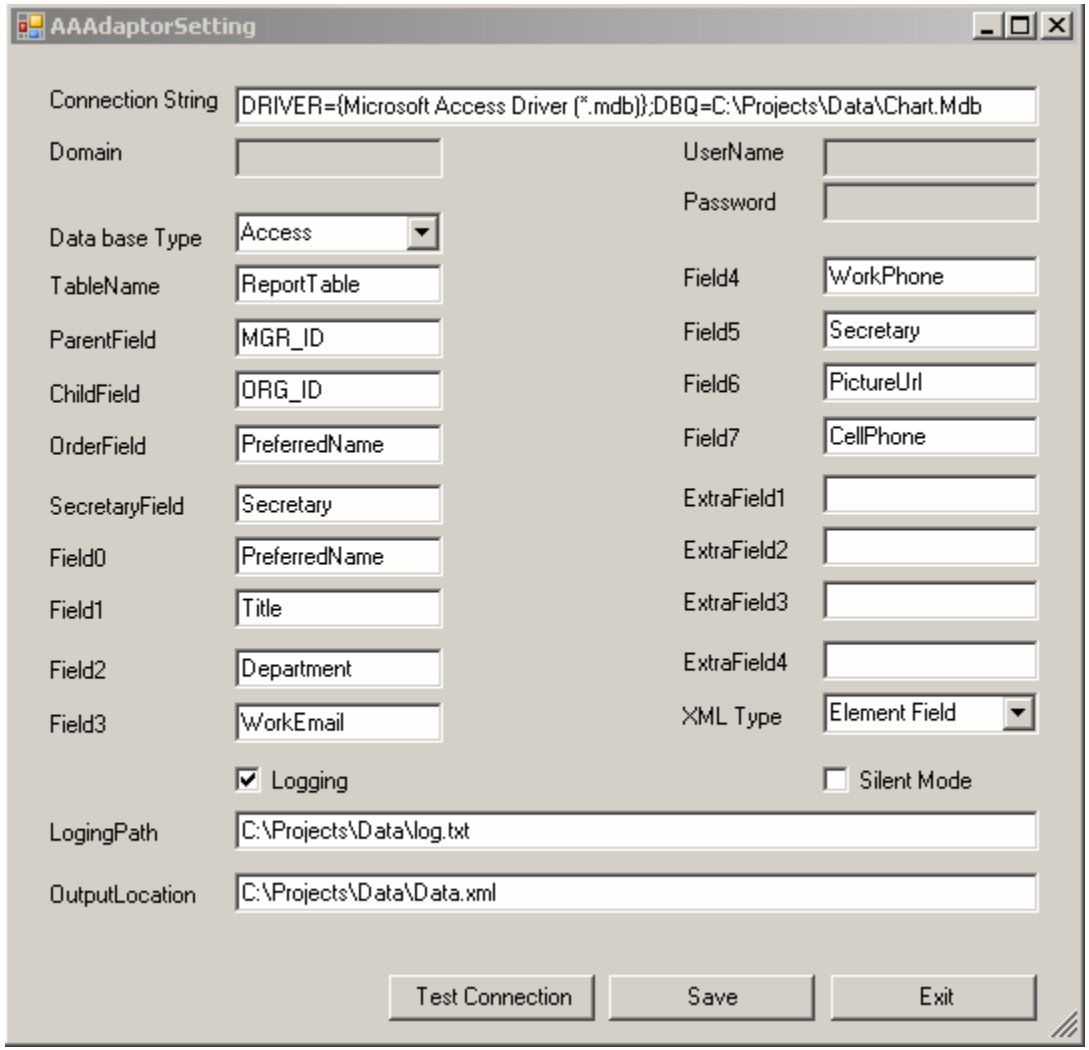
The following is the content of AAAdaptor.XML file configured to obtain data from an Excel file:

```
<?xml version="1.0" encoding="utf-8"?>
<AAAdaptor>
  <!-- Connection String for Access databases.-->
  <!--<add key="ConnectionString"
value="Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\Projects\Data\Chart.Mdb"/>-->
  <!--Connection String for SQL databases with Standard Security-->
  <!--<add key="ConnectionString" value=Provider=SQLOLEDB;Data
Source=local;Initial Catalog=ChartSQL;UserId=xxxx;Password=xxxx;"/>-->
```

```
  <!--Connection String for SQL databases with Trusted security-->
  <!--<add key="ConnectionString" value="Provider=SQLOLEDB;Data
Source=WSS2DEV;Initial Catalog=ChartSQL;Integrated Security=SSPI;" />-->
  <!--Excel Connection String-->
  <!--<add key="ConnectionString" value="DRIVER=Microsoft Excel Driver
(*.xls);MaxScanRows=8;DBQ=C:\Projects\Data\OrgChart.xls;FIL=excel
8.0;HDR=Yes"/>-->
  <!--SharePoint List Connection String-->
  <!-- This is the URL of SharePoint server -->
  <!--
      <add key="ConnectionString" value="http://aasoftech-win20:22043/"/>
      <add key="Domain" value="AASOFTECH-WIN20"/>
      <add key="UserName" value="xxxxx" />
      <add key="Password" value="xxxx" />
-->
  <!-- The following key worked for .NET 2.0 framework and the Odbc namespace
-->
  <!--<add key="ConnectionString" value="DRIVER={Microsoft Access Driver
(*.mdb)};DBQ=C:\Projects\Data\Chart.Mdb"/>-->
  <ConnectionString>DRIVER={Microsoft Access Driver
(*.mdb)};DBQ=C:\Projects\Data\Chart.Mdb</ConnectionString>
  <Domain>
  </Domain>
  <UserName>
  </UserName>
  <Password>
  </Password>
  <!-- The DatabaseType
             A = Access
             O = Oracle
             S = SQL Server
             T = Text File (future use)
     E = Excel File
     P = SharePoint List
      -->
  <DatabaseType>A</DatabaseType>
  <!-- Not sure what this key does-->
  <AutoExpand3Level>true</AutoExpand3Level>
  <!-- The table or SharePoint List which contains the Organization
information -->
  <TableName>ReportTable</TableName>
  <!-- The parent field in the organization table. -->
  <ParentField>MGR_ID</ParentField>
  <!-- The Child field in the organization table. -->
  <ChildField>ORG_ID</ChildField>
  <!-- The field to order by in the organization table. -->
  <OrderField>PreferredName</OrderField>
  <!-- The secretary field in the organization table. -->
  <SecretaryField>Secretary</SecretaryField>
  <!-- One of the fields in the organization table. -->
  <Field0>PreferredName</Field0>
  <!-- One of the fields in the organization table. -->
  <Field1>Title</Field1>
  <!-- One of the fields in the organization table. -->
  <Field2>Department</Field2>
  <!-- One of the fields in the organization table. -->
  <Field3>WorkEmail</Field3>
```

```
  <!-- One of the fields in the organization table. -->
  <Field4>WorkPhone</Field4>
  <!-- One of the fields in the organization table. -->
  <Field5>Secretary</Field5>
  <!-- One of the fields in the organization table. -->
  <Field6>PictureUrl</Field6>
  <!-- One of the fields in the organization table. -->
  <Field7>CellPhone</Field7>
  <!-- One of the fields in the organization table. -->
  <ExtraField1>
  </ExtraField1>
  <!-- One of the fields in the organization table. -->
  <ExtraField2>
  </ExtraField2>
  <!-- One of the fields in the organization table. -->
  <ExtraField3>
  </ExtraField3>
  <!-- One of the fields in the organization table. -->
  <ExtraField4>
  </ExtraField4>
  <!-- Determines if a log of actions is output to a file.
            true = log is created
            false = log is not created
       -->
  <Logging>True</Logging>
  <!-- Path to the log file -->
  <LogingPath>C:\Projects\Data\log.txt</LogingPath>
  <!-- Determines if the user interface is displayed
               Possible values are;
               1.  false : The user interface displays.
               2.  true      : The user interface does not display, XML is
automatically written out.  Uses the key 'OutputLocation' to determine where
to write the output file.
            -->
  <SilentMode>False</SilentMode>
  <!-- Determines the location of the XML file when the SilentMode='true'-->
  <OutputLocation>C:\Projects\Data\Data.xml</OutputLocation>
  <!-- Determines the XML file type
         Possible values are;\
         0: fields as attributes.
         1: fields as elements.-->
  <XMLType>1</XMLType>
</AAAdaptor>
```

You can change the parameters of "AAAdaptor.XML" file when you go to the "AAAdaptor Setting" window. To go to "AAAdaptor Setting" window, you need to start "AADBAdaptor.Wrapper.exe" and then click on the "AAdaptor Setting" push button. You should see the following window:



The following are the settings in the "AAAdaptor.XML" file that can be modified for each site.

<table>
<tr><th>Key</th><th>Purpose</th><th>Example</th></tr>
<tr><td>ConnectionString</td><td>Defines the location of the source data.</td><td><add key="ConnectionString" value="Provider=Microsoft.Jet.OLEDB.4.0;Data Source=C:\Chart.Mdb"/></td></tr>
<tr><td>DatabaseType</td><td>The type of datasource defined by the ConnetionString key.</td><td><add key="DatabaseType" value="A"/>

<table><tr><th>Accepted Values</th><th>Purpose</th></tr><tr><td>A</td><td>Access</td></tr><tr><td>O</td><td>Oracle</td></tr><tr><td>S</td><td>SQL Server,
SharePoint User Profile,</td></tr><tr><td>T</td><td>Text File</td></tr><tr><td>E</td><td>Excel File</td></tr><tr><td>P</td><td>SharePoint List</td></tr></table></td></tr>
</table>

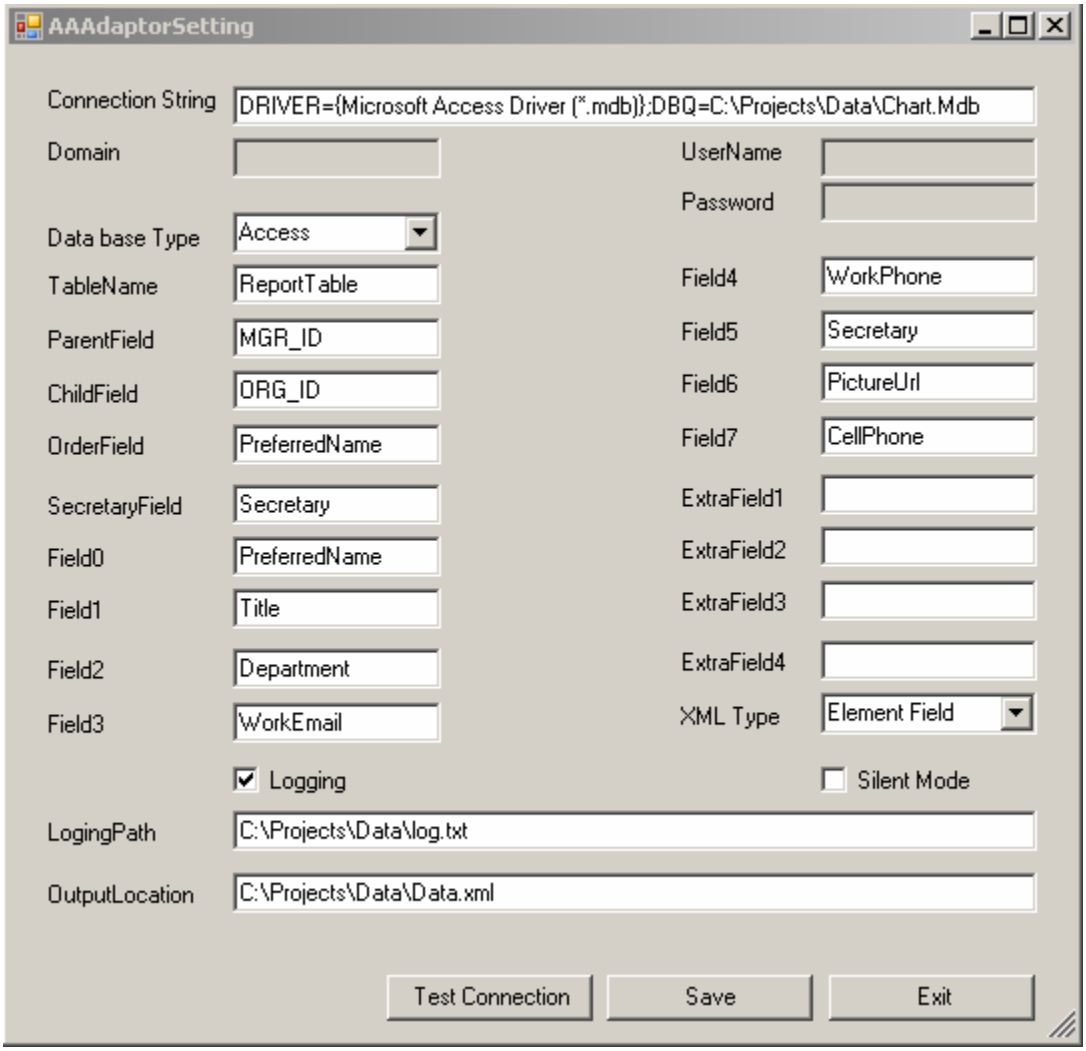
TableName	The name of the Organization table or view in the data source, or the sheet name of Excel file, or the name of a SharePoint list.	<add key="TableName" value="ReportTable"/>
ParentField	The name of the field in the Organization table representing unique Supervisor ID.	<add key="ParentField" value="MGR_ID"/>
ChildField	The name of the field in the Organization table representing unique Employee ID.	<add key="ChildField" value="ORG_ID"/>
OrderField	How the XML data is ordered when output. The data is always ordered ascending.	<add key="OrderField" value="PreferredName"/>
SecretaryField	The secretary field in the Organization table.	<add key="SecretaryField" value="Secretary"/>
Field0, Field1, Field2, Field3…Field7	Any eight fields defined in the Organization table.	<add key="Field0" value="PreferredName"/> …. <add key="Field7" value="CellPhone"/>
ExtraField1, ExtraField2, ExtraField3, ExtraField4	4 extra fields defined in the Organization table.	<add key=" ExtraField1" value="Your extra field"/> …. <add key=" ExtraField4" value="Your extra field"/>
Logging	Determines if a log file is written.	<add key="Logging" value="N"/>

<table>
<tr><td></td><td></td><td><table><tr><th>Accepted Values</th><th>Purpose</th></tr><tr><td>N</td><td>Log file is not written.</td></tr><tr><td>Y</td><td>Log file is written.</td></tr></table></td></tr>
<tr><td>LogingPath</td><td>The location to place the log file when the Logging key equals “Y”.</td><td><add key="LogingPath" value="C:\Adapterlog.txt"/></td></tr>
<tr><td>SilentMode</td><td>Determines if the user interface displays when running the program.</td><td><add key="SilentMode" value="N"/>
<table><tr><th>Accepted Values</th><th>Purpose</th></tr><tr><td>N</td><td>User interface does NOT display.</td></tr><tr><td>Y</td><td>User interface does display.</td></tr></table></td></tr>
<tr><td>OutputLocation</td><td>The location to place the XML file when the SilentMode key equals “Y”.</td><td><add key="OutputLocation" value="C:\OrgChart.xml"/></td></tr>
<tr><td>XMLType</td><td>Type of the output XML</td><td><table><tr><th>Accepted Values</th><th>Purpose</th></tr><tr><td>1</td><td>Standard (default)</td></tr></table></td></tr>
</table>

		0	Attribute base. Supports older version of "AA OrgChart Web Part" (1.6 and earlier)
		Use the default setting for this parameter.	

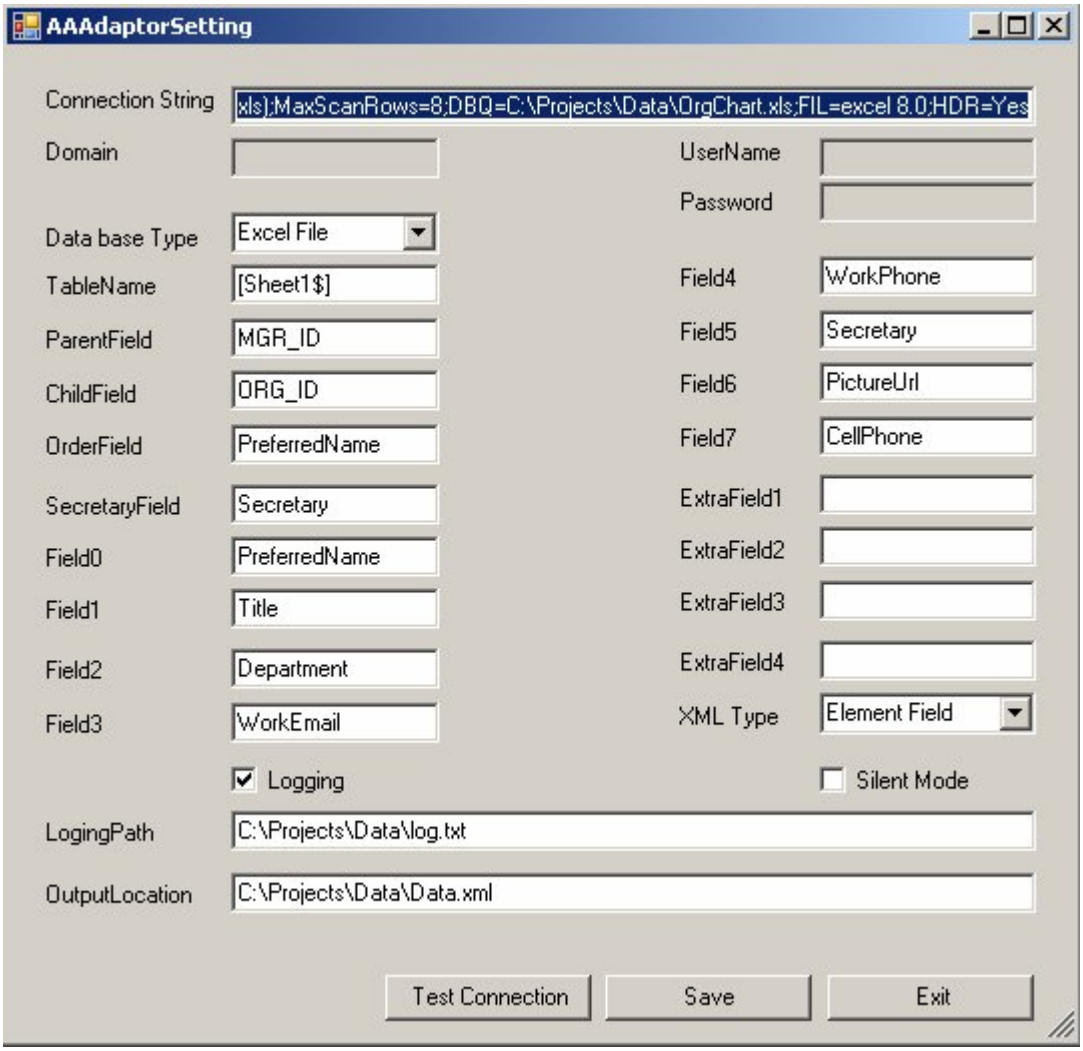
Sample AAAdaptor.XML to connect to Access:

The following is an example of the settings fields when you want to connect to Access Database.



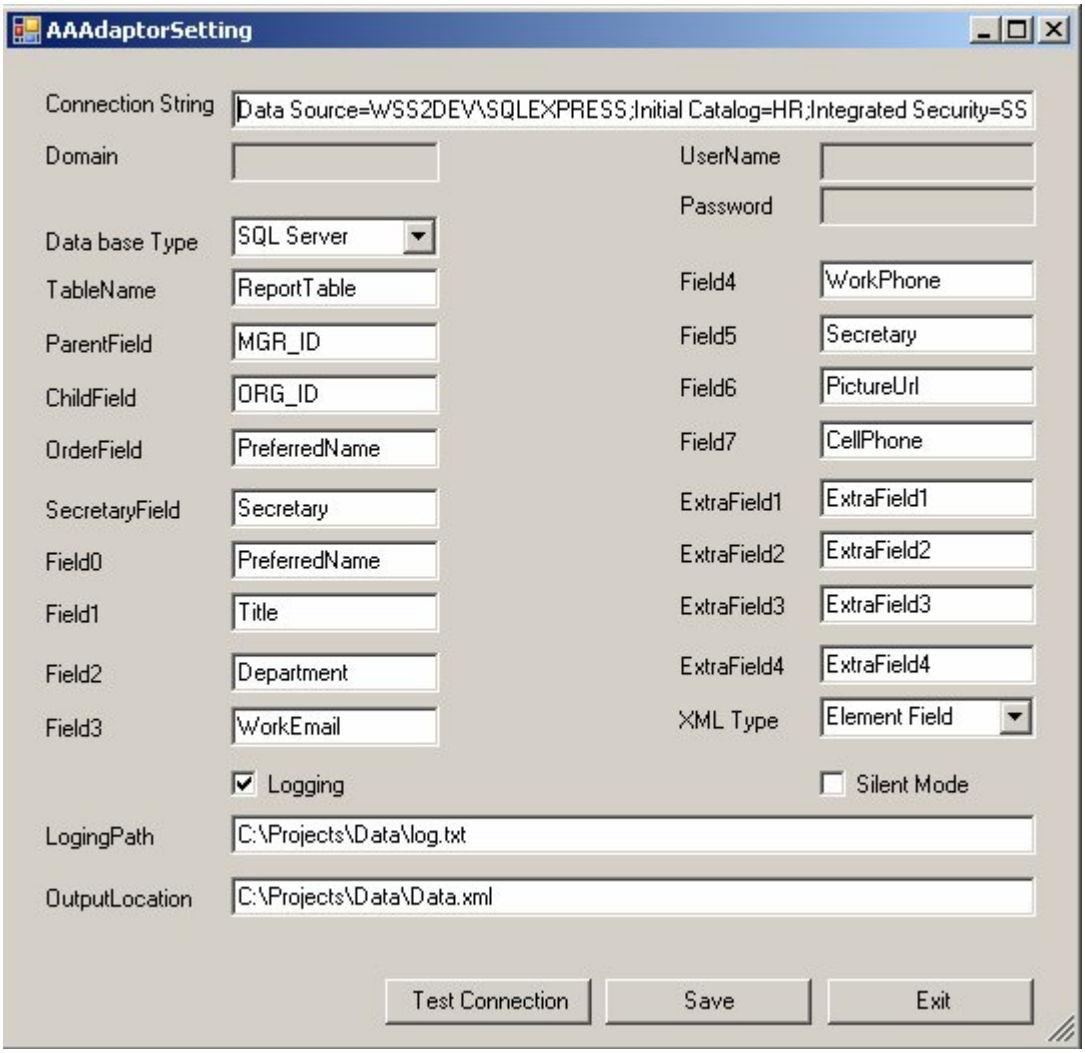
Sample AAAdaptor.XML to connect to Excel file:

The following is an example of the settings fields when you want to connect to Excel File.



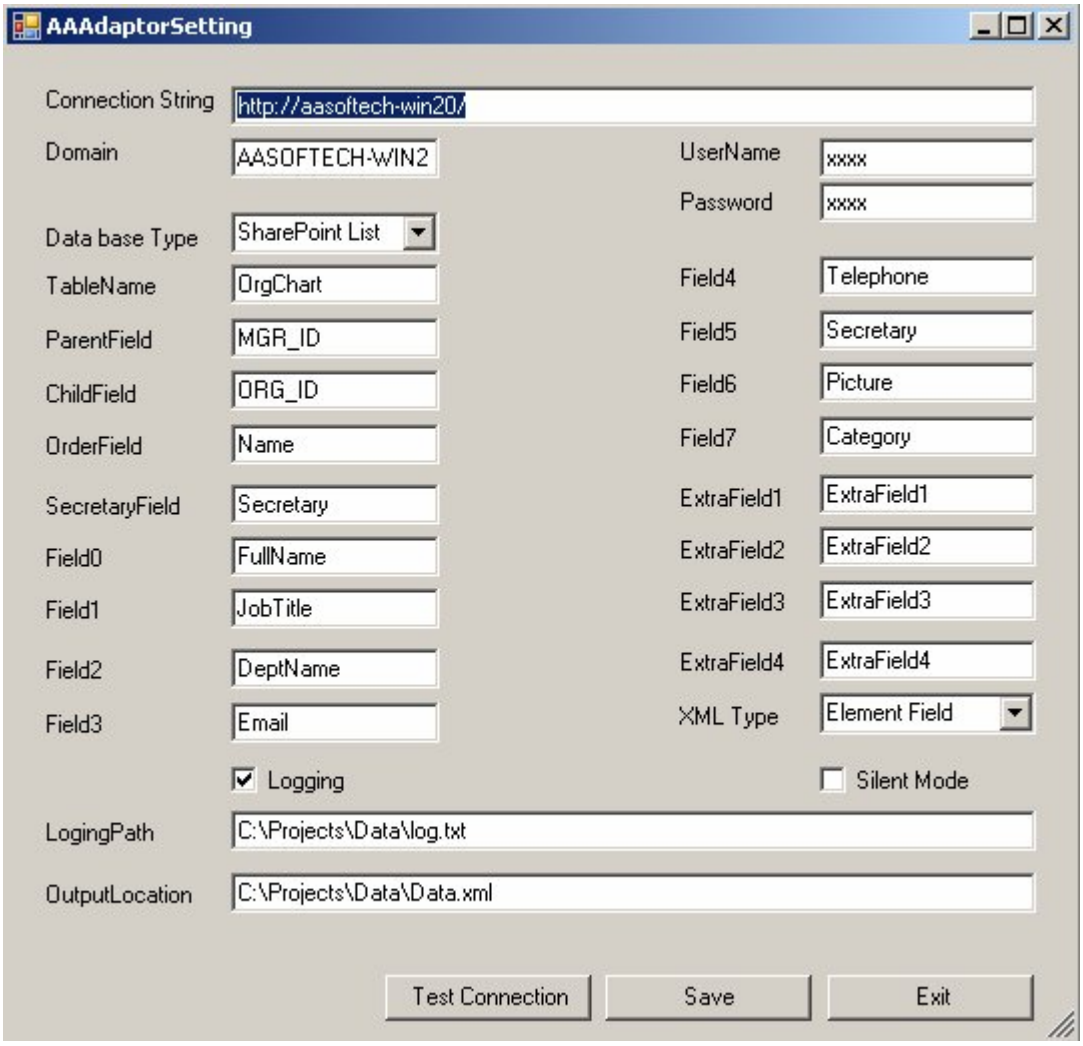
Sample AAAdaptor.XML to connect to SQL Server:

The following is an example of the settings fields when you want to connect to SQL Server database.



Sample AAAdaptor.XML to connect to SharePoint List:

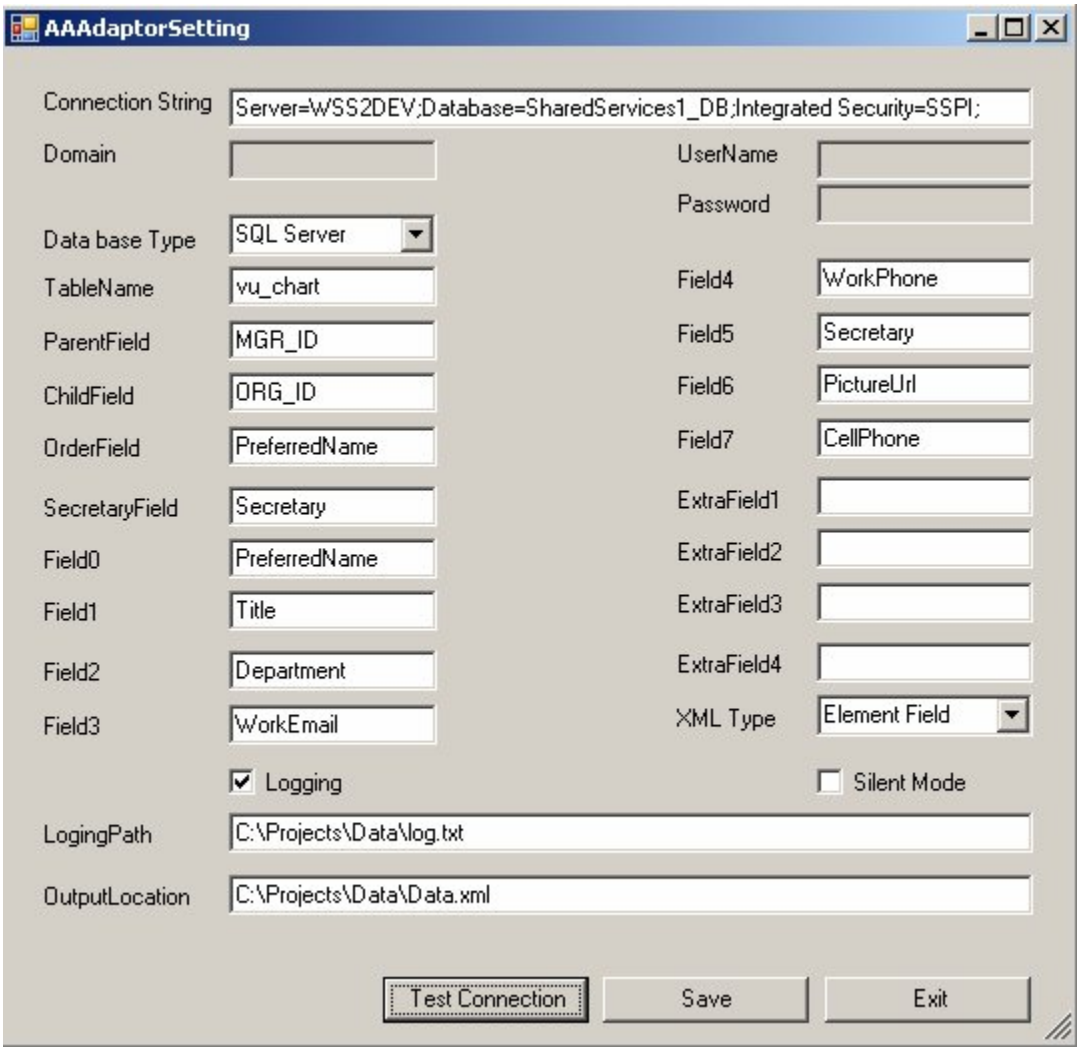
The following is the example of the settings fields when you want to connect to SharePoint List.



Sample AAAdaptor.XML to connect to SharePoint User profile:

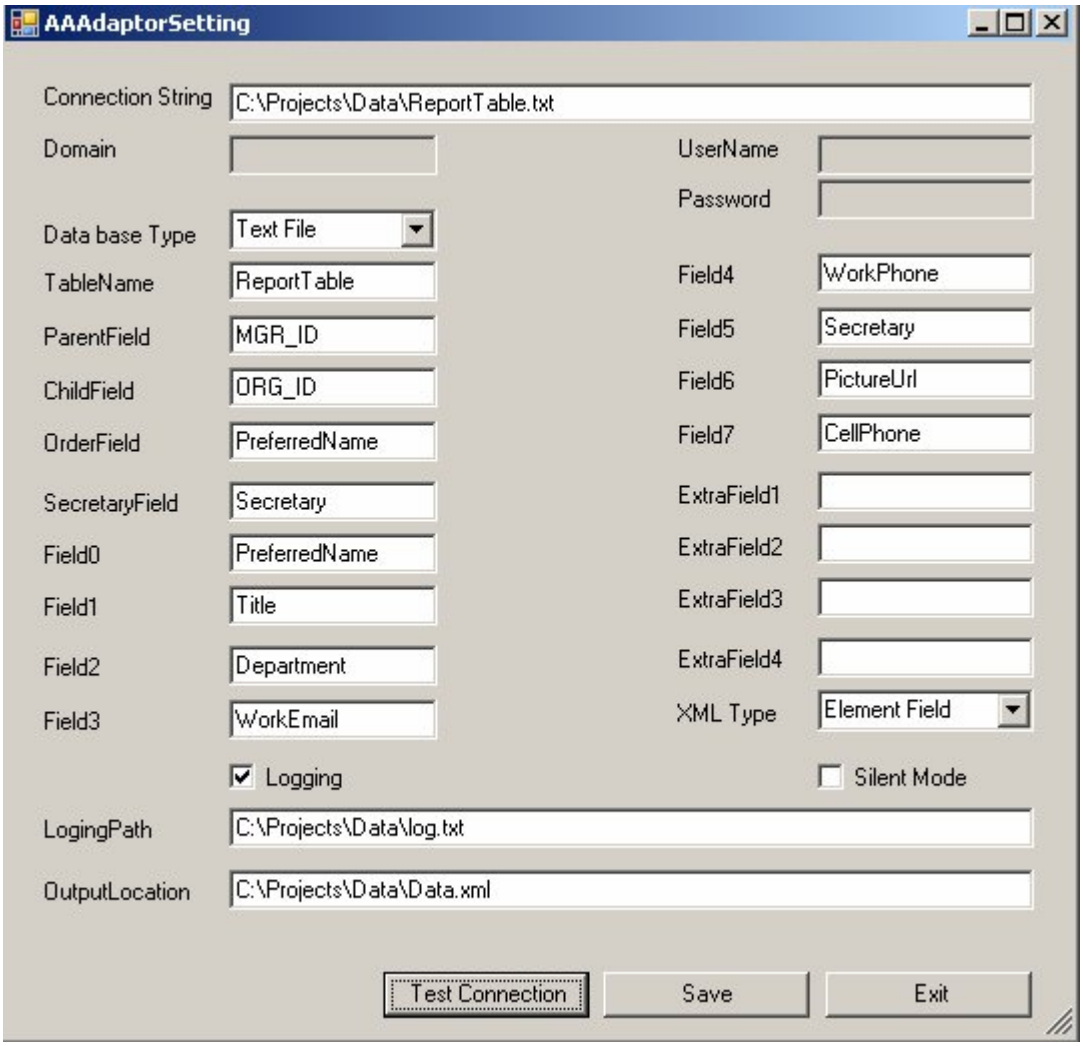
If you have MOSS you can directly connect "AAOrgChart Web Part" to user profile and you don't need AAAdaptor. To connect directly to UserProfile look at "AAOrgChart Web Part" user's guide Chapter 7.

If you still want to connect to user profile using AAAdaptor the following is an example of the settings fields when you want to connect to SharePoint user profile.



Sample AAAdaptor.XML to connect to Text file:

The following is an example of the settings fields when you want to connect to Text file.



By changing the connection string and other settings in the above window, you can point to your own database.

By saving the above window, you will generate an "AAAdaptor.XML" file.

There are several sample XML files shipped with the product to show you how to connect to access, sql server, excel, text file, SharePoint List, or User SharePoint Profile. You can see the parameters on these sample files to figure out how to setup your own configuration in the above window.

The following are the sample XML files coming with the product:

Sample Configuration file	Usage
AAAdaptor_Access.xml	Has parameters when you want to connect to access database
AAAdaptor_Excel.xml	Has parameters when you want to connect to Excel file
AAAdaptor_SharepointList.xml	Has parameters when you want to connect to SharePoint List
AAAdaptor_Text.xml	Has parameters when you want to connect to Text file
AAAdaptor_SharePointUserProfile.xml	Has parameters when you want to connect to SharePoint User profile
AAAdaptor_SQLServer.xml	Has parameters when you want to connect to SQL Server database

Examples:

ConnectionString example:

Condition	Sample
Connect to MSAccess (.Net 1.0)	`<add key="ConnectionString" value="Provider=Microsoft.Jet.OLEDB.4.0;Data Source=C:\AADBAdaptor\Chart.Mdb"/>`
Connect to	`<add key="ConnectionString" value="DRIVER={Microsoft`

MSAccess (.Net 2.0)	Access Driver (*.mdb)};DBQ=C:\Projects\Data\Chart.Mdb"/>
Connect to SQL Server	<add key="ConnectionString" value="Data Source=local;Initial Catalog=ChartSQL;UserId=WSS2DEV\abcd;Password=123456;"/>
Connect to Excel	<add key="ConnectionString" value="DRIVER=Microsoft Excel Driver (*.xls);MaxScanRows=8;DBQ=C:\Data\OrgChart.xls;FIL=excel 8.0;HDR=Yes"/>
Connect to Text	<add key="ConnectionString" value="C:\Projects\Data\ReportTable.txt"/>
Connect to SharePoint List	<add key="ConnectionString" value="http://your SharePoint Server/"/>
Connect to SharePoint User Profile	<add key="ConnectionString" value="Source=USATLSV45;Initial Catalog=MOSS_SharedServices_DB;Integrated Security=SSPI;"/>

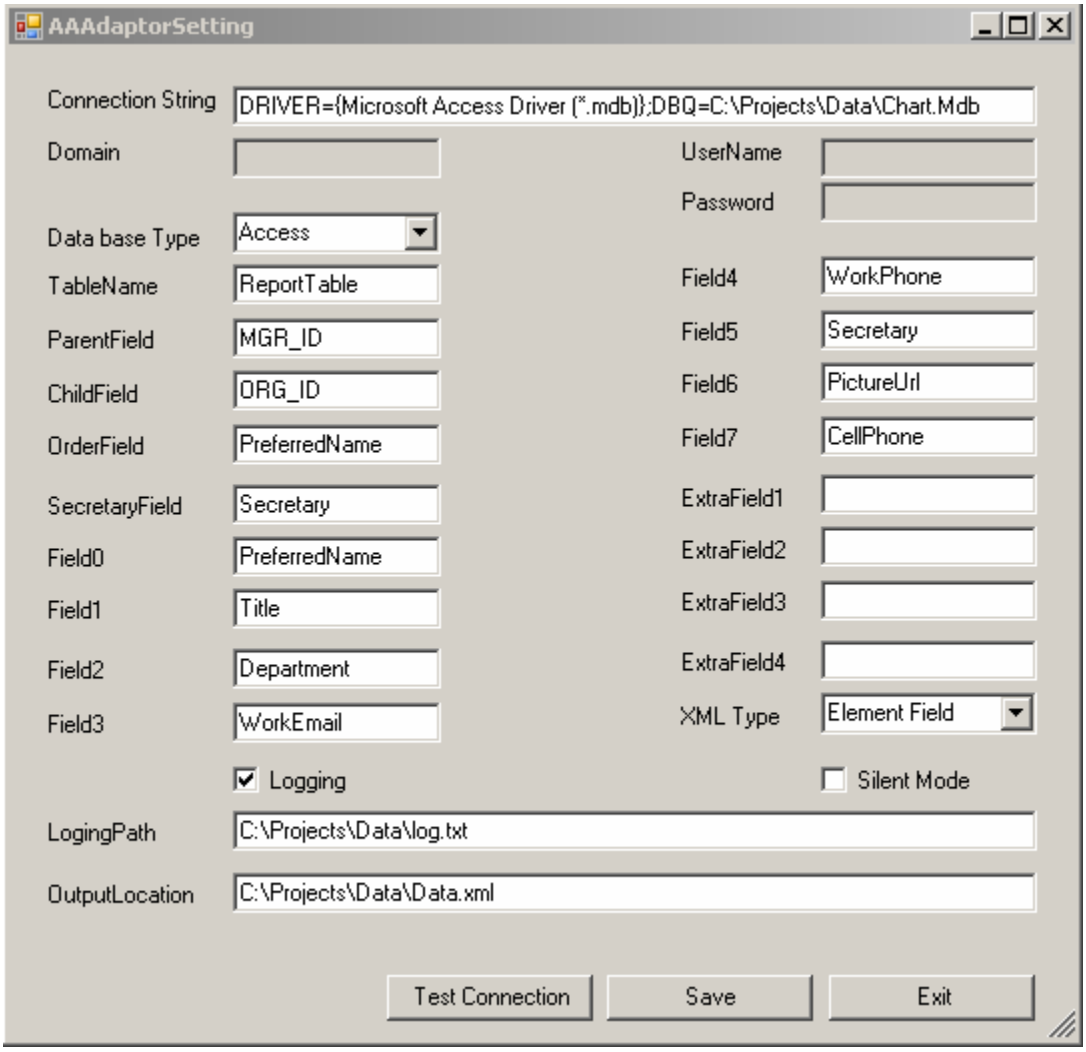
Table Name example:

Accepted Values	Purpose
Connect to MSAccess	<add key="TableName" value="ReportTable"/>
Connect to SQL Server	<add key="TableName" value="ReportTable"/>
Connect to Text	<add key="TableName" value="ReportTable"/>
Connect to Excel	<add key="TableName" value="sheet1"/>
Connect to SharePoint User Profile	<add key="TableName" value="vu_Chart"/>
Connect to SharePoint List	<add key="TableName" value="List1"/>

Chapter 2: **How to use "AA Adaptor" Utility program**

1- Run "AADBAdapter.Wrapper.exe" program .

First click on the "Adaptor Setting" push button to make sure you can connect to the database. Set the parameters so that you can create an XML data from access database.

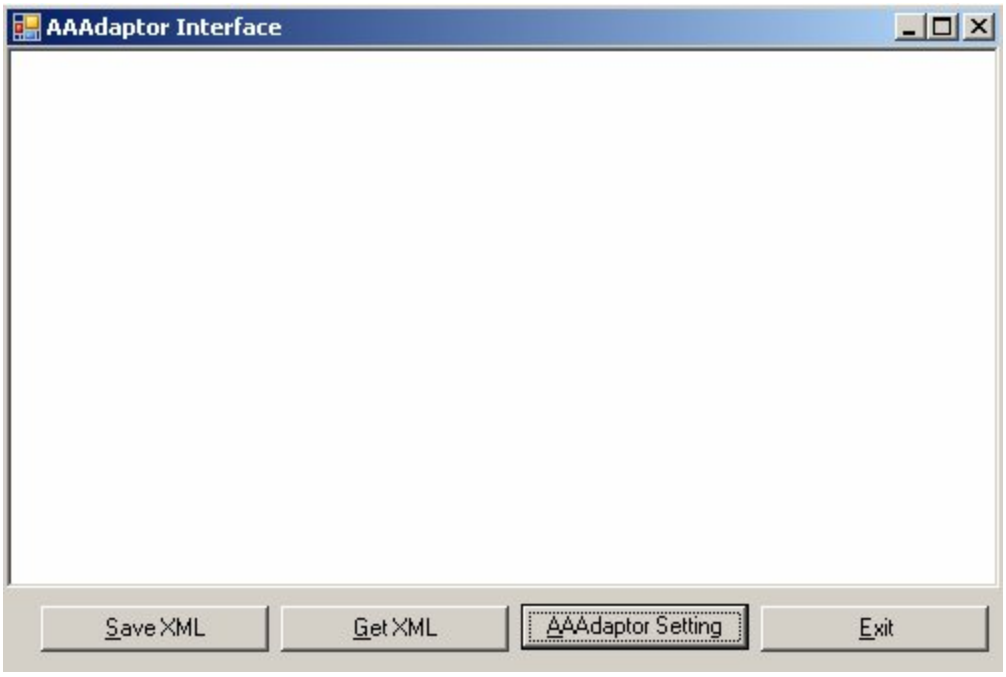


Make sure the access database location in the connection string is correct and that the Database Type is Access.

Use the same path for "LoggingPath" and "OutputLocation" at the bottom of the settings window.

Click on Save. Then click on the "Test Connection" button. If "Test Connection" is running fine, then click Exit to close the window..

2- You should now see the following window:

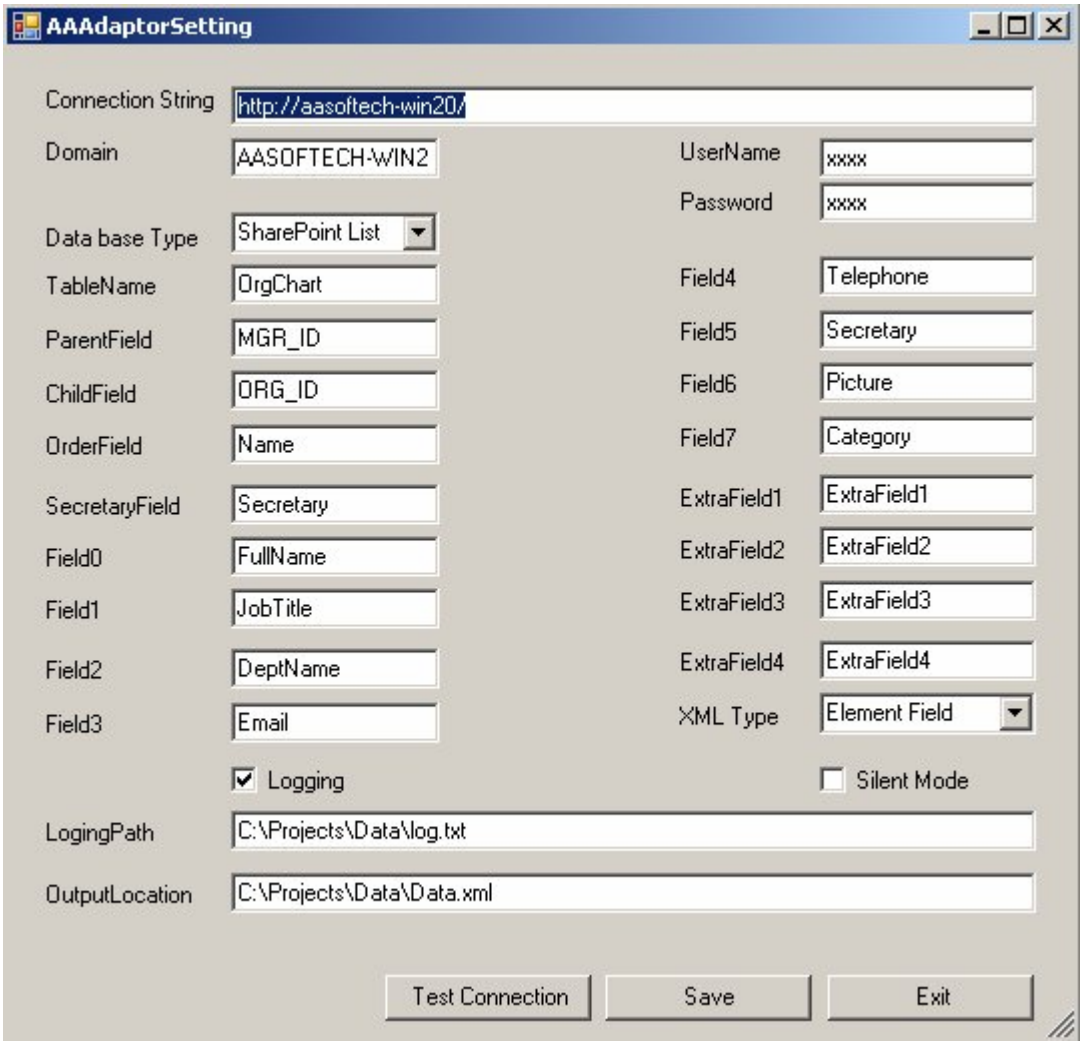


Click on "Save XML" to save the data. Choose where you want to save the XML file. The XML file should now be created, and the XML result should be displayed in the same window. If you get an error look at the log file. If the log file is not created, look at the event log.

3- Configure "AAAdaptor.XML" file to point to your database.

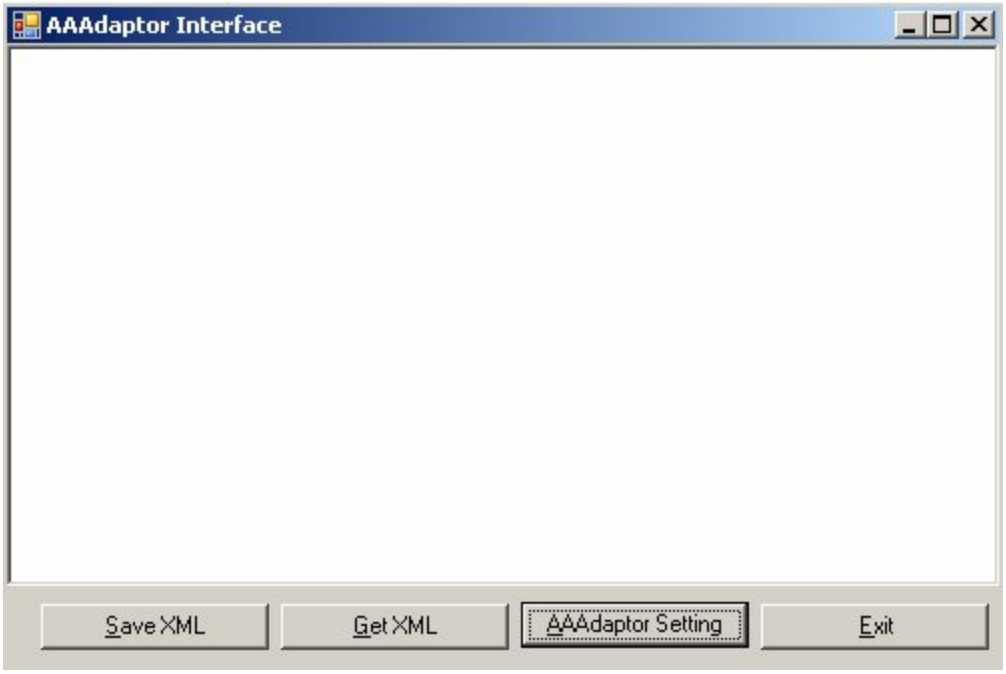
Within AA Adaptor zip file there are several sample XML files that are pointing to different data sources.

Choose the XML that has the same data source as yours. Make a backup of current AAAdaptor.XML and rename the new XML file as AAAdaptor.XML. For example, if your data source is SharePoint List, rename "AADBAdaptor_SharePointList.xml" to "AAAdaptor.XML" and then click on the "AAAdaptor Setting" push button.



Now modify the connection string, domain name, userid and password. Make sure other parameters are correct (domain name, userid and password parameters are only enabled when you want to connect to SharePoint List). Save the XML and test the connection using "Test Connection".

When "Test Connection" is successful, exit the window and run the main program from the following window:

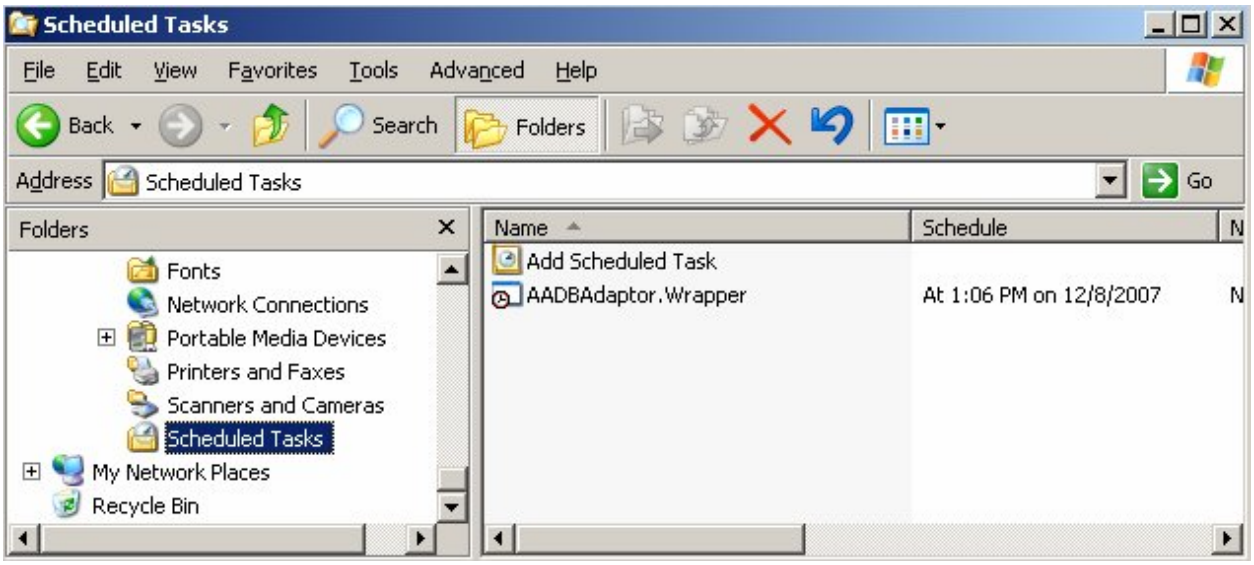


Click on "Save XML" to save the XML data.

Copy Data.XML to \wpresources\HRWebParts\HRData directory. Refresh your "AA OrgChart" page.

Scheduling AA Adaptor utility program:

To generates XML data used by "AA Adaptor Orgchart" you can use windows scheduler program to schedule "AADBAdapter.Wrapper.exe".


Scheduled Tasks
File Edit View Favorites Tools Advanced Help
Back Search Folders
Address Scheduled Tasks
Go
Folders
Fonts
Network Connections
Portable Media Devices
Printers and Faxes
Scanners and Cameras
Scheduled Tasks
My Network Places
Recycle Bin
Name
Schedule
Add Scheduled Task
AADBAdaptor.Wrapper
At 1:06 PM on 12/8/2007

Chapter 3: How to connect to SharePoint 2007 User Profile

If you have MOSS you can directly connect "AAOrgChart Web Part" to user profile and you don't need AAAdaptor. To connect directly to UserProfile look at "AAOrgChart Web Part" user's guide Chapter 7.

If you still want to connect to UserProfile using AAAdaptor first create a view using the script CreateSharePointView.SQL submit in this kit in Sharepoint database.

The following is the script for generating the View.

```
--Create View in SharePoint Shared Services Database (default name is SharedServices1_DB)

USE [SharedServices1_DB]
GO
/****** Object:  View [dbo].[vu_Chart]    Script Date: 02/20/2007 21:52:38 ******/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO

CREATE View [dbo].[vu_Chart] AS

SELECT  aa.PreferredName as 'Name', bb.Title as 'JobTitle', bb.Department as 'DeptName', aa.ORG_ID,
aa.MGR_ID, '<Img src=' + '/wpresources/HRWebparts/HRData/images/not_img.jpg>' as Picture, '' + aa.Email +''
as Email, bb.Telephone, '0' as 'Secretary', 'Employee' as 'Category'
FROM
(SELECT UserProfile_Full.RecordID, UserProfile_Full.RecordID AS 'ORG_ID', UserProfile_Full.NTName,
UserProfile_Full.PreferredName, UserProfile_Full.Email, UserProfile_Full.Manager, UserProfile_Full.DataSource,
UserProfile_Full_1.RecordID AS 'MGR_ID',
(CASE WHEN UserProfile_Full.Manager IS NULL THEN 0 ELSE 1 END) AS 'HasParent',
(CASE WHEN b.childcount IS NULL THEN 0 ELSE b.childcount END) AS childcount
        FROM UserProfile_Full
        LEFT OUTER JOIN UserProfile_Full AS UserProfile_Full_1
        ON UserProfile_Full.Manager = UserProfile_Full_1.NTName
```

LEFT OUTER JOIN

(SELECT Manager, COUNT(Manager) AS 'ChildCount' FROM UserProfile_Full AS UserProfile_Full_2 WHERE (Email LIKE '%aa%') AND (Manager IS NOT NULL) GROUP BY

Manager) AS b

ON UserProfile_Full.NTName = b.Manager

WHERE (UserProfile_Full.Email LIKE '%aa%')) AS aa

LEFT OUTER JOIN (

SELECT a_1.RecordID, a_1.PropertyVal AS 'Telephone', CAST(b_1.PropertyVal AS varchar(250)) AS 'Title', CAST(c.PropertyVal AS varchar(250)) AS 'Department'

FROM

(SELECT RecordID, PropertyVal FROM UserProfileValue WHERE (PropertyID = 8)) AS a_1 INNER JOIN (SELECT RecordID, PropertyVal FROM UserProfileValue AS UserProfileValue_2 WHERE (PropertyID = 13))

AS b_1

ON a_1.RecordID = b_1.RecordID

INNER JOIN

(SELECT RecordID, PropertyVal FROM UserProfileValue AS UserProfileValue_1 WHERE (PropertyID = 14)) AS c ON a_1.RecordID = c.RecordID) AS bb ON aa.RecordID = bb.RecordID

Then change the connection string of this file to point to your sharepoint database:

<add key="ConnectionString" value="Server=WSS2DEV;Database=SharedServices1_DB;Integrated Security=SSPI;"/>

Run "AADBAdapter.Wrapper.exe". First from "AAAdaptor Setting" Window click on TestConnection to make sure you can connect to the database. Then click on SaveXML to save the data. And Choose where you want to save the XML file. The XML file should be created where you have chosen. Make sure the file name is Data.XML.

When Data XML is created, move the XML file into the directory where sample Data.XML exist. It should be under \wpresources\HRWebParts\HRData\Data.XML directory. Reset IIS server and refresh the page.

Chapter 4: How to connect to Active Directory to extract personal information.

You can either import from Active Directory to SharePoint 2007 database, or from SQL server link to active directory.

Either way, you need to connect to the database (either SharePoint database or SQL server) to get Active Directory information. The previous sections describe how to connect to SQL server or SharePoint database.

To link to Active directory from SQL server, follow the instruction written in the link in below:

http://articles.techrepublic.com.com/5100-6345_11-5259887-2.html

Basically you need to link to Active Directory using SQL statement similar to the following SQL Script:

```
EXEC
sp_addlinkedserver 'ADSI', 'Active Directory Services 2.5',
'ADSDSOObject', 'adsdatasource'
```

The following is the View that can be used by AA Adaptor to get Active directory data.

```
SELECT title as JobTitle, displayName as Name,manager,department as DeptName,
        mail as Email, telephoneNumber as Telephone,info as Category,info as Picture,
        displayName as ORG_ID, manager as MGR_ID, 0 as 'Secretary',
 (CASE WHEN manager IS NULL THEN 0 ELSE 1 END) AS 'HasParent'
        FROM OpenQuery(ADSI, 'SELECT title,manager,mail, info,department,
displayName, sAMAccountName, givenName, telephoneNumber,
facsimileTelephoneNumber, sn FROM "LDAP://DEV" where objectClass = "User"')
```

Generate the above SQL as View and pass as TableName to AAAdaptor.XML of "AA. Adaptor"

Chapter 5: XML data format used in "AA OrgChart WebPart" Web Parts.

"AA OrgChart WebPart" uses XML data as input file.

The following is the XML data used in "AA OrgChart WebPart".

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<RS>
<Employee>
<ChildCount>9</ChildCount>
<HasParent>1</HasParent>
<MGR_ID>1</MGR_ID>
<ORG_ID>47611</ORG_ID>
<PreferredName>ANZEVINO,SHERI</PreferredName>
<Title>SR MGR</Title>
<Department>SERVICE DELIVERY</Department>
<WorkEmail>sales@aasoftech.com</WorkEmail>
<WorkPhone>123-456-7890</WorkPhone>
<Secretary>False</Secretary>
<PictureUrl>&lt;Img
src=&apos;/wpresources/HRWebparts/HRData/images/Sheri.jpg&apos;&gt;</PictureU
rl>
<CellPhone>987-654-3210</CellPhone>
<ExtraField1>Building 1</ExtraField1>
<ExtraField2>Room 203</ExtraField2>
<ExtraField3>Pager 12</ExtraField3>
<ExtraField4 />
</Employee>
<Employee>
<ChildCount>0</ChildCount>
<HasParent>1</HasParent>
<MGR_ID>47611</MGR_ID>
<ORG_ID>57828</ORG_ID>
<PreferredName>ANZEVINO,SHERI</PreferredName>
<Title>STAFF ADMIN II</Title>
<Department>Netpro Development</Department>
<WorkEmail>sales@aasoftech.com</WorkEmail>
<WorkPhone>123-456-7890</WorkPhone>
<Secretary>False</Secretary>
<PictureUrl>&lt;Img
src=&apos;/wpresources/HRWebparts/HRData/images/not_img.jpg&apos;&gt;</Pictur
eUrl>
<CellPhone>987-654-3210</CellPhone>
<ExtraField1>Building 2</ExtraField1>
<ExtraField2>Room 204</ExtraField2>
<ExtraField3>Pager 14</ExtraField3>
<ExtraField4 />
</Employee>
</RS>
```

Elements used in the XML data.

MGR_ID: SupervisorID field used within the application.

ORG_ID: EmployeeID field used within the application.

PreferredName: Employee Name

Secretary: Set to either true or false to define if the employee is a secretary

Title: Employee Job Title

Department: Employee Department Name

WorkEmail: Employee Email

WorkPhone: Employee Telephone

PictureURL: html image tag referencing the Employee Picture, such as : "<Img src=' '/wpresources/HRWebparts/HRData/images /3.jpg'>"

CellPhone: Employee Type in the Organization.

ChildCount: Value 1 or 0 to show if the employee is a manager.

HasParent: Value 1 or 0 to show if the employee has a manager.

ExtraField1: Additional field 1 can be set by client.

ExtraField2: Additional field 2 can be set by client.

ExtraField3: Additional field 3 can be set by client.

ExtraField4: Additional field 4 can be set by client.