2015

AmanoNet API Guide v1.0.0.0

INTEGRATORS MANUAL

IMPRO TECHNOLOGIES

Table of Contents

Document Control

Item	AmanoNet API Guide v1.0.0.0
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1.0.0.0	2015/06/07	Clive van Eeden	AmanoNet API Guide

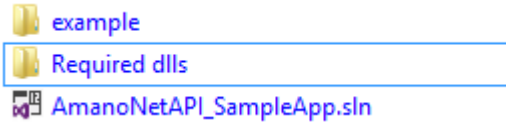
AmanoNet API Requirements

This API sample app has 3 files required to integrate into AmanoNet found in the /lib folder of the project.

1. AmanoNetSDK.dll – you need to add this as a reference to your project
2. EntityFramework.dll and EntityFramework.SqlServer.dll – You don't need to add these as references, but you will need to copy them to your 'Debug' or 'Release' folder as they have to be in the same folder as the AmanoNetSDK.dll file for it to work, as it uses Entity Framework to make database mapping. And also as part of your deployment for your integration program.

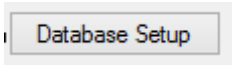
API Sample Kit

The sample API Kit is a Visual Studio 2013 project (recommend using Community edition) named 'AmanoNetAPI_SampleApp.sln', and all code for project resides in the 'example' folder:

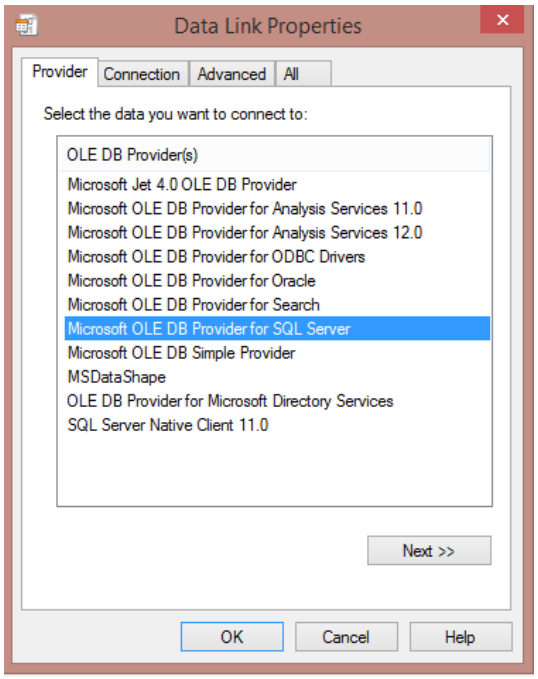


When you debug the project you will see a Settings section where you will setup the database connection string that points to your AmanoNet database:

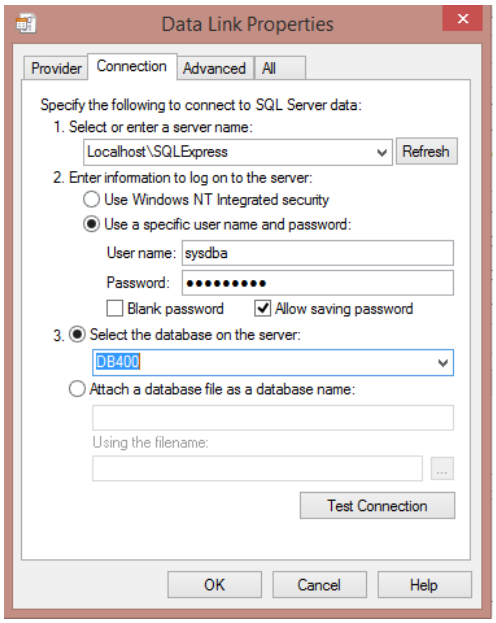
Once you have setup the string it is advised that you copy and paste that string to the Text Property of the 'AmanoNetDbTextBox', that way you will not have to setup each time you debug the project.

To set up the database connection string, click on the 'Database Setup' button: 

Double click on 'Microsoft OLE DB Provider for SQL Server':



Type in server instance information (server name, user name, password and select database) and click OK when done. This will populate the AmanoNetDbTextBox with the connection info.



You will now be able to test the API

API Usage Guide

Before making any calls to the API, you need to declare its usage:

```
using AmanoNetSDK;
```

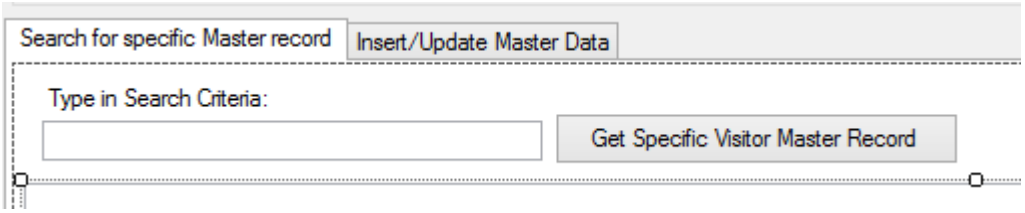
And also declare an instance of it within your class/form:

```
namespace AmanoNetAPI_SampleApp
{
    public partial class Form1 : Form
    {
        //Reference an instance of the API class
        public AmanoNetAPI amanoNetApi;
```

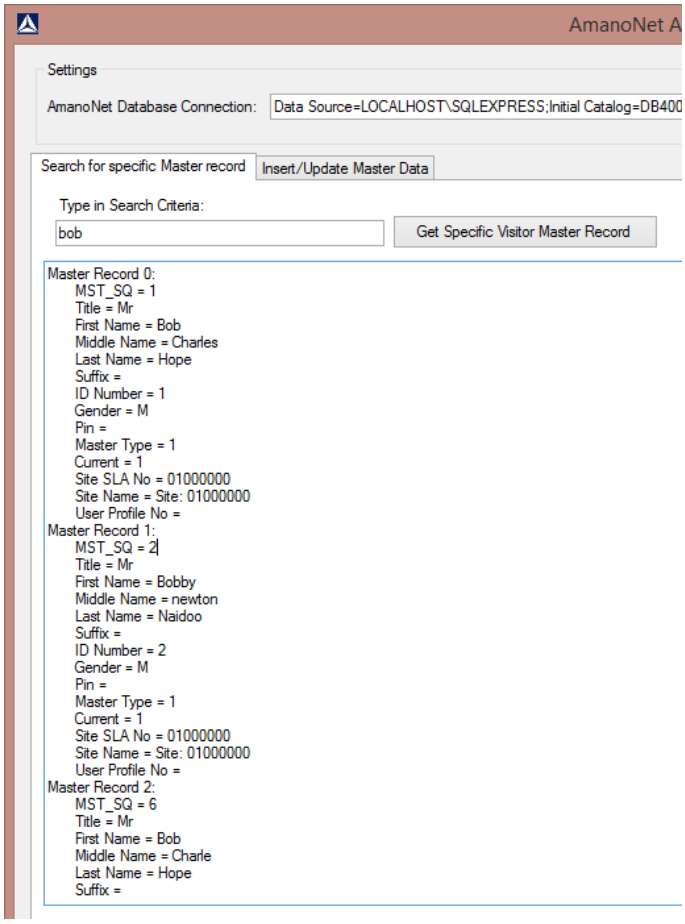
And in your Form_Load event assign your details, passing your app name and the connection details:

```
private void Form1_Load(object sender, EventArgs e)
{
    //on load create new instance of AmanoNetAPI passing your app name and database string of AmanoNet database
    amanoNetApi = new AmanoNetAPI("My App", AmanoNetDbTextBox.Text);
```

The sample app first tab has a search facility:



You can type in First name, Last name, middle name or ID Number here and a wildcard search is done like *search value*, so it's best to be specific here or else you will obtain a lot of results, for example:



The method for this can be found on the 'GetSpecificMasterRecordButton_Click':

```
//Here is an example of doing a search by Firstname/Lastname or Middlename
private void GetSpecificMasterRecordButton_Click(object sender, EventArgs e)
{
```

Assign 'amanoNetApi.SearchForSpecificMasterRecord' to a string:

```
String GetSpecificMasterRecord = amanoNetApi.SearchForSpecificMasterRecord(SearchCriteriaTextBox.Text);
```

Then you can use 'ParseJSON' method from the AmanoNetSDK ParseHelpers class as below:

```
for (int i = 0; i < GetSpecificMasterRecord.ParseJSON<MASTER>().Count(); i++)
{
    GetSpecificMasterRecordResponseTextBox.AppendText(
        "Master Record " + i.ToString() + ":" + Environment.NewLine +
        "       MST_SQ = " + GetSpecificMasterRecord.ParseJSON<MASTER>()[i].MST_SQ.ToString() + Environment.NewLine +
        "       Title = " + GetSpecificMasterRecord.ParseJSON<MASTER>()[i].MST_Title.ToString() + Environment.NewLine +
```

On the MSTSQ_TextBox_LostFocus method, there is another search example. If you type in an existing MST_SQ number from the database, it will return data for you to populate fields you need:

```
//Here is an example of calling MASTER data associated with the database primary key (MST_SQ).
//Type a number in 'Database MST_SQ' field, click anywhere else and the data will populate
private void MSTSQ_TextBox_LostFocus(object sender, EventArgs e)
{
```

The API method for this is 'amanoNetApi.GetMasterRecordUsingMSTSQ' and assign to a string:

```
String GetMasterRecord = amanoNetApi.GetMasterRecordUsingMSTSQ(MSTSQ_TextBox.Text);
```

Take note of how this information is parsed and used:

```
for (int i = 0; i < GetMasterRecord.ParseJSON<MASTER>().Count(); i++)
{
    TitleComboBox.Text = GetMasterRecord.ParseJSON<MASTER>()[i].MST_Title.ToString();
    FirstNameTextBox.Text = GetMasterRecord.ParseJSON<MASTER>()[i].MST_FirstName.ToString();
    MiddleNameTextBox.Text = GetMasterRecord.ParseJSON<MASTER>()[i].MST_MiddleName.ToString();
    LastNameTextBox.Text = GetMasterRecord.ParseJSON<MASTER>()[i].MST_LastName.ToString();
    IDNumberTextBox.Text = GetMasterRecord.ParseJSON<MASTER>()[i].MST_ID.ToString();
    if (GetMasterRecord.ParseJSON<MASTER>()[i].MST_Gender.ToString() == "M")
        GenderComboBox.SelectedIndex = 0;
    else
        GenderComboBox.SelectedIndex = 1;
    if (GetMasterRecord.ParseJSON<MASTER>()[i].MST_Type.ToString() == "0")
    {
        MasterTypeComboBox.SelectedIndex = 0;
        EmployeeNumberTextBox.Text = GetMasterRecord.ParseJSON<EMPLOYEE>()[i].EMP_EmployeeNo.ToString();
        EmployeeEmployerTextBox.Text = GetMasterRecord.ParseJSON<EMPLOYEE>()[i].EMP_Employer.ToString();
        EmployeePositionTextBox.Text = GetMasterRecord.ParseJSON<EMPLOYEE>()[i].EMP_Position.ToString();
        DepartmentComboBox.Text = GetMasterRecord.ParseJSON<EMPLOYEE>()[i].DEPT_No.ToString();
        DepartmentNameLabel.Text = GetMasterRecord.ParseJSON<DEPARTMENT>()[i].DEPT_Name.ToString();
    }
    else
    {
        MasterTypeComboBox.SelectedIndex = 1;
        DepartmentComboBox.Text = GetMasterRecord.ParseJSON<VISITOR>()[i].DEPT_No.ToString();
        DepartmentNameLabel.Text = GetMasterRecord.ParseJSON<DEPARTMENT>()[i].DEPT_Name.ToString();
    }
    if (GetMasterRecord.ParseJSON<MASTER>()[i].MST_Current.ToString() == "1")
        MasterCurrentComboBox.SelectedIndex = 0;
    else
        MasterCurrentComboBox.SelectedIndex = 1;
    MasterSiteComboBox.Text = GetMasterRecord.ParseJSON<MASTER>()[i].SITE_SLA.ToString();
    SiteNameLabel.Text = GetMasterRecord.ParseJSON<SITE>()[i].SITE_Name.ToString();
    if (GetMasterRecord.ParseJSON<MASTER>()[i].MT_NO.ToString() == "1")
        ClockingTypeComboBox.SelectedIndex = 0;
    else
        ClockingTypeComboBox.SelectedIndex = 1;
```

Some use ParseJSON<MASTER>, some ParseJSON<EMPLOYEE>, some ParseJSON<VISITOR> and some ParseJSON<DEPARTMENT>. This is because this information comes from different database tables and what you get back is heavily dependent on the master type (e.g. Employee type =0 or Visitor type = 1). The example shows you how to decide on which to use from the information that is received.

Updating and Inserting data is shown via the 'InsertMasterDataButton_Click' method.

Depending on whether you are doing an Employee Type or Visitor Type, this will show you how to prepare the data. Before even using the API insert/update methods you need to use the API Build models methods, to ensure that the data is presented to the API correctly.

Master data is to be built regardless, this is done using the 'amanoNetApi.BuildMaster' method as shown:

```
//Build up MASTER table values, assign values to the amanoNetApi.BuildMaster method from the API.
//We do this to make sure our format is correct before doing Insert/Update...
var Master_Record = amanoNetApi.BuildMaster(int.Parse(MSTSQ_TextBox.Text), TitleComboBox.Text, FirstNameTextBox.Text, MiddleNa
                                            null, //MST_PIN is a nullable field, but you can populate this with an integer if
                                            MST_Type, MST_Current, MasterSiteComboBox.Text,
                                            null, //USRPRF_NUM is a nullable field, but you can populate this with an integer
                                            "", //because MST_CDATE is a string, it cannot be nullable from code, but you can
                                            MT_NO //MT_NO can be a nullable field, but it is recommended to have the clocking
                                            );
```

Then you decide whether you are doing an employee or visitor, do build up employee use 'amanoNetApi.BuildEmployee',

```
//Build up EMPLOYEE table values using amanoNetApi.BuildEmployee
var Employee_Record = amanoNetApi.BuildEmployee(int.Parse(MSTSQ_TextBox.Text), EmployeeNumberTextBox.Text, EmployeeEmplo
```

for visitor use 'amanoNetApi.BuildVisitor'.

```
//Build up for VISITOR table values using amanoNetApi.BuildEmployee
var Visitor_Record = amanoNetApi.BuildVisitor(int.Parse(MSTSQ_TextBox.Text), VisitorCompanyTextBox.Text, 0, Convert.ToInt32(Departme
                                              null //HOSTED_BY is a nullable field, you would need to know the MST_SQ of the host
                                              );
```

Once this is done you can then run the relevant Insert/Update method.

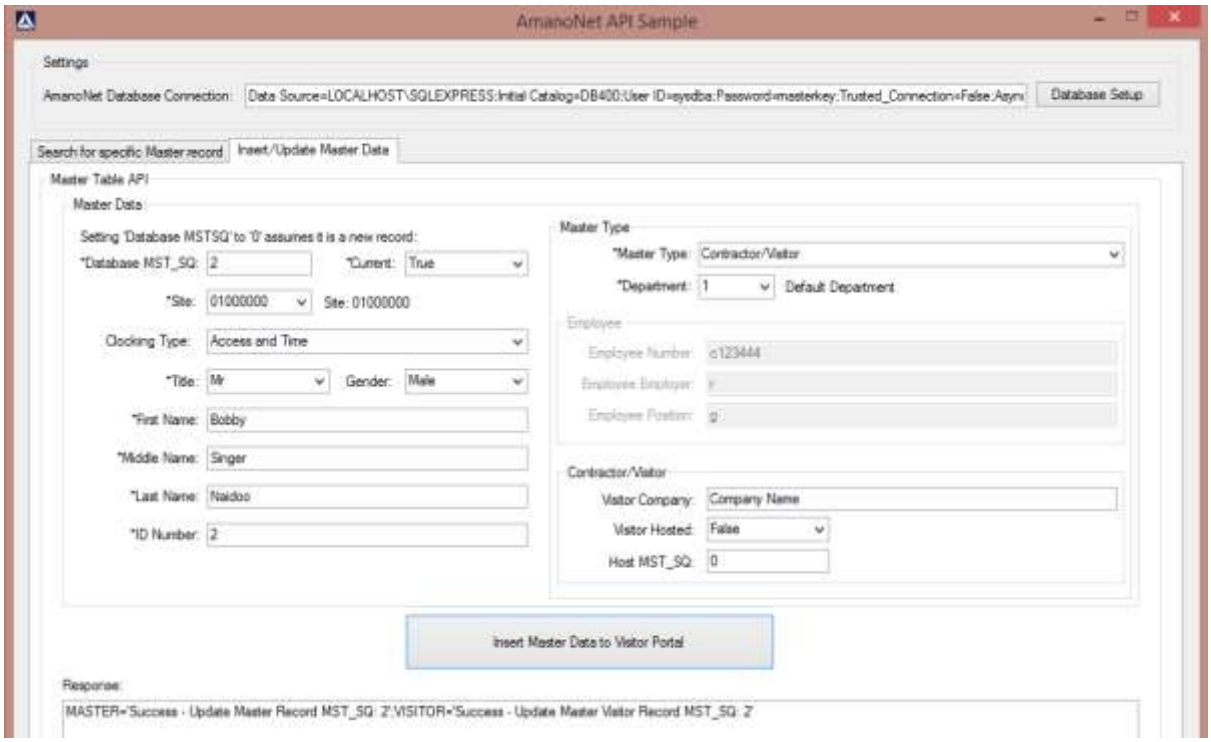
For Employees its 'amanoNetApi.UpdateInsertMasterEmployee':

```
//Now do Insert/Update by calling amanoNetApi.UpdateInsertMasterEmployee and using varia
returnValue = amanoNetApi.UpdateInsertMasterEmployee(Master_Record, Employee_Record);
```

And for Employees its 'amanoNetApi.UpdateInsertMasterVisitor':

```
//Now do Insert/Update by calling amanoNetApi.UpdateInsertMasterVisitor and using variab
returnValue = amanoNetApi.UpdateInsertMasterVisitor(Master_Record, Visitor_Record);
```

‘returnValue’ is a string variable that will return whether you insert/update was a success or failure with the relevant database MST_SQ primary key. As seen in the response below:



There are lots of comments in the sample app code to help guide you if you need more understanding on the process.