

# **Oracle® Utilities Work and Asset Management**

ESRI2 (ArcIMS) Installation Guide

Release 1.9

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# ESRI (ArcIMS) Installation Guide

This document describes the installation of the GIS viewer integrated between Oracle's Work and Asset Management (WAM) and ESRI's ArcIMS map server. Within the WAM configuration, this GIS integration is referred to as "ESRI2". The focus of this document is on the installation of the integration and not the installation of ArcIMS which should be described in ESRI's documentation.

## 1.9 Release information

The following restrictions to the integration apply in this release.

- With this release we will no longer be supporting the Java version of the map viewer. The integration will only support the HTML viewer.
- A generic WAM database user is no longer needed for this integration. Instead, the WAM URL must be specified in the Config.asp file of the integration configuration files.
- For software security purposes, the GIS integration no longer works when the GIS Viewer is the starting point in the process. This happens because the ESRI Viewer does not store authentication information for WAM.

## Prerequisites

The ArcIMS integration requires the following components.

- Oracle Utilities Work and Asset Management version 1.9.0 or greater
- ESRI ArcIMS
- ArcIMS GIS data
- WAM Integration
- Files
- The ArcIMS machine must have an Oracle database client installed and the tnsnames.ora file should contain the proper reference to the database.

## Verify Installation of ArcIMS

- IIS must be the Web Server and the ASP extensions for IIS must be enabled.
- The GIS Services defined in the ArcIMS Administrator must be image server virtual servers. These are the only servers supported by the HTML viewer.
- An ArcIMS Website should have been created against the GIS Image Service with the viewer type being "HTML". Make sure the ArcIMS Website is functioning before the integration is installed by running the Website URL in the browser.
- The "ArcIMSParam.js" file within the ArcIMS Website contains two entries that specify the URL for the Map Server and image service – imsURL and imsOVURL. Make sure the server name includes any necessary domain information to reach the URL from a client browser.

## Installation Overview

The Oracle WAM ESRI ArcIMS integration is installed over existing ArcIMS HTML Viewer Website files.

1. Expand installation files

2. Create the ODBC WAM DSN
3. Modify ArcIMS Website files with integration changes
4. Edit Configuration Files
5. Configure the WAM GIS SETUP Business Rule or User Profile keys
6. Edit Custom Searches

## Expand Installation Files

Expand the file ArcIMS\_Integration.zip file in a temporary location. This compressed file contains a folder called “Oracle\_WAM\_ESRI2”. Within this directory, you should see the following.

- SynergenGIS (directory)
- EAM\_Searches (directory)
- SynergenGIS (directory)
- SynergenMapView.asp (file)
- viewer.htm (file)

## Create ODBC WAM DSN

The ArcIMS WAM Integration creates and displays WAM database information from within the GIS Viewer. This database access is through a Windows ODBC System Datasource Name (DSN).

- You can choose your own name for the DSN, but the name must match the “v\_dsn” setting in the “Config.asp” file.
- You must use the driver named “Microsoft ODBC for Oracle” to avoid incompatibility issues.
- The “Microsoft ODBC for Oracle” driver accesses the database through Oracle’s Database Client. This client software must be installed and permissions granted on the associated Oracle Home directory. This allows the website access to the driver. There is currently an Oracle bug that may prevent access to the Oracle Home directory. This bug and it’s

## Modify ArcIMS Website Files with Integration Changes

1. Rename the following file within the existing ArcIMS Website. This will be overwritten by the integration file with the same name found within the “Oracle\_WAM\_ESRI2” directory.
  - viewer.htm
2. Copy and backup the following files in your ArcIMS Website viewer directory. The directory should be like “\ArcIMS\Website\viewer”, where “viewer” is the website name you gave to the ArcIMS Manager when creating the site. These files will be modified with the WAM integration code.
  - Mapframe.htm
  - Toolbar.htm
  - javascript\aimsCustom.js (this file is in the “\javascript” subdirectory)
  - javascript\aimsResource.js (this file is in the “\javascript” subdirectory)

## Edit the Configuration Files

The Config.asp file contains configurable settings specific to your environment.

- **v\_dsn** - references the DSN that was created earlier make sure that this value matches your DSN name.
- **v\_SIAUrl** – the URL to the WAM application server. This should be the same URL defined in the WAM configuration’s sia\_integration\_url (within the config.properties file).
- The SynergenProcedures.js file contains configurable settings for the WAM Integration map viewer.
- **gsGSF** – The search field name. This is the column name in the GIS data that refers back to WAM assets.

- gsWebsiteURL – This is the URL to the ArcIMS GIS Website that you created.

## Configure WAM Business Rules or User Profile Keys

The “GIS SETUP” Business Rule or User Profile keys for the GIS integration define the type of GIS as well as specifying the path to the GIS server. While the Business Rule keys define the settings for a WAM plant, the User Profile keys define the settings for a specific user. The following are the keys used for the ArcIMS integration. They can be defined either for Business Rules or User Profile keys.

**ACTIVATED GIS OPTION** - This defines the type of GIS Integration. For the ArcIMS integration, this should be set to “ESRI2”.

**ESRI2 VIEWER** - This is the URL to the starting point of the URL. Enter the full value in the “Value 4” field. All value fields are concatenated, but the first 3 Value fields are limited in size. You should include the ending “?” in the URL as well.

**DISPLAY CHILD ASSETS (YES or NO)** - NO indicates that only the selected Asset will be displayed on the map. (Recommended). YES indicates the selected Asset and its Children Assets will be displayed on the map.

## Configure Responsibilities

Add the View GIS and ESRI2 Viewer function to all Responsibilities requiring GIS access.

## Edit the file /viewer/EAM\_Searches/EAM\_Searches.js.

You will need to set the configuration values in this file. The LayerName for each section (like theStreetLayerName) is the name of your Shape file/Layer. The other values are column names in the in the Shape file/Layer.

### ***This section supports Intersections searches***

```
var theStreetLayerName="Streets";

var theStreetNameField="STR_NAME";

var theFromStreetFieldName = "FRSTNM";

var theToStreetFieldName = "TOSTNM";

var theStreetFieldsToDisplay = "FRSTNM TOSTNM ADDR_LEFT_ ADDR_LEFT1 ADDR_
RIGHT ADDR_RIG_1";
```

### ***Parcel ID searches***

```
var theParcelLayerName="Parcels";

var theParcelIDFieldName = "PARCELID";

var theParcelFieldsToDisplay = "NAM1 ADR1 CITY ST ZIP";
```

### ***Address searches***

```
var theAddressLayerName="Parcels";

var theAddressFieldName = "ADR1";

var theAddressFieldsToDisplay = "NAM1 ADR1 CITY ST ZIP";
```

## Troubleshooting

When the GIS Viewer attempts to access the database through the Oracle database client you may see errors and the system may not be able to access the database. This issue is described in Oracle’s Metalink document ID 215255.1. You may see the following errors when attempting to access the database.

**The Oracle client and networking components were not found.**

These components are supplied by Oracle Corporation and are part of the Oracle Version 7.3 (or greater) client software installation. You will be unable to use this driver until these components have been installed.

**Error number: -2147467259 - [Microsoft][ODBC Driver Manager] Driver's SQLAllocHandle on SQL\_HANDLE\_ENV failed****To resolve this error:**

1. Launch Windows Explorer and navigate to the Oracle database client's "home" directory.
2. Right-click on the "home" directory and choose the "Properties" menu option to display the properties dialog.
3. Within this dialog, select the "Security" tab and look in the "Group or user names:" section. Look for and select "Authenticated Users". . If you don't, refer to the *Adding Authenticated Users Group* section below.
4. In the Permissions list, *uncheck* the Read and Execute box, which is located under the Allow column, and click "Apply".
5. Re-check the Read and Execute box located under the Allow column and click "Apply".
6. Click the OK button until you close out of all the security properties windows.
7. Reboot the server -- THIS STEP IS VERY IMPORTANT.

**If you later find that the Web Service is not able to query the database, complete the following additional steps:**

1. Repeat the first 7 steps above.
2. Click the Advanced button.
3. When the Advanced Security Settings window opens, click the check box next to "Replace permission entries on all child objects with entries shown here that apply to child objects". (Note: if you later look at this setting you will NOT see a check here. After permissions are replaced, the check mark will disappear).
4. Click the Apply button
5. Click Yes to respond to the message.
6. The process that will start may take a few minutes to complete.
7. Click the OK button until you close out of all the security properties windows.
8. Reboot the server.

**Adding Authenticated Users Group**

If the Authenticated Users Group does not exist in the Group or user names list, you will need to do the following to add the Group:

1. On the Security tab of the Properties window, click on the Add... button.
2. In the Select Users, Computers, or Groups window, verify that the name of your server is shown in the From this location field. If not, do the following steps to select your server:
3. Click on the Locations... button.
4. Click on the item at the top of the Locations list, which should be the name of your server and click the OK button.
5. In the Select Users, Computers, or Groups window, click on the Advanced... button.
6. Click the Find Now button.
7. In the list that appears, select Authenticated Users and click the OK button, then click OK again. You should be back to the Security tab of the Properties window.
8. Click the Apply button.
9. You can now continue with setting the permissions for the Authenticated Users group.

**ArcIMS HTML Viewer Files**

This section describes what needs to be modified in each of the ArcIMS HTML viewer files.

These files are created by the ArcIMS Manager when you create an ArcIMS website. Within each section, we include some parts of the existing ArcIMS code so that you know where to insert the integration code. The integration code is identified by the text "Oracle WAM start" and "Oracle WAM end". Samples of the modified files are included in the "config\_samples" folder of the integration installation files. These samples indicate where the inserted text should go.

## MapFrame.htm

```
<!-- Routing params. . . for routing and reverse
geocoding requires RouteServer extension -->
<!-- <SCRIPT TYPE="text/javascript"
LANGUAGE="JavaScript"
SRC="aimsRouteParams.js"></SCRIPT> -->
<!-- Oracle WAM start -->
<SCRIPT TYPE="text/javascript" LANGUAGE="JavaScript"
SRC="EAM_Searches/EAM_Searches.js"></SCRIPT>
<!-- Oracle WAM end -->

<SCRIPT TYPE="text/javascript" LANGUAGE="JavaScript">
// variables for spacing
```

## toolbar.htm

```
if (parent.MapFrame.allowOptions) {
    // Options. . . requiers aimsOptions.js...
allowOptions is set to true in this file
    document.write('<td align="center"
valign="middle">');
    document.write('');
    isSecond = !isSecond
    document.writeln('</td>');
    if (isSecond) document.write('</tr><tr>');
}

//Oracle WAM start
document.write('<td align="center" valign="middle"
colspan="2">&nbsp;  </td></tr><tr>');

//Folio Find
document.write('<td align="center" valign="middle">');
document.write('');
isSecond = !isSecond
document.writeln('</td>');
if (isSecond) document.write('</tr><tr>');

//Address Find
document.write('<td align="center" valign="middle">');
document.write('');
isSecond = !isSecond
document.writeln('</td>');
if (isSecond) document.write('</tr><tr>');

//Address wizard
document.write('<td align="center" valign="middle">');
document.write('\');
isSecond = !isSecond
document.writeln('</td>');
if (isSecond) document.write('</tr><tr>');

//Oracle WAM end
if (parent.MapFrame.canLoad) {
// Load MapService. . . requires aimsGeneric.js

```

### javascript\aimsCustom.js

```

// send XML response to custom function
//flow redirected here when
//XMLMode >=1000
//Oracle WAM start
function useCustomFunction(theReply) {
if (XMLMode==1001) {

EAM_ShowSearchResult(theReply,0);
} else if (XMLMode==1002) {
// insert code here
EAM_ShowSearchResult_Wizard(theReply);
} else if (XMLMode==1003) {
// insert code here
EAM_ShowSearchResult(theReply,1);
} else {
alert(msgList[55] + XMLMode + msgList[56]);
}
hideLayer("LoadData");
}
//Oracle WAM end

```

### javascript\aimsResource.js

```

buttonList[8] = "";
buttonList[9] = "";
buttonList[0] = "";
*/
//Oracle WAM start
buttonList[61] = "Find Parcel";
buttonList[62] = "Find Address";
buttonList[63] = "Intersection Wizard";
//Oracle WAM end

```