WebALP3.0 Service
Installation and Configuration Guide

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1. Introduction

WebALP3.0 is a framework that enables a 3D Geographic Information to be accessed through the Internet. It provides an access to a (video) data taken from Iwane Mobile Mapping System (IMS), Camera Vector (CV), and other information of an environment deriving from various Iwane's proprietary softwares. Moreover, the framework also provides a extendable 3D tagging system which generally required in most Geographic Information Services.

A core of WebALP3.0 is comprised of two components: SphereView and WebALP3.0 Service. SphereView acts as a front-end layer for an end-user to visualize a data, both a still images and videos, while WebALP3.0 Service is a back-end layer storing and providing information, both to SphereView and a web application.

This document describes how to install and configure a WebALP3.0 Service.

1.1. System Requirements

Operation System (OS)	Windows Server 2008 R2; x64 Windows Server 2012; x64 Windows Server 2012 R2; x64
Processer (CPU)	Intel Xeon Processor E5-1410 2.8 GHZ or better
Memory (RAM)	8GB or higher
Storage Space (Hard disk)	< 1GB for WebALP3.0 Service
USB Port	1 (for a dongle license only)

1.2. Pre-requisite Software

- *Microsoft Internet Information Services (IIS) 7.5 or 8.0
- *ASP.NET (for IIS7.5) or APS.NET4.5 (for IIS8.0)
- Microsoft .NET 4.5 or higher
- Visual c++ redistributable for visual studio 2012
- PostgreSQL 9.3.X
- PostGIS 2.1.X
- Sentinel HASP/LDK 6.63 Run-time (for a dongle license only)
- *Adobe Media Server 5

*Not included in a WebALP3.0 Installer bundle.

Please make sure to install all the pre-requisite software that is not included in the installer bundle, before proceeding with the installation. Please be advised that PostgreSQL 9.3.X, PostGIS 2.1.x and Adobe Media Server 5 can be installed in a separate server.

1.3. About This Manual

In this document, Chapter 2 explains how to install WebALP3.0 Service and its pre-requisite software using an installer bundle provided by Iwane Laboratory Ltd. Chapter 3 describes how to activate WebALP3.0 Service and how to initially configure the WebALP3.0 Server. Finally, Chapter 4 explains how to configure Adobe Media Server 5, so that it works with WebALP3.0 Viewer, the SphereView.

Each number behind chapter, section, and page can connect to corresponding place by using *'ctrl'* + left click.

Each "Figure" and "Table" in this manual can link to corresponding figure and table by using *'ctrl'* + left click.

2. WebALP3.0 Service Installation

There are two types of license for WebALP3.0: a MAC address license, and a dongle license. An installation bundle is different based on a type of license, namely

- A MAC address license : WebALP3Bundle_mac.exe and
- A dongle license: WebALP3Bundle_dongle.exe.

To install WebALP3.0 Service, please obtain and execute an installation bundle according to a purchased license. For both types of license, an installation process is more or less the same. However, for a demonstration purpose, a dongle license will be considered for the less of this document.

Once the installation bundle is executed, the following installation dialog will appear on the screen.
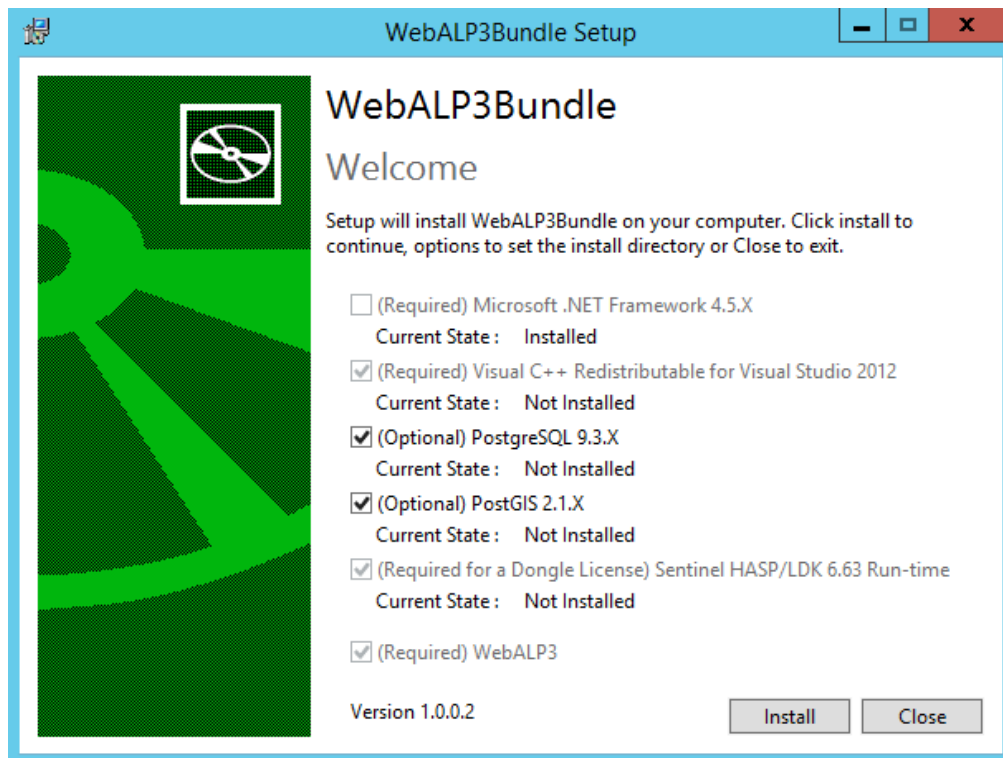

Figure 2-1 (Main Dialog of WebALP3.0 Installer Bundle)

In general, an installer bundle will detect an installed status of all required software, and checked/unchecked their option automatically. Please checked/unchecked an install option for an optional software, and click Install to proceed.

In this example, PostgreSQL 9.3.X and PostGIS 2.1.X will be installed in the same machine as a WebALP3.0 Service. Please be careful that if PostgreSQL 9.3.X and PostGIS 2.1.X are not installed in the same machine as WebALP3 .0 Service, they must be installed in a separated machine and accessible through the network.

2.1. Installation of Pre-Requisite Software

In general, the installation bundle will respectively call an installer of each pre-requisite software to install them. Please simply follow the on screen instruction.

There is one option that MUST be selected during the installation of PostGIS2.1.X, which will be explained below

During the installation of PostGIS 2.1.X, there will be a dialog for choosing an install component. Please make sure to choose a "**Create spatial database**" as shown in Figure 2-2.
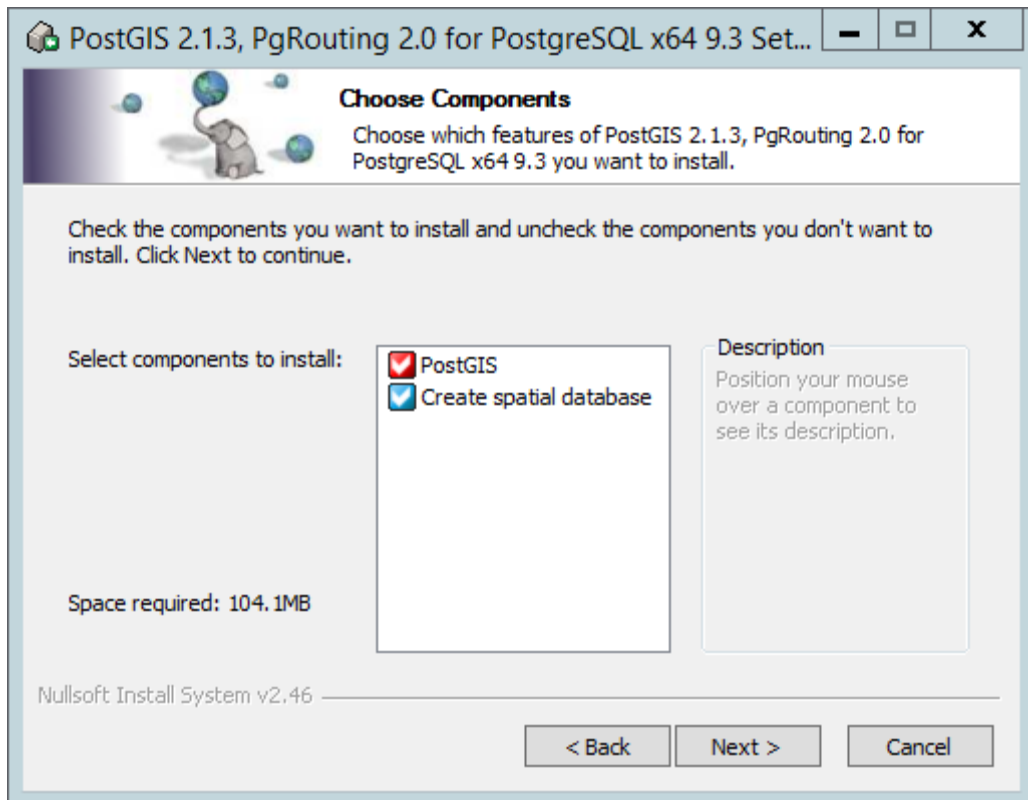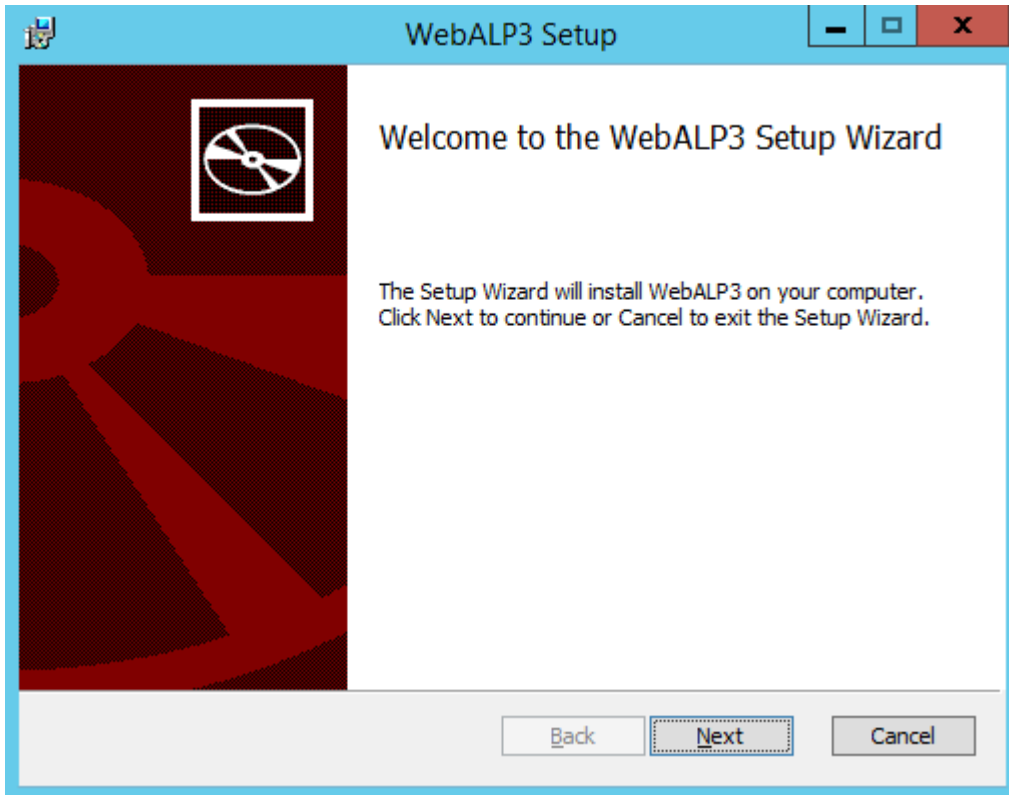

Figure 2-2 (Dialog to choose install components of PostGIS2.1.3)
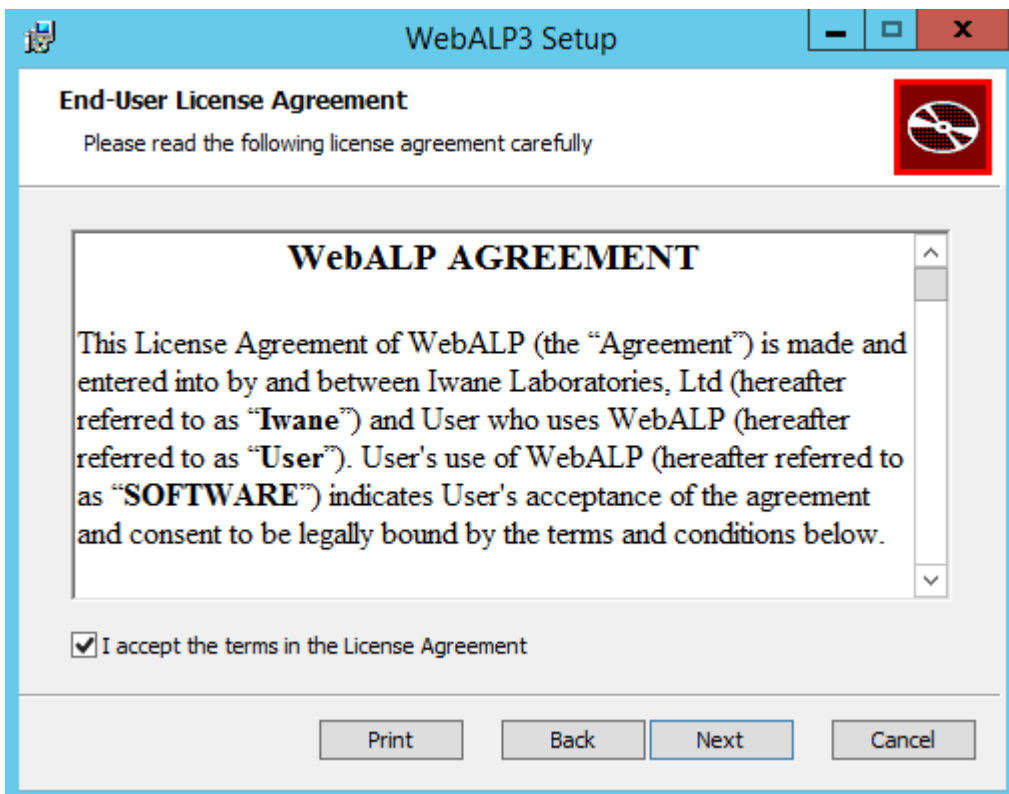
2.2. Installation of WebALP3.0 Service

An installation bundle will call an installer of WebALP3.0 Service, once all pre-requisite software is installed. Please follow an on-screen instruction as shown below to install WebALP3.0 Service.
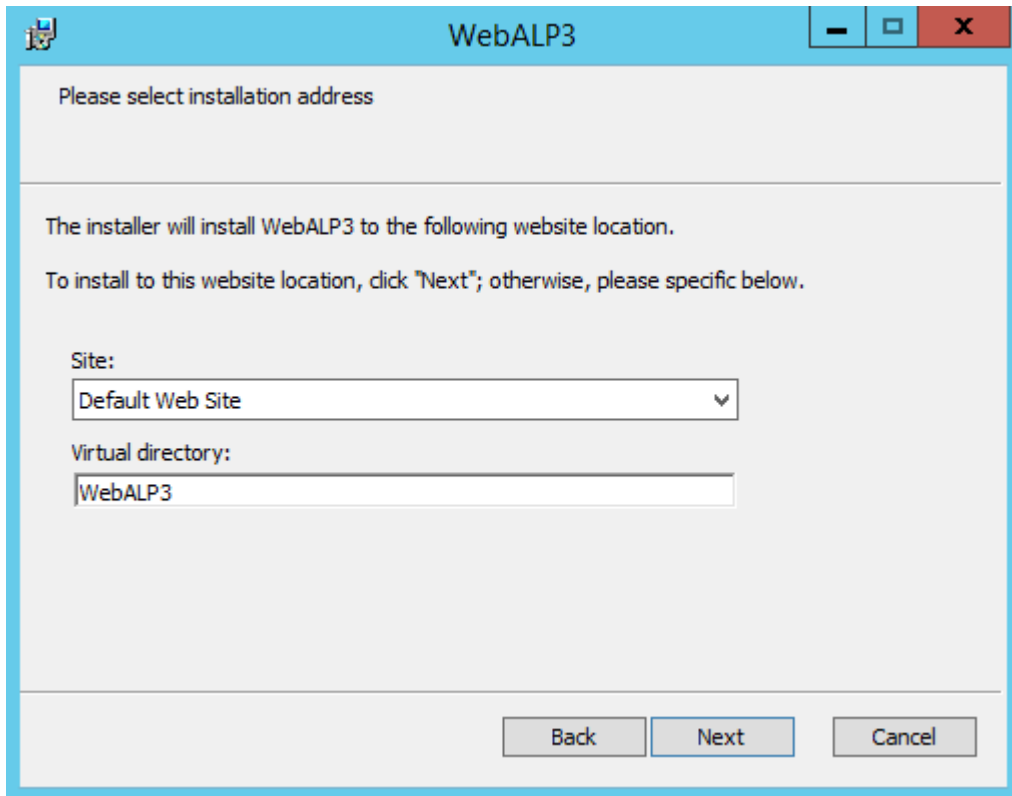
**Step 1 :** Welcome Screen; simply click next to proceed.

Step 2 : License Agreement; please carefully read an end-user license agreement, check accept if agree, and then click next to proceed.

Step 3 : Choosing website and virtual directory; please choose an IIS site that WebALP3.0 will be installed and its virtual directory name.


Step 4 : Choosing destination folder; please choose a destination for a WebALP3.0 Service to be install. Since it is a web-application, it is recommended to be a folder under IIS root directory.
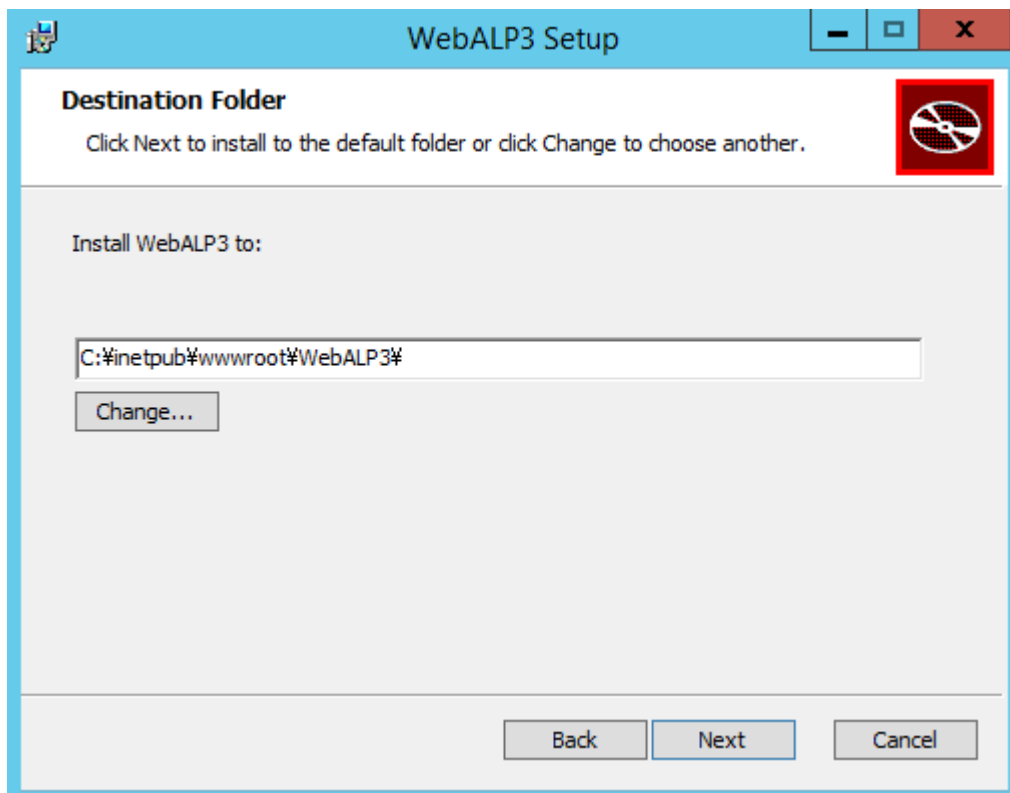
Step 5 : Reviewing an installation setting; simply click install to proceed with the installation.
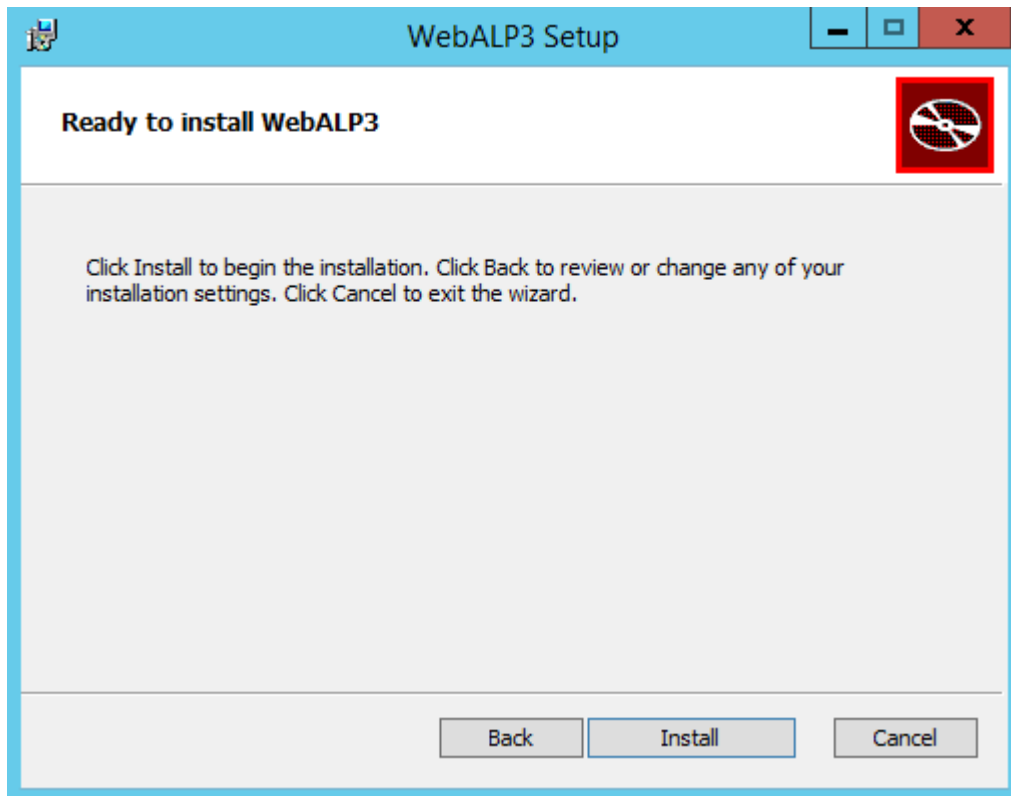

Step 6 : Completing an installation; Once an installation is successful, the following screen will show up. Simply click Finish to close a WebALP3.0 installer wizard.
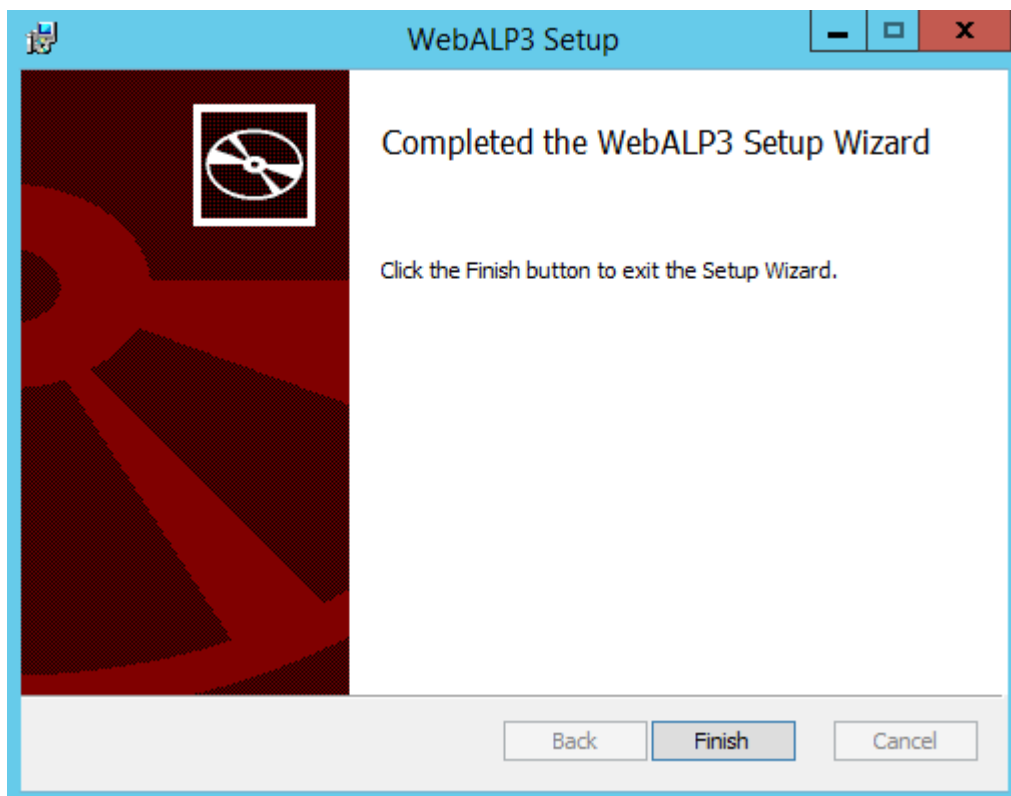
2.3. Confirming an Installation of WebALP3.0 Service

To confirm that an installation of WebALP3.0 Service is successful, please follow the instructions below.

Step 1 : Open Internet Information Services (IIS) Manager;
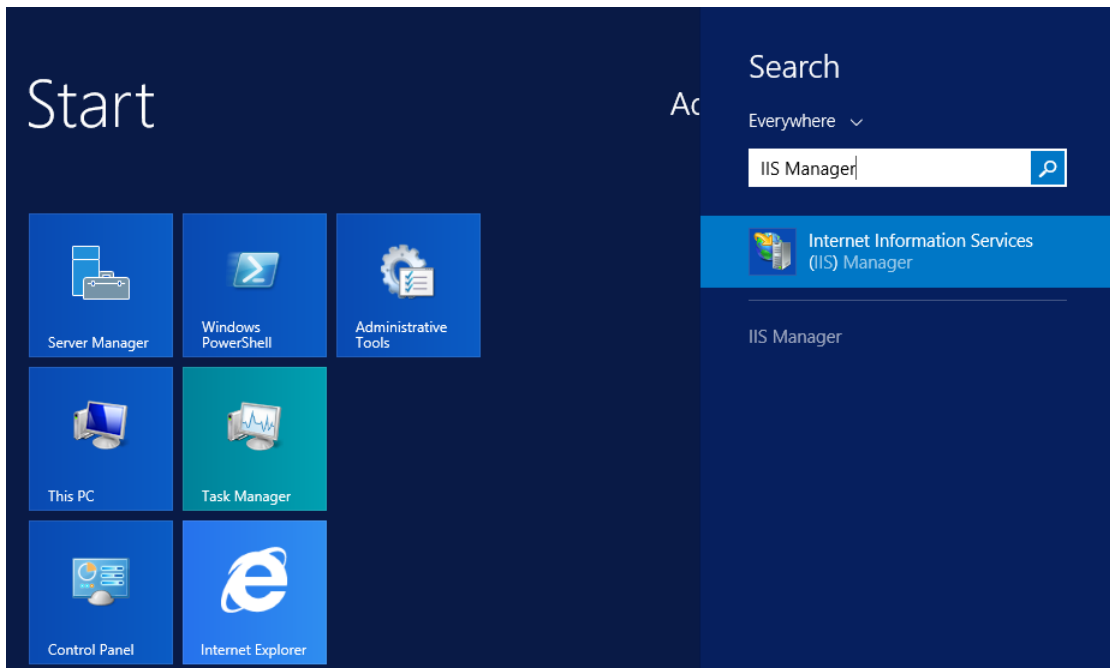
Step 2 : Choosing the website and click on a virtual directory selected during the installation. The following screen should appear. Click on Browse *:80 (http) on the right to open the WebALP3.0 Welcome Page. Please be advised that the port number might be different depending on the configuration of a website.
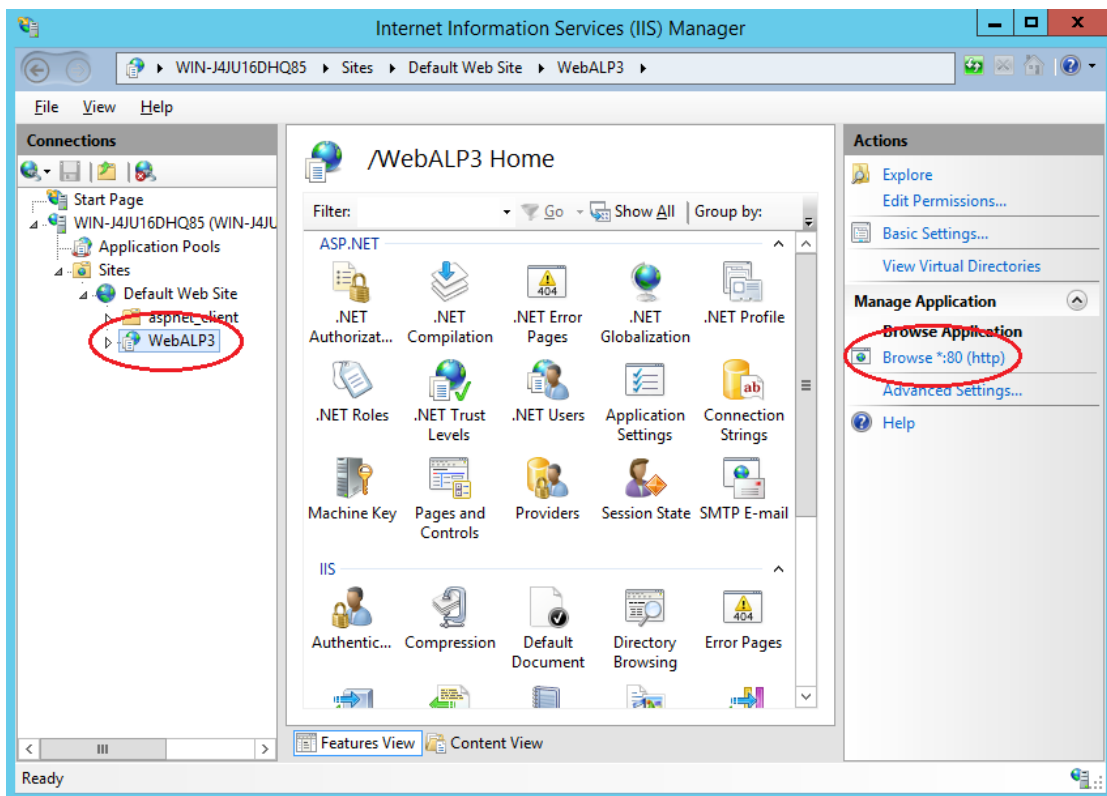
Step 3 : WebALP3.0 welcome page; A welcome page of WebALP3.0 should appear as shown below. By default, an error message regarding the license will be shown. This is because the WebALP3.0 license has not been imported to activate a WebALP3.0 service yet. The process will be described in Chapter 3.

Please be advised that the security of Internet Explorer in Windows server might be too strict that it might prevent from accessing the page. In the case, a lesser strict security browser like Google Chrome is recommended.
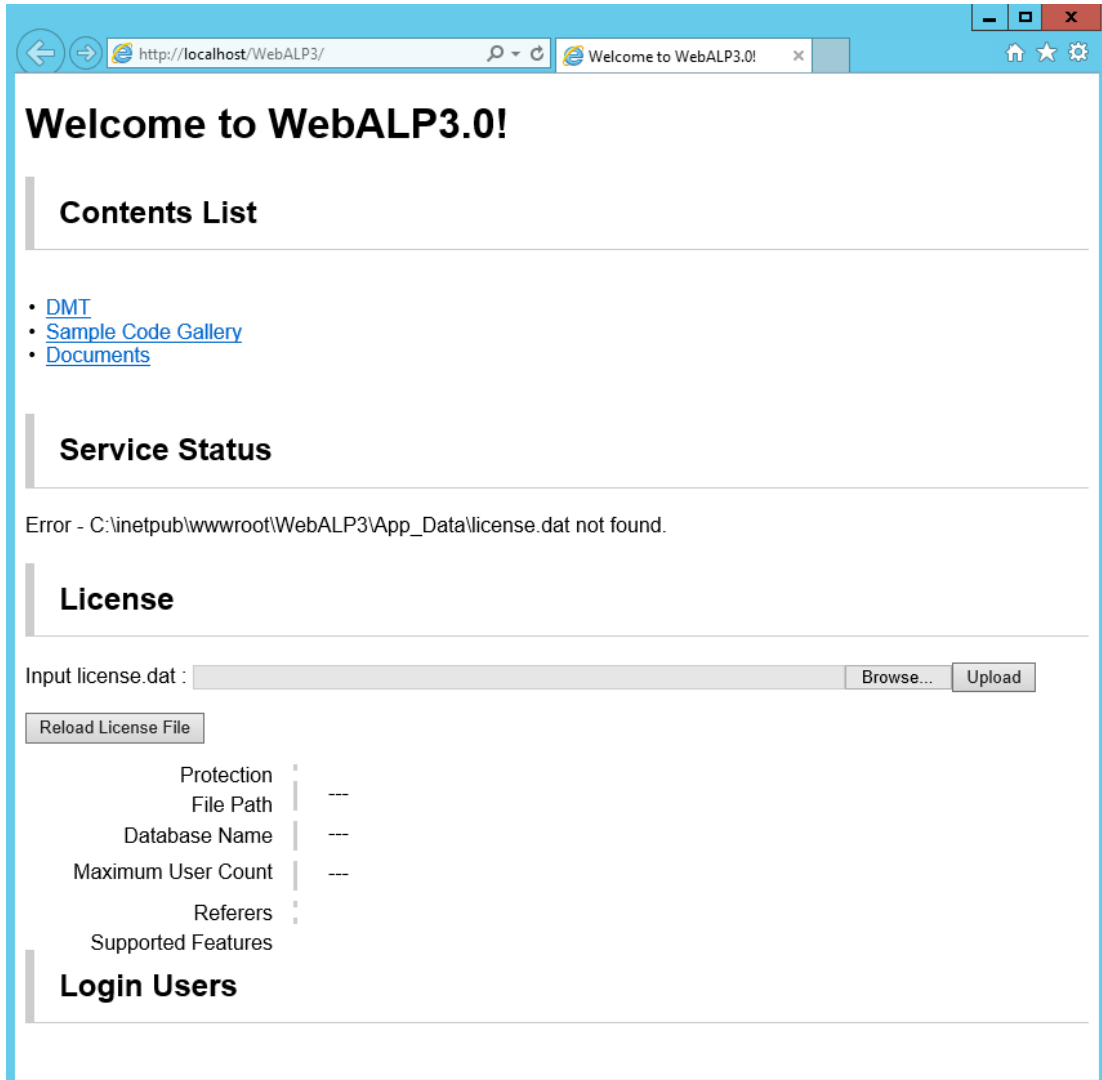

Figure 2-3 (Screenshot of a WebALP3.0 Welcome Page.)

3. WebALP3.0 Activation and Initial Configuration

You are only a few steps away from experiencing a WebALP3.0 service!? Once the WebALP3.0 installation is completed and confirmed, the next step is to activate a WebALP3.0 service by importing the license. There is also some initial configuration that is recommended, but this is optional and can always be done later once the WebALP3.0 service is up and running.

3.1. Activating WebALP3.0

When WebALP3.0 is purchased, a license file (license.dat) will be sent to a customer. Contents of each licenses depends on the contract the customer made during purchase. This license.dat is required to activate WebALP3.0 Service.

To activate WebALP3.0 Service, browse to a welcome page of WebALP3.0 as shown in subsection 2.3. Under License tab, click *Browse* to choose a license file, and click *Upload* to upload the license to the server. As for a dongle license custermer, make sure a dongle key is plugged-in to the machine.


Figure 3-1 (Screenshot of Welcome Page of WebALP3.0, after it is successfully activated.)

### 3.2. Initial Configuration of a WebALP3.0 (Optional)

All configurations of WebALP3.0 service can be done through Data Maintenance Tools (DMT). DMT is a web application mainly used to register and manage data in WebALP3.0 server. A DMT of a particular WebALP3.0 server can be accessed through a link in a WebALP3.0 Welcome Page.

As mentioned earlier, please be advised that the security of Internet Explorer in Windows server might be too strict that it might prevent from accessing the page. In the case, a lesser strict security browser like Google Chrome is recommended.

Once the DMT is shown in a browser, please click a *configure* tab to open a configuration dialog.
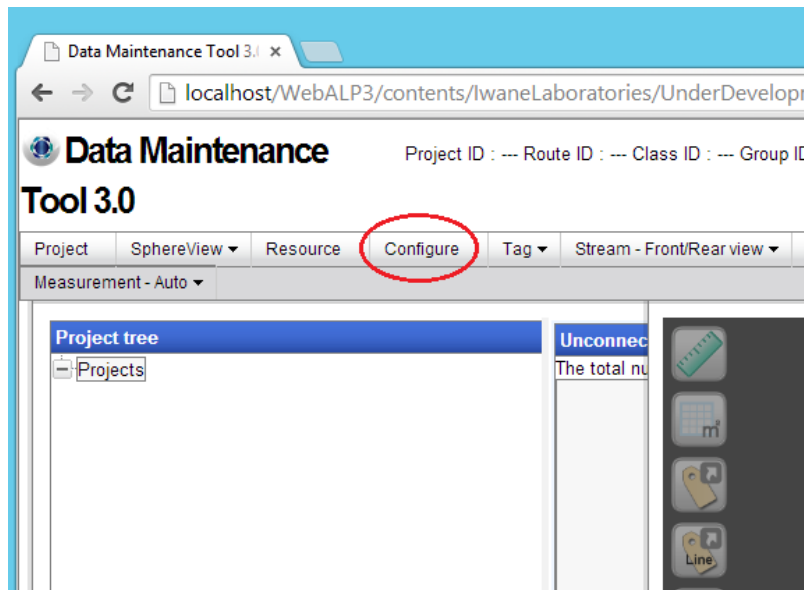
For an initial configuration, it is recommended that at least two parameters are configured: file root directory, and context root url.
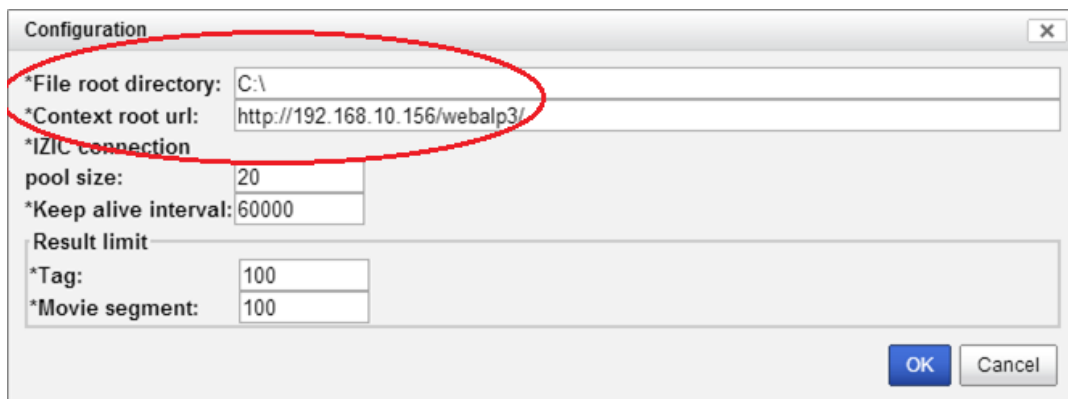
A WebALP3.0 server has a functionality that required itself to serve as a file server (through http protocol). *File root directory* is a folder in a server where those file will be stored, and *context root url* will be used to create a link to access a file on the server. In general, context root url should be the same as the URL used to access WebALP3.0 Welcome Page from other machines in the network. More information of other configurations can be found in Data Maintenance Tools (DMT) manual.

Finally, in order to allow access to WebALP3.0 Service from other machines, please open a port in a firewall to allow access to WebALP3.0 Service. The port number should be the same as the port of the IIS website, where WebALP3.0 is installed to.

4. Adobe Media Server 5 Configuration for WebALP3.0

In this chapter, a configuration of Adobe Media Server 5 which is related to WebALP3.0 is explained. The following notations are assumed for the less of an explanation in this chapter.

- ${AWS_HOME} = A folder where Adobe Media Server 5 is installed in the machine.
- vod_webalp3 = Name of a video application that will be created.
- C:¥webalp3_data¥stream = A folder where a video stream (*.flv) is stored.

Please be advised again that Adobe Media Server 5 does not need to be installed in the same machine as WebALP3.0 as long as it can be accessed by the WebALP3.0 server machine, and other client machines through the network.

4.1. Installation of Adobe Media Server 5

An installation guide of Adobe Media Server 5 can be found on Adobe official website. Information related to WebALP3.0 and would need a special attention is

- It is not necessary to install Apache 2.x during Adobe Media Server 5 installation, in order to use WebALP3.0.
- Please make sure that there is no port crashing between Adobe Media Server and other application on the server.

In order to allow access to Adobe Media Server 5 from other machines, please open a port in a firewall of the server both inbound and outbound.

4.2. Adding a Video Application in Adobe Media Server 5

For a completeness of this document, a method on how to add new video application in Adobe Media Server 5 is briefly described. A complete version of the method can be found at Adobe official website.

Step 1 : Create new on-demand video application
- Copy ${AMS_HOME}¥samples¥applications¥vod
- Rename the folder to the desired application name, namely vod_webalp3.
- Move the folder to ${AMS_HOME}/applications

Step 2 : Specify folder of the media files
- Edit ${AMS_HOME}¥applications¥vod_webalp3¥Application.xml
- Replace <Streams>/;${VOD_COMMON_DIR}</Streams> <Streams>…<Streams>
- With <Streams>/;C:¥webalp3_data¥stream<Streams>
- *Multiple folder can be specified here with different <Stream/> xml tags.

Step 3 : Restart Adobe Media Server 5, and check the result.
- Start an Administrator console from ${AMS_HOME}¥webroot¥ams_adminConsole.htm
- Restart Adobe Media Server 5 by *Login → Manage Servers*, Click the restart bottom at the bottom of the page after choosing a server to be restarted.
- Check whether a new video application (vod_webalp3) is up and running by *Login → Manage Servers→Applications*
- If everything went fine, a video stream file C:¥webalp3_data¥stream¥sample_file.flv should now be accessed locally through and URL : [rtmp://localhost/vod_webalp/sample_file]

4.3. Additional Configuration for WebALP3.0 (Mandatory)

There are two additional configurations are required to enable a video stream to be used by WebALP3.0 and be played in SphereView viewer properly.

In brief, SphereView is a 3D viewer of WebALP3.0 implemented using Adobe Shockwave Flash technology. It acts as a front-end layer for an end-user to visualize a data, both a still images and videos.

Step 1 : Allow a video stream to be modified by the client application on the fly.
- Open $AMS_HOME/conf/_defaultRoot_/_defaultVHost_/Application.xml
- Change a value in XML tags to be as the following:

```
<FolderAccess>true</FolderAccess>

<AudioSampleAccess enabled="true">/</AudioSampleAccess>

<VideoSampleAccess enabled="true">/</VideoSampleAccess>
```

Step 2 : Force a meta-data of a video stream to send only once during a video seeking.
- Open $AMS_HOME/conf/_defaultRoot_/_defaultVHost_/Application.xml
- Change a value in XML tags to be as the following:

```
<SendDuplicateOnMetaData>false</SendDuplicateOnMetaData>
```

Step 3 : Restart Adobe Media Server 5

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