

IBM® Tivoli® Software

# Maximo extensions for Building Information Models

## Forge Viewer Plug-in Install Guide

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# 1 Installation Instructions

## 1.1 Supported Version

This version of the Forge Viewer Plug-in is only intended for install on Maximo 7.6.0.6. For Maximo 7.5 users, the full BIM solution is available as a separate download

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**Alert:**     *The Forge Viewer user REST and the Maximo integration Framework. To function it must be able authenticate to the Maximo REST API using the UI session context.*

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**Tip**             If your Maximo environment is virtualized, create a snapshot before starting the install.

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## 1.2 Copy source

Copy the application resource, and tools directories from the Maximo for building extensions source files into the Maximo install directory root. Note: This parches a single file, See below.

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**Tip**             In a standard install on Windows, the Maximo install root directory is:

`C:\ibm\SMP\maximo`

For a Linux install, the .EAR file is typically built on a Windows system then deployed to the Linux server. In this case, the install directory is found on the Windows system used to build the .EAR file

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The install directory structure is as follows:

```

applications
  maximo
    businessobjects
      classes
        psdi
          app
            bim

            Viewer
              dataapi
                <Class list>
              lmv
                <Class list>

maximouiweb
  webmodule
    webclient
      components
        bimlmv
          <JSP and HTML file list>
        javascript
          <JS file list>
        skins
          tivoli09
            images
              bim
                <Image list>
          Tivoli13
            images
              bim
                <Image list>

WEB-INF
  classes
    psdi
      webclient
        beans
          bim
            viewer
              lmv
                <Class list>

  properties
  product
    <bimlmv.xml>

resources
  presentations
    <XML files>

tools
  maximo
    en
      bimlmv
        <dbc and msg files>

```

## 1.3 Database update

- Stop the Maximo application server

- Goto the directory  
`<Maximo_root>\tools\maximo`
- Run updatedb

## 1.4 Rebuild and deploy EAR

You must rebuild the Maximo application. EAR file and redeploy it to the application server. The following instructions assume a standard install on IBM WebSphere

Goto the directory

```
<Maximo_root>\deployment
```

Run the command

```
Buildmaximoear or Buildmaximoearwas8
```

. On a standard install, you may ignore the warning:

```
"unable to locate tools.tar warning"
```

To deploy the new .EAR file

- Log into the WebSphere admin console
- On the left hand menu select Applications->Enterprise Applications
- Check Maximo in the table and select update
- Select the "Replace the entire application" radio button and the "Local file system" Radio button
- Select "Browser" to upload the new .EAR file. For a standard install without extensions, the .EAR file is in the directory:

```
<Maximo_root>\deployment\default\maximo.ear
```

Check the timestamp on the file to insure the ear was correctly built

- Click next through the wizard. For a standard install, you may accept all the defaults
- When the wizard completes the application update, select "save". Note: It may take several minutes for the server to restart

## 1.5 Configure System Properties

To configure system properties:

- Goto->System Configuration->Platform Configuration->System Properties
- Click the twisty to display the filter
- Enter bim in the property name filter field and press enter
- When you have updated properties as described below, check the box to the left of the properties you have edited to select them and select live refresh from the toolbar

### 1.5.1 Forge service Key and Secret

The Autodesk Forge Viewer is a cloud based WebGL application to use it you must have an account with Autodesk and credentials for the Autodesk Forge service. The version of

the viewer provided for 3<sup>rd</sup> party integration is different from that used by BIM360 accounts and requires separate credentials. You may sign up for a trail here:

<https://developer.autodesk.com/>

Once you acquire your Key and Secret from Autodesk they must be installed into Maximo. To do so, set the following System Properties:

'bim.viewer.LMV.key'

'bim.viewer.LMV.secret'

## 1.5.2 Working Directory

You may override the default values specified for the working directories in the Maximo system properties. They are:

- bim.import.dir => c:/bim/import
- bim.model.dir => c:/bim/models
- bim.import.docdir => c:/bim/docs

Insure that these directories exist

## 1.6 Autodesk SSL Certificate

If the Autodesk Large Model Viewer is used, the app server must make an SSL connection to the Autodesk cloud services. The service uses a VeriSign signed certificate. By default, the VeriSign root certificate is not in the WebSphere trust store so the AutoDesk certificate is not trusted and the connections fails. The certificate can be imported from the WebSphere admin console. Select:

Security->SSL certificate and key management

From "Related Items" Select Key stores and certificates

Select NodeDefaultTrustStore

From "Additional Properties" Select Signer certificates

Select "Retrieve from port"

Provide the following values:

The screenshot shows the 'General Properties' dialog box in the WebSphere Admin Console. The 'Host' field is set to 'developer.api.autodesk.com'. The 'Port' field is set to '443'. The 'SSL configuration for outbound connection' dropdown is set to 'CellDefaultSSLSettings'. The 'Alias' field is set to 'Autodesk View and Data API'. There is a 'Retrieve signer information' button. At the bottom are 'Apply', 'OK', 'Reset', and 'Cancel' buttons.

And select "Retrieve signer information"

WebSphere should respond with:

**Retrieved signer information**

**Serial number**  
49248466687453522052688216172288342269

**Issued to**  
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**Fingerprint (SHA digest)**  
32:F3:08:82:62:2B:87:CF:88:56:C6:3D:B8:73:DF:08:53:B4:DD:27

**Validity period**  
Nov 7, 2021

Click OK, and then save the changes on the following screens.

### 1.6.1 Selecting the Active Viewer

Multiple viewer plug-ins may be installed in a single Maximo instance. However, only one viewer may be active at a time. The active viewer is selected via the system property:

```
bim.viewer.active
```

Valid values are:

- lmv – To select the Forge Viewer
- navisworks – To select the NavisWorks viewer (Deprecated, separate install)
- vendor – To deactivate all viewers

Additional values may be defined by 3<sup>rd</sup> party viewers

The Forge viewer install sets the value to "lmv"





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