OPENFLIGHT API

19

RELEASE NOTES

Contents

OpenFlight API Release Notes

Welcome to the Release Notes for OpenFlight API 19.0.

OpenFlight API 19.0

This section describes the fixes made to the software since the previous release, as well as any known issues and limitations of the current version. It includes:

"Important note regarding Presagis License Tool" on page 5

"What's new" on page 6

"Fixes" on page 13

"Issues" on page 14

Important note regarding Presagis License Tool

Presagis has recently become aware of security vulnerabilities in versions of the Presagis License Tool up to and including version 4.4. The vulnerabilities affect only those customers who are running a Presagis License Server. Customers who are using a node-locked license are not affected.

The vulnerabilities have been fixed in the latest version of the Presagis License Tool, version 4.5. If you are using a Presagis License Server running on either the Microsoft Windows or Linux platform to license your Presagis software, ensure that your server is running the latest version.

For more information on how to upgrade, consult the *Presagis License Tool User Guide* for version 4.5.

What's new

This section provides an overview of the new features and enhancements introduced in this release. For information on how to use these new features, refer to the *OpenFlight API Developer Guide and OpenFlight API Reference.*

OpenFlight version

This version of the OpenFlight API corresponds to OpenFlight version 16.7.

Visual Studio Compatibility

The OpenFlight API is distributed in several binary formats for the Microsoft Windows platform:

- Visual Studio 2015 (VC14-Win32)

- Visual Studio 2015 (VC14-x64)

- Visual Studio 2013 (VC12-Win32)

- Visual Studio 2013 (VC12-x64)

- Visual Studio 2008 (VC9-Win32)

- Visual Studio 2008 (VC9-x64)

The table below shows which binary format you should use for the plug-ins, applications, and/or scripts you are developing.

If you are developing...	Use...	Notes
Plug-ins for Creator 19.0	VC14-x64	
Plug-ins for Creator 18	VC14-x64	
Plug-ins for Creator 17	VC14-x64	
Plug-ins for Creator 16	VC12-x64	
Plug-ins for Creator 15	VC12-Win32 or VC12-x64 depending on which version of Creator you are using, 32 or 64 bit respectively.	

Plug-ins for Creator 14	VC9-Win32	Both VC9 versions of the OpenFlight API DLLs are dependent on VC90 CRT version 9.0.21022.8. The OpenFlight API installer automatically installs the proper Visual Studio 2008 (release) redistributable package if your computer does not already have it. The debug version of the CRT should be installed on your computer when you apply the proper patches/service packs to Visual Studio 2008.
Plug-ins for Creator 13 (v5.0)	VC9-Win32	
Plug-ins for Creator v3.4 - v4.2	VC8-Win32	BothVC8 versions of the OpenFlight API DLLs are dependent on VC80 CRT version 8.0.50727.4053. The OpenFlight API installer automatically installs the proper Visual Studio 2005 (release) redistributable package if your computer does not already have it. The debug version of the CRT should be installed on your computer when you apply the proper patches/service packs to Visual Studio 2005.
Stand-alone applications	Any format	
Stand-alone OpenFlight scripts	VC14-Win32 or VC14-x64, as the required Python binding files (.pyd) are available only with the VC14 format.	If you are developing stand-alone scripts, you will also need to install Python 2.7.X. If you are using OpenFlight scripts exclusively within Creator, you do not need to install Python.

The OpenFlight API installer for the Windows platform includes the binary files for all platforms. When you install the OpenFlight API on Windows, you can choose which platform you want or you can choose to install them all.

Location of link libraries

The subfolder containing the link libraries is located in:

```
PRESAGIS_OPENFLIGHT_API/lib<platform>
```

where `lib<platform>` is:

Folder...	Contains library for...
`lib`	VC14-Win32 or Linux
`lib_x64`	VC14-x64
`lib_vc12`	VC12-Win32
`lib_vc12_x64`	VC12-x64
`lib_vc9`	VC9-Win32
`lib_vc9_x64`	VC9-x64
`lib_vc8`	VC8-Win32
`lib_vc8_x64`	VC8-x64

Location of dynamic link libraries

The subfolder containing the dynamic link libraries is located in:

```
PRESAGIS_OPENFLIGHT_API/bin<platform>
```

where `bin<platform>` is:

Folder...	Contains library for...
`bin`	VC14-Win32 or Linux
`bin_x64`	VC14-x64
`bin_vc12`	VC12-Win32
`bin_vc12_x64`	VC12-x64
`bin_vc9`	VC9-Win32
`bin_vc9_x64`	VC9-x64
`bin_vc8`	VC8-Win32
`bin_vc8_x64`	VC8-x64

Importers and Exporters

The Windows VC14 platform also includes database importer and exporter plug-ins you can use in your stand-alone programs. These plug-ins enable you to read/write database formats other than OpenFlight using the OpenFlight API and are included in the following installation folders:

Subfolder	Database importer/exporter plug-ins version
bin_x64/debug/plugins	Debug
bin_x64/release/plugins	Release

Documentation

Documentation that was previously provided in CHM format is now provided in HTML format. It opens in your default Web browser.

The documents included with the OpenFlight API include:

OpenFlight API Installation Guide

OpenFlight API Release Notes

OpenFlight API Developer Guide

- *Volume 1 (Read/Write)*
- *Volume 2 (Extensions/Tools)*

OpenFlight API Reference Set

- *OpenFlight API Reference*
- *OpenFlight Data Dictionary*

Amendment to Software License Agreement

Documentation is installed at:

```
PRESAGIS_OPENFLIGHT_API/docs
```

PDF versions of *OpenFlight API Installation Guide*, *OpenFlight API Release Notes* and *OpenFlight API Developer Guide* are located in this folder.

HTML Help versions of *OpenFlight API Installation Guide*, *OpenFlight API Release Notes* and *OpenFlight API Developer Guide* are accessible from:

```
PRESAGIS_OPENFLIGHT_API/docs/help/index.html
```

OpenFlight API Reference Set is located here:

```
PRESAGIS_OPENFLIGHT_API/docs/reference/
OpenFlight_API_Reference_Set.htm
```

Sample Code

Sample code is located in:

```
PRESAGIS_OPENFLIGHT_API/samples
```

with subfolders for different kinds of samples:

Subfolder	Description
apps	sample stand-along programs
extensions	sample OpenFlight data extensions
plugins	sample plug-ins (not included in the Linux distribution)
scripts	sample OpenFlight and Creator scripts

Plug-in Runtime Directory

Plug-ins are loaded in the stand-alone program environment when your program or script calls the OpenFlight API function `mgInit`. `mgInit` searches for plug-ins in the following locations (in the order listed). As soon as a folder is found in one of these locations, `mgInit` stops searching for other locations and loads the plug-ins it finds in the first folder found.

- The directory (or directories) your program specifies when calling `mgSetPluginFolder`. If you call this function before `mgInit` to specify one or more directories, the folder(s) you specify will be searched for plug-ins. To specify more than one directory, pass a semi-colon delimited list of paths to `mgSetPluginFolder`.

- The directory (or directories) specified by the environmental variable `PRESAGIS_OPENFLIGHT_PLUGIN_DIR`. This environmental variable may specify any accessible directory on your computer or may specify multiple directories using a semi-colon to delimit each path.

- A directory named `plugins` immediately below the directory that contains the executable being run.

Creator loads plug-ins automatically when it starts. Creator searches for plug-ins in the following locations (in the order listed). As soon as a folder is found in one of these locations, Creator stops searching for other locations and loads the plug-ins it finds in the first folder found.

- The directory (or directories) specified by the environmental variable `PRESAGIS_CREATOR_PLUGIN_DIR`. This environmental variable may specify any accessible directory on your computer or may specify multiple directories using a semi-colon to delimit each path.

- A directory named `plugins` in the Creator configuration folder. This folder is located at:

  `PRESAGIS_CREATOR/config/plugins`

New functions

Base Functions

`mgIsHostCreator`

Dialog Functions

`mgPromptDialogParamBlock`

Matrix Functions

`mgMatrixFormLCS`

Parameter Block Functions

Added OpenFlight Script version of these functions:

```
mgNewParamBlock
mgParamAddInteger
mgParamAddDouble
mgParamAddDouble2
mgParamAddDouble3
mgParamAddFloat
mgParamAddBool
```

```
mgParamAddString
mgParamSetEnumerant
mgParamSetDimension
mgParamSetIntegerMinGT
mgParamSetIntegerMinGE
mgParamSetIntegerMaxLT
mgParamSetIntegerMaxLE
mgParamSetDoubleMinGT
mgParamSetDoubleMinGE
mgParamSetDoubleMaxLT
mgParamSetDoubleMaxLE
```

New symbols

`MTA_SHORTCUT` for `mgRegisterEditor` and `mgRegisterViewer`

Fixes

This section describes the limitations identified in previous releases that have been fixed.

Case No.	Description
CR-11691	Fixed `mgPromptDialogFile` to handle spaces in `MPFA_PATTERN` attribute.
CR-11604	Fixed `mgOpenDb`/`mgCloseDb` memory leak when file contains at least one texture.
CR-11388	Fixed Python signature for `mgExtensionFieldGetCoord3d`.

Issues

This section describes any known issues and limitations of the current version, as well as any pending issues from previous versions.

mgInit

`mgInit` / `mgExit` can be called only one time per process.

Copyright

March 4, 2020

PRESAGIS