A MITEL
PRODUCT
GUIDE

MiContact Center Enterprise

OAS Client Programming Guide – Getting Started

Release 9.6
Document Version 1.0

September 2022

Mitel
Powering connections

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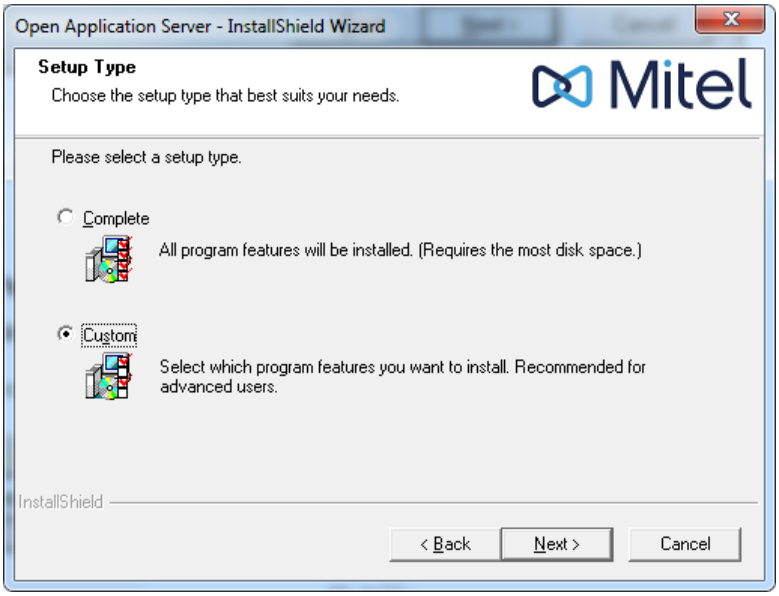
GETTING STARTED

Open Application Server (OAS) provides call and media control APIs for third party applications. This document provides information on binary files and header files that are required to program client applications to OAS.

SDK INSTALLATION

The SDK installation installs the required header files and binary files for development of OAS client applications.

You can chose to install SDK by selecting custom installation mode option in the OAS installation as described below.

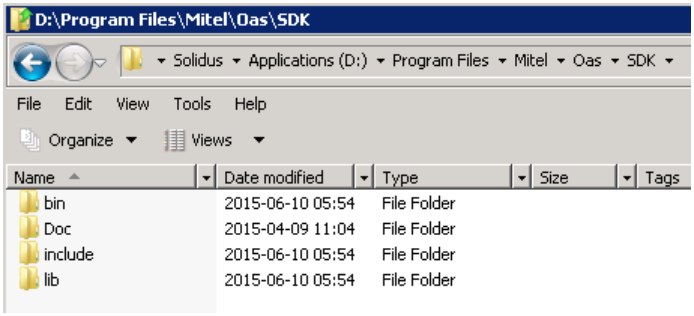


Click **Next.** On the next screen, select the OAS Software development Kit option.

DEFAULT PATH FOR SDK

SDK will be installed in the following default path

`%Installation Path% Program files/Mitel/OAS/SDK`



BINARIES

The client application needs to integrate with *oascsta32.dll* to get the Open Application Server API's.

oascsta32.dll is provided in the following path

C:/Program files/Commonfiles/Ericssonshare/

%Installation Path% Program files/Mitel/OAS/SDK/bin

Complete OAS installation also installs SDK.

oascsta32.dll depends on following binaries during runtime

- conclnt.dll
- conmgr.dll
- connstubs.dll
- dnacomm.dll
- etpclasses.dll
- etpclient.dll
- npclient.dll
- nrmconnclient.dll
- qconmgr.dll
- qstreams.dll
- thrmgr.dll

All these binaries are provided in following path

C:/Program files/Commonfiles/Ericssonshare/

The file versions of some of npclient.dll does not follow OAS version numbering. The file version of npclient.dll is 4.0.3.0.

Ensure that the file version numbers are correct.

Example: If client application is connecting to OAS 9.2, the DLLs should have following file versions.

DLL Name	Version Number
connstubs.dll	9.2.87.0
etpclasses.dll	9.2.87.0
etpclient.dll	9.2.87.0
nrmconnclient.dll	9.2.87.0
oascsta32.dll	9.2.87.0

Note1: Use load library to load the *oascsta32.dll* in client application

Note2: The binaries are compiled with Visual Studio 2003. The binaries for Visual Studio 2013 are also available and appended with "13", example *etpclasses13.dll*.

HEADER FILES

The following header files should be included in client application program:

1. *csta.h*: for call control
2. *etp.h*: for media control

These header files along with their dependent files are provided in the following path:

`%Installation Path% Program files/Mitel/OAS/SDK/include`

- acs.h
- acsdefs.h
- acslimit.h
- cdi.h
- cstadefs.h
- drvrdefs.h
- etpdefs.h
- etpmediadefs.h
- sdb.h
- sdbdefs.h
- tdi.h
- tdrvr.h
- tsplatfm.h

GUIDELINES FOR IMPLEMENTATION

Client can load *oascsta32.dll* in following ways

- Dynamic Linking using Load Library (* Recommended)
- Static Linking

DYNAMIC LINKING (* RECOMMENDED)

Use load library API to load *oascsta32.dll.*

Refer the below link to find more information on LoadLibrary .

http://msdn.microsoft.com/en-us/library/ms684175(VS.85).aspx

Sample Code:

The client application needs to declare a function pointer to respective API functions.

```
typedef RetCode_t
 (* acsOpenStream_t) (
    ACSHandle_t          FAR    *acsHandle,
    InvokeIDType_t              invokeIDType,
    InvokeID_t                  invokeID,
    StreamType_t                streamType,
    ServerID_t           FAR    *serverID,
    LoginID_t            FAR    *loginID,
    Passwd_t             FAR    *passwd,
    AppName_t            FAR    *applicationName,
    Level_t                     acsLevelReq,
    Version_t            FAR    *apiVer,
    unsigned short              sendQSize,
    unsigned short              sendExtraBufs,
    unsigned short              recvQSize,
    unsigned short              recvExtraBufs,
    PrivateData_t        FAR    *priv);
```

Fetch the function pointers of oas*cscta32.dll* APIs as following

```
HINSTANCE hInstance;
hInstance = LoadLibrary(L"oascsta32.dll");
OpenStream = (acsOpenStream_t)GetProcAddress(hInstance,"acsOpenStream");
//In the same way declare the relevant structures
//and call the appropriate functions in the following way
GetEventBlock = (acsGetEventBlock_t) GetProcAddress(hInstance,
                                                    "acsGetEventBlock");
MonitorDevice = (cstaMonitorDevice_t) GetProcAddress(hInstance,
                                                    "cstaMonitorDevice");
MakeCall = (cstaMakeCall_t) GetProcAddress(hInstance,"cstaMakeCall");
```

For more details on the structures of requests and responses refer to oasapg.pdf which we can found in the following path

```
%Installation Path% Program Files\Mitel\OAS\SDK\Doc
```

STATIC LINKING

csta32.lib can be included in the client program for static linking.

Client application needs to be recompiled to work with updated version of *csta32.lib* file. The lib file is provided at the following path:

```
%Installation Path% Program Files\Mitel\OAS\SDK\lib
```

This option is not recommended.