

## COM License Bridge to CORBA License Manager 2005

### Applies to:

SAP Business One 2005 and future versions / License Manager (CORBA).

### Summary

This article describes how to install and use the “SAP Business One COM License Bridge” to connect to the SAP Business One CORBA License Manager. This COM License Bridge “wraps” the CORBA interface which is exposed by the SAP Business One License Service since version 2005 with a COM wrapper.

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## Ready-to-use “COM License Bridge” exposes License Service API

When trying to establish DCOM connections from client PCs to servers that are running in a different domain or workgroup, security issues are common problems. Therefore the License Service was moved from DCOM technology to CORBA with the SAP Business One 2005 release. With CORBA such issues do not exist since it is not tied to Windows authentication.

It happens though that SAP Business One partners request functionality that is available in the License Service API. In an effort to accommodate these requests a COM “License Bridge” to the API of the License Service has been developed.

It “wraps” the CORBA interface which is exposed by the SAP Business One License Service since version 2005 with a COM wrapper.

The COM\_B1License.exe is a COM server which could run as a Windows service as well.

It provides the same interface as available in SAP Business One version 2004:

- All CLSIDs and IIDs from the 2004 COM License Server are being reused.
- If the 2004 interface had already been used – the License Bridge would allow using 2004-based code to run without rebuilding.

## How to install / uninstall the “COM License Bridge”

You can easily install the COM License Bridge by simply running the Setup provided for download in SDN.

The default installation path will be “Program Files/SAP/SAP Business One ServerTools” as the LicenseBridge.exe should be ideally in this directory, you can change it if you want to but please be careful to have the needed DLLs in the same directory.

Please note that the COM License Bridge will only work on the system where the actual License Service is running.

Please note further that the service uses ace2005.dll and TAO\_CosNaming2005.dll (and its dependencies). These DLL files are used by the SAP Business One License Service too – and therefore are located in the “C:\Program Files\SAP\SAP Business One ServerTools\License” directory.

Ideally the License Bridge would be copied into that directory as well. However this directory is maintained by the SAP Business One Server Tools Installer. Therefore special attention has to be paid to the License Bridge during any subsequent Server Tools Update process.

## Running the COM License Bridge

You don’t need to run the COM License Bridge executable, only by registering it as a server plus instancing it from your code as a COM interface will launch it.

The License Bridge could be registered as a Windows service, but this should not be necessary on versions of the operating system which are officially supported; even more, registering the License Bridge has proven to cause the mechanism used in the COM\_TestLicense sample to fail!

## Registering the COM License Bridge

You need to register the COMLicenseBridge as a COM Server prior to use it.

To register the LicenseBridge as a COM Server you need to call:

COM\_B1License.exe –RegServer

Or use the “Register COM License Bridge” menu inside All Programs -> SAP Business One ServerTools -> COM License Bridge -> Register COM License Bridge.

### Un-Registering the License Bridge

You can Unregister the COM License Bridge server by calling:

COM\_B1License.exe -UnregServer

Or use the “Unregister COM License Bridge” menu inside All Programs -> SAP Business One ServerTools -> COM License Bridge -> Unregister COM License Bridge.

### Logging

The bridge logs “events” into the Windows event log so that the events are visible in the Windows Event Viewer. To disable logging to the Windows Events System, add the following key to the registry and set its value to “false”:

HKEY\_LOCAL\_MACHINE\SOFTWARE\SAP\SAP Manage\LicenseManager\EnableEventLog

### Using the COM License Bridge

After installing the COM License Bridge and registering it you are ready to use it from your add-on code.

Together with the Setup you have 2 C# samples showing you how to use the COM License Bridge, one developed for Visual Studio .NET 2003 and the second one for Visual Studio .NET 2005. Please download the “Sample\_COMLicenseBridge” corresponding to your Visual Studio .NET version to see how to use the COM License Bridge.

Please note that the sample can work with the SAP Business One 2004 license service as well.

Please find a full list of all available functions in the SAP Business One SDK Help Center, section “SAP Business One License API”.

### The Sample\_COMLicenseBridge

The code sample is provided as C# Windows application project to show you how to use the COM License Bridge.

The sample contains all publicly available methods – two of them are disabled though to avoid any unintended usage: `LoadLicenseFile` + `ResetAllLicenses`

After Initializing the COM interface a couple of API methods are called to provide some basic information. The calls to further API methods are implemented in handlers for the corresponding Click events.

The most important steps how to use the API can be summarized as follows:

1. Add a reference to “SBOLicense COM Bridge 1.0 Type Library” in your Microsoft Visual Studio project.
2. Declare a variable for the `LicenseInfo` interface:  
`SBOLICENSELib.LicenseInfo lc = null;`
3. Instantiate the `LicenseInfo` interface:  
`lc = new SBOLICENSELib.LicenseInfo();`

Using the interface is fairly straightforward:

E.g.g check whether user “manager” has been assigned SAP Business One Professional User license:

Check for the SWPRODUCTNAME corresponding to Professional User license in the license file – in this case SWPRODUCTNAME = PROFESSIONAL\_MSS.

The code could e.g. look like this:

```
int result = lc.IsUserLicensed("manager", PROFESSIONAL_MSS);
if (result != 0)
    MessageBox.Show("User is Licensed");
else
    MessageBox.Show("User is not Licensed: " + result);
```

## Frequent requirements

- Number of Add-On users to be identical to Professional users:

```
int lNumPro, lNumAdd, lAvail, lStart, lEnd;
string sModule = «PROFESSIONAL_MSS»;
lc.GetLicenseInfo(sModule, out lNumPro, out lAvail, out lStart, out lEnd);

//...if the License Key Name of your Add-On would be BASIS00001234567:
sModule = «BASIS00001234567_MSS»;
lc.GetLicenseInfo(sModule, out lNumAdd, out lAvail, out lStart, out lEnd);

if (lNumPro!= lNumAdd)
    MessageBox.Show("Number of Add-On licenses does not match number of
Professional users!");
```

- Type of license the user has / related to functions – especially for applications that use DI API only:

```

int result = lc.IsUserLicensed("manager", PROFESSIONAL_MSS);
    if (result != 0)
        MessageBox.Show("User is Licensed");
    else
        MessageBox.Show("User is not Licensed: " + result);

```

From there you would need to reflect license type vs. the actual functionalities in the B1 application which would be accessible for a particular user – or read-only – or not.

Please note that a functionality that fully fulfills this requirement is available through UI API:

`Application.Company.GetFormLicenseStatus( ByVal FormType As String ) As BoLicenseStatus`

## How to (re-)build the (COM) License Bridge Source Code

The License Bridge is based on Open Source Libraries ACE and TAO:

ACE(TM) and TAO(TM) are copyrighted by Douglas C. Schmidt and his research group at Washington University, University of California, Irvine, and Vanderbilt University Copyright (c) 1993-2003, all rights reserved.

The core components of the License Bridge are:

- the `CServiceModule` class in the `SBOLicense.cpp` file which provides standard interfaces to register, unregister and run the License Bridge
- the `CLicenseInfo` class in the `LicenseInfo.cpp` file which actually exposes the API

To rebuild the License Bridge it is necessary to:

1. Download the C++ source code for ACE and TAO libraries from <http://download.dre.vanderbilt.edu/> and rebuild the libraries (\*.lib).

Please note that SAP Business One 2005 (SP01) uses ACE 5.4 / TAO 1.4.

SAP Business One 2006 will be using ACE 5.5 / TAO 1.5.

2. Build the License Bridge itself
3. Link it with the ACE + TAO libraries.

At this point in time only the versions ACE 5.5 / TAO 1.5 are available through the link above though.

Please note that the builder of the resulting License Bridge will have to assume full responsibility for any issue related to this build and its usage!

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