



## Test Plan

**B1-SDK 10 - SAP Business One Add-on Certification 10  
for MS SQL**

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# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>6</b>
1.1	Purpose .....	6
1.2	Overview .....	6
1.3	Namespace.....	6
1.4	Test Location .....	6
1.5	Test Environment .....	7
1.6	Test process .....	7
<b>2</b>	<b>PREPARING FOR THE TEST .....</b>	<b>8</b>
2.1	Testing in an ICC Laboratory.....	8
2.2	Testing over an Internet Collaboration Session .....	9
2.3	Testing at the ISV's office .....	10
<b>3</b>	<b>TECHNICAL REQUIREMENTS.....</b>	<b>10</b>
3.1	B1TE Setup .....	10
3.2	Install / Uninstall .....	10
3.3	No Add-on .....	11
3.4	Licensing (Optional) .....	11
3.5	Advanced Database Objects .....	12
3.6	Modifying SAP Business One Data .....	14
3.7	Exception / Error handling.....	16
3.8	Compliance with SDK guidelines.....	18
3.9	Documentation of event handlers.....	20
3.10	Compliance with Screen Design Guidelines .....	21
3.11	Extending SAP Business One GUI .....	22
3.12	Web Client .....	22
3.13	User name in license and Add-On admin .....	23
3.14	Field length increase .....	23
3.15	Service Layer Enabled for Microsoft SQL Server .....	23
3.16	Extend UDF Support to Additional Objects .....	24
3.17	64 Bit support only and upgrading Business One Add-on .....	25
3.18	Platform & Extensibility.....	27
3.19	Upgrading SAP Business One Add-Ons.....	28
3.20	Silent Upgrades for Third-Party Add-Ons.....	29

<b>4</b>	<b>FUNCTIONAL REQUIREMENTS</b> .....	<b>31</b>
<b>5</b>	<b>STABILITY / PERFORMANCE REQUIREMENTS</b> .....	<b>31</b>
<b>6</b>	<b>APPENDIX</b> .....	<b>32</b>
<b>6.1</b>	<b>Test Tools</b> .....	<b>32</b>
<b>6.2</b>	<b>Related Documents</b> .....	<b>33</b>







# Preface

This document is the test plan for SAP Business One Add-On Solution certification. The compliance of the delivered Add-On Solution with this test plan will be checked against an SAP Business One reference system.

## *How to read this document*

This document is meant to show an overview of the checkpoints for certification

## *Icons*

Icon	Meaning
	Caution
	Example
	Note or Tip
	Recommendation
	Syntax
	Tool available

# 1 INTRODUCTION

## 1.1 Purpose

This document describes the tests to be performed during SAP Business One Add-On Solution certification for the integration of an external solution or an Add-On enhancement to SAP Business One.

## 1.2 Overview

The requirements for the certification test are mainly grouped as technical and functionality requirements.

Unless noted otherwise all the requirements are mandatory.

## 1.3 Namespace

It is mandatory for all certification partners to register namespace with SAP.

The namespace can be registered via <https://support.sap.com/en/my-support/keys.html>

Partner needs to have Administrative S-user for this purpose.

Partner needs to apply the registered namespace to all self-developed objects, such as database tables, during the add-on development.

## 1.4 Test Location

SAP Business One Add-On Solution Certification is performed by SAP Integration and Certification Center (ICC). Depending on the Add-On Solution as well as the agreement between SAP ICC and the Independent Software Vendor (ISV), the certification test can be performed;

- In an SAP ICC laboratory – optional
- Remotely over an Internet Collaboration Session – preferred
- At the ISV location – optional

When testing in an SAP ICC laboratory, SAP ICC will provide the necessary hardware, SAP software (SAP Business One, SDK etc.) and the database system. The ISV will bring any additional hardware and/or software required together with the Add-On to be certified.

Optionally the certification test can also be performed remotely over an Internet collaboration session. In this case, the vendor will provide the hardware and all required software. The vendor will also be responsible for the associated communication charges during the course of the certification test – internet collaboration session, telephone etc.

Rarely, due to technical dependencies ISVs might prefer the certification test to be performed at their own location – for example, if the Add-On depends on a hardware that is not easy to deliver to an ICC laboratory. Then the required hardware and software for the certification test are provided by the ISV. In addition, the ISV will also cover the travel expenses of the ICC consultant.

## 1.5 Test Environment

In addition to the Add-On solution to be certified, the following constitute the necessary environment for the certification testing.

- Database System for SAP Business One
- SAP Business One – the version mentioned in the certification contract or the version used in actual ICC certification test.
- Latest support packages for SAP Business One
  - Required patch level will be communicated by the ICC consultant
- SAP Business One Test Environment – B1TE

## 1.6 Test process

The following lists different tasks need to be performed for a successful certification test.

- a) The ISV sends the completed the Technical Product Profile (TPP) to the ICC consultant
- b) ICC consultant reviews the TPP and communicates to finally agree on the functional test cases.
- c) Utilizing the B1TE tools as needed
  - a. Technical requirements are verified
  - b. Functional requirements are verified
- d) After a successful test, ISV's Add-On is awarded with the certificate
- e) If one or more of the mandatory tests fails, the test is rescheduled to continue at a later date so that the ISV can correct the missing or non-compliant functionality.

## 2 PREPARING FOR THE TEST

Based on the test location, the following subsections outline the preparations necessary for a smooth certification test session.

### 2.1 Testing in an ICC Laboratory

In order to perform the certification test in one of ICC laboratories, the ICC consultant is responsible to prepare the necessary environment.

Hence the ICC consultant will have the following installed before the scheduled certification date.

- Database System
  - By default the MS SQL Server 2000 database will be installed.
- SAP Business One System – including the SDK
  - The version specified in the certification contract
  - Unless requested otherwise, the ICC consultant will install the default SAP SBO-Demo database for the region. (e.g. SBODemo\_US for Americas)
- Recent SAP Business One support package
  - Unless agreed otherwise, the most recent patch level will be applied.
- SAP Business One Test Environment (same version as the SAP Business One system)

The ISV will bring

- the installation (setup) file(s) for the Add-On solution to be certified
- any other required software and/or hardware that is not provided (licensed) by SAP
- two solution licenses to be used during the certification testing
  - If the ISV chooses to comply with the optional technical requirement of using the SAP Business One Licensing mechanism. Otherwise this is not required – see the section 0
  - [No Add-on](#)

If a partner has a solution which has no SAP Business SDK Add-on, instead, it directly interfaces with SAP Business One via DI-API, it is acceptable based on below condition:

- Partner solution can only access to SAP Business One via DI-API calls or consume SAP HANA Service Layer.
- Partner needs to provide a security guideline regarding its solution access to SAP Business One.
- In these scenarios that, partner solution needs to communicate significant of data with SAP Business One which is the back-office, one or more performance test case shall be verified during test.
  - Licensing (Optional) for more information on this.



## 2.2 Testing over an Internet Collaboration Session

If the certification test will be performed over an Internet Collaboration session (WebEx, Live Meeting etc.) the ISV will;

- Schedule the Internet Collaboration session for the date and time agreed with the ICC consultant
- Provide the database system – based on the system requirements of SAP Business One version specified in the certification contract
  - Special cases should be clarified with the ICC consultant before the certification test (e.g. MSDE vs. MS SQL Server etc.)
- Install SAP Business One system – based on the version specified in the certification contract
- Apply the recent support packages for SAP Business One
  - Based on patch level agreed with the ICC consultant
- Install SAP Business One Test Environment – B1TE
  - B1TE can be downloaded from SAP Developer Network – <http://sdn.sap.com>
  - Or you can contact your certification consultant for obtaining B1TE
- Obtain two solution licenses to be used during the certification testing
  - If the ISV chooses to comply with the optional technical requirement of using the SAP Business One Licensing mechanism. Otherwise this is not required – see the section 0
  - No Add-on

If a partner has a solution which has no SAP Business SDK Add-on, instead, it directly interfaces with SAP Business One via DI-API, it is acceptable based on below condition:

- Partner solution can only access to SAP Business One via DI-API calls or consume SAP HANA Service Layer.
- Partner needs to provide a security guideline regarding its solution access to SAP Business One.
- In these scenarios that, partner solution needs to communicate significant of data with SAP Business One which is the back-office, one or more performance test case shall be verified during test.
  - Licensing (Optional) for more information on this document.

During the certification test session, the partner is requested to

- Set up SAP Business One database in the testing server
  - Unless requested otherwise, the default SAP SBO-Demo database for the region. (e.g. SBODemo\_US for Americas)
  - This database backup will be restored over the SAP SBO-Demo database that the ISV recently installed.

### 2.3 Testing at the ISV's office

In general the process outlined in the previous section ([2.2 Testing over an Internet Collaboration Session](#)) applies.

## 3 TECHNICAL REQUIREMENTS

Unless noted otherwise all the requirements listed below are mandatory.

### 3.1 B1TE Setup

#### Requirement

B1TE is a tool package where it contains several tools, during certification, partner needs to contact ICC consultant to obtain the tool package and setup B1 DB Profiler and Formchecker correctly.

#### Action

- Install B1TE tool
- Read help file of B1 DB Profiler and Formchecker
- For B1 DB profiler, you should expect to see several log items appear from the pop-up window.
- Formchecker needs namespace where you applied from SAP.

### 3.2 Install / Uninstall

#### Requirement

The installation process should run smoothly and according to the documentation supplied by the ISV.

#### Action

- Run the installation
- Check the configuration / customization against the provided documents.
- Verify that the process runs smoothly.
- A few, documented “manual” changes are allowed.  
Manual changes are those that a system administrator cannot perform inside the Add-On or SAP Business One or a configuration tool:
  - Editing a configuration file
  - Changing values in the database
  - Direct changes in SAP Business One tables are not allowed
- Use B1 DB Profiler to check usage of APIs.

#### Tools



##### B1 DB Profiler:

B1 DB Profiler tracks usage of Business Objects (including UDOs) in the SAP Business One application or DI objects in DI API or DI Server. These should be the only changes in the SAP Business One database tables.

## **Expected Result**

Duration depends on particular Add-On; should in general be finished after a couple of minutes.

Only a very few manual changes / configurations to be performed – if at all.

### **3.3 No Add-on**

If a partner has a solution which has no SAP Business SDK Add-on, instead, it directly interfaces with SAP Business One via DI-API, it is acceptable based on below condition:

- Partner solution can only access to SAP Business One via DI-API calls or consume SAP HANA Service Layer.
- Partner needs to provide a security guideline regarding its solution access to SAP Business One.
- In these scenarios that, partner solution needs to communicate significant of data with SAP Business One which is the back-office, one or more performance test case shall be verified during test.

### **3.4 Licensing (Optional)**

#### **Requirement**

Optionally the ISV may choose to use the licensing mechanism offered in SAP Business One.

In order to comply with this requirement, the ISV should have registered the Add-On for licensing and use the mechanism (AddOnIdentifier generated from License Key Name; to be used in Add-On code).

#### **Action**

Before assigning an Add-On solution license to the user, the Add-On will be launched.

#### **Expected Result**

As the license for the Add-On solution is not assigned to the user yet the Add-On will fail to connect to the API(s).

#### **Remarks**

SAP Business One license mechanism is described in detail in the SDK Help Center and the licensing documentation. In addition he requests licenses for the system – including licenses for his Add-On.

When using the SAP Business One license mechanism UI API + DI API work on a named user basis.

An Add-On using only DI Server is not affected by this requirement since DI Server works in a license mode per CPU.

#### **Contact**

Please contact your SAP PartnerEdge manager if you have any question about license

### 3.5 Advanced Database Objects

#### Requirement

The use of advanced database objects such as stored procedures and triggers in the SAP Business One databases are not allowed.

Except the SAP provided stored procedure `SBO_SP_TransactionNotification` modifying and/or creating as well as executing any SAP or non-SAP stored procedures are not allowed as they

- may cause conflicts with SAP Business One processes
- are not portable between different database systems
- cause possible problems during upgrading and/or patching the SAP Business One databases
  - Using DI API or DI Server instead guarantees backward compatibility for an Add-On running on a customer system.

Therefore the usage of stored procedures in the SAP Business One databases will not be accepted regardless of their purpose as to write and/or extract data.

Similarly as they may get erased during upgrades and conflict with SAP Business One processes, triggers are also not allowed in SAP Business One databases.

#### Please note:

If you are using `SBO_SP_TransactionNotification`, you should use it **only** to propagate the information about a change of a Business Object (UDO or standard SAP Business One) in SAP Business One.

- If the `SBO_SP_TransactionNotification` is modified by the Add-on, it should be done manually. Automated updates can potentially overwrite changes made by other Add-ons.
- No rollbacks are allowed within the `SBO_SP_TransactionNotification`. This will be verified using the procedure outlined in the test action outlined below.

#### Action

System table listing triggers will be checked (see SAP Note 767032).

SQL statement to check for Microsoft SQL Server:

```
"USE *DB*
SELECT T0.name 'trigger',
(select name from sysobjects T1 where T1.Id = T0.Parent_obj),
'table' FROM sysobjects T0 WHERE type = 'TR'"
```

Usage of Stored procedures will be checked as well.

If any, the modified section of the `SBO_SP_TransactionNotification` will be checked against returning a non-zero value in the `@error` parameter. As it would cause a rollback, returning a non-zero value in `@error` parameter is not allowed. For example `SET @error = 10`.

### **Expected Result**

No triggers and stored procedures added and/or used by the Add-On solution.

### **Tools**



#### B1 DB Profiler

B1 DB Profiler tracks usage of Business Objects (including UDOs) in the SAP Business One application or DI objects in DI API or DI Server. As a consequence, these should be the only changes in the database.

#### Microsoft SQL Tools

The tools will be used to check for triggers and additional stored procedures.

### **Remarks**

The use of advanced database objects in non-SAP Business One databases is permitted.

The use of views for extracting data is permitted.

## 3.6 Modifying SAP Business One Data

### Requirement

The use of Data Interface (DI) objects (via DI API or DI Server API) is required to modify (i.e. add, remove, delete) SAP Business One data. In contrast to using DML (i.e. SQL queries) queries, this ensures the consistency of the SAP Business One data.

Any additional connection should be indicated to SAP in advance (in the Technical Product Profile). This includes details about its purpose and a description of how intensively it is used in order to plan the tracking of these connections accordingly. SAP will track opening of connections to the database and check for potential DML actions on SAP Business One tables run through these connections and DML actions run through DI API RecordSet object. Such DML actions are not acceptable for certification.

This rule applies to any table in the SAP Business One database except user-defined tables (UDT) which are not used for user-defined objects (UDO) or any custom tables.

### Action

Run B1 DB Profiler and see the changes logged there to detect lack of usage of DI API / DI Server objects.

The Profiler will be running during the test. At the end of the tests (or at any point of time) the logged information will be evaluated. Unclear results will be discussed. Eventually cases might be retested and investigated more deeply.

### Expected Result

Reasonable number of lines in the log (basically every DML call should go through the objects in the APIs).

Each test case described to test the Functional Requirements should include a list which objects are expected to be used (ideally, but not mandatory with details about the usage: access / create / update / delete / ...).

Data from SAP Business One tables may only be read according to the preconditions described above in the requirements section.

### Tools



#### B1 DB Profiler:

B1 DB Profiler tracks usage of Business Objects (including UDOs) in the SAP Business One application or DI objects in DI API or DI Server. As a consequence, these should be the only changes in the database.

#### B1 .NET Profiler (.NET only)

B1 .NET Profiler tracks usage of DI API objects and usage of ODBC, OleDb etc.

#### Microsoft SQL Profiler / OSQL / ISQL:

These tools can be configured to track actions performed on a particular database – also outside the SAP Business One SDK APIs.

**Remarks**

DML operations are acceptable with the RecordSet object for user table only.

For other business objects use only the relevant DI objects and not the RecordSet object.

Any DML operations on system tables pose a high risk for data corruption, and will not be supported.

For the sake of maximum version compatibility and database system independency the usage of SQL statements should be avoided whenever possible.

### 3.7 Exception / Error handling

#### Requirement

Errors and exceptions have to be handled correctly.

- When handling transactions via DI API, please note the following:
  - a) There is only one level of transactions – hierarchical transactions are not supported
  - b) In case of any errors which cause an exception (wrong data format) or failure of a single transaction (Add, Update, etc.) the global transaction will be rolled back. Hence any single transaction afterwards will have immediate impact in the data in the SAP Business One database. If this is the case an exception will be thrown when the developer tries to call the function to end the transaction (`EndTransaction`).  
The ISV is required to describe where this mechanism is used and handle potential error cases accordingly
- When calling the UI API methods please note:  
Any misuse of the UI API methods will result in an exception that the Add-On should handle. Similarly the Add-On should also handle the exceptions that occur in any EventHandler routine.

#### Action

Error cases may be constructed by SAP based on the test cases provided in addition to the tracking done through B1 .NET Profiler.

- **Transaction handling in DI API:**  
The cases where this option is used have to be specified in the Functional Test section.  
During the test drive SAP will check these cases.  
If possible, SAP will take a look at source code and see how a potential failure - e.g. because of a wrong data format is handled; the entire transaction has to be started again after the user / the Add-On corrected erroneous data.
- **Exceptions in UI API:**  
Check the logs of B1 Profiler.

#### Expected Result

- **Transaction handling in DI API:**  
The expected behavior is that all operations in a global transaction fail - or all succeed.
- **Exceptions in UI API:**  
Potential exceptions should be captured and handled by the Add-On – though UI API might be able to handle them instead in certain cases.

#### Tools



B1 DB Profiler



B1 DB Profiler tracks usage of Business Objects (including UDOs) in the SAP Business One application or DI objects in DI API or DI Server. As a consequence, these should be the only changes in the database.

B1 .NET Profiler

B1 .NET Profiler tracks usage of DI + UI API objects + exceptions – including calls to `StartTransaction / EndTransaction`.

## **Links**

[SDK Help Center](#)

### 3.8 Compliance with SDK guidelines

#### Requirements

SDK Guidelines can be found in the SDK Help Center:

- In the “Compatibility Guidelines” check the section “Namespace Conventions” which is most important and helps to avoid conflicts between Add-Ons on the customer site.  
Please note: It is required that the Add-On implementation follows the rules in using a namespace.
- In the “Compatibility Guidelines” check the section “Multilingual Support” information about the support for that in the APIs.

Furthermore the following information should be supplied to follow the guidelines:

- Modifications of menus / SAP Business One forms should be documented.
- Application events should be handled.

#### Action

- Namespace compliance:  
The B1 Form Checker will perform namespace checks for UI elements.  
The B1 DB Browser will check compliance for additional tables and fields.
- Multilingualism:  
This can be checked through switching the “Display Language” at least, if the vendor wants to sell the solution in regions with different or various languages spoken. If this is not intended, it should be stated in the vendor’s documentation! If it is, the partner part of the UI will be checked:  
Visually compare static text fields, descriptions (in status bar) and error messages to reflect the selected language.  
  
Remark:  
To switch the display language go in the SAP Business One application to “Modules” / “Administration” / “System initialization” / “General Settings” and then to the “Display” tab.
- Modifications:  
Compliance can be checked based on the logs of B1 .NET Profiler:  
If there are calls to UI API when a SAP Business One form comes up, this indicates that the Add-On at least reacts to that event. Often changes in the layout of SAP Business One forms will be performed at this point in time.
- Application events:  
Company change, SAP Business One Shut Down, Stopped in “Add-On Manager”:  
Add-On should perform clean-up (menus only in the case of being stopped through Add-On Manager) + shut down

Language change:

Menus should be cleaned up + recreated

Static texts + descriptions should appear in the right language (if applicable)

### **Expected Result**

The Form Checker + B1 Profiler will be running during the test.

- Namespace compliance:  
Non-compliance will be detected and reported.
  
- Multilingualism:  
The partner UI part should reflect the language change as stated in “Action”
  
- Modifications:  
TPP information should match the log recorded during session.
  
- Application events:  
Add-On solution should react as described in “Action”.

### **Tools**



[B1DBBrowser](#)

[B1 Form Checker](#)

[B1 Query Generator / B1 Debug Information](#) option

[B1 .NET Profiler](#)

### **Links**

[SDK Help Center](#)

[SDK Standards & Guidelines.pdf on SMP](#)

### 3.9 Documentation of event handlers

#### Requirement

Complete documentation of event handlers (i.e. handling the calls originating from SAP Business One forms) has to be provided by the ISV.

#### Action

In addition to manually verifying the functionality of the user interface, B1 Event Bubble Checker will be configured to track UI events to identify possible cases where the events are blocked by the Add-On.

This will be compared with the information given in the TPP.

#### Expected Result

The information in the B1 .NET Profiler and the B1 Event Bubble Checker should match with the information provided in the TPP / user documentation.

#### Remarks

It is important for the customer to know about differences between the functionality described in the documentation of the SAP Business One application and the entire solution – i.e. standard SAP Business One + the Add-On solution.

#### Tools



[B1 Event Bubble Checker](#)

[B1 .NET Profiler](#)

#### Link

[SDK Help Center](#)

[SDK Standards & Guidelines.pdf on SMP](#)

### 3.10 Compliance with Screen Design Guidelines

#### Requirement

The Add-On solution should integrate with SAP Business One seamlessly. Following the SAP Business One User Interface Standards and Guidelines will improve usability and consistency of the integrated solution.

#### Action

Basic layout checks are done through the tool [B1 Form Checker](#). Forms, Menus will also be checked visually for the look and feel as well as the functionality.

#### Expected Result

The B1 .NET Profiler and B1 Form Checker will be running during the test. B1 Form Checker should not list errors. Depending on the results (e.g. errors or warnings generated) SAP might need to run additional or more intensive checks and may find that the Guidelines are formally met, but the integration is too far from being seamless. This is the overall goal of the Guidelines and the checks.

#### Tools



[B1 Form Checker](#)  
[B1 .NET Profiler](#)  
[B1 Debug Information](#) option

#### Link

[SAP Business One User Interface Standards on SDN](#)

#### Remarks

Especially using ActiveX controls might be critical and should be described in the in detail in the TPP.

In general displaying images via an ActiveX control is allowed. However, SAP provided controls should be used where applicable.

### 3.11 Extending SAP Business One GUI

#### Requirement

The use of the SAP Business One SDK User Interface (UI) API is required to extend the SAP Business One GUI.

The UI API shields the GUI of the SAP Business One application from corruptions due to incompatible changes performed by an Add-On program. In addition it should be ensured that a solution integrated into SAP Business One GUI provides a seamless look & feel to the end-user.

An Add-On solution should therefore not hook on SAP Business One forms window handles to display screens.

#### Action

During the session, SAP will have B1 .NET Profiler running aside the solution and keep an eye on the logs.

In case a window is hooked on to SAP Business One forms, there will be no logs of events in B1 .NET Profiler for this window.

#### Expected Result

Partner Add-Ons should not use such a mechanism.

#### Tools



B1 .NET Profiler (.NET only)

#### Remarks

### 3.12 Web Client

#### Requirement

As of the release of SAP Business One 10.0, SAP introduced Web Client.

There are two versions of this application.

The first version is based on SAP Fiori design principles, on top of SAP Business One 10, version for SAP HANA.

The second version is based on MS SQL Server operations, on top of SAP Business One 10. Some features are not supported in the SQL version.

#### Action

Please contact SAP ICC consultant if you implement Web Client with SAP Business One 10.0.

### 3.13 User name in license and Add-On admin

#### Requirement

A new column for displaying the User Name is added to the Allocation and Assignment tabs in License Administration window and to the User Preferences tab in Add-on Administration window.

#### Action

ICC consultant will exam the corresponding feature from add-on installation test case.

#### Expected Result

User Code and User name shall be displayed properly.

#### Tools

N/A

### 3.14 Field length increase

#### Requirement

From SAP Business One 10.0 release, below field length has been increased:

- Customer Group Name and Supplier Group Name may contain up to 100 characters
- The Item Group Name also supports 100 characters

For partner add-on developed before SAP Business One 10.0, which is associated with Item Group Name, Customer Group Name and Supplier Group Name, is required to document in the corresponding section of Technical Product Profile and build a test case to address this change.

For partner add-on developed upon SAP Business One 10.0, you can skip this section.

#### Action

ICC consultant will exam Technical Product Profile and run test case.

#### Expected Result

Item Group Name, Customer Group Name and Supplier Group Name shall be displayed, changed, saved and deleted properly.

#### Tools

N/A

### 3.15 Service Layer Enabled for Microsoft SQL Server

#### Requirement

As of SAP Business One 10.0 PL01, Service Layer is enabled for MS SQL Server databases.

Service layer available from SAP B1 version from 10.0 PL01. You can install from Component Wizard under packages.

For the release information, please refer to SAP Note [2875568](#)

If partner add-on implements Service Layer with MS SQL Server, the add-on will be tested with below criteria

- To test the logon
- To test master data including GET/POST/PATCH/DELETE
- To generate transactional data and post as document
- All other test cases necessary for the add-on

As such, all above mentioned criteria has to be validated via test cases.

One option for running the Service Layer is that, it can be run as/with Job Service on port 30030 on MSSQL installations.

SAP also has a note [2419141](#) (How to Troubleshoot Alerts in SAP Business One) which can be used as a reference.

#### **Action**

ICC consultant will exam Technical Product Profile and run test case.

#### **Expected Result**

The test cases associate with the testing criteria shall not have negative result.

### **3.16 Extend UDF Support to Additional Objects**

#### **Requirement**

From SAP Business One 10.0 release, User Defined Fields can be added to more SAP Business One 10.0 objects including below:

\*Alerts (OALT), Attachment rows (ATC1), Countries (OCRY), Document Numbering Series (NNM1), BP Groups (OCRG), BP Payment Terms (OCTG), BP/Item Properties (OCQG)/(OITG), Item Preferred Vendors (ITM2), Item Prices (ITM1), Manufacturers (OMRC), UoM Master Data (OUOM), Location (OLCT), Package Types (OPKG), Branch Setup (OBPL), and Shipping Types (OSHP).

For partner add-on developed before SAP Business One 10.0, which may use these objects or reference these objects, it is required to exam and make sure UDF function is trouble free to be implemented to these objects.

Partners are required to build necessary test cases which demonstrate where partner add-on reference above mentioned objects will not impact UDF to these objects.

#### **Action**

ICC consultant will exam Technical Product Profile and run test case if applicable.

#### **Expected Result**

Test cases shall reveal that, UDF is trouble free to be added to these objects.



## Tools

N/A

### 3.17 64 Bit support only and upgrading Business One Add-on

#### Requirement

SAP Business One 10.0 will support only 64bit Windows operating system, which means only 64-bit add-ons will be supported with SAP Business One 10.0.

For partner add-on developed before SAP Business One 10.0 with 32bit windows OS, you need to make all necessary upgrade to adapt 64bit windows OS.

When you select the Add-On checkbox in the Component Selections window of the setup wizard, the following occurs:

- New versions of all SAP add-ons are automatically registered on the SAP Business One server.
- New installers are uploaded to the server during the upgrade of the common database.

Add-ons that were already installed and assigned to a company are reregistered with new releases and assigned to the same company. On a client computer, upon the next logon to a company assigned with add-ons, installers for the new add-on releases run automatically.

Partner add-on can be upgraded with silent mode.

To enable the SAP Business One client agent to upgrade a third-party add-on in silent mode, do either of the following:

- If your add-on needs to be installed, you must recreate the add-on's ARD file using the latest version of the Add-On Registration Data Generator to enable silent upgrades (and installations).

**Note** You may be required to rebuild the installation package of the add-on and redesign the installation and configuration process. For example, if the add-on uses an installation wizard that requires the user to specify some information, then you can perform the configuration steps in the SAP Business One client after installing the add-on instead. Alternatively, you can provide the required information as command line arguments in the ARD file.

- If your add-on does not need to be installed, you can use the Extension Manager to manage its upgrade.

For more information, see the guide [How to Package and Deploy Lightweight Extensions for SAP Business One](#) on SAP Help Portal.

The following procedure describes how to enable silent upgrades using the Add-On Registration Data Generator.

Procedure will be as the following:

- 1 To start the Add-On Registration Data Generator, run the `AddOnRegDataGen.exe` file, which is typically located in the `...\\SAP Business One SDK\\Tools\\AddOnRegDataGen` folder.

2. Load an existing file or enter the mandatory information.

For more information, see the Create a Registration Data File chapter in the SDK help file.

3. Select the Silent Mode checkbox

4. If necessary, in the Installer/Uninstaller/Upgrade Command Line field, enter any required command line arguments.

5. Choose Generate File

Partner add-on which implement silence add-on shall build up a test case to illustrate the process and make sure it follows SAP guideline.

Once above steps are achieved successfully, run below steps to perform silent upgrade.

You can upgrade SAP Business One using a silent mode by calling ... \Setup.exe from the upgrade package. You can use the silent mode to upgrade the following components:

- Repository
- All packages of Server Tools, including:
  - o System Landscape Directory
  - o License Manager
  - o Extension Manager
  - o Data Interface Server
  - o Job Service
  - o Workflow
- Databases
- Integration Solution Components
- DI API
- SAP Business One Client
- Browser Access Service
- All Add-Ons

To upgrade SAP Business One, provide the following argument: setup.exe <Config.XML>  
<parameter> <value>

To obtain the required Config.XML file, first run the setup wizard in the interactive mode. After generating this file, you can make a copy and use a text editor to modify the values for future use as required. You can find the configuration file in the ... \%PROGRAMDATA%\SAP\SAP Business One\Log\SAP Business One\SetupWizard\Config folder.

You can provide several different parameters, or multiple parameters, as shown in the following table.

Type	Parameter	Value
Database Server and License Server authentication	-DbPassword	Database server password
	-SitePassword	Site user password
SLD configuration	-SLDCertPassword	SLD certificate password
	-SLDDomainPassword	SLD domain user password
Integration Solution Components	-B1iDBPassword	Integration framework database server password

	-B1iAdminPassword	Integration framework Tomcat server administrator password
	-B1iDIPassword	Company password for DI calls

Example

Setup.exe "C:\my\_config\Config.XML" -DbPassword x1Y3s -SitePassword pO3kAnk3

### Action

ICC consultant will exam Technical Product Profile and exam the test case.

### Expected Result

The add-on upgrade test described shall be an error free process.




### Tools

When install SAP B1TE tools, make sure use 64bit version.

## 3.18 Platform & Extensibility

### Requirement

Below table contains Platform & Extensibility released along with SAP Business One 10.0. In order to make it easier to be referenced, both MS SQL and SAP HANA features are listed.

Feature	Description	Localization
SAP HANA 2.0 Platform Adaption	SAP HANA 2.0 supported only	ALL 
Support SLES 15	Suse Linux Enterprise Server SLES 15 only	ALL 
SAP HANA 2.0 Platform Adaption for Remote Support Platform 3.2	RSP 3.2 supports SAP HANA 2.0	ALL 
Integration Framework for SAP Business One SAP Business One integration for SAP NetWeaver	Additional System Types in System Landscape Directory available: SAP Business One 10.0 SAP Business One Generic S/4 HANA on Premise SAP Note <a href="#">2857220</a>	ALL
DI API: Blocking Updating Address ID in Business Partner Master Data through DI API	New checkbox Allow to Update Address ID added to the Administration -> System Initialization -> General Settings -> BP tab. This checkbox is selected by default. When	ALL

	deselecting the checkbox the Address ID field cannot be edited and updated through DI API; an error message appears	
DI API and Service Layer: Recurring Postings	Recurring Postings exposed to DI API and Service Layer SAP Note <a href="#">2878517</a> (PL01)	ALL
DI API and Service Layer: Posting Template	Posting Templates exposed to DI API and Service Layer SAP Note <a href="#">2878484</a> (PL01)	ALL
DI API and Service Layer: Cancel and Restore Approval Requests	New methods added to cancel and restore Approval Requests in DI API and Service Layer SAP Note <a href="#">2859177</a> (PL01)	ALL
DI API: Additional Reference Documents	Additional document referencing for Goods Receipt, Goods Issue, Purchase Request, Inventory Transfer, Inventory Transfer Request, Checks for Payment SAP Note <a href="#">2866114</a> (PL01)	ALL

Partner add-on, which concerns the Platform & Extensibility feature, there shall be one or more test cases to be established in Technical Product Profile.

For details of Platform Support Matrix SAP Business One, version for SAP HANA and Platform Support Matrix SAP Business One, please refer to the Appendix section 6.2

### Action

ICC consultant will exam Technical Product Profile and exam the test case.

## 3.19 Upgrading SAP Business One Add-Ons

### Requirement

When you select the Add-On checkbox in the Component Selections window of the setup wizard, the following occurs:

- New versions of all SAP add-ons are automatically registered on the SAP Business One server.

- New installers are uploaded to the server during the upgrade of the common database.

Add-ons that were already installed and assigned to a company are re-registered with new releases and assigned to the same company. On a client computer, upon the next logon to a company assigned with add-ons, installers for the new add-on releases run automatically.

### **Troubleshooting Add-On Upgrades**

When upgrading add-ons in an upgraded company for which the server name was previously something like (local), you may encounter a message about installation failure.

SAP Business One has introduced a license security mechanism, and we do not recommend that you specify a server name such as (local). In this case, during an upgrade, the user defines the server name as an IP address or a computer name. The application does not find the previous, (local), name of the upgraded company, which prevents the previous add-ons from being upgraded.

To solve this problem, do the following:

Go to the ... \SAP Business One\ folder and locate the AddonsLocalRegistration.sbo file. Change the server name of each related add-on to the new name specified in the license server.

#### **Example**

- o Old name: <Common ID="1" Name="(local)"/>
- o New name: <Common ID="1" Name="MyServerName"/>

#### **Action**

ICC consultant will exam the test case if this step is concerning the partner add-on certification.

## **3.20 Silent Upgrades for Third-Party Add-Ons**

### **Requirement**

To enable the SAP Business One client agent to upgrade a third-party add-on in silent mode, do either of the following:

- If your add-on needs to be installed, you must recreate the add-on's ARD file using the latest version of the Add-On Registration Data Generator to enable silent upgrades (and installations).
- If your add-on does not need to be installed, you can use the Extension Manager to manage its upgrade.

For more information, see the guide [How to Package and Deploy SAP Business One Extensions for Lightweight Deployment on SAP Help Portal](#).

## Enabling Silent Upgrade Using Add-On Registration Data Generator

1. To start the Add-On Registration Data Generator, run the AddOnRegDataGen.exe file, which is typically located in the ... \SAP Business One SDK \Tools \AddOnRegDataGen folder.
2. Load an existing file or enter the mandatory information.  
For more information, see Create a Registration Data File in the SDK help file.
3. Select the Silent Mode checkbox.
4. If necessary, in the Installer Command Line, Uninstaller Command Line Arguments, or Upgrade Command Line field, enter any required command line arguments.
5. Choose Generate File.

### Note

You may be required to rebuild the installation package of the add-on and redesign the installation and configuration process.

For example, if the add-on uses an installation wizard that requires the user to specify some information, then you can perform the configuration steps in the SAP Business One client after installing the add-on instead. Alternatively, you can provide the required information as command line arguments in the ARD file.

### Action

ICC consultant will exam the test case if this step is concerning the partner add-on certification.

## **4 FUNCTIONAL REQUIREMENTS**

### **Requirement**

Partner should provide information about the purpose of the Add-On solution including test cases.

It is highly recommended that, partner needs to provide a solution name (add-on name) and version.

Then, several test cases will be established to validate the functions of this solution.

### **Tools**

Potentially scripting tools (maybe using UI API – or Windows mechanisms) could be used where applicable.

The test cases in section 5.1 of the TPP will be copied into the Certification Test Report. However, the solution name and version will be copied into Certificate page.

## **5 STABILITY / PERFORMANCE REQUIREMENTS**

If applicable, performance/load testing will be performed for the Add-On.

These performance/load test cases will determine if the product can handle a number of users or amount of data without running out of resources or having transactions suffer excessive delay.

### **Requirement**

Mechanisms used to process data should be suitable for its purpose.

The test cases in section 5.2 of the TPP will be copied into the Certification Test Report.

### **Expected Result**

The test cases associate with the testing criteria shall not have negative result.

## 6 APPENDIX

### 6.1 Test Tools

A short description of the SAP Business One Test Environment – B1TE - can be found below. For more information please see the documentation that comes with B1TE.

- **B1 DB Browser**

SAP Business One DB Browser is a stand-alone tool to browse through the SAP Business One database table definitions.

SAP will verify the DB structure for namespace compliance.

- **B1 DB Profiler**

B1 DB Profiler tracks usage of DI objects.

Check log of B1 DB Profiler, if applicable, to detect lack of usage of DI API / DI Server objects. Direct writes will appear different from DI object usages in SQL Profiler.

- **B1 .NET Profiler**

Tool will be used to track calls to UI API and DI API. Applicable for .NET based Add-Ons.

- **B1 Form Checker**

Tool will check basic compliance with Standards & Guidelines (namespace usage for menus, form types, form UIDs) and Screen Design Guidelines (distance from border, size on UI elements etc.).

- **B1 Bubble Checker**

Tool to track the events that the Add-On blocks to propagate to other event handlers.

- **MS SQL Profiler / OSQL / ISQL** – Microsoft tools for MS SQL Server

SQL Profiler is shipped with Microsoft SQL Server 2000 (part of the client tools).

“Trace” files can be configured which track actions performed on a particular database such as:

- Opening and closing of database connections
- DML statements on the database in general or
- DML statements run through a particular DB connection

OSQL is part of the Microsoft SQL Server Desktop Engine (MSDE) installation whereas

ISQL is shipped with Microsoft SQL Server 2000 (part of client tools).

SQL script files can be used to track the same information as in SQL Profiler.

The output of the SQL tools can be directed into files or tables for evaluating later.



## 6.2 Related Documents

- Online Documentation for SAP Business One
  - <http://help.sap.com> → *SAP Business One*
- Online Documentation for SAP Business One SDK
  - [SAP Community Wiki](#)
- SAP Business One Extensibility Tutorial
  - [YouTube](#)
- Platform Support Matrix SAP Business One, version for SAP HANA  
[https://help.sap.com/doc/0110003587000000239412011e/9.3/en-US/B1\\_HANA\\_Platform\\_Support\\_Matrix.pdf](https://help.sap.com/doc/0110003587000000239412011e/9.3/en-US/B1_HANA_Platform_Support_Matrix.pdf)
- Platform Support Matrix SAP Business One  
[https://help.sap.com/doc/011000358700000032462013e/9.3/en-US/B1\\_Platform\\_Support\\_Matrix.pdf](https://help.sap.com/doc/011000358700000032462013e/9.3/en-US/B1_Platform_Support_Matrix.pdf)

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