



Certificate

SAP INTEGRATION CERTIFICATION

SAP SE hereby confirms that the ABAP interface software
for the product

EPO Connector 2016

of the company

EPO Consulting GmbH

has been certified for integration with SAP S/4HANA 1610 via the SAP integration
scenario *ABAP Add-On Deployment for SAP S/4HANA*.

This certificate confirms the technical and syntactical consistency of the Add-On in
accordance with SAP certification procedures.
SAP only certifies successful integration of the product with SAP solutions. Vendor is
responsible for the product itself and its error-free operation.

The certification test is documented in report no. 9023
and expires May 15, 2020.

Vendor Hardware: PC x86-64

Vendor Operating System: Linux

SAP Test System: SAP S/4HANA 1610

This configuration meets the requirements for deploying EPO Connector 2016 on
SAP S/4HANA.

Certified Functions:

Assign Software Component with a registered Namespace

Package Add-On using SAP Add-On Assembly Kit (AAK)

Deploy using SAP Add-On Installation Tool (SAINT)

Integrate with SAP S/4HANA

SAP Solution Manager Ready functionality

Walldorf, May 15, 2017

Christoph Claus, SAP SE

SAP, R/3, and SAP NetWeaver are registered trademarks of SAP SE Germany.
All other names are registered or unregistered trademarks of the individual firms.
<http://www.sap.com/icc>



SAP[®] Certified
Integration with SAP[®] S/4HANA

Interface Certification

ABAP Add-On Deployment on SAP S/4HANA

Test Report

SAP Integration and Certification Center

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company. SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. Please see <http://www.sap.com/corporate-en/legal/copyright/index.epx#trademark> for additional trademark information and notices.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors.

National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP SE or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

Interface Certification #9023

SAP Interface incl. Release: ABAP Add-On Deployment for S/4HANA
SAP Product incl. Release: SAP S/4HANA 1610

Hardware used for SAP test system: PC x86-64
Operating System of SAP test system: Linux

Name of Vendor: EPO Consulting GmbH
Vendor Number (SAP internal): 755849

Vendor Product Name and Release: EPO Connector 2016

Vendor Interface Software Name:
Release Vendor Interface Software:

Hardware used for Vendor Test System: PC x86-64
Operating System of Vendor Test System: Linux
Tools used for the technical integration:

Language Version tested: German

Certification Date: May 15, 2017
Expiration Date: May 15, 2020
Location: remote
Persons present - Vendor: Werner Kroiss

Persons present - SAP: Christoph Claus

Certified Functions:

- Assign Software Component with a registered Namespace
 - Package Add-On using SAP Add-On Assembly Kit (AAK)
 - Deploy using SAP Add-On Installation Tool (SAINT)
 - Integrate with SAP S/4HANA
 - Technical De-Installation Test
 - SAP Solution Manager Ready functionality
-

1. Product Information

Product information	
Product web page:	https://www.epoconsulting.com
Which releases of the SAP Business Solutions does partner's software support?	<input checked="" type="checkbox"/> SAP S/4HANA 1610
Support contact information:	support@epoconsulting.com

2. Functional Overview

Supported Functions and Business Processes – General Description	
Overview on the functionality and the purpose of the 3 rd party product.	<p>EPO Connector is an ABAP add-on product which makes SOA based SAP integration easy and powerful.</p> <p>It enables to integrate virtually any system or application directly with SAP. The EPO Connector is a modification-free ABAP add-on, which provides rich functions to integrate with SAP. It can handle incoming web services calls and it can generate outgoing calls for consuming external web services. File interfaces are also possible. Preferred message formats are XML and JSON.</p> <p>The main goal of the EPO Connector is helping improving processes by simplifying SAP integration.</p> <p>Features of this product/solution:</p> <ul style="list-style-type: none"> • Integrate direct with SAP without the need of a middleware • Implementation of business logic in SAP ABAP • Usage of standard internet technology for communication (http, XML, web services, XSLT, JSON) on SAP NetWeaver ABAP and on SAP S/4 Hana, too. • High performance and endless scalability because of use of SAP NetWeaver ABAP / SAP S/4 Hana core functionality • All interfaces done with the EPO Connector do run completely unchanged on SAP ECC 6.0 and SAP S/4 solutions. There is no need to re-program the interfaces with third-party software solutions and HTML5 apps.

3. Product Implementation

3.1 S/4HANA Conversion Strategy

There is a conversion strategy available, that supports customers to migrate the Add-On from SAP Business Suite to SAP S/4HANA.	
Details:	No changes to the existing Add-On are required. Customer can apply the very same Add-On for S/4HANA. An Attribute Change Package (ACP) is provided to support the conversion of the customer’s ERP system to S/4HANA.

3.2 Complete List of used and *released* SAP objects

The list below has been given to SAP by the Vendor, for reference purposes. SAP cannot guarantee that it’s a complete list.

<u>Complete List of used BAPIs / RFCs / IDocs / ESs or other SAP building blocks that are officially released by SAP.</u>		
SAP inbound: BAPI_USER_GET_DETAIL with EPO runtime in XML		SAP inbound: BAPI_SALESORDER_GETSTATUS with EPO runtime in XML
SAP inbound: BAPI_USER_GET_DETAIL with EPO runtime in JSON		SAP inbound: BAPI_SALESORDER_GETSTATUS with EPO runtime in JSON
SAP inbound: BAPI_BANK_GETDETAIL with EPO runtime in XML		SAP outbound: Service GET_WEATHER, operation GET_CITIES with EPO Client
AP inbound: BAPI_BANK_GETDETAIL with EPO runtime in JSON		SAP outbound: Service GET_WEATHER, operation GET_WEATHER with EPO Client
SAP inbound: BAPI_BANK_CREATE with EPO runtime in XML		
SAP inbound: BAPI_BANK_CREATE with EPO runtime in JSON		

3.3 Complete List of used and *unreleased* SAP objects

The list below has been given to SAP by the Vendor, for reference purposes. SAP cannot guarantee that it’s a complete list. In addition, the correct functionality of the objects listed below is not in the scope of this ABAP Add-On Deployment certification.

<u>Complete List of used but <u>unreleased</u> SAP objects, such as function modules and reports.</u>		
Technically any SAP Function Module can be used in integration scenarios, however this is not part of the EPO Connector and therefore it is a customer decision using it.		

4. Quality

The Information below is provided by the 3rd party Add-On provider. It has neither been tested nor validated by SAP.

4.1 Performance and Scalability

<p>Overview on the architecture and design of the product including performance and scalability.</p>	<p>Architecture and description: The EPO Connector is 100% written in ABAP. It uses the web server functionality of SAP NetWeaver. For SAP inbound calls it is implemented as a http handler. The EPO runtime handler is done completely by EPO Consulting, For SAP outbound calls there is the EPO Client used. The EPO client is a function module, which does everything for calling external web services.</p> <p>Performance and scalability: The performance of the EPO Connector depends just on the performance of SAP NetWeaver or SAP S/4 Hana. The performance on SAP S/4 is much improved in comparison to SAP R/3 only because of the system architecture of SAP S/4. We know from customers, who are using this solution heavily, that the performance of SAP NetWeaver for these scenarios is very good. Also for performance and scalability all options of SAP NetWeaver can be used. Amongst others these options are to introduce extra application servers and the SAP Web dispatcher or other load balancing options.</p>
--	---

4.2 Quality Assurance

<p>Overview on Quality Assurance procedures from the vendors to assure that the interface design and performance consistently conform to specified requirements.</p>	<p>Quality in general and quality in programming is a key aspect in work for EPO Consulting.</p> <p>Development test are conducted directly from the developers. When components are finished from the developers the components are tested on the development system from a quality manager.</p> <p>When passing the tests on the development system all software components are tested fully on our own QM systems. (QM = Quality Management).</p> <p>For test purposes the software is always installed on a clean SAP system (no previous version of the EPO Connector). This is achieved by using virtual machines.</p> <p>Feedback from customers or potential customers is also taken into consideration. A maintenance contract is offered to all customers. Bug fixes are delivered to customers with the help of AAK.</p>
<p>The following quality documents exist:</p>	
<p>Test Plan Documentation</p>	<p><input type="checkbox"/> yes Comments:</p>

Test Report Documentation	<input type="checkbox"/> yes Comments:
Benchmark Results Documentation	<input type="checkbox"/> yes Comments:

4.3 Security

The Add-On Development Lifecycle ensures security	OK
The Add-On does not contain any Cross-Site Scripting (XSS) vulnerabilities	OK
The Add-On does not contain any memory corruption vulnerabilities	OK
The Add-On does not contain any SQL or other data query and manipulation language injection vulnerabilities	OK
The Add-On does not contain any Path Traversal vulnerabilities	OK
The Add-On does not contain any intentionally hidden and non-documented features that circumvent security measures (backdoor)	OK
Remarks:	

5. Software Product Assessment

5.1 Check Documentation

Functional Documentation	<input checked="" type="checkbox"/> yes Comments:
Installation Documentation	<input checked="" type="checkbox"/> yes Comments:
Maintenance Documentation	<input checked="" type="checkbox"/> yes Comments:
End User Documentation	<input checked="" type="checkbox"/> yes Comments:
De-Installation Documentation, according to SAP Note 1883223 .	<input type="checkbox"/> yes Comments:

5.2 Install and Configure Product for SAP Integration

How is the installation and setup of the product integration part done?	<input checked="" type="checkbox"/> good <input type="checkbox"/> average <input type="checkbox"/> poor
Remarks	

6. Test Cases

6.1 Checks performed by the AddOn Assembly Kit (AAK)	
Invalid objects	OK
Existence of objects and table entries to be delivered	OK
Assignment to namespace	OK
Delivery of CVERS entries (R3TR VERS) not possible	OK
New objects (entries) in Support Package/CRT	OK
Table entries (check if delivery-relevant/delivery behavior)	OK
Assignment to development class and software component	OK
Table entries in customer name range (protected: TRESC)	OK
Included AAK Log of Performed Checks	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
Remarks: No log included, because everything was ok.	

6.2 Technical De-Installation Test	
Add-On is de-installable	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no

6.3 Describe test steps to be executed during functional test	
The test cases below are executed to check that the Add-On could run successfully in the SAP environment. SAP does not validate or confirm the correct functionality of the Add-On.	
1 Describe test case 1. XML SAP inbound: BAPI_USER_GET_DETAIL with EPO runtime. Test client is EPO Transmitter (from EPO Consulting). Configuration of EPO Connector can be viewed before the integration test. Debugging is possible during the test. Results can be seen in EPO Transmitter and also in SAP (messages are stored).	OK

2 Describe test case 2. JSON SAP inbound: BAPI_USER_GET_DETAIL as above but with JSON REST service instead of XML web service.	OK
3 Describe test case 3. XML SAP inbound: BAPI_BANK_GETDETAIL with EPO runtime. Test client is EPO Transmitter (from EPO Consulting).	OK
4 Describe test case 4. JSON SAP inbound: BAPI_BANK_GETDETAIL with EPO runtime. Test client is EPO Transmitter (from EPO Consulting).	OK
5 Describe test case 5. XML SAP inbound: BAPI_MATERIAL_GET_DETAIL with EPO runtime. Test client is EPO Transmitter (from EPO Consulting).	OK
6 Describe test case 6. JSON SAP inbound: BAPI_MATERIAL_GET_DETAIL with EPO runtime. Test client is EPO Transmitter (from EPO Consulting).	OK
7 Describe test case 7. XML SAP inbound: BAPI_BANK_CREATE with EPO runtime. Test client is EPO Transmitter (from EPO Consulting).	OK
8 Describe test case 8. JSON SAP inbound: BAPI_BANK_CREATE with EPO runtime. Test client is EPO Transmitter (from EPO Consulting).	OK
9 Describe test case 9. SAP outbound: Service GET_WEATHER, operation GET_CITIES with EPO client	OK
10 Describe test case 10. SAP outbound: Service GET_WEATHER, operation GET_CITY_TIME with EPO client	OK

6.4 Describe performance load test steps to be executed during functional test	
The test cases below are executed within a reasonable time.	
1 Describe test case 1. XML SAP inbound: In EPO Transmitter the “POST” can be done repeatedly. Test with 100 repeats for EPO runtime	Result
2 Describe test case 2. JSON SAP inbound: In EPO Transmitter the “POST” can be done repeatedly. Test with 100 repeats for EPO runtime	Result

7. Partner Confirmation

Partner states that by following the guidelines of the ICC Integration Assessment or ICC Integration Guide, only the integration technologies listed in this document are used in the described interface software.

ABAP Add-On deployment Certification is only valid for the SAP release and partner product release noted in this document; in the event of SAP or partner release changes SAP offers re-certification of the interface software.

The partner solution **has not been deployed or tested on SAP Solution Manager** as part of the certification procedure. It’s therefore not “certified for SAP Solution Manager”.