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SAP integration with Nintex

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1 About the Author

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Christian Tauchmann is Software Consultant at Theobald Software GmbH in Stuttgart, Germany. His focus is on SAP/SharePoint integration. Before joining Theobald Software, he worked as a consultant at a public data services center and helped clients adapt to changing business needs, training and coaching them on all things SAP. He has gained significant expertise in integrating SAP data into the Nintex workflow automation platform. Get in touch: christian.tauchmann@theobald-software.com

2 Introduction

This whitepaper gives an overview of SAP integration possibilities with Nintex – in SharePoint and in the cloud.

With **ECS Core,** Theobald Software provides a connector for cloud environments which enables easy and no-code SAP integration possibilities for Nintex solutions in the cloud. These cloud solutions can be Nintex Workflow Cloud, Nintex for Office 365 and Nintex Forms for Office 365.

Furthermore, **ERPConnect Services,** Theobald Software's solution for seamless, straightforward integration of SAP with SharePoint On-Premises, offers different approaches for realizing SAP integration scenarios with Nintex SharePoint solutions, namely Nintex Workflow and Nintex Forms.

2.1 Nintex Workflow Cloud

Nintex Workflow Cloud (NWC) is the Nintex solution for workflow automation in the cloud, running independently from Office 365 or any other Microsoft platform. Connectors to several other cloud solutions and applications are provided in NWC.

2.2 Nintex Workflow for Office 365

Nintex Workflow for Office 365 is the Office 365 hosted variant of Nintex Workflow for SharePoint. It comes with a workflow designer accessible in SharePoint Online like the one in SharePoint on-premises. In the Workflow Designer's toolbox, numerous workflow actions for business automation within Office 365 are available.

2.3 Nintex Workflow for SharePoint

Nintex Workflow for SharePoint is the business workflow automation solution for SharePoint on-premises. In the Nintex Workflow Designer, it is possible to easily create business workflows for SharePoint sites or custom lists. Workflow design is made possible by a multitude of workflow actions and live connectors to solutions outside of SharePoint.

2.4 Nintex Forms

Nintex Forms is a forms designer provided for Nintex Workflow, SharePoint and Office 365. With Nintex Forms, it is possible to create SharePoint (Online and On-Premises) forms by using pre-defined layouts for different applications and devices.

2.5 ECS Core

ECS Core is the Theobald Software SAP connector for cloud environments and other autonomous enterprise portals. It's both a code and no-code solution and provides different options for SAP integration. Connectivity with Nintex Cloud solutions is made easy by a standard REST service interface and the WebService Designer tool delivered with ECS Core. This approach is described in more detail in this whitepaper.

2.6 ERPConnect Services (ECS)

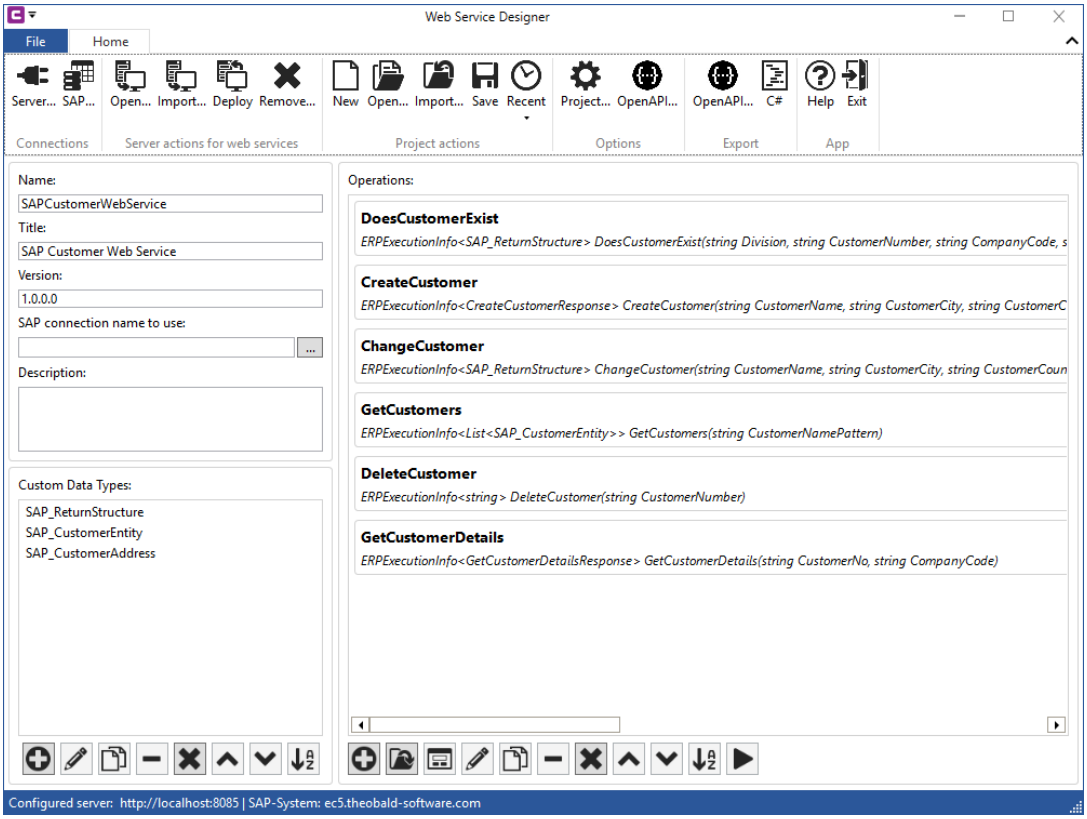
ERPConnect Services (ECS) is the SAP-SharePoint integration platform in Theobald Software's product portfolio. With ECS, you can access SAP data in SharePoint by using different tools. It doesn't require any additional middleware – the integration takes place entirely within the SharePoint stack. Integration with Nintex for SharePoint is provided by different instruments within the ECS toolbox.

3 SAP Integration with Nintex cloud solutions

In this chapter the SAP integration options with Nintex cloud solutions are described.

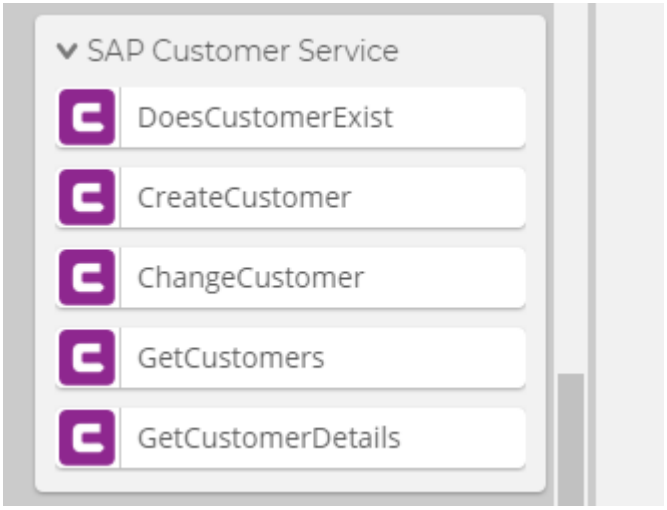
3.1 Integration with Nintex Workflow Cloud

SAP Integration with the Nintex Workflow Cloud (NWC) is made possible with the cloud connector **ECS Core**. ECS Core offers a very comfortable and easy way to connect to SAP for read and write access. The solution works completely without any programming and uses a standard REST service interface for SAP connectivity. A key component therefore is the WebService Designer included in ECS Core. With the WebService Designer it is possible to create custom SAP integrated REST web services and access these services within a NWC workflow.

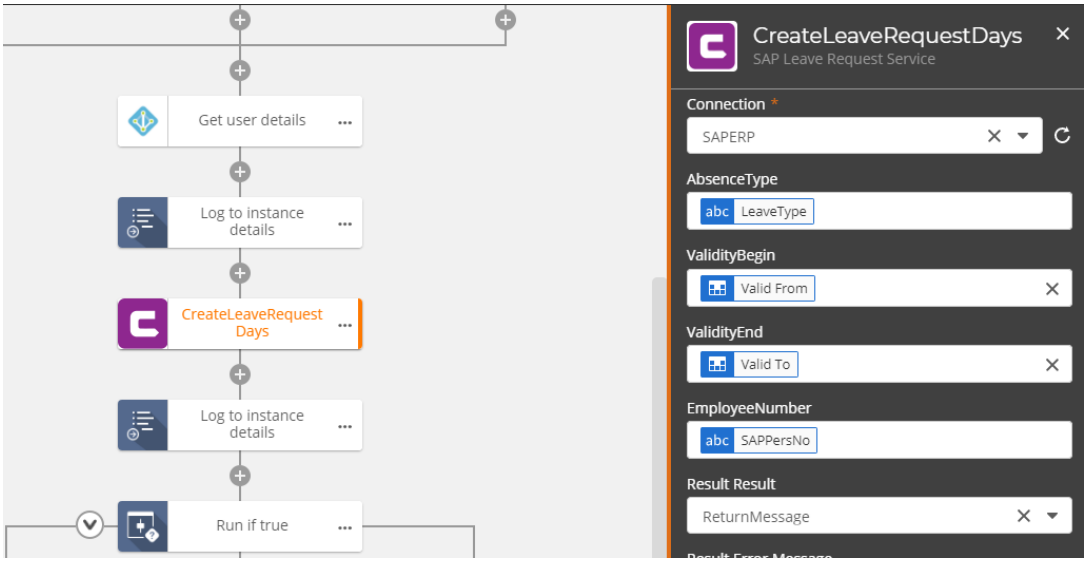


Besides offering flexible access to SAP tables and functions the created REST web services can be easily transferred into NWC custom connectors. The Xtensions framework provided in every NWC tenant allows to import so called OpenAPI definitions which are basically descriptions of REST services. With the WebService Designer it is possible to export a service with all its operations into an OpenAPI definition and import this definition into the Xtensions framework. The service is then available in the NWC designer toolbox as a custom connector, easy to configure and easy to use. Just drag and drop the connector to the canvas and define your SAP connection as well as the connector's input- and output parameters - that's all.

Custom connector created with the Nintex Xtensions framework and ECS Core:



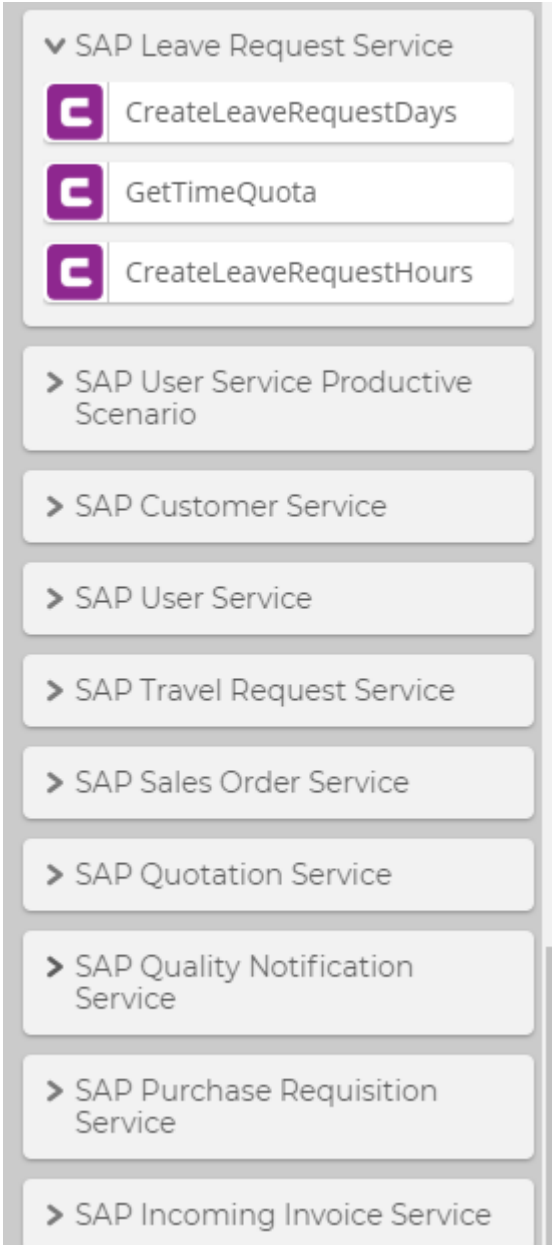
Example of an NWC SAP integration scenario for leave request management,realized with ECS Core:



3.2 Pre-defined Business Content

It is not only possible for customers to create their individual web services and import them as custom connectors into their NWC tenant. Theobald Software also provides a growing set of pre-defined and pre-configured web services for common transactional SAP processes. The services provided as business content are related to different SAP areas like accounting, financing and human resources. They cover common processes such as creating and changing sales orders, purchase orders, goods receipts, material master data and many more.

Example for pre-defined services for SAP integration use cases:



This business content facilitates a super-easy start to SAP integration for customers. In the simplest case it is possible to use the provided custom SAP connectors directly as they are and only adjust the SAP connection. But of course, it is also possible to use the connectors as templates and adjust them according to the customer's individual SAP customizing and business requirements. Furthermore, NWC workflow templates for every scenario are provided and can be obtained from Theobald Software. Just import the workflow to your NWC tenancy after installing the custom connector.

The business content is primarily built for SAP integration scenarios in the cloud but the pre-configured web services can in principle also be used for your scenarios in Nintex Workflow for SharePoint On-Premises.

3.3 Integration with Nintex for Office 365

SAP integration with Nintex for Office 365 functions almost identical to integration with Nintex Workflow Cloud. SAP-based REST web services can be created with the WebService Designer and consumed within a Nintex for Office 365 workflow. This allows the realization of SAP integration scenarios for innumerable business processes. Templates and examples can be obtained from Theobald Software.

The web service call in Nintex for Office 365 can be done directly and without further modification with the standard *Call HTTP Webservice* workflow action or - even more comfortable – a custom connector can be imported to the Xtensions framework just like in NWC. The possibility with the Xtensions framework is not available yet in Nintex for Office 365 but this feature is already announced by Nintex and will be coming soon.

All integration options regarding REST services, pre-defined business content and custom connectors can therefore equally be used in Nintex for Office 365.

Build RequestHeader
Call SAP Web service
Log Web Service Response

3.3 Benefits of SAP integration with Nintex cloud solutions

The benefits of SAP integration with cloud environments and Nintex cloud solutions by using the cloud connector ECS Core are endless and can confer considerable advantages for your business:

- Bring any kind of SAP data into the cloud - in real time
- Avoid complicated SAP usability and significantly reduce your costs by providing an intuitive interaction between users and SAP.
- Integrate your SAP data and processes without having to develop or configure anything in the SAP system.
- Profit from user-oriented scenarios that are delivered as Business Content.
- Create innovative and modern solutions by integrating your SAP business processes with new applications and technologies (e. g. bots, digital voice assistants, cloud, mobile and workflow solutions, collaboration platforms).
- Benefit from the latest security architecture by supporting common authentication methods.
- Build on SAP-certified technology and proven knowledge in the field of SAP integration.

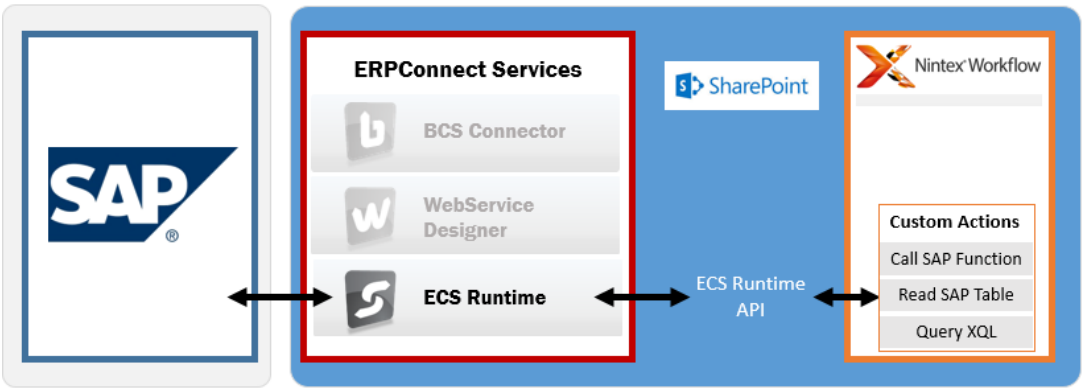
4 SAP integration with Nintex for SharePoint

This chapter provides a brief overview of how SAP integration with Nintex for SharePoint On-Premises is enabled.

4.1 Nintex Workflow integration

As mentioned previously, SAP integration for Nintex Workflows can be realized with **ERPConnect Services (ECS)**, the solution for SAP SharePoint integration from Theobald Software. ESC contains the following software components:

- BCS Connector
- WebService Designer
- ECS Runtime



The **BCS Connector Designer** allows you to create external content types for SAP data without the need to write any code. The **WebService Designer** enables you to create web services for direct access to SAP data and processes. In this paper, we want to focus on the possibilities of Nintex Workflow integration. **ECS Runtime**, the SAP/SharePoint integration platform for developers, provides the Nintex Workflow integration.

ECS Runtime provides so-called **Custom Actions** to enable direct access to SAP data within a Nintex Workflow. ESC delivers these Custom Actions, which can easily be implemented on your SharePoint server with an installer package.

The following Custom Actions are available:

- **Call SAP Function Action**: This custom action enables read/write access to your SAP data. You can use the custom action to call any remote-enabled SAP function

module or BAPI to enable business process integration between SharePoint and SAP. You can easily configure the action without any programming or complex syntax.

- **Read SAP Table Action:** You can use this custom action to read data from any SAP table and view in your Nintex workflow. Just select the requested SAP table and fields in the configuration screen that's all.
- **Query XQL Action:** This custom action provides the combined functionality of the other two custom actions outlined above. The Query XQL action offers a very flexible way of interacting with SAP by sending self-defined query statements to the SAP system. An XQL Explorer tool is provided with ERPConnect Services, to construct and verify the so called XQL statement.

4.2 Benefits of SAP integration with SharePoint and Nintex

Combining the strengths of SAP and SharePoint with ERPConnect Services and the Nintex Workflow automation platform brings many benefits:

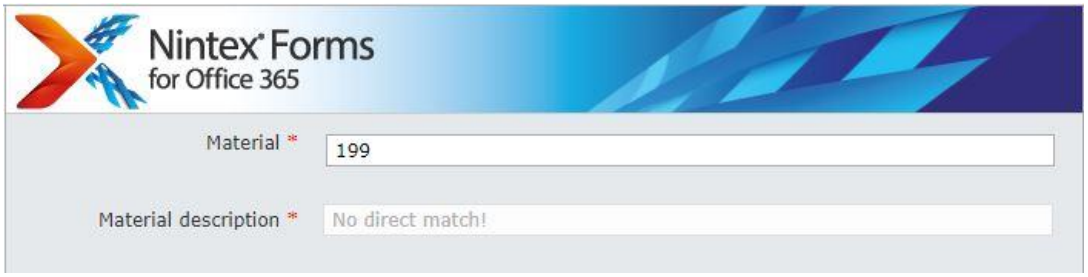
- With SAP integration to SharePoint, you can bring SAP-bound and sometimes rarely used actions into a well-known and heavily used platform. That means you can increase efficiency by bringing processes from several environments (e.g. SAP, CRM, etc.) into one portal. This eliminates manual and repetitive data entry.
- For the users, it means lower training costs: Business processes will be handled in a familiar and more intuitive way. This integration increases efficiency and usability compared to the standard SAP GUI experience.
- Furthermore, with SAP integration in SharePoint, you are using SharePoint as a flexible data hub in the mobile world. Existing SharePoint infrastructure can be used for mobile SharePoint applications, which leads to less development effort (Office 365).
- With the drag-and-drop Nintex Workflow designer, you can easily adjust or expand existing workflow scenarios according to your individual requirements. In SAP, only skilled ABAP developers can adjust workflows so it's expensive and time consuming.
- With Nintex Forms used as a data input cockpit, it's very simple to design templates for mobile devices like smartphones or tablet PCs. This enables users to process routine jobs while travelling (e.g. approvals).
- SAP integration with Nintex doesn't require any developer skills, which saves time and money.

5 SAP integration with Nintex Forms

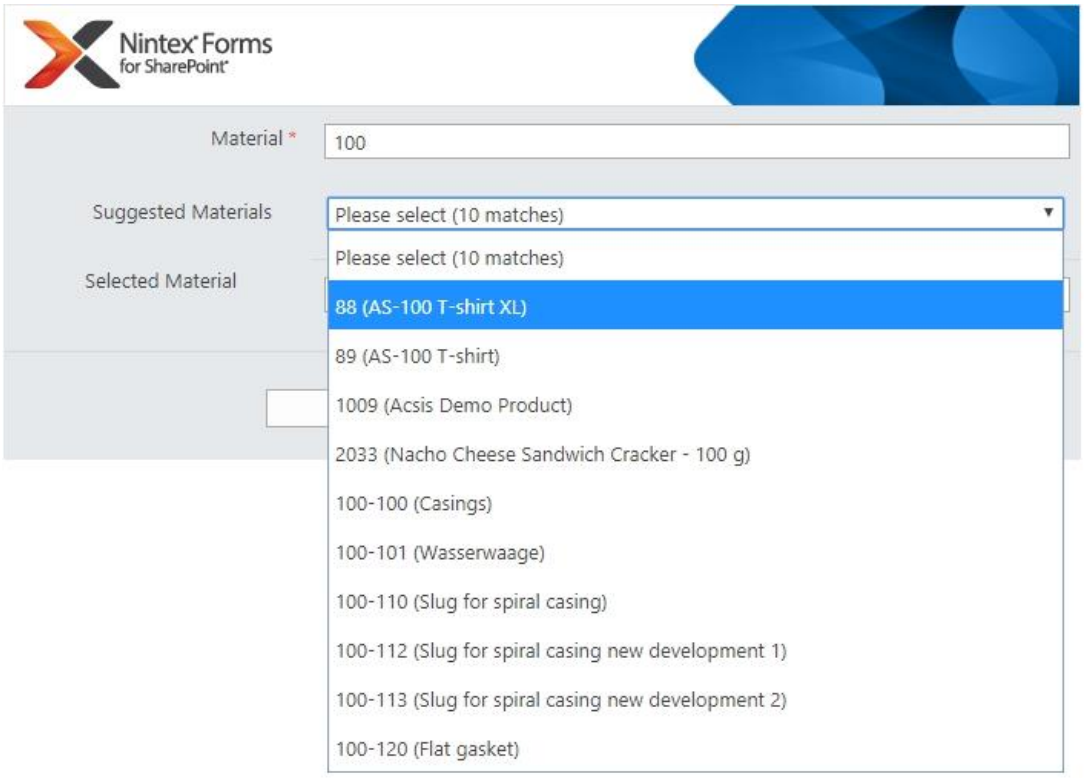
SAP integration is also enabled for both Nintex Forms in SharePoint On-Premises and Office 365. This is made possible by Custom JavaScript (JS) Includes that can be embedded in the Nintex Forms designer and a powerful JavaScript library provided with the SharePoint and cloud connectors ECS and ECS Core. With a little bit of JavaScript code, it is possible to access SAP in a variety of potential use cases.

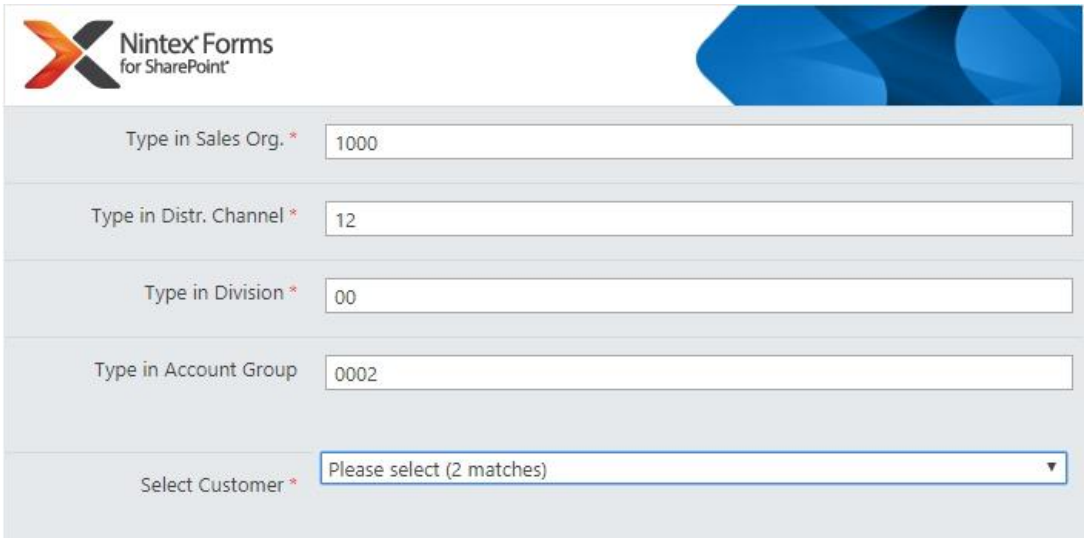
The most common use cases are the following:

Field validation: For input fields in a form it can be checked, if inserted values exist in the SAP system or not. This helps to prevent users from passing non-valid values to SAP.



Input help/ selection lists: It is possible to access SAP data with query expressions in the JavaScript code and display the return values in a selection list (i.e. cascading dropdown list). The selection criteria can be one single field or various fields reducing the hit list more and more. This enables dynamic and flexible data selection in countless scenarios.


Nintex Forms for SharePoint
Material *
100
Suggested Materials
Please select (10 matches)
Selected Material
Please select (10 matches)
88 (AS-100 T-shirt XL)
89 (AS-100 T-shirt)
1009 (Acsis Demo Product)
2033 (Nacho Cheese Sandwich Cracker - 100 g)
100-100 (Casings)
100-101 (Wasserwaage)
100-110 (Slug for spiral casing)
100-112 (Slug for spiral casing new development 1)
100-113 (Slug for spiral casing new development 2)
100-120 (Flat gasket)


Nintex Forms for SharePoint
Type in Sales Org. *
1000
Type in Distr. Channel *
12
Type in Division *
00
Type in Account Group
0002
Select Customer *
Please select (2 matches)

6 Summary

This document outlined different possibilities for SAP integration with your Nintex solutions, on-premises and in the cloud.

For SAP integration with Nintex Workflow Cloud, Nintex for Office 365 and Nintex Forms for Office 365, the Theobald Software cloud connector **ECS Core** is the solution of choice. ECS Core allows read and write access to SAP data and processes through a standardized REST service interface. This approach is perfectly supported and usable within the Nintex platform. The provision of an increasing set of pre-defined and pre-configured business content, covering common processes from different SAP areas like accounting, finance or human resources, makes it super-easy for customers to implement their integration scenarios in the cloud.

SAP access in Nintex Forms for Office 365 is also supported via JavaScript code – a dedicated JavaScript developer library is delivered with ECS Core.

For Nintex solutions in SharePoint on-premises, several integration options are provided by the SAP SharePoint connector **ERPConnect Services**. The most elegant way to integrate SAP data with Nintex Workflow for SharePoint is the use of the Nintex Workflow Custom Actions. The Custom Actions are workflow actions that enable SAP connectivity directly within the Nintex Workflow designer and without writing a single line of code.
They allow to read from an SAP table, invoke an SAP function module or to send query statements to the SAP system.

Furthermore, with the BCS Connector and WebService designer two additional instruments for SAP connectivity are provided with ERPConnect Services and can be used within Nintex Workflow and Nintex Forms for SharePoint.

In Nintex Forms for SharePoint, also the JavaScript library can be used to realize SAP connectivity for different use cases in your forms.

Have we caught your interest? Give it a try. Both solutions ECS Core and ERPConnect Services available with full functionality as a free trial for 30 days from our web site at www.theobald-software.com.

If you have any questions regarding this paper just ask our SAP integration experts, they will gladly offer their advice: support@theobald-software.com

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