



Quick Start – Single Sign-on for
Microsoft Dynamics NAV

Microsoft Dynamics NAV

White Paper

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Introduction

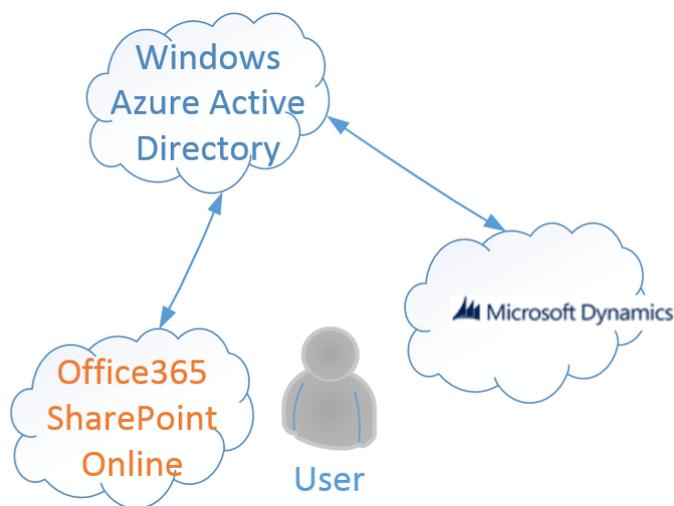
This document describes the process that needs to be followed by those companies wanting to have a single sign-on (SSO) experience between Office365 and Microsoft Dynamics NAV. It contains a number of technical and design considerations but the overall goal is to educate the reader in understanding the basic steps involved in setting up Microsoft Dynamics NAV for SSO. After the setup is completed, the following options can be enabled:

- Access to Microsoft Dynamics NAV using Office365 account credentials. This is instead of Windows Authentication or another authentication type.
- Single sign-on between Microsoft Dynamics NAV Web Client and SharePoint Online. With this option, there is no need to re-enter sign in credentials when switching between SharePoint, Office Web Apps, and Microsoft Dynamics NAV Web Client.
- Microsoft Dynamics NAV Web parts hosted as Apps within SharePoint (Online and On Premise). This allows the opportunity to build an overview/dashboard/data entry portal containing a mash up of Office, SharePoint and Microsoft Dynamics NAV parts.

The technology that supports these environments is the Windows Azure Active Directory (WAAD). WAAD is a free service provided by Microsoft.

How Windows Azure AD works with Microsoft Dynamics NAV

All authentication systems have the concept of an identity provider. The role of the identity provider is to quickly and reliably approve or reject authentication requests –it's a gatekeeper service saying who may or may not access the service based on the user details provided. In earlier versions of Microsoft Dynamics NAV, or with different authentication setups, it is either the operating system or the database server itself that is the identity provider. With Windows Azure AD, Microsoft Dynamics NAV is outsourcing the access decision and this is the key to single sign on, as multiple applications can use the same identity provider to authenticate their clients.



In the diagram to the left, a user of both SharePoint Online and Microsoft Dynamics NAV is able to use both applications with the same sign in details because Windows Azure Active Directory is the Identity provider for both applications.

To use WAAD as the identity provider is relatively straightforward – just register the application and its users in WAAD and as long as the application supports it, that's about all that's required.

Quick Setup Guide

While the process of linking applications and users together in Windows Azure AD is not overly complex, the lack of familiarity and difficulty of debugging errors makes it inconvenient to do all the steps manually, at least the first time you try this.

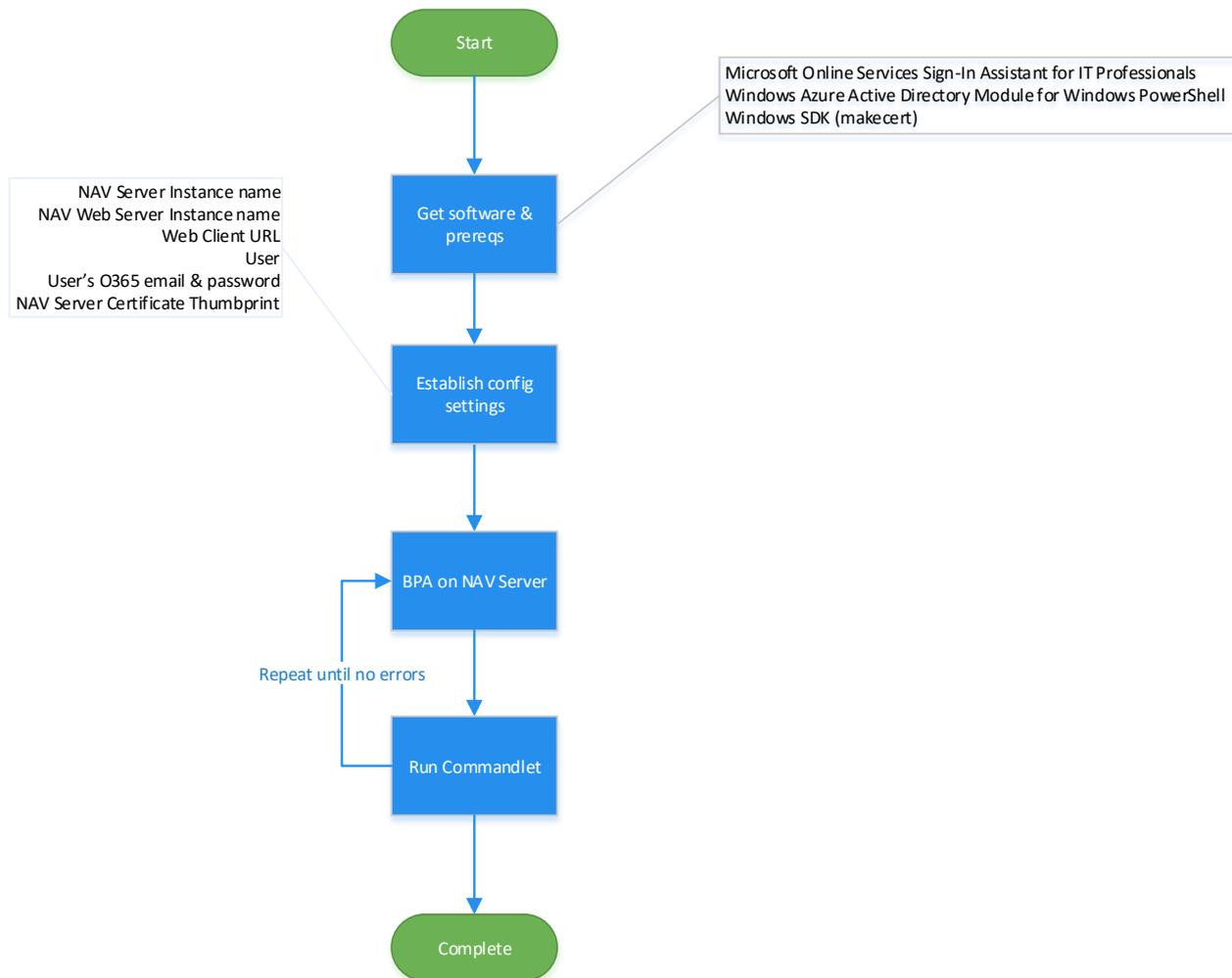
There are four steps that are needed to make Microsoft Dynamics NAV SSO enabled with SharePoint Online. To assist with these steps, Microsoft provides two tools. These tools assist with the following steps:

1. Updating the Microsoft Dynamics NAV user in the Microsoft Dynamics NAV system that will be connected to an Office 365 user account.
2. Updating the Microsoft Dynamics NAV Server configuration to use SharePoint Authentication.
3. Updating the Microsoft Dynamics NAV Web Server Instance Configuration to use SharePoint Authentication and supply the login URLs for the Windows Azure AD.
4. Updating the Azure Active Directory tenant by creating or changing a Server Principal for the Microsoft Dynamics NAV Web Client and registering the user.

The two tools are a diagnostic feature of the Best Practice Analyzer (BPA) tool and a set of Windows PowerShell cmdlets and are described below.

Process Overview

Overall the flow looks as follows. It requires that you install prerequisites and have configuration settings ready.



The Tools

The two tools that are used serve different purposes. The Best Practice Analyzer (BPA) tool is a diagnostic tool and will tell you if you have any or are using any incorrect settings in your SSO setup. The second tool is a set of Windows PowerShell cmdlets that fix problems and prepare the environment correctly.

In a perfect system, you run the BPA tool, see a list of errors then run the Windows PowerShell cmdlets, which fixes the errors. Then, a re-run of BPA would be all green.

Step 1 – Software prerequisites

Before running the tools, the following software components must be preinstalled. You can obtain them from MSDN.

- Microsoft Online Services Sign-In Assistant for IT Professionals
- Windows Azure Active Directory Module for Windows PowerShell
- Windows SDK

How do you know if you have done this right? BPA and cmdlets cannot run without these components and will warn you. Look for errors in execution.

Step 2 – Configuration information

You will need several pieces of information to setup the system. These include:

- Microsoft Dynamics NAV Server Instance name. This can be found by running the service control manager, locating the Microsoft Dynamics NAV Server and taking the service name from the properties. **Note:** you need the service name, not the display name and it is usually the part of the name after the \$ symbol in the server name.
- Microsoft Dynamics NAV Web Server Instance name. This can be found by running IIS Manager to get the name of the web server.
- Web Client URL. This can be found by running the web client after a demo installation. Typically it's `http://server/NAVWebClient/default.aspx`
- Microsoft Dynamics NAV User
- User's O365 email address and password
- Microsoft Dynamics NAV Server Certificate Thumbprint

Important: The O365 user account is assumed to be an administrator of the O365 subscription and of the Windows Azure tenant. The script performs actions that require administrator rights and will fail on non-Administrator level credentials.

How can you verify this has been done correctly? Ensure you are using the correct instance names and have chosen the right user. Some steps later may fail if the user has insufficient permissions to achieve the tasks.

Step 3 – Run the tools

See the Help documentation on MSDN, consult the [Microsoft Dynamics NAV Team Blog](#), or follow videos that are provided online to follow the actual steps.

How can you verify this has been done correctly? The BPA tool outputs a report and there should be no unexpected errors or warnings. WindowsPowerShell cmdlets will output errors in the case of permission errors or unexpected errors.

Step 4 - Complete

If the systems have been connected and set up by the scripts, the single sign-on for Microsoft Dynamics NAV Web Client should now work.

How can you verify this has been done correctly? Manually investigating the Microsoft Dynamics NAV User card will show the SharePoint email in the Users page. Windows Azure Management portal should also show that Microsoft Dynamics NAV is registered and the user is present. And of course, the user should be able to sign in to Microsoft Dynamics NAV and SharePoint Online/Office365 with their email address and password now, without having to re-enter the credentials when changing between applications.

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