**NAV 2017 Installation and Configuration**

**M0: Course Introduction**

**M1: Architecture**

**NAV 2017 Architecture**

Database SQL Server

Server Tier (Application Server (NAS)

Client Tier

**client option 1:**

windows (RTC), web, tablet, outlook and phone client

URL for web client (<http://server_name/DynamicsNAV110/Webclient> ) for NAV 2018

URL for web client (<http://server_name/DynamicsNAV100/Webclient> ) for NAV 2017

to configure phone or tablet client, we need SSL Certificate

URL for tablet client (<http://server_name/DynamicsNAV110/tablet.aspx> ) for NAV 2018

URL for tablet client (<http://server_name/DynamicsNAV100/tablet.aspx> ) for NAV 2017

for Phone

URL for Phone client (<http://server_name/DynamicsNAV110/phone.aspx> ) for NAV 2018

URL for Phone client (<http://server_name/DynamicsNAV100/phone.aspx> ) for NAV 2017

To configure we need to install outlook client add-in

If add-in is installed, then we can working directly from office 365 in to NAV 2018

**client option 2: Web Services & NAV Application Server (NAS)**

Web Services in two services

SOAP if we want to expose business logic to outside world then we use SOAP Web services. used for web shop as well

ODATA used for power BI, to extract the data

NAV Application Server (NAS)

It is middle tier server component. It run as a windows service. Connect different client to DB. It run in background. It is managed by Server Administration Tool.

**Installation Options Part1**

We can install NAV 2018 on One Computer means all three components (DB, Server & client) We can install NAV 2018 on Two Computer means all three components (DB, Server & client)

We can install NAV 18 on Three Computer means all three components (DB, Server & client)

Client, developer, server

custom components

preconfigure components

**Installation Options Part2**

Click on customize button and do customization and save the customization for future use.

Later we can load the save configuration setup.

If we run the NAV 2018 setup from command prompt like navsetup.exe /? Will give all option to run the setup with preconfigure file.

**M2: Installation Requirements**

**Windows/DB/Web/Help server requirements**

Windows / Web / Help Server requirements

windows 8, 8.1 or 10 Professional 64bit

windows 7 SP1 prof 64 bit

windows 2012, 2012 R2 essential or standard 64bit

IS 7.5 or higher

For help server, windows search must be enabled

SQL Server requirements

SQL Server 2014 or 2012 SP2 64bit express , standard or enterprise

Azure SQL V12 standard or premium service tiers.

**Clients Components**

windows client requirements

Windows 7 SP1, 8, 8.1 or 10 Professional 64/32bit

Windows 2012, 2012 R2 essential or standard 64bit

web client requirements

Latest browser internet explorer 11, chrome, safari, Firefox, Edge

web client base URL

http://DESKTOP-CDIPFSE:8080/DynamicsNAV110/Webclient/

windows client base URL

dynamicsnav://DESKTOP-CDIPFSE:7046/DynamicsNAV110/

Mobile client requirements

Windows

Windows 8.1 or Windows Phone 8.1 or later

Minimum 1GB RAM

IOS

IOS 8.4 or later

4" Screen size for smartphone

7" Screen size for tablet

Android

Android 4.4.3 or higher

Minimum 1GB RAM

4" Screen size for smartphone

7" Screen size for tablet

Office 365 client requirements

SSL

NavUserPassWord Authentication

Outlook 2013 or later

Outlook web app

OWA for iPhone, iPad & Android

Additional components like SharePoint, ADCS

.Net Framework

windows PowerShell

Report viewer

NAV as an app for SharePoint

Windows server 2012 standard 64bit

SharePoint 2013 service pack 1

ADCS

MSXML 6.0

Telnet or Microsoft Windows HyperTerminal

VT100 Plug-in

**M3: Microsoft Dynamics NAV Server administration**

**Server Installation & configuration & Setup**

Open NAV 208 DVD 🡪 Run the setup 🡪 click custom -🡪 click server 🡪 from windows make sure service name (DynamicsNAV110) 🡪 Service account (NT Authentication ) 🡪 it is recommended to use domain service account 🡪 SQL Server name & Instance & DB name (NAV-2017 & NAVDEMO & demo database )🡪 leave all default option 🡪 apply.

we can edit configuration after installation by three methods (NAV Administration, CustomSettings.config file edit manually or PowerShell)

Open NAV Server administration 🡪 window will open 🡪 here we can change settings.

C:\Program Files\Microsoft Dynamics NAV\110\Service is default installation path

here we can see CustomSettings.config XML, we can edit this file for configuration

after change save file and open Dynamics NAV 2018 Administration and restart the service

to create another instance of NAV Service

open Dynamics NAV 2018 Administration or PowerShell --> click add instance --> give name --> give port number (5)-->

Open NAV PowerShell 🡪 we can run different command to configure NAV Server.

**Server** **Administration**

Security System

Database 🡪 Company 🡪 Objects (table, page etc) 🡪 Record (row)

Development Environment

In DE we can create DB , delete database and manage the database. We can also manage license of NAV from development environment. After license is upload, service need to be restart to take effect.

**NAV Server** **Administration tool**

to create another instance of NAV Service, we are using NAV Administration tool

open Dynamics NAV 2018 Administration or PowerShell --> click add instance --> give name (DynamicsNAV\_TEST) --> give port number (5045, 5046,5047,5048) --> OK

Select the service 🡪 click edit 🡪 choose credential type (Windows ) 🡪 cache size is (9 power 2 MB = 512 is selected ) 🡪 On db tab 🡪 give proper db setting 🡪 restart

Now open NAV Window client 🡪 client will used last instance 🡪 to change to our newly create instance 🡪 click menu left side 🡪 select server 🡪 change server address to (localhost:5046/DynamicsNAV\_TEST) 🡪 company will show 🡪click OK

NAV Task Scheduler

Task Scheduler is the new platform engine that runs jobs Queues

TASKSCHEDULER.CREATETASK

TASKSCHEDULER.CANCELTASK

TASKSCHEDULER.SETTASKREADY

TASKSCHEDULER.TASKEXISTS

Task Scheduler should be enable in server instance in NAV server administration tool 🡪 select the service 🡪 Task Scheduler tab 🡪 enable

search for job queue in NAV, configure the task, will run the task automatically

disabling web services

open NAV 2018 administration --> click instance --> expend SOAP tab --> uncheck the enable option --> save and restart the instance

**Best Practice Analyzer**

BPA is used to sort out issue with NAV installation

installation of BPA

copy BPA folder from NAV Installation media to local computer --> run the setup --> click start scanning button this will give information

**PowerShell API**

PowerShell in administration (used for administration)

PowerShell in development (used for development)

both above options are available from start menu of windows

**Wide area network connections**

WAN connection is used if someone want to use or connect to NAV 2018 from outside.

Windows client connection over WAN

To setup WAN connection following step need to be followed.

1. NAV password Authentication
2. Certificate on MMC
3. Makecert.exe utility used to create certificate
4. Visual Studio
5. Configure Thumbprint
6. Configure Client
7. first create server instance with navuserpassword & certificate footprint
8. makecert.exe is not installed by default --> it can be install by installing visual studio or windows server development kits <https://www.microsoft.com/en-us/download/details.aspx?id=8279> or search for Microsoft Windows SDK for Windows 7 and .Net Framework 4 in google 🡪 download and install

to create certificate --> open command prompt --> navigate to folder --> c:\program files (x86)\windows kits\10\bin\x64-->run makecert.exe --> follow the wizard🡪 use same password everywhere 🡪

certificate will be created in C:\temp folder 🡪

open mmc 🡪 add snap-in 🡪 certificate 🡪 computer account 🡪 OK 🡪 click personal 🡪 our certificate will show there 🡪 double click on certificate 🡪 click detail tab 🡪 scroll down 🡪 select thumbprint 🡪 copy the thumbprint to notepad and remove spaces then paste in server instance created in step no. 1 -🡪 make sure that the SSL is enable in instance on SOAP tab.

Last step is to import the same certificate on client as well.

or we can create certificate using built-in script available in NAV 2018 installation media NAV 2018\WindowsPowerShellScripts\NAVCertificateAdministration

**NAS Application Server**

NAS is used to automate task. On server instance we can configure on NAS Service tab 🡪

**NAV Help Server**

Help server will allow us to search for help regarding NAV functionality. It will be available to all clients. Can be accessed by pressing F1 or help icon.

Open NAV DVD 🡪 run setup 🡪 custom 🡪 select help server 🡪 finish the wizard 🡪 default port is 49000 🡪 We can change as well 🡪

**Database backup & restore**

To create and restore NAV database backup 🡪 use SQL server management studio🡪 open SSM studio 🡪 right click db 🡪 task 🡪 backup 🡪 choose location 🡪 give name (Demonav.bak) 🡪 check copy only option 🡪select destination 🡪 click media option 🡪 select overwrite & verify backup option 🡪 click backup option use backup compression 🡪

**Configure SQL server authentication**

Open SQL server management studio 🡪 right click server 🡪 property 🡪 click security 🡪 select windows and sql 🡪 restart SQL service 🡪 go to security 🡪 login 🡪 create new login 🡪 give name (steven) 🡪 password (1234) 🡪 user mapping ( select NAV database and select public & db\_owener ) 🡪 OK 🡪

Open server administration tool 🡪 select instance 🡪 click database credential option at right side 🡪 click edit 🡪 SQL server authentication 🡪 enter user (steven) 🡪 password (1234) 🡪 restart the instance

**M4: Microsoft Dynamics NAV Client**

**Install Windows Client**

Open NAV DVD 🡪 run setup 🡪 click client 🡪 click finish

**Install/publish Web Service Component**

Open server administration tool 🡪 select instance 🡪 enable SOAP and ODATA service 🡪 restart the instance.

Open NAV 🡪 search web service page 🡪 click new 🡪 object type (page) 🡪 object id (31) 🡪 service name (item list) 🡪 publish (yes) 🡪 copy oData url 🡪 open internet explorer 🡪 paste 🡪 enter login detail 🡪

**Install Web Client**

To use web client IIS must be installed and below IIS feature should be enabled.

.NET 4.5 Extensibility

ASP.NET 4.5

ISAPI Extension and Filters

Request Filtering

Windows Authentication

Static Content

HTTP Activation

Install IIS from windows server roles and feature 🡪 Select IIS 🡪 select above feature and finish the installation.

Open NAV DVD 🡪 run setup 🡪 select web server component 🡪 click apply

To verify IIS and web client is running

Open internet explorer and enter the below URL

http://server\_name :8080/DynamicsNAV110/webclient

**Web Client Configuration**

Configuration file is available at (C:\wwwroot\Microsoft Dynamics NAV \100\webclient\web file 🡪 open in visual studio 🡪

**Install Tablet Client**

Microsoft Dynamics NAV Universal App

There two type of tablet NAV version

1. Web Brower for testing purposed
2. Apple, Google play and windows store for production

For tablet client SSL is must. Certification mention above. Certificate will also be installed on device as well.

Test Purpose

Open browser and enter below URL

URL for tablet client (<http://server_name/DynamicsNAV110/tablet.aspx> ) for NAV 2018

URL for tablet client (<http://server_name/DynamicsNAV100/tablet.aspx> ) for NAV 2017

For Production

Make sure certificate is generated and register in instance on application server and credential must be navuserpasswrod 🡪 now download the application from store (itune, google play or windows store) 🡪 to install certificate on device 🡪 for IOS

<http://support.apple.com/downloads/#iphone> 🡪 run the certificate file and install the certificate 🡪 for android & windows 🡪 copy certificate to device and run and install it.

**Install Phone Client**

Same setup like tablet 🡪 for browser SSL is not required but for universal app, SSL is requirement. Credential type must by navuserpassword in instance.

**Managing Companies**

In one database we may have one or more company 🡪 press ctrl+O from keyboard to switch between companies.

We can

Open Company

Create Company

Go to department/administration/IT/Administration/general/companies 🡪 select new company 🡪 give name 🡪

Copy Company

Select the source company on above location 🡪 click copy 🡪 give new company name

Change / Switch Company

Rename / Delete company

Select the source company on above location 🡪 click edit list 🡪 change the name

If we click delete button 🡪 company will get deleted.

**In Office 365 experience**

There is outlook and excel add-in, after installing these add-in, then we can directly work from outlook to NAV 2018

OUT LOOK SETUP

In NAV 2018 🡪 Search for office Add-in Management (Administration/IT Administration/Services) 🡪 click deploy add-in in ribbon 🡪 enter office 365 credentials 🡪 then in outlook need to enable two plug-in (Document Links and Project Madeira) 🡪

EXCEL SETUP

Open Excel 🡪 Click insert menu 🡪 click my Add-ins 🡪 Click store 🡪 search for dynamics office-in 🡪click add button 🡪 add server information 🡪 enter server URL

**CRM Integration**

Go to Microsoft Dynamics CRM Online 🡪 register for free trail 🡪 after registering for trail --. CRM will be available in office 365 🡪 from menu click CRM 🡪 log in CRM 🡪 click setting 🡪 click security 🡪 make sure user have admin right 🡪 open NAV 🡪 search for assisted setup 🡪 click assisted setup in location (Administration/Application Setup / General) 🡪 click CRM connection 🡪 follow the wizard 🡪 finish

search for crm in NAV 2018 🡪 for advance configuration

**Email Logging**

open NAV 🡪 search for assisted setup 🡪 click assisted setup in location (Administration/Application Setup / General) 🡪 click email logging 🡪 follow the wizard 🡪 finish

from office 365 menu 🡪 click admin 🡪 click exchange on left side 🡪 click public folder 🡪 click email login 🡪

verify in marketing in NAV that setup is OK.

**Windows Client Available in 64-bit Version**

To install 32 bit version 🡪 install the setup normally regardless of bit 🡪when we install the client 🡪 in client installation folder will have have setup Microsoft.Dynamics.NAV.clicnet.x86.exe 🡪run it directly or create shortcut for 32 & 64 separately.

**Create and Restore company based backup**

Exporting Data

Department>Administration>IT Administration>General 🡪 click Export to Data File 🡪 give description 🡪 select company 🡪 select options 🡪 select the save location

Importing Data

Connect to new company 🡪 then go to 🡪 Department>Administration>IT Administration>General 🡪 click import to Data File🡪 select data file 🡪 click OK 🡪

**Enable Single sign-on with Office 365 in NAV 2018**

SSO mean to login with same username & password to both O365 and NAV 🡪

We will some PowerShell commands to enable SSO

We will use Set-NavSingleSignOnWithOffice365 powershell command is used.

**M5: Development Environment**

Development is used for development and administration and also used to upload license file.

**Installation**

If client is already installed on client PC 🡪 run the setup 🡪 add component 🡪 click client 🡪 select development Environment (C/SIDE) 🡪

If client is not installed yet 🡪 Open NAV DVD 🡪 Click custom 🡪 click developer 🡪 finish

**Managing Databases**

Using development environment, we can open, close, create & delete db.

I know these option / tasks.

**Managing Licenses**

I know this topic

**Managing Objects**

I know this topic

**Database Schema Synchronization**

I know this topic. We can do this from Tool 🡪 Synchronization

**M6: Windows Client Personalize**

**Windows Client Design**

When we start NAV, start with rolecenter main page 🡪 for more profiles 🡪 go to department🡪administration 🡪 application setup 🡪 RoleTailored Client 🡪 Profiles

To assign a profile to user 🡪 click the User Personalization 🡪 select user 🡪 assign profile

We can assign profile to group and user to group. So all users in a particular group will have that profile.

Role Center

Left side we have navigation pane

Middle we have content area

**Configuration**

We can customize any page by going to Manu 🡪 Customize 🡪 Customize this page.

As an administrator, we can customize NAV pages for all users 🡪 start NAV client from command and enter command Micorosft.Dynamics.Nav.Client.exe –cofigure –profile:”order processor”

Then we can disable personalization option in profile

**Customize the Navigation Pane**

There is reset / restore all default setting, so all the personalization will removed. We can delete the configuration and customization from IT administration as well.

**Customize Pages**

We can customize ribbon, menu, page layout etc

**Managing Users – 1**

For type of authentication we need to setup server instance.

**Managing Users – 2**

Create user by going to users (Administration/IT Administration/General/users 🡪 click new user 🡪 give him name 🡪click on change password on ribbon 🡪 enter password 🡪 assign permission 🡪 click OK

**M7: Deployment**

**Deploying NAV Using ClickOnce**

To install client on lot of machine, we use ClickOnce Functionality. It’s a website and user will access a link and click on button 🡪 which will install application on their system.

Requirements

MS Windows SDK and .Net Framework

Code Signing Certificate

ClickOnce Installer Tools

Setup.exe

C:\program files (x86)\MS NAV\100\ClickOnce

Install tools

MS NAV Windows Client Installation files share Installation

Install the ClickOnce from DVD --> go to path

C:\program files (x86)\MS NAV\100\ClickOnce Install tools

Copy Installer tool folder and paste on C:\ drive

Open templatefiles folder and open NAVClientInstallation.html

This is the page user will see to install the client

Inside templatefiles folder --> open deployment folder --> open

.xml file --> edit the shared folder path it’s important -->

inside deployment folder open application folder -->

**Deploying and Managing NAV on Azure VM**

Prepare Azure Subscription & Storage account

Create free account 🡪 click azure portal -> login 🡪 create vm 🡪 search for nav template 🡪 select template 🡪 give machine name 🡪 select disk type 🡪 create username & password 🡪 resource name (same is VM Name) 🡪 choose configuration 🡪 connect to VM 🡪

There are some PowerShell scripts on DVD with which we can automate the cloud deployment.

**Deploying NAV on Azure SQL**

Login to Azure dashboard 🡪click add give name and username & password 🡪 now open MSSS studio 🡪 right click NAV database 🡪 click task 🡪 deploy database to azure 🡪 connect to azure sql server 🡪 finish 🡪 now connect MSSS Studio to azure database.

**Migrating to Multitenancy**

**Extensions**

Go to Azure site --> login to portal --> Create VM based on NAM template --> for deployment some script are available on DVD in windowspowershellscript folder.

**M8: Microsoft Dynamics PowerShell**

**The PowerShell API**

**PowerShell Commands**

**M9: Upgrading to NAV 2017**

**Converting a Database**

Open development environment 🡪 open the old database 🡪 system will try to convert 🡪

**Upgrading the Data**

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**Upgrading the Extension**

M10: Course Review