

# BI4Dynamics NAV Express Manual

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# **1. System Requirements**

## **1.1. Accounts and Permissions**

- Be (local) administrator on the windows server where BI4Dynamics Express is installed.
- Read permissions on the NAV database.
- Read permissions on the master database of the source database SQL Server (only required if the NAV license is uploaded to the SQL server)
- Create database and linked server permissions on MS SQL Server where the BI4Dynamics DWH will be deployed.

Note: All four (4) permissions can be combined into one (1) Windows domain account. One Windows domain account is preferred.

## **1.2. Windows Server**

#### Hardware

- 1 processor 4 cores Intel® processors or equivalent (limited by SQL Server Express),
- 1 GB RAM (limited by SQL Server Express),
- Required hard disk space depends on the size of NAV database; We recommend: 1.25 x size of Dynamics NAV database used (max 10GB database size limited by SQL Server Express)

#### Software

- Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016 or Win XP/Vista/7/8,
- SQL Server Express 2008R2, 2012, 2014 or 2016
- UAC should be disabled or application needs to be installed outside Program Files folder
- .NET Framework 4.0
- Network availability:
  - **Online server** is connected to the Internet with port 80 opened (if the server is under proxy, the application needs access to our authorization web service) or
  - **Offline servers**: special offline license is required, please contact <u>sales@bi4dynamics.com</u> for further assistance.

#### **Source Database (NAV)**

• NAV license needs to be uploaded either on the server (to the master database of SQL instance) or into the NAV database

If the NAV license is uploaded to NAV (SQL) server, than user also needs read permission on master database of SQL Server where NAV database resides.

# **2. INSTALLATION**

# **2.1. Installing BI4Dynamics Express**

**IMPORTANT!** Before installing BI4Dynamics Express solution, please check hardware and software requirements, make sure you have sufficient permissions and an active internet connected. **IMPORTANT!** The installation process has to be started on the server where BI4Dynamics data warehouse will be created.

1. Double-click **BI4Dynamics.exe** to start the installation\*.

\*Always start BI4Dynamics as an administrator Note: The name of the file varies based on the version you are using.

2. Follow the instructions on screen.



#### 3. Accept the license agreement.



4. Choose Express Installation Type

BI4Dynamics Installation Wizard
Installation type
Please choose installation type that best fits your needs
Please choose appropriate installation type:
O Default
express
Install data warehouse only
< Back Next > Cancel

5. The installer will check for some of the prerequisites. If you fail any of the tests you can click on the result to see the error. You have to fix the problem before you can rerun the test. Once all the tests are successfully completed you can continue with the installation.

bis BI4D	ynamics Installation Wizard	<b>×</b>
Checl Pl	c prerequisites ease wait while installation wizard is checking program prerequisites	
Belowi	s a list of program prerequisites:	
	Rule	Result
	SQL Server	Waming
⚠	SQL Analysis Server	Waming
⚠	SQL Server Agent	Waming
	Shared Management Objects	Passed
1	Analysis Management Objects	Waming
	UAC deactivated	Passed
Please	review warnings in the list above.	Re-run Install
	< Back Next >	Cancel

- 6. If Shared Management Objects are not installed, please click the Install button, which will trigger the installation of correct version of SMO's and CLR Types.
- 7. Select the folder where you would like to install BI4Dynamics Express. You can choose to create a shortcut on the desktop and/or in the start menu.

BI4Dynamics Installation Wizard	X
Installation location	
Please choose where the program should be installed	
Program will be installed in the following location:	
C:\Program Files (x86)\BI4Dynamics\	Change
☑ Create a shortcut for this program on the desktop.	
Create a shortcut for this program in the start menu.	
Disk space	
Total space:	90.1 GB
Free space:	32.4 GB
C Back Navt >	Cancel
	Cancer

8. Confirm the configuration and begin the installation of BI4Dynamics Express.

9. Click *Finish* after the installation is completed.



#### 10. BI4Dynamics Express is successfully installed

🗢 🕌 🕨 Computer 🕨 Local Disk (C:) 🕨 Progra	am Files (x86)	) 🕨 BI4Dyna	mics NAV 🕨	
e ▼ Include in library ▼ Share with ▼	Burn	New folde	r	
		1.00	- ^	<i>C</i> :
Name	<ul> <li>Date mo</li> </ul>	dified	Туре	Size
🐌 Localization	29/08/20	17 14:37	File folder	
BI4DynamicsNAV.exe	16/08/20	17 13:00	Application	24.654 KB
BI4Dynamics.Common.dll	16/08/20	17 07:10	Application extens	1.260 KB
🚳 BI4Dynamics.Data.Common.dll	10/08/20	17 10:02	Application extens	20 KB
🚳 BI4Dynamics.Data.dll	10/08/20	17 10:02	Application extens	116 KB
BI4Dynamics.Data.NAV.dll	10/08/20	17 10:02	Application extens	343 KB
BI4Dynamics.Interface.dll	07/08/20	17 13:23	Application extens	8 KB
BI4Dynamics.Licensing.dll	10/08/20	17 10:02	Application extens	20 KB
BI4Dynamics.Localization.dll	10/08/20	17 10:02	Application extens	66 KB
BI4Dynamics.Mef.dll	07/08/20	17 13:23	Application extens	8 KB
BI4Dvnamics.Model.dll	10/08/20	17 10:02	Application extens	673 KB

# **2.2. Deploying BI4Dynamics Express**

Deploying a BI4Dynamics Express solution is a six step process:

- 1. Providing license information
- 2. Creating an instance
- 3. Adding the data sources
- 4. Selecting companies
- 5. Selecting modules
- 6. Deploying and processing the selected modules

When you open the application, an instance wizard will start to guide you through the configuration.

#### **Providing license information**

1. Launch *BI4Dynamics.exe* from the folder where BI4Dynamics Express was installed to open the application.

BI4Dynamics NAV 5.1.0	Instance: BI4NAV
Flia T Deploy Process C	ustomize Develop
Edit	🚂 😽 🛛 Stage Name: BI4DynamicsNAV
Add CREMOVE	Companies Modules Deploy Analysis Database Start: 07-11-2015 00:00:00 🛐 🙌 Daily 💌 Create
Data	Sources Settings Deploy Solution SQL Agent Job
Instance Wizard ×	
STEP 1 License Informat	on License Information
STEP 2 New Instance	
STEP 3 Add Data Source	Online authentication - enter license key:
	OR
	Offline authentication - import license file:
	This process is used only if customer server is not on-line
	Step 1: Generate Server ID Generate server ID
	(please wait up to 30 seconds) Stan 2: Sand Server ID to support@hiddunamics.com
	Step 3: Wait to receive RIADunamics license file
	(file will be sent by our support team)
	Step 4: Import license file
	(please wait up to 30 seconds)
Show on startup	· Back Cancel Next ·

- Note: The default installation location is C:\Program Files (x86)\BI4Dynamics NAV. Application can also be started from the Desktop shortcut or from the Start Menu shortcut.
- 2. Enter the BI4Dynamics Express online license key

OR

• Follow the instructions on screen to receive an *offline license key* (in case you don't have the internet connection or port 80 on the server is closed).



Note: If you experience any problems with authorization, please contact us via support@bi4dynamic.com.

3. Click *Next*.

#### **Creating an instance**

- 1. Type the *Name* of the new instance.
- 2. Select what Language the solution will be deployed in.
- 3. Select or Type in the *SQL Server Instance* name where the BI4Dynamics Data Warehouse will be deployed.
- 4. Type in the *Database Name* of the BI4Dynamics Data Warehouse.
- 5. Authentication type: Windows Authentication only
- 6. The default values for *SQL Database file Locations* (data and log files) and *SQL Database Collation* are entered automatically. Check them and refresh or modify if necessary.
- 7. Click *Next*.



#### Adding the data sources

- 1. Select the SQL Server Instance, where the source database is located.
- 2. Select the *Database Name* of the source database.
- 3. Choose *Authentication* type: Windows or SQL Server (with SQL Server Authentication you also need to provide your user name and password).
- 4. Select your Dynamics source version Data Source Version.
- 5. Click *Test* to test the connection to the data source. If the connection is successful click *Add* to add the selected source database to the solution.
- Note: You can add more than one data source by clicking Add again. Each data source you add will be coloured differently.
- 6. Click *Next*.

<b>B</b> BC	BI4Dynamics NAV 5.4.0 Instanc	e: BI4NAV				- • •
File 🐨 🛛 De	eploy Process Customi	ze Stage				
Add Re	dit emove		Companies Modules	O Stage ⇒ Data Warehouse ⇒ Analysis Database	Name: BI4DynamicsN/ Start: 24-03-2017 00:0	0:00 🛐 🎋 Daily 🗸 Create
	Data Sourc	25	Settings	Deploy Solution	S	QL Agent Job
Instance Wiz	zard ×					
STEP 1	License Information	Add Data Sourc	es			
STEP 2	New Instance	Add all NAV source dat	abases you wish to ar	alyze in BI4Dynamics to you	r BI4Dynamic:	
STEP 3	Add Data Sources	Data source inform	ation			
		SQL Server Instance:	NAV\SQL2014ENT	•		
STEP 5		Database Name:	Demo Database NAV (10-	) -		
STEP 6		Authentication:	Windows Authentication	•		
STEP 7		Data Source Version:	NAV 2017	•		
		Double-byte character set	Test A	dd		
		Multi Tenant mode				
		Azure Data source				
		Data sources				
		Edet Rei NAV/SQL2014ENT Rei Demo Database NAV ( 10.0, NPS-GROUP/mat	× 1 øjg			
V	Show on startup		· Ba	ck Cancel	Next ·	

If you use non default SQL port (1433), then you have to add SQL port number when adding the data source in BI4Dynamics. SQL port number must be added after SQLServerName and must contain prefix ",". Example "SQLServerName,SQLPort \ SQLInstance".

#### **Selecting Companies**

- 1. From the list of companies tick the ones you want to include in your instance and configure additional settings for each selected company:
  - a. *Country*: local country description (e.g. Great Britain)
  - b. *Local Currency*: local currency code (e.g. GBP)
  - c. *Additional Currency*: select the additional currency code for this company (e.g. EUR)
  - d. **Dimensions**: select dimensions you would like to include in the solution and click **Add** to add them to the list. You can remove the selected dimension by clicking the X button next to the dimension name

- Note: If all selected companies have the same sort order for dimensions, dimensions will also be renamed when deploying unified dimensional model (UDM). If the sort order is different, dimensions will keep their default name (e.g. Dimension 1).
- 2. Click Next.

📫 📋 👔 🛛 🖪	814Dynamics NAV 5.4.0 Instance: B	BI4NAV			
File 🐨 🛛 De	eploy Process Customize	Stage			
Add Re	lit emove		Companies Modules	<ul> <li>O Stage</li> <li>Control Deploy All</li> <li>O Analysis Database</li> </ul>	Name: BI4DynamicsNAV
	Data Sources		Settings	Deploy Solution	SQL Agent Job
Instance Wiza	ard ×				
STEP 1	License Information	Select Companie	es		
STEP 2	New Instance			1	
STEP 3	Add Data Sources	Demo Database NA	/ (10-0)		
STEP 4	Select Companies	CRONUS Internationa	al Ltd_		
STEP 5		Country:	3B		
STEP 6		Additional Currency:	GBP USD -		
STEP 7		Dimensions:			
		1 4m			
		2 Business Group			
		3 Customer Group			
		4 Department			
		5 Project			
		6 Purchaser			
		8 Salesperson	ö		
		L		I	
V	Show on startup		• Bac	k Cancel	Next ·

#### **Selecting modules**

- 1. Select the *Modules* you would like to install.
- 2. Click *Next*.



#### Deploying and processing selected modules

- 1. In the last step select the tasks you want the wizard to perform:
  - a. Deploy deploys BI4Dynamics data warehouse to the specified SQL server
  - **b. Process** transfers data from you source database to the BI4Dynamics data warehouse
- 2. Click **Run**.

BI4Dynamics NAV 5.6.0 Instance	:: BI4NAV_DEMO	-   <b>-</b>   ×
Deploy Process Customiz	re Stage	
Add Remove	Companies Modules Deploy 🖒 Stage Deploy Madily Data Warehouse	
Data Source	es Settings Deploy Solution	
Instance Wizard ×		
STEP 1 License Information	Run	
STEP 2 New Instance		
Add Data Sources	☑ Deploy ☑ Process	
STEP 4 Select Companies	Auto update MetaData	
STEP 5 Select Modules	Deploying	
STEP 6 Run	07-09-2017 13:01:12 Instance is saved to C:\Program Files (x86)\BI4Dynamics NAV\BI4NAV	
	07-09-2017 13:01:09         Table 'LedgerEntryDimension' does not exist or its columns are mis           A         07.00.2017 13:01:00         Table 'AccountingBariodCE! does not exist or its columns are misici	
Show on startup	· Back Close Run ·	

3. A log file is displayed to monitor the installation progress.

🔤 📄 🍸   BI4Dynamics NAV 5.1.0 Instance: BI4NAV_510	
Deploy Process Customize Develop	
Add Remove	Image: Stander     Stander     Stander     Stander     EddynamicsNAV       Companies Modules     Delay     Analysis Database     Starte     0:-11-2015 000000     Image:
Data Sources	Settings Deploy Solution SQL Agent Job
Instance Wizard ×	
STEP 1 License Information Run	
STEP 2 New Instance	
STEP 3 Add Data Sources	yIng 1-2015 15:14:34 Creating analysis module 'FAPostingGroup.xml'
STEP 4 Select Companies 0 06-1	I-2015 15:14:33 Creating analysis module 'FAPostingCategory.xml' I-2015 15:14:33 Creating analysis module 'Maintenance.xml'
STEP 5 Select Modules 0 06-1	I-2015 15:14:33 Creating analysis module 'DateTool.xml' I-2015 15:14:33 Creating analysis module 'HelpDimensionSetEntry.xml'
STEP 6 Run 0 06-1	L-2015 15:14:33 Creating analysis module 'SourceCode.xml'
\$719-3         Congratulations         0         06-1           0         06-1         0         06-1           0         06-1         0         06-1	-2015 15:14:32 Creating analysis module 'Dimension8.xml' 1-2015 15:14:32 Creating analysis module 'Dimension7.xml' 1-2015 15:14:31 Creating analysis module 'Dimension6.xml'
0 06-1 0 06-1	-2015 15:14:21 Creating analysis module 'Dimension5.xml' 1-2015 15:14:21 Creating analysis module 'Dimension4.xml'
0 06-1 0 06-1	-2015 15:14:21 Creating analysis module 'Dimension3.xml' Creating analysis module 'FAPostingGroup.xml' L-2015 15:14:20 Creating analysis module 'Dimension2.xml'
0 06-1 0 06-1	:-2015 15:14:30 Creating analysis module 'Dimension1.xml'           L-2015 15:14:30 Creating analysis module 'BankAccount.xml'
06-1	L-2015 15:14:30 Creating analysis module 'DocumentBankAccount.xml'
0 06-1	-2015 15:14:29 Creating analysis module 'Date.xml'
0 06-1	2015 15:14:29 Creating analysis module 'Currency.xml'
90-1	-2015 15:14:29 Creating analysis module 'Company.amt'
00-1	1-2015 15:14:29 Creating analysis module 'Dimodasource.ant'
9 86-1	- 2015 15:14:29 Denloying dimensions on analysis database
0 06-1	-2015 15:14:29 Creating analysis database
0 06-1	1-2015 15:14:29 DEPLOY ANALYSIS DATABASE
0 06-1	L-2015 15:14:28 Deploying module Sales Orders
I Show on startup	· Back Close Cancel ·

- 4. After successful processing the Data Warehouse with data you can use any front-end tool to begin your analysis.
- To help you get started, <u>BI4Dynamics provides a set of trial reports</u>.
- You will need to change the connection of the reports to point to the OLAP server where you deployed BI4Dynamics.

## 2.3. Schedule Automatic Data Update

To schedule the automatic data update the Windows Task Scheduler can be used.

- 1. Open Task Scheduler and select Create Task...
- 2. On General tab enter *Name* and *Description*. Select the user account with administrator permissions and select *Run with highest privileges*.



If the **Do not store password** is checked, please uncheck it.

On *Triggers* tab define a trigger to start the task. Select *New...* with Begin the task: *On a schedule* and select *Daily* and set the date and time.

lew Actio	n		)
You mus	t specify what action this task wi	ll perform.	
Action:	Start a program		~
Settings	i		
Progra	m/script:		
jram F	iles (x86)\Bl4Dynamics NAV\Bl4D	ynamicsNAV.exe" Brow	wse
Add ar	guments (optional):	√.bi4nav" "BI4Dy	namics"
Start ir	n (optional):	I	
		OK	Cancel

 On Actions tab define the program to run when the task is started. Select New... with Action: Start a program and enter the following settings: Program/script: "Application" Add arguments: "Instance" "Process Flow"

New Actio	on		X
You mus	t specify what action this task will perform.		
Action: Settings	Start a program s	~	]
Progra	am/script:		
jram Fi	iles (x86)\BI4Dynamics NAV\BI4DynamicsNA	AV.exe" Browse	
Add ar	rguments (optional):	√.bi4nav" "BI4Dynamics"	
Start in	n (optional):		
		OK Cancel	

#### Example:

Program/script: "C:\Program Files (x86)\BI4Dynamics NAV\BI4DynamicsNAV.exe" Add arguments: "C:\Program Files (x86)\BI4Dynamics NAV\BI4NAV\BI4NAV.bi4nav" "BI4Dynamics"

- 5. When you confirm the task created with **OK**, you will have to enter the password which will be used to run the application.
- Note: The application has to be started under the user with administrator permissions (Run as Administrator).

Task Scheduler					- 🗆 X
File Action View Help					
🗢 🔿 🙍 🖬 🚺 🖬					
🕑 Task Scheduler (Local)	ne	Status	Triggers		Actions
Task Scheduler Library	314Dynamics NAV Data Update	Running	At 01:00 every day		Task Scheduler Library
		<u> </u>			💿 Create Basic Task
					🐌 Create Task
					Import Task
					Display All Running Tasks
					📔 Enable All Tasks History
					Mew Folder
<				>	View
Gene	eral Triggers Actions Condition		Refresh		
Nar	mer BI4Dynamics NAV Data	lindate	,	~	? Help
loc			Selected Item		
Aut	thor: NPS-GROUP\uros				Run
Des	scription: The task updates BI4D	ynamics NAV data.			End End
		-			Disable
					Export
					e Properties
				-	🗙 Delete
- Se	ecunty options				? Help
www.	vnen running the task, use the foli iros	owing user account:			
	) Run only when user is logged or	n			
۲	Run whether user is logged on o	or not			
	Do not store password. The	task will only have a	cess to local resources		
<	an a			×	
<b>/</b>					

# 2.4. Deleting instance

- 1. Open the instance you would like to delete by clicking *File* and selecting the instance in the list on the right.
- 2. Click *File > Delete*.
- 3. Click **Yes** to confirm the action.

**IMPORTANT!** When deleting an instance, the Data Warehouse will be deleted.

Note: BI4Dynamics Instance folders and the log file are not removed during the delete process.

# 2.5. Uninstalling BI4Dynamics

- 1. Click Start > Settings > Control Panel.
- 2. Click Add or Remove Programs.
- 3. From the list of installed programs, select **BI4Dynamics**.
- 4. Click *Remove*.
- 5. Follow the instructions on screen.

**IMPORTANT!** User files will not be removed when uninstalling the solution.

# **3. CONECTING REPORTS**

### **3.1. Excel Reports**

- 1. Download and Open Prebuilt reports
- 2. Click *PowerPivot* tab → *Manage*

FILE	HOME	INSERT	PAGE LAYOUT	FORMULAS	DATA	A REVIEW	VIEW	ADD-INS	POWERPIVOT
(Manage	$\underbrace{f\overline{x}}_{Calculated}_{Fields  \bullet}$	KPIs	<ul> <li>☐ Align Vertically</li> <li>☐ Align Horizontally</li> </ul>	Add to Data Model	Update All	<b>□</b> Detect	Settings		
Data Model	Calculat	ions	Slicer Alignment	Table	5	Relationships			

#### 3. In Manage window, *Home* tab → *Get External Data* → *Existing Connections*

🚯   🖽 🚽 🤝 🛪 🤕 🖛   PowerPivot for Excel - DW Express-Sales v2.7.xlsx								
Home Design Advanced								
Paste	Get External Refu	resh PivotTable	Data Type : ▼ Format : ▼ e \$ ▼ % ♪ 300 →00	A↓ Z↓ A↓ Z↓ F				
Clipboard			Formatting	So				
[TypeID]	From From	n Data From Oth	er Existing	Typ				
Þ	Database - Ser	vice Sources	Connections	-1 N/A				

4. Select the existing PowerPivot Data Connection  $\rightarrow$  *Edit* 

Exis	sting Con	inections	? 🗙				
Se	lect an E	xisting Connection					
Sel	Select a connection to a data source that contains the data that you want to import.						
-							
	Select a c	data source connection:					
	Power	Pivot Data Connections	A				
		SqlServer LJBINC BI4NAV_reports					
	-	Data Source = LJBINC; Initial Catalog = BI4NAV_reports					

- 5. Choose Server name and Database name from the dropdown menu and click Save
- 6. In Manage window, click *Refresh*

## **3.2. PowerBI Reports**

- 1. Download and Open Prebuilt reports
- 2. Click *Edit Queries* → *Edit Parameters*



3. Enter SQL Server name and BI4Dynamics Database name and click OK

Enter Parameters					×
Enter Furdimeters					
BI4Dynamics_DW_Server					
LOCALHOST					
BI4Dynamics_Database	_				
BI4NAV					
			ОК	Cancel	

4. Click Apply Changes



#### 5. On the next two windows, click *Connect* ad *OK*.

		SQL Server database	×
Win	dows	■ .\sql2014;BI4NAV	
Dat	abase	Use your Windows credentials to access this database.	
		<ul> <li>Use my current credentials</li> <li>Use alternate credentials</li> <li>User name</li> <li>Password</li> </ul>	
		Select which level to apply these settings to	
		.\sql2014 *	
	Encryption	Support	
	The data source yo To access this data	urre trying to access doesn't support encryption. Source using an unencrypted connection, click OK.	ncel
		OK Cancel ity by Month	URNITURE

#### 6. Wait for the *PowerBI* to import the data

Apply query changes	×
fact Sales Values 270.787 rows from .\sql2014/BI4NAV_POS.	<b>^</b>
Customer 84 rows from .\sql2014/BI4NAV_POS.	E
Date     4.383 rows from .\sql2014/BI4NAV_POS.	
<ul> <li>Document Sales</li> <li>89 rows from .\sql2014/BI4NAV_POS.</li> </ul>	
<ul> <li>Item</li> <li>666 rows from .\sql2014/BI4NAV_POS.</li> </ul>	-
	Cancel

7. Start using **BI4Dynamics** predefined **PowerBI** reports