

BI4Dynamics NAV Installation Requirements

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BI4Dynamics NAV: 7.2

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1. SYSTEM REQUIREMENTS

BI4Dynamics can run on premise and in cloud Platform as Service (PaaS).

Note:

It is of utmost importance that all system software used in BI project is of latest version and constantly updated. Any neglect of this task might result in inability of BI4Dynamics to be installed or properly operate.

For any questions related to system requirements, please send an email to support@bi4dynamics.com

1.1. Accounts and Permissions

- Be (local) administrator on the windows server where BI4Dynamics 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.
- Granted Server role on MS SQL Analysis Services where the BI4Dynamics OLAP cubes will be deployed. Additionally the Analysis Server service should run under BI4Dynamics domain account.
- SQL Agent job Service user account needs all of the above stated permissions.

Note:

All six (6) accounts can be combined into one (1) Windows domain account. One Windows domain account is preferred.

1.2. Windows Server

Hardware

- **CPU:** 2 – 4 Intel® processors or equivalent (at least 2GHz), the more cores the better as SSIS option can run parallel on as many cores as there are available. Using SSIS option can speed up processing Stage and Data warehouse by 30 to 50%
- **RAM:** minimum recommendation:
 - 16 GB RAM for NAV database size < 50 GB
 - 32 GB RAM for NAV database size 100 ... 250 GB
 - 64 GB RAM for NAV database size 250 ... 500 GB,
 - 128 GB RAM for NAV database size 500... 1000 GB,
 - 256 GB RAM for NAV database size 1000..2000 GB,
 - 384 GB RAM for NAV database size 2000..4000 GB,
 - 512 GB RAM for NAV database size > 4000 GB,Consult us for larger databases as our recommendations depend on table structures
- **Disk** space depends on the size of NAV database, we recommend:
 - 1.25 x size of Dynamics NAV database used when no SSIS option is used
 - 2 x size of Dynamics NAV database used with SSIS option is used;

SSIS options needs more space as more tables are processed at the same time so more disk is needed for temporary calculations. The result – size of BI4Dynamics DW - will be about 30-50% of NAV database.

If possible, use SSD hard drive, which processes data about 30 – 50 % faster than standard 15k disks

Please contact us on details when databases larger than 2 TB to get HW recommendation based on table structure.

Notes:

NAV database vs number of BI users

Hardware configuration should correspond to the size of Microsoft Dynamics database (this is important) and to lesser extent to the number of analytical users (this is less important).

Rules for fast processing:

Enough RAM: RAM amount under the recommended size will significantly affect the processing speed.

Fast disks: Most important parameter as large set of data are read and written each time.

Good CPU with many cores

Software

- Windows Server 2008 R2, 2012, 2012 R2, 2016, 2019 or Win XP/Vista/7/8,10,
- UAC should be disabled or application needs to be installed outside Program Files folder
- .NET Framework 4.7.2
- Network availability:
 - **Online servers:** 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)
 - **Offline servers:** special offline license is required; please contact sales@bi4dynamics.com for further assistance.

1.3. SQL Server

General

All BI4Dynamics features run on **Standard** SQL Edition. It is understood that it can run also on BI or Enterprise edition.

- Microsoft SQL Server **Standard** Edition from version **2016** and above with
 - Database Engine
 - Analysis Services (**Multidimensional option**, Tabular is not supported yet)
 - SQL Agent
 - Integration Services (optional): to run processing parallel; if not installed or selected then loading stage tables and processing DW tables is running sequentially, one table after another
- All services run under the windows domain user with appropriate permissions
- Separate partitions for:
 - Data
 - Log
 - Temp

Notes:

To introduce additional speed improvements it is recommended to put data files on a RAID 5 for fast read speeds and log & temp files on RAID 1 for fast write speeds. For Microsoft Dynamics NAV databases, the collation of the data warehouse server should match the collation of the NAV server

Processing cubes by cube partitions

The feature has been available since Microsoft SQL Server 2016 introduced three partitions as a part of **Standard** Edition. BI4Dynamics can process cubes by partitions. System requirements are:

1. Analysis Services on Microsoft SQL Server Standard edition **2016** and above
2. Integration Services on Microsoft SQL Server
3. Incremental processing option available in BI4Dynamics NAV
4. BI4Dynamics NAV license current on Enhancement (BREP, software assurance)

1.4. 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
- There has to be at least one entry in Currency and Country tables per Company (only applies to companies you intend to use in BI4Dynamics)
- 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".

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.

**Only NAV W1-World Wide version is supported*

2. RECOMMENDATIONS

A dedicated infrastructure for BI stack is recommended. Please consolidate such decision with IT services experts to determine the optimal configuration for the environment.

Dedicated BI infrastructure stack

With modern VM infrastructure, it is easy to have an independent and dedicated BI environment up and running within a few hours. If your company uses virtualisation, you can create a windows server machine that can host a dedicated BI SQL Server instance.

- Separating the NAV production environment from BI environment gives you more flexibility regarding system resources and increases NAV environment stability
- Please check for any maintenance jobs running at source DB server and set the BI4Dynamics daily job accordingly.

Shared BI infrastructure stack

Adding a dedicated BI infrastructure is not always possible. Existing NAV production environment can also be used.

- It's advisable to allocate some extra hardware resources on existing server for BI purposes.
- All running agent jobs needs to be aligned with the BI4Dynamics agent jobs in order to avoid accidental interlocking issues.