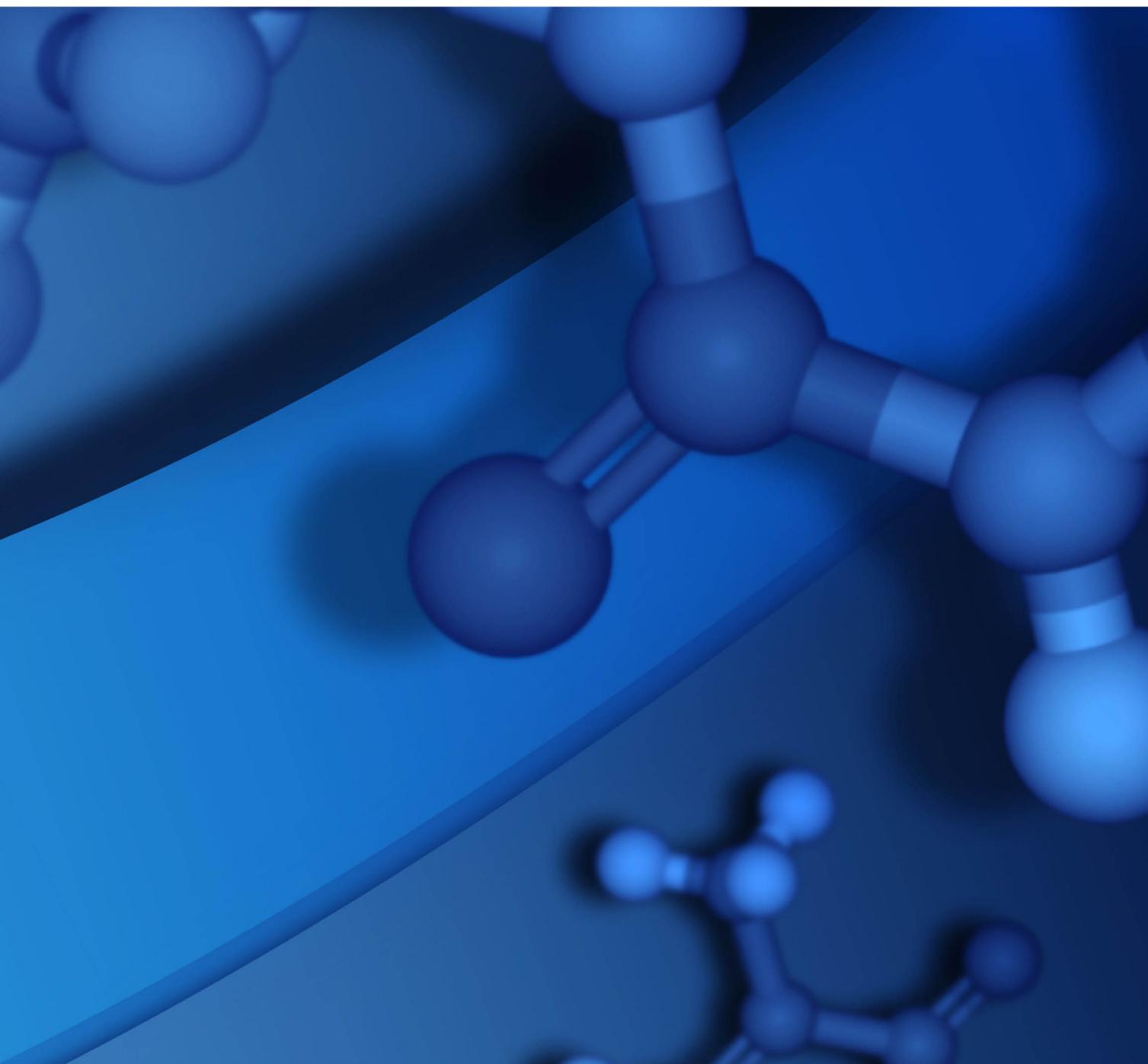


# VAULT SERVER SYSTEM REQUIREMENTS

BIOVIA WORKBOOK 2021



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## Acknowledgments and References

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## About This Document

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This document identifies the requirements for a supported installation of BIOVIA Vault Server 2021. The requirements are categorized into the following areas:

- Related BIOVIA software and version requirements
- Hardware, operating system, regional language settings, and software requirements for each of the following:
  - Application server or virtual machine that will host Vault Server
  - Database server that will host the Vault Server database
  - Computers that will host Vault Administration Console and BIOVIA Workflow Designer

For information about what constitutes a supported installation, refer to the *BIOVIA Software Product Lifecycle and Platform Support Policy*.

## **Related BIOVIA Software Requirements**

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### **BIOVIA Foundation Hub and Pipeline Pilot Server**

Vault Server 2021 requires Foundation Hub 2021 and Pipeline Pilot Server 2021.

Vault Server uses Foundation Hub for single sign-on user authentication.

Workbook uses Pipeline Pilot Server for data analytics.

### **BIOVIA Workbook Client**

Vault Server 2021 requires Workbook Client 2021.

### **Vault Administration Console and Workflow Designer**

Vault Server 2021 requires Vault Administration Console 2021.

Vault Server 2021 is compatible with Workflow Designer 2021, an optional module that administrators can use to design workflows.

You can install these applications on your Vault Server machines and on client computers that meet the requirements specified in the last chapter of this document.

### **BIOVIA Direct**

Vault Server 2021 requires BIOVIA Direct 2021.

## Application Server and Virtual Machine Requirements

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This chapter identifies hardware and software requirements for application servers that host BIOVIA Vault Server installations.

### Minimum Hardware Requirements

This section identifies the minimum recommended hardware requirements for application servers and virtual machines (VMs) that host Vault Server.

#### Application Server Hardware

BIOVIA recommends the following minimum hardware when Vault Server is hosted on an application server.

| Component       | Minimum Configuration             |
|-----------------|-----------------------------------|
| Processor       | Dual 3.0 GHz or faster Intel Xeon |
| RAM             | 12 GB or higher                   |
| Hard disk space | 250 GB or higher                  |
| Network         | 1 GB or higher TCP/IPv4 network   |

#### Virtual Machine (VM) Hardware

BIOVIA recommends the following minimum hardware when Vault Server is hosted on a VM.

| Component       | Minimum Configuration           |
|-----------------|---------------------------------|
| Processor       | Two sockets with two cores each |
| RAM             | 8 GB memory with 60% reserved   |
| Hard disk space | 250 GB                          |
| Network         | 1 GB or higher network          |

## Operating Systems, Virtualization Technologies, and Regional Settings

BIOVIA supports Vault Server 2021 on application servers that use the following operating systems, virtualization technologies, and regional settings.

| Supported Operating Environment        |  |
|--|--|
| <b>Operating Systems</b>               | <ul style="list-style-type: none"> <li>■ Microsoft Windows Server 2019</li> <li>■ Microsoft Windows Server 2016</li> </ul>   |
| <b>Operating system virtualization</b> | VMware   |
| <b>Regional settings</b>               | <ul style="list-style-type: none"> <li>■ Danish</li> <li>■ Dutch (Belgium)</li> <li>■ Dutch (Netherlands)</li> <li>■ English (U.S., U.K.)</li> <li>■ French (France)</li> <li>■ German (Germany)</li> <li>■ German (Switzerland)</li> <li>■ Hungarian</li> <li>■ Italian (Italy)</li> <li>■ Spanish (Spain)</li> <li>■ Swedish</li> <li>■ Swedish (Finland)</li> <li>■ Korean</li> <li>■ Chinese</li> <li>■ Japanese</li> </ul> <div style="background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p><b>IMPORTANT!</b></p> <ul style="list-style-type: none"> <li>■ The application server and the database server must use the same regional settings. If you use a Red Hat Linux database server, you must use either English or Japanese.</li> <li>■ Customized regional settings are not supported. Use the defaults for the region you select.</li> </ul> </div> |

## Third-party Software Requirements

Application servers for Vault Server 2021 require the following third-party software.

| Software                             | Version                | Comments  |
|--------------------------------------|------------------------|---|
| Windows PowerShell                   | Default OS             | The Workbook Installer cannot run without Windows PowerShell.   |
| Oracle Data Access Components (ODAC) | 12.2.0.1.1             | If the ODAC installation is missing or incorrect, the Workbook Installer reports it, and it must be manually resolved before the installation can proceed. For details about manual installation of the required components, see the <i>Vault Server Installation Guide</i> . |
| Microsoft .NET Framework             | 3.5 and 4.6.1 or later | If the required .NET Framework components are missing, the Workbook Installer will install and configure them.  |

## Database Server Requirements

This chapter identifies requirements for database servers that host the BIOVIA Vault Server database.

### Minimum Hardware Requirements

BIOVIA recommends the following minimum hardware on the database server.

| Component       | Minimum Configuration   |
|-----------------|---|
| Processor       | Two dual-core 2.5 GHz processors or greater, or the equivalent of four CPUs. BIOVIA recommends four dual-core, or two quad-core 3.0 GHz processors or greater, or the equivalent of eight CPUs.                         |
| RAM             | 8 GB with 4-6 GB allocated solely for the BIOVIA Vault Server database.   |
| Hard disk space | 100 GB minimum for initial installation. Disk space requirements depend on usage and can grow to many terabytes. An Oracle supported enterprise storage array is recommended for environments with more than 100 users. |
| Network         | 1 Gbps recommended. TCP/IPv4 network.   |

### Operating Systems

Workbook 2021 is supported on database servers with the following operating systems and regional settings.

**Notes:**

- The database server and application server must use the same regional settings.
- Use default settings for the selected region; custom regional settings are not supported.
- For security protocols, Workbook requires TLS 1.2.

#### Operating Systems

Microsoft Windows Server 2019

Microsoft Windows Server 2016

Red Hat Linux 7 or 8 Advanced or Enterprise Server

### Oracle Database Versions

BIOVIA Vault Server supports the following versions of Oracle Database:

- Oracle Database 12c Release 2
- Oracle Database 19c Patch 7 or later

**Notes:**

- You can use Standard Edition or Enterprise Edition, but Enterprise Edition is recommended because it provides additional important features like Replication.
- Oracle Multitenant Architecture is not supported.

## Oracle Instance Requirements

### IMPORTANT!

- To avoid a known Oracle defect, disable automatic acceptance of SQL profiles. For instructions, see the *Vault Server Installation Guide*.
- The BIOVIA Vault Server database can grow in size by many terabytes. Create tablespaces and user accounts that can support the expected growth. Oracle Text indexing, which supports full-text searches in Workbook, also significantly affects the amount of required disk space.
- Oracle requires several patches to be applied to Oracle Database 12.2 to address defects with Oracle Text. These defects can cause errors with full text searches in Workbook. For more information, see *Oracle Text Release 12.2.0.1.0 Mandatory Patches (Doc ID 2438893.1)* on the Oracle Support website.

| Element                   | Requirements and Notes   |
|---------------------------|--|
| English Character Set     | <ul style="list-style-type: none"> <li>■ AL32UTF8 is required for most cases.</li> <li>■ The 32-bit character set (AL32UTF8) is required for the following:               <ul style="list-style-type: none"> <li>■ New installations of Workbook</li> <li>■ Upgrades to existing Workbook installations on Japanese, Chinese, and Korean language systems.</li> </ul> </li> </ul> <p>8-bit character sets (WE8ISO8859P1 or WEMSWIN1252 ) are supported for other upgrades, but not recommended, because 32-bit is necessary for all experiment data in Oracle to be found in searches and for accurate representation of all Unicode characters.</p> |
| Japanese Character Set    | <p>Use the NLS_LANG setting JAPANESE_JAPAN.character_set and one of the following:</p> <ul style="list-style-type: none"> <li>■ JA16EUC</li> <li>■ JA16EUTILDE</li> <li>■ JA16SJIS</li> <li>■ JA16SJISTILDE</li> </ul>   |
| Initialization parameters | <p>The following values are guidelines—monitor the maximum number of processes and memory used by Oracle, and increase relevant values as needed:</p> <ul style="list-style-type: none"> <li>■ PROCESSES: 500–1000 (depends on number of users)</li> <li>■ OPEN_CURSORS: 500–1000</li> <li>■ NLS_LENGTH_SEMANTICS: byte</li> <li>■ SGA_TARGET: 4GB-6GB <b>AND</b> PGA_AGGREGATE_TARGET: 1GB-2GB</li> </ul>   |
| Oracle Packages           | <ul style="list-style-type: none"> <li>■ Oracle Text version that ships with your version of Oracle Database, plus mandatory patches required by Oracle.</li> <li>■ Oracle Database Catalog View</li> <li>■ Oracle Database Packages and Types</li> <li>■ JServer JAVA Virtual Machine</li> <li>■ Oracle Database Java Packages</li> </ul>   |
| Jobs                      | <ul style="list-style-type: none"> <li>■ Gather statistics</li> </ul>  |

### Regional Language Settings

- Danish
- Dutch (Belgium)
- Dutch (Netherlands)
- English (U.S., U.K.)
- French (France)
- German (Germany)
- German (Switzerland)
- Hungarian
- Italian (Italy)
- Spanish (Spain)
- Swedish
- Swedish (Finland)
- Korean
- **Chinese**
- Japanese

Customized regional settings are not supported. Use the defaults for the regional setting you select.

# Vault Administration Console and Workflow Designer Requirements

This chapter identifies the requirements for the Vault Administration Console, which is required to support a Vault Server installation, and for the Workflow Designer, which is an optional module that administrators can use to design workflows.

These applications are not installed by the Vault Server or Workbook client application installers. They have their own independent installers which can be run on Workbook client systems as well as on Vault Server machines.

## Minimum Hardware Requirements

BIOVIA recommends the following minimum hardware for a Vault Administration Console and Workflow Designer installation.

| Hardware           | Minimum Configuration   |
|--------------------|---|
| RAM                | <ul style="list-style-type: none"><li>■ If run on the same computer as Vault Server, 12 GB minimum (the Vault Server minimum).</li><li>■ If run independently on a client computer, 1 GB minimum; 4 GB recommended.</li></ul> |
| Disk Space         | 200 MB  |
| Display Properties | 1280 × 1024   |
| Network            | 1 GB or higher, TCP/IPv4  |

## Operating Systems and Regional Settings

BIOVIA supports Vault Administration Console and Workflow Designer on application servers that host the Vault Server and on client computers that use the following operating systems and regional settings.

### Operating Systems

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows 10

### Notes:

- For security protocols, Workbook requires TLS 1.2.
- The Vault Administration Console and Workflow Designer are not optimized for touch-screen navigation and are not supported in Citrix environments.

## Third-party Software Requirements

The following table lists software required for Vault Administration Console and Workflow Designer.

| Software                           | Version      | Comments  |
|------------------------------------|--------------|---|
| Microsoft Management Console (MMC) | 3.0          | Required for Vault Administration Console. Use the Windows Control Panel or Server Manager on computers that run Vault Administration Console to ensure that MMC is installed and enabled.  |
| Microsoft .NET Framework           | See comments | <ul style="list-style-type: none"> <li>■ If installing on an application server, see <a href="#">Third-party Software Requirements</a> on page 5.</li> <li>■ If installing on a client system, see the <i>Workbook Client System Requirements</i>.</li> </ul> |

## Regional Language Settings

- Danish
- Dutch (Belgium)
- Dutch (Netherlands)
- English (U.S., U.K.)
- French (France)
- German (Germany)
- German (Switzerland)
- Hungarian
- Italian (Italy)
- Spanish (Spain)
- Swedish
- Swedish (Finland)
- Korean
- **Chinese**
- Japanese

Customized regional settings are not supported. Use the defaults for the regional setting you select.