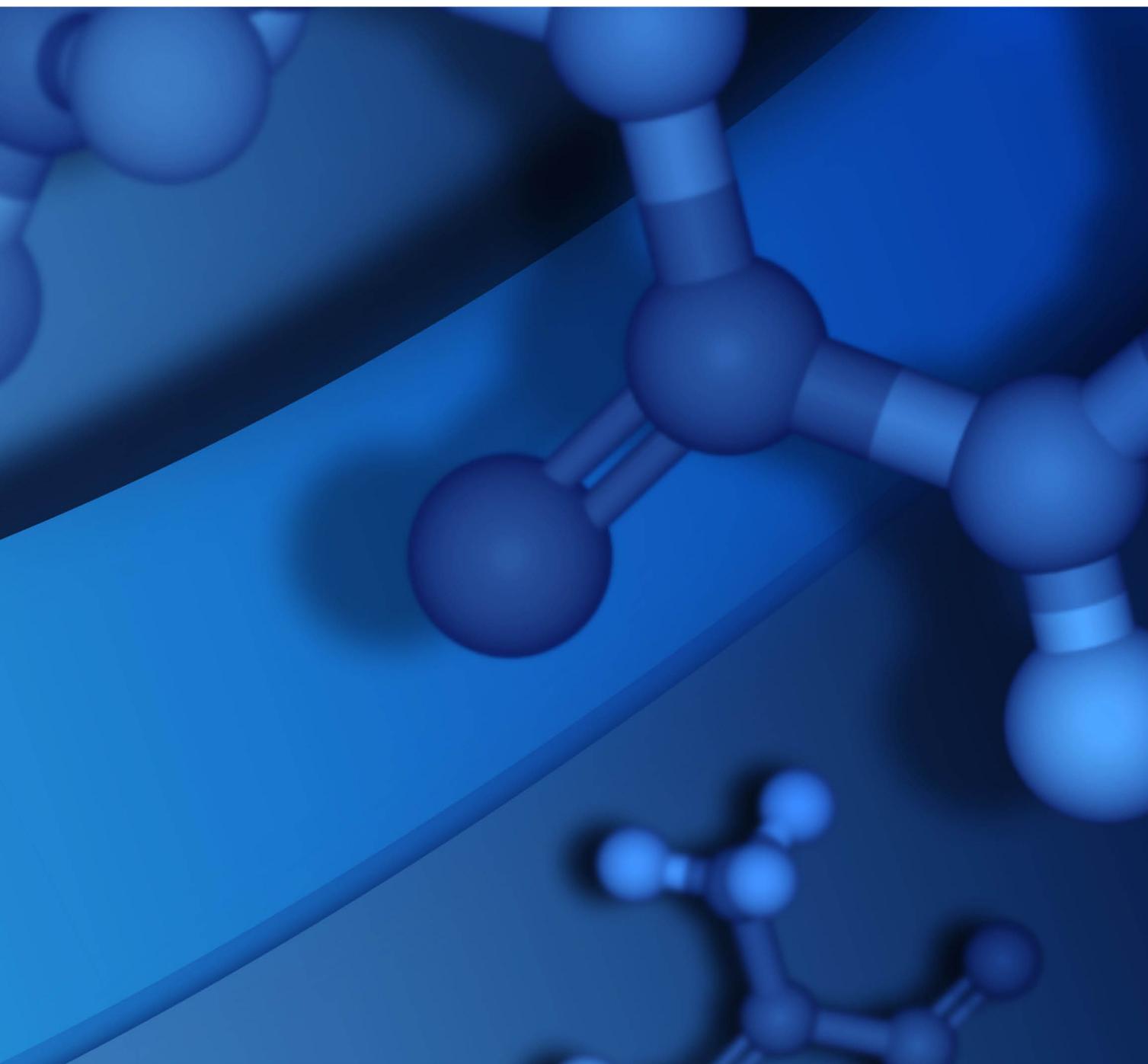


# SYSTEM REQUIREMENTS

PIPELINE PILOT 2021



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## Acknowledgments and References

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## About This Document

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This document provides requirements, recommendations, and notes for planning an installation of BIOVIA Pipeline Pilot 2021.

This document lists third-party hardware and software supported for use with Pipeline Pilot Server and Pipeline Pilot Client. The hardware and software and their versions are subject to change.

## Definitions

For the purpose of this document the following definitions are used:

- **Supported:** The hardware or software was tested against Pipeline Pilot, is expected to function as documented, and will be supported by BIOVIA. If issues are found that are specific to these versions of the hardware or software, they will be addressed per the BIOVIA Software support policy.
- **Not Supported:** Any hardware/software not specifically listed in this document is not supported by BIOVIA. These are used at the customer's risk and BIOVIA makes no guarantee regarding the capability of unsupported hardware or software to function with Pipeline Pilot Server.
- **Regional Language Settings:** The ability to change the format that Microsoft® Windows uses to display dates, times, large numbers and decimal fractions. This document includes the regional language settings that BIOVIA supports for Pipeline Pilot.

## Additional Information

Additional information related to installation is available:

- *Pipeline Pilot Server Installation Guide*
- *R Software for Pipeline Pilot Installation and Configuration Guide*
- *BIOVIA Query Service Administration Guide*

## Dassault Systèmes Support Resources

For additional resources or to contact Dassault Systèmes Customer Support, visit the Support portal:

<https://www.3ds.com/support/>

From this portal, you can:

- Call or email Dassault Systèmes Customer Support
- Submit a request
- Download installers
- Access hardware and software requirements
- Access Knowledge Base
- Access Communities and Twitter feeds

## Pipeline Pilot Server Requirements

This section lists the hardware and software that are required to install Pipeline Pilot on your server.

### Minimum Hardware Requirements

BIOVIA recommends the following minimum hardware for proper operation:

Recommended Configuration	
Processor	<ul style="list-style-type: none"><li>■ x64 architecture-based computer with Intel processor that supports Intel 64 architecture (formerly known as Intel EM64T)</li><li>■ AMD processor that supports the AMD64 platform</li></ul> <p><b>Note:</b> Intel Itanium IA64 processors are not supported.</p> <p>As a guide to your processor requirement decision, one processing core for every 2 simultaneous jobs should provide adequate performance, but not less than 8 cores.</p>
RAM	1 GB for each processor core but not less than 8 GB total. Typically, you want to size a server to maximum load, and have at least 1 GB per running protocol. This does not take into account other applications or operations that might be running on the server.
Disk space	The following minimum disk space is recommended for the proper installation and operation of Pipeline Pilot Server. <ul style="list-style-type: none"><li>■ 20 GB for Pipeline Pilot Server components.</li><li>■ 50 GB (minimum) of free disk space for runtime environment, user data files, and so on.</li></ul> Disk space required depends on the data used.
Swap Space	At least $1 \times$ RAM for systems up to 8 GB or $0.5 \times$ RAM for large memory systems. Refer to your operating system recommendations for more precise guidelines.
Network	TCP/IP 1 Gb/s

#### Notes:

- Some of the protocols and components in Pipeline Pilot Server running Python will fail on CPUs without AVX (Advanced Vector Extensions) support.
- Data size and computational resource requirements tend to be significantly higher for **Next-Generation Sequencing (NGS)** experiments than for data in other domains. As a minimum we recommend:
  - 8 CPUs/cores
  - 16 GB of RAM
  - 2 TB of dedicated "data" space

## Supported Operating Systems

BIOVIA supports the installation of Pipeline Pilot Server on the following operating systems:

Operating System	Versions	Comments
CentOS	8.1+	64-bit only
	7.5+	64-bit only
Red Hat® Enterprise Linux®	8.1+	64-bit only
	7.5+	64-bit only
Microsoft® Windows Server	Windows Server 2019	64-bit only
	Windows Server 2016	64-bit only

### IMPORTANT!

- The Next Gen Sequencing collection can only be installed and used on a Linux operating system.
- Install the Arial font for ligand depictions on Linux installations. The font is not installed by default on Linux and ligand depictions do not render properly without Arial.

## Supported Software for Grids

Software	Version	Comments
PBS Professional	18.2.3	
Slurm	18.08	

## Pipeline Pilot Client Requirements

This section lists the hardware and software that are required to install Pipeline Pilot Client.

### Supported Operating Systems

BIOVIA supports the installation of Pipeline Pilot Client on the following operating systems:

Operating System	Supported Versions	Notes
Windows	Windows 10 Pro	<ul style="list-style-type: none"><li>■ 64-bit only</li><li>■ English and Kanji</li></ul>
	Windows 10 Enterprise	<ul style="list-style-type: none"><li>■ 64-bit only</li><li>■ English and Kanji</li></ul>

**Note:** Administrator privileges are required so the installer can update registry settings.

### Supported Browsers

Browser	Versions	Comments
Mozilla Firefox	Latest ESR	64-bit
Google Chrome	Latest	64-bit
Microsoft Edge	Latest	64-bit

**Note:** Users of the HTML5 Dashboard Collection should disable ad-blockers in their browsers, or add Pipeline Pilot Server to the allowlist. Otherwise, some required JavaScript resources may be blocked.

### Third Party Tools

The following versions of optional third party tools are supported:

- Microsoft® Office 2019 or 2016 (32-bit or 64-bit)
- TIBCO Spotfire® 9.1 or later (for Spotfire viewer components)

**Note:** Other third-party software might be required for use with separately licensed collections. For details, see the user guides included with your collections (**Pipeline Pilot Help Center > Users tab > Component Collections**). If you need further assistance, contact Dassault Systèmes Customer Support, see [Dassault Systèmes Support Resources](#) on page 1.

## Additional Requirements

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### BIOVIA Software Compatibility

Pipeline Pilot 2021 is compatible with 2021 versions of other BIOVIA applications.

### SSL

For your production deployment of Pipeline Pilot, you must obtain and install a trusted SSL certificate from a recognized Certificate Authority to secure communication between the server and any client connecting through SSL.

### Required RPMs

The following RPMs are required for Linux installations. The Pipeline Pilot Server distribution includes `check_system.sh`, which you can use to check which libraries may be required for your system. Note that the libraries must be the 64-bit version.

#### Red Hat 8.1+ and CentOS 8.1+

- `libnsl`

#### Red Hat 7.5+ and CentOS 7.5+

- `alsa-lib (x86_64)`
- `audit-libs (x86_64)`
- `compat-libstdc++-33 (x86_64)`
- `compat-libtiff3 (x86_64)`
- `e2fsprogs-libs (x86_64)`
- `expat (x86_64)`
- `glibc (x86_64)`
- `keyutils-libs (x86_64)`
- `krb5-libs (x86_64)`
- `libgcc (x86_64)`
- `gd (x86_64)`
- `libICE (x86_64)`
- `libpcap (x86_64)`
- `libselenium (x86_64)`
- `libsepol (x86_64)`
- `libSM (x86_64)`
- `libstdc++ (x86_64)`
- `libX11 (x86_64)`
- `libXau (x86_64)`
- `libXdmcp (x86_64)`
- `libXext (x86_64)`

## Additional Requirements

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- libXi (x86\_64)
- libXmu (x86\_64)
- libXpm (x86\_64)
- libXrender (x86\_64)
- libXt (x86\_64)
- libXtst (x86\_64)
- pam (x86\_64)
- cairo (x86\_64)
- fontconfig (x86\_64)
- glib2 (x86\_64)
- bzip2-libs (x86\_64)
- freetype (x86\_64)
- libjpeg-turbo (x86\_64)
- zlib (x86\_64)
- libdrm (x86\_64)
- libXdamage (x86\_64)
- libXfixes (x86\_64)
- libXxf86vm (x86\_64)
- libXinerama (x86\_64)
- tcsh
- bc
- glibc

## Optional Software

Software	Comments
BIOVIA Direct	Must be installed in Oracle for searching of chemistry data. For details of support levels for each version of Direct, contact Dassault Systèmes Customer Support, see <a href="#">Dassault Systèmes Support Resources</a> on page 1.
BIOVIA Chemical Registration	Chemical Registration includes an IDS that the Query Service can use to search the database.
BIOVIA Biological Registration	Biological Registration includes an IDS that the Query Service can use to search the database.
BIOVIA Insight	Insight provides an interface to search databases and analyze data.
BIOVIA Insight for Excel	Insight for Excel adds capabilities for scientific data retrieval, browsing, analysis, and reporting to Microsoft Excel, which allows you to create scientifically aware spreadsheets.
BIOVIA Draw	Draw may be installed to test chemistry searches and to view chemical

Software	Comments
	structures in record sets. For details of support levels for each version of Draw, contact Dassault Systèmes Customer Support, see <a href="#">Dassault Systèmes Support Resources</a> on page 1.

# Appendix A:

## Query Service Requirements

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This section lists the requirements specific to the Query Service.

The BIOVIA Query Service is a web service for querying integrating data sources (IDSs). An IDS maps the flat table fields in a relational database to hierarchical nodes.

The Query Service has the same installation requirements as Pipeline Pilot Server, with which it is included.

The Query Service also has its own requirements for the underlying databases that it queries, and the BIOVIA software with which it can be used.

### Required Software Settings

Software	Versions	Comments
Apache Tomcat virtual memory	Standard	The Query Service runs within the Apache Tomcat virtual machine. There is a maximum setting on the virtual memory that Apache Tomcat allocates to that java virtual machine: do not decrease that setting.

### Supported Databases

Software	Versions	Comments
Oracle	19c	Chemistry searching is possible for Oracle databases that have the BIOVIA Direct cartridge installed. See <a href="#">Optional Software</a> on page 6.
	12c R2 64-bit	
Microsoft SQL Server	2019	Chemistry searching is not available for SQL Server databases.
	2017	

# Appendix B:

## Data Source Builder Requirements

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This section lists the software that is required to install Data Source Builder on client computers. For the system requirements of the Query Service, see [Query Service Requirements](#).

Data Source Builder is a Windows application for creating integrating data sources (IDSs). IDSs can be queried by the BIOVIA Query Service.

Users can download Data Source Builder from the Pipeline Pilot Server home page.

### Supported Operating Systems

BIOVIA supports the installation of Data Source Builder on the following operating systems:

Operating System	Version	Supported regional language settings
Microsoft® Windows 10 English OS	64-bit	

**Notes:**

- The Data Source Builder user interface is in English, regardless of the language of the machine on which it is installed.
- Customized regional settings are NOT supported.

### Required Software

Software	Version	Comments
BIOVIA Foundation	2021	Data Source Builder must log in to an instance of BIOVIA Foundation to use the Query Service. (BIOVIA Foundation does not need to be installed on the same computer as Data Source Builder.)
Microsoft® .NET Framework	4.7	