Ansys Granta MI 2023 R1

Granta MI 2023 R1 System Requirements

Ansys / GRANTA MI

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1 Using this document

This document covers application server, database server, and desktop client system requirements for Ansys Granta MI Enterprise version 2023 R1.

1.1 Additional requirements

If you will be using any of the following Granta MI features, please refer to the relevant documentation for information on additional system requirements.

Products/components	Requires
MI Machine Learning	For Windows Server version, .NET Core, and Docker requirements, see the *MI Machine Learning Installation and Configuration Guide*.
Material Calibration	For .NET Core requirements, see the *Ansys Material Calibration Installation & Configuration Guide* for details.
MI Materials Gateway	For operating system and host application version requirements, see the *Granta MI Materials Gateway Release Notes*.
MI Mat Analyzer	For Windows and MatLab version requirements, see the *MI Mat Analyzer 1.5 Installation Guide*.
MI Scripting Toolkit for Python	For Windows and Python version requirements, see *MI Scripting Toolkit 3.0 for Python Overview and Installation*.

1.2 'Certified' and 'Supported' configurations

In this document, configurations are referred to as either **certified** or **supported**.

- **Certified** means a full set of functional regression tests have been run on this configuration.
- **Supported** means some tests have been run on this configuration, and/or it is a configuration for which we would investigate issues and, where possible, provide fixes.

Our general support policy is to make every effort possible to get the software working in the environment in which it has been deployed, irrespective of whether it has been certified for or tested in that type of environment. However, if a reported issue appears to be due to the environment in which the software is running rather than a fault with the software itself (i.e., the fault cannot be reproduced in a certified environment), then it may not be possible to resolve the issue and any attempt to do so may require extended reciprocal support from the customer's IT organization, and fees may be payable.

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2 Application server requirements

The system and hardware requirements to run Granta MI Enterprise are listed below.

2.1 Microsoft Windows operating system requirements

The following 64-bit operating systems are supported.

Operating system	Certified/Supported
Windows Server 2022 with Desktop Experience	Supported
Windows Server 2019 with Desktop Experience	**Certified**
Windows Server 2016	Supported[1]
Windows 11 Windows 10, version 1607 or later	Supported for testing and evaluation, not for production use

[1] Note that Granta MI 2023 R1 is the last release to support Windows Server 2016 as an application server platform. (Microsoft ended Mainstream Support for Windows Server 2016 on Jan 11, 2022.)

2.2 IIS requirements

Microsoft Internet Information Services (IIS) is an optional component of the Windows operating system. It is used to host the Granta MI web applications, and must be installed before installing Granta MI on your MI application server. The Installation Manager will attempt to install and configure IIS for you, if it is not already installed.

2.3 .NET Framework requirements

Granta MI utilizes many .NET Framework services, and a version of .NET Framework is installed with Windows Server.

The computer on which Granta MI Server 2023 R1 is installed (the Granta MI *application server*) requires **.NET Framework version 4.7.2**. If your system has an older version of .NET Framework, you will be prompted to upgrade prior to the Granta MI installation.

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2.4 ASP.NET Core requirements

If you are going to use the MI Machine Learning feature, there are additional ASP.NET Core requirements for your MI Server; see the *MI Machine Learning Installation and Configuration* Guide for details.

2.5 Hardware requirements

The minimum application server hardware requirements listed below are for a small enterprise using a database containing a typical range of data types, with an even spread of tool usage by users. Deployments in medium and large enterprises will require more processor and memory; contact Ansys Granta Technical Support for advice.

Component	Requirement
Processor	Intel® Xeon® 4 core minimum 8 core server recommended
RAM	16 GB minimum (e.g. for a test server) 32 GB to 128 GB recommended for a production server
Disk space	100 GB minimum 300 GB recommended

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3 Database server requirements

3.1 Microsoft SQL Server on Windows

The supported Microsoft Windows/SQL Server options are as follows.

Windows Version / SQL Server Version	**SQL Server 2019** Windows	**SQL Server 2017** Windows	**SQL Server 2016**	**SQL Server 2014**
Windows Server 2022	Supported	Supported		
Windows Server 2019	Certified	Certified	Certified	Supported
Windows Server 2016	Supported	Supported	Supported	Supported
Windows 11	Supported[a]	Supported[a]		
Windows 10	Supported[a]	Supported[a]	Supported[a]	Supported[a]

[a] Supported for testing and evaluation only, not for production use

3.2 SQL Server Express

Microsoft SQL Server Express may be used for evaluation purposes, and for small-scale Granta MI production environments.

3.3 SQL Server VMs

For information on options for private cloud IaaS deployment on Azure and AWS virtual machines, see Section 9, Granta MI Enterprise on cloud platforms, on page 14.

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4 Client requirements

4.1 Windows operating system requirements

Granta MI PC client applications such as MI Toolbox, MI Admin, and Data Flow Designer can be installed on the following 64-bit Windows platforms.

Table 1. Supported Windows platforms for Granta MI PC client applications

Operating system	Certified/Supported
Windows 11	Supported
Windows 10, version 1607 or later	Supported
Windows Server 2022 with Desktop Experience	Supported
Windows Server 2019 with Desktop Experience	**Certified**
Windows Server 2016	Supported[1]

[1] Note that Granta MI 2023 R1 is the last release to support Windows Server 2016 as a desktop client platform. (Microsoft ended Mainstream Support for Windows Server 2016 on Jan 11, 2022.)

4.2 Linux operating system requirements

The following Granta MI client applications are supported on Linux platforms for 2023 R1.

Table 2 Supported Linux platforms for Granta MI PC client applications

Application	Linux platforms
Python Scripting Toolkit (STK)	RHEL/CentOS 7.9 Ubuntu 20.04 LTS Debian 9.11 SUSE Enterprise 15.2 **Note that CentOS support will not be maintained in the future**
MI Materials Gateway for ANSA	Red Hat Enterprise Linux Workstation, 7.4[b] or later [b] Certified on version 7.7; supported on versions 7.4, 7.8 and later
MI Materials Gateway for Ansys Workbench	Red Hat Enterprise Linux Workstation, 7.4[b] or later [b] Certified on version 7.7; supported on versions 7.4, 7.8 and later

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4.3 Hardware requirements

Granta MI web clients have no particular hardware requirements.

Machines running rich clients such as MI Toolbox and MI Admin should have at least 16 GB of memory. While these tools will run with less memory, they may have issues with manipulating large databases.

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5 Port requirements

The required ports for Granta MI communication in your network are shown below.

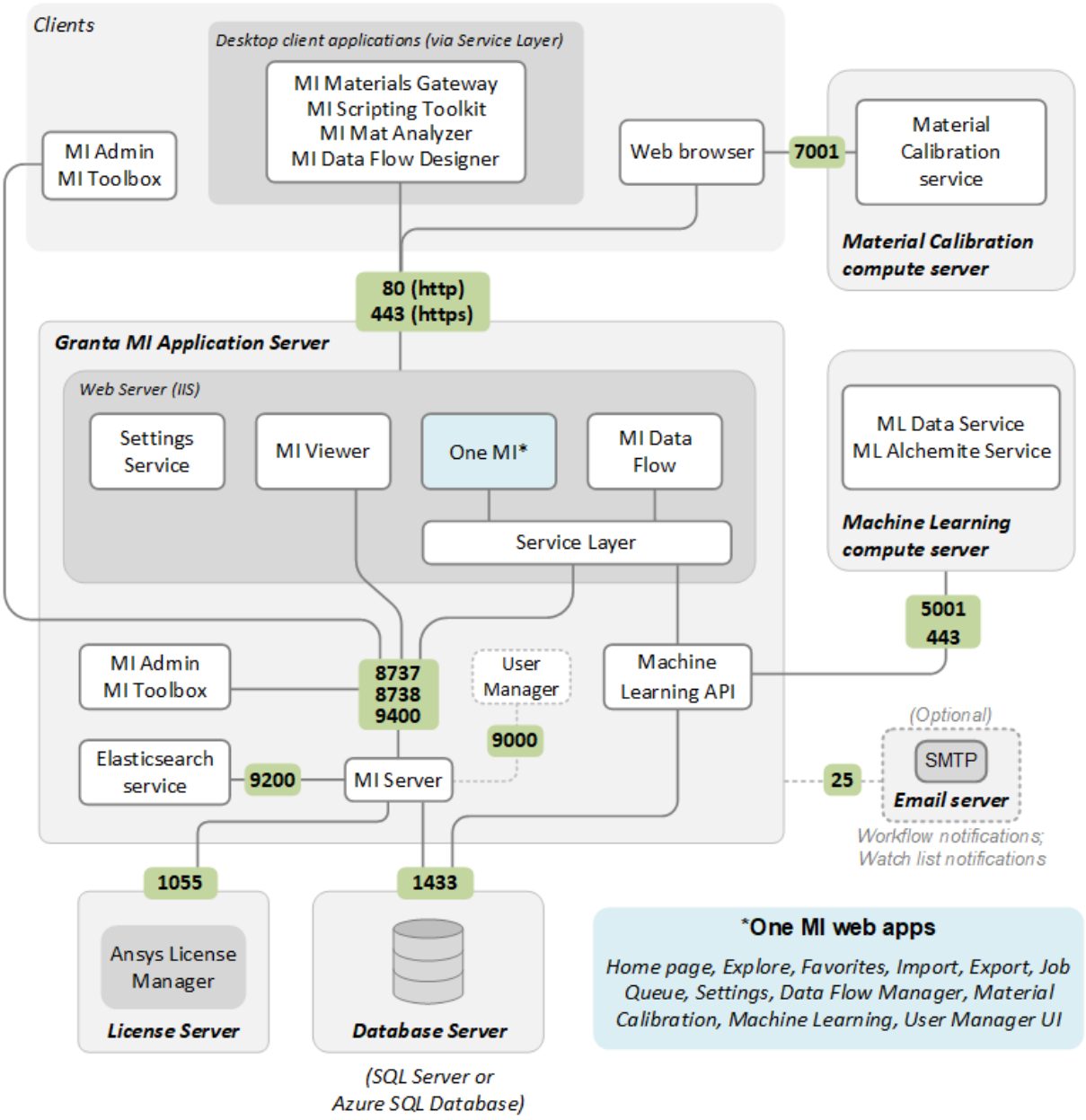

Figure 1 Required communication ports

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6 Supported web browsers

We test Granta MI web applications against recently-released browser versions prior to releasing a given version of Granta MI. The following minimum browser versions have been tested and certified as compatible with Ansys Granta MI 2023 R1.

Table 3. Compatible browser versions

Browser	Version
Microsoft Edge Chromium	99 or later
Mozilla Firefox®	99 or later To run the User Manager application, Firefox must be configured to enable Negotiate authentication; see the *Granta MI Configuration Guide* for further details.
Google® Chrome	97 or later

You may still be able to run Granta MI web applications without major issues on older versions of these supported browsers; however, we do not test Granta MI against older versions. This means you may encounter unexpected user interface behavior and appearance, and some components may not function correctly. We will endeavor to provide technical assistance with the configuration of older browsers to mitigate compatibility issues, but some issues may only be resolved by upgrading your browser.

End of support for Internet Explorer 11

Internet Explorer 11 (IE11) is no longer a supported browser for any Granta MI web applications. Customers are encouraged to move to Microsoft Edge, Firefox or Chrome.

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7 Authentication methods

Granta MI supports the following authentication mechanisms:

- **Windows Authentication** – users authenticate against Windows Active Directory Domain Services, logging in to Granta MI applications using their Windows credentials. A user's Windows group memberships determine what they can do, and the resources they can access, within Granta MI.
- **MI User Manager Authentication** – users authenticate against MI User Manager, an internal Granta MI authentication provider. MI user accounts and roles/privileges are then all managed in the MI User Manager web application.
- **OpenID Connect authentication** – users authenticate against an external identity provider system using industry standard OpenID Connect with OAuth 2.0 (OIDC). We have tested with the following OpenID Connect-capable identity providers:
  - PingFederate 10.1
  - Azure AD
  - Okta
  - Auth0
  - Keycloak

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8 Supported virtualization environments

Ansys Granta MI is supported on the following virtualization environments:

- VMware vSphere
- Citrix Hypervisor

The virtual environment must meet the basic system requirements for Granta MI operating system and system specifications described in the previous sections.

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9 Granta MI Enterprise on cloud platforms

Granta MI software is certified or supported for private cloud IaaS deployment on the following platforms.

Our Technical Support team will provide best effort to support other private cloud deployments, but may be unable to reproduce cloud-specific issues.

9.1 Microsoft Azure

Azure SQL data platform	Status
Azure 'Infrastructure as a Service' (IaaS) with Microsoft SQL Server installed and licensed on your Azure cloud	Certified
Azure SQL Database	Supported[1]

[1] SQL authentication must be used for access management; Azure Active Directory Authentication is not supported.

9.2 Amazon Web Services (AWS)

Services	Status
Amazon Web Services (AWS) with Microsoft SQL Server installed and licensed on your AWS cloud	Supported
Amazon RDS PaaS	Not supported

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10 Licensing requirements

Monthly Active User (MAU) licensing for Granta MI Release 2023 R1 is managed with Ansys License Manager Release 2023 R1. See the document *Ansys License Manager Server Hardware and Network Requirements* for information on software and hardware requirements for Ansys license servers.

10.1 Migration to Monthly Active User (MAU) licensing

Customers who purchased a license of Granta MI, or renewed maintenance, before December 2019, may still be using the legacy Granta 'named user' licensing model. These customers can still download Granta MI Enterprise software through My Granta for this release and use their existing 16-character license key, and do not need Ansys License Manager.

However, note that 2023 R1 is the last Granta MI release that supports the old license model.

Ansys introduced a flexible Monthly Active User (MAU) licensing model in January 2020, with a three-phased plan for transitioning customers from the old, named user model:

Phase 1 – Jan 2020 - All new Paid-Up licenses using MAU model

Phase 2 – Jan 2021 - All new lease licenses using MAU model

Phase 3 – Jan 2022 - All new maintenance licenses using MAU model

We are now at the end of the last phase. For all future releases, any customers who are currently using the legacy Granta named user licensing model will need to transition to the Monthly Active User (MAU) licensing model, and start using Ansys License Manager.

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