



GINIS 2024

Compatibility list - Technology

From version 5.24.3
16. 9. 2024

Obsah

1 Initial information	5
2 Supported database systems	6
2.1 Oracle Database	6
2.2 IBM Informix Dynamic Server	6
2.3 Microsoft SQL Server	7
3 Client environment	9
3.1 Thick client	9
3.2 Web client	11
4 Web application server	12
5 Office software support	14
6 Electronic document storage	15
7 Interface for mailing systems	16
8 Bar code support	17
9 Digital signature and electronic sealing support	18
10 Automatic scanner support	19
11 File conversion to PDF and PDF/A format	20
12 GORDIC DKS - Document conversion server	21
13 Communication with the ISZR interface	22
14 Communication with the ISDS interface	22
15 Microsoft Azure support	22
16 Multi-factor authentication	22
17 Payment terminals support	22

1. Initial information

GINIS is a modular information system that is capable of working in various environments.

GINIS runs in both thick client and web client architecture and supports 3 database systems. Several office system types, electronic documents storages and mailing systems are also supported.

GINIS is ready for on-premise or cloud deployment.

2. Supported database systems

The GINIS information system supports these database systems:

- Oracle Database
- IBM Informix Dynamic Server
- Microsoft SQL Server

To achieve reliable system operation, the database server needs to have sufficient resources (processor performance, physical RAM).

Estimation of minimal RAM for database server: 8 GB + (100 MB * users number)

2.1. Oracle Database

Applicable editions and versions

- Oracle 12.2 SE2, EE, applicable versions 12.2.0.1 and higher - in GINIS 5.25 will be not supported.
- Oracle 19 SE2, EE, applicable versions 19.4.0.0 and higher

Other information

- Multitenant/Container DB is not supported - database GINIS can work only as common non CDB
- Data is stored in collation ANSI CP1250
- For request is possible support for Oracle 21c, there is able to use Multitenant/Container DB and charset AL32UTF8

2.2. IBM Informix Dynamic Server

Applicable editions

- Workgroup Edition
- Advanced Workgroup Edition
- Enterprise Edition
- Advanced Enterprise Edition

Applicable versions

- 12.10 xC12 and higher
- 14.10 xC7 and higher

Other information

- see <https://www.ibm.com/support/pages/node/320749>
- Data is stored in encoding ANSI CP1250

2.3. Microsoft SQL Server

Applicable editions

- Enterprise Edition
- Standard Edition
- Developer Edition
- Express Edition

SQL Server applicable versions

- SQL Server 2014 + SP3, build 12.0.6024.0 - will be without support in GINIS 5.25
- SQL Server 2016 + SP3, build 13.0.6300.2
- SQL Server 2017 + CU19, build 14.0.3281.6
- SQL Server 2019 + CU15, build 15.0.4198.2
- SQL Server 2022 + RTM, build 16.0.1000.6
- SQL Server on Linux 2017, 2019, 2022 - specific issues related to implementation on Linux OS will not be addressed.

Depending on the specific version of the GINIS database, you may be forced to upgrade SQL Server. It is not possible to specify the minimum necessary build of SQL Server. We recommend that you regularly install the latest available update, optimally following the instructions on the site:

<https://sqlserverupdates.com/>

<https://learn.microsoft.com/en-us/troubleshoot/sql/releases/download-and-install-latest-updates>

Other information

- **HW a SW requirements for SQL Server:** <https://learn.microsoft.com/en-us/sql/sql-server/install/hardware-and-software-requirements-for-installing-sql-server-2022>
- **Required settings for GINIS:**
 - Authentication method: SQL Server a Windows (Mixed mode)
 - Communication protocol: TCP/IP
- **Recommended settings for GINIS:**
 - SQL Server collation: Czech_CI_AS
 - Format the disk for data and transaction log with NTFS Allocation Unit Size = 64 KB
- **Azure SQL Database:**
 - Managed Instance
 - Elastic Pool
 - Single Database

Data storage

- New implementations (from year 2019) - **Unicode**
- Older implementations - **ANSI CP1250**
- Azure SQL Database - **Unicode**
- Migration of older databases to Unicode is possible (as a service).

3. Client environment

GINIS runs in both thick client and web client architecture.

The **thick client** is created as a 32-bit program. It is based on these technologies:

- Win32
- MS .NET Framework

The **web client** is created in Microsoft .NET Framework. Runs in 64-bit mode or in 32-bit mode.

In the case of working with files larger than 2 GB, the modules are required to run in 64-bit mode.

3.1. Thick client

Minimal requirements

- RAM min. 4 GB
- Hard disk space min. 10 GB
- for some modules with heavy loads (for example GSAPOD01) is necessary efficient HW (CPU RAM 8 GB, SSD)
- Display screen resolution min. 1024×768 with 100% magnification color depth 32 bits

Operating system

- Microsoft Windows 11
- Microsoft Windows 10 Anniversary Update and higher
- Microsoft Windows Server 2022
- Microsoft Windows Server 2019
- Microsoft Windows Server 2016

Oper. system must support application language settings.

In case of incompatible changes caused by a Windows Update, GINIS will be fixed within 30 days after the update release.

Database system client

- **Oracle Database:**

- 32 bit: Oracle Client version 11.2.0.2, 12.2.0.1, 19.1.0.0, 19.3.0.0
- 32 bit: Oracle OLE DB provider version 11.2.0.2, 12.2.0.1 (installation as a part of the GINIS client recommended)

- **Microsoft SQL Server:**

- Microsoft ODBC Driver 17 for SQL Server (x86 + x64)
- Microsoft OLE DB Driver 18 for SQL Server (x86 + x64)
- Microsoft SQL Server 2012 Native Client (x86 + x64)

- **IBM Informix DS:**

- 32 bit: IBM Informix Client version 3.70 TC8, 4.10 TC15

Another system software

- Microsoft.NET Framework v. 4.8 (in some cases Microsoft.NET Framework ver. 3.5 is needed)
- Microsoft Edge in compatible mode IE11, eventual Mozilla FireFox
- Microsoft Windows Installer 3.1 and higher
- Microsoft Visual C++ 2010 Redistributable (x86 + x64)
- Microsoft Visual C++ 2013 Redistributable (x86 + x64)
- Microsoft Visual C++ 2015-2019 Redistributable (x86 + x64)

Automatic updates of the GINIS clients

For the successful work of automatic updates of the GINIS client, it is necessary:

- enabling system service GSSINS01.EXE
- the right to write to the installation directory GINIS
- the right to write to the register Computer_LOCAL_MACHINE
- the right to write to the register Computer_CURRENT_USER
- the right to register system objects (ActiveX, COM,OLE), installation of fonts and MSI third parties

3.2. Web client

Minimal requirements

- RAM min. 4 GB
- Hard disk space min. 4 GB
- Display color depth 32 bits

Operating system

- Microsoft Windows 11
- Microsoft Windows 10
- Microsoft Windows Server 2022
- Microsoft Windows Server 2019
- Microsoft Windows Server 2016

In case of incompatible changes caused by a Windows Update, GINIS will be fixed within 30 days after the update release.

Another system software

- **Web client 05** (a new technology GWAXxx05)
 - Microsoft Edge (updated, only official distribution)
 - Google Chrome (updated, only official distribution)
 - Mozilla FireFox (updated, only official distribution)
 - Safari (updated, only official distribution)

Obsoleted technology will be supported only to version GINIS 2023

Web browser settings for appropriate webserver

- Active scripting - enabled (javascript)
- Cookies - enabled (for authorization only)
- Access data sources across domains (for verification in the state registry only)
- HTTPS protocol is required for using web client

Additional requirements for client certificate signing

- **For every web browser except Safari:**
 - Gordic.Browser.Extensions (shortly GBE)
- **Safari:**
 - GBE is not supported
 - see more Certificate signing

4. Web application server

System GINIS Web client must be run on a web application server.

Minimal requirements

- RAM min. 8 GB
- Hard disk space min. 8 GB
- for some modules with heavy load consuming applications need high performance HW (CPU with high core frequency, RAM 16 GB, SSD)
- Display screen resolution min. 1024×768 with 100% magnification color depth 32 bits

Operating system

- Microsoft Windows Server 2022
- Microsoft Windows Server 2019
- Microsoft Windows Server 2016

Oper. system must support application language settings.

Operation on Windows Server Core is not supported.

In the case of working with files larger than 2 GB, operating system is required 64-bit.

The edition of the operating system must be chosen according to the hardware and according to the Microsoft licensing rules, see: <https://www.microsoft.com/en/windows-server/pricing>

In case of incompatible changes caused by a Windows Update, GINIS will be fixed within 30 days after the update release.

Database system client

- **Oracle Database:**
 - 64 bit: Oracle Client version 11.2.0.2, 12.2.0.1, 19.1.0.0, 19.3.0.0
 - 64 bit: Oracle OLE DB provider version 11.2.0.2, 12.2.0.1 (installation as a part of the GINIS client recommended)
- **Microsoft SQL Server:**
 - Microsoft OLE DB Driver 18 for SQL Server
- **IBM Informix DS:**
 - 32 bit: Informix OLE DB provider version 3.70 TC8, 4.10 TC15
 - 64 bit: Informix OLE DB provider version 4.10 FC15, 4.50 FC8

Another system software

- Microsoft IIS 7 or higher with ASP.NET support installed
- Microsoft.NET Framework ver. 4.8 (in some cases Microsoft.NET Framework ver. 3.5 is needed)
- Microsoft Windows Installer 3.1 or higher
- WebSocket protocol support (recommended for thin client)
- HTTPS protocol is required for web client
- Microsoft .NET 8.0 (LTS) will be required from version GINIS 5.25

5. Office software support

Using the 32-bit MS Office edition is necessary for full integration with GINIS more on [http://technet.microsoft.com/en-us/library/ee681792\(v=office.15\).aspx](http://technet.microsoft.com/en-us/library/ee681792(v=office.15).aspx)

Office software support in GINIS subsystems:

GINIS-SSL

- MS Office 2016 CZ, 2019 CZ, 2021 CZ
- MS Office 2010 CZ - Is not supported in GINIS 5.24. For a fee, support can be extended until the end of GINIS 5.24
- MS Office 2013 CZ - Is not supported in GINIS 5.25. For a fee, support can be extended until the end of GINIS 5.25
- MS Office 365 CZ - Windows applications
- OpenOffice Writer 3.0 and higher - basic support for generating data into form templates

Creating documents

el. documents created with GINIS-REG or GINIS-FIK

- MS Office 2016 CZ, 2019 CZ, 2021 CZ
- MS Office 2010 CZ - Is not supported in GINIS 5.24. For a fee, support can be extended until the end of GINIS 5.24
- MS Office 2013 CZ - Is not supported in GINIS 5.25. For a fee, support can be extended until the end of GINIS 5.25
- MS Office 365 CZ - Windows applications

Reports created by GORDIC Report generator

- MS Office 2016 CZ, 2019 CZ, 2021 CZ
- MS Office 2010 CZ - Is not supported in GINIS 5.24. For a fee, support can be extended until the end of GINIS 5.24
- MS Office 2013 CZ - Is not supported in GINIS 5.25. For a fee, support can be extended until the end of GINIS 5.25
- MS Office 365 CZ - Windows applications

RTF templates and grafical report export

- OpenOffice Writer 3.0 and higher

Grafical report export to PDF format

- Acrobat Reader ver. 9.0 and higher (format PDF ver. 1.4 and higher)

Recommended PDF viewers for PDF file preview

- Foxit Reader ver. 7 and higher

6. Electronic document storage

Scope of electronic document storage support:

Supported storage types

- GORDIC WS DMS
- ftp, sftp server
- Azure Blob Storage

Electronic document storage with full-text

Windows Search:

- can run in Windows Server 2012 a Windows 8 or higher
- can run only with WS DMS

7. Interface for mailing systems

Scope of email systems support in GINIS modules:

E-registry

- **e-mail reception** - with POP3, POP3S, Microsoft - GraphAPI

Redistribution node - Mail - inbox

- **E-mail download - thick client**
 - Extended MAPI (for 32-bit Microsoft Outlook 2010, 2013)
 - MAPI (for 32-bit clients that support E-MAPI)
 - POP3, POP3S, Microsoft - GraphAPI
- **E-mail download - thin client**
 - POP3, POP3S, Microsoft - GraphAPI
- **E-mail sending - thick client**
 - Extended MAPI (for 32-bit Microsoft Outlook 2010, 2013)
 - SMTP, SMTPS, SMTP (XOAUTH2)
- **E-mail sending - thin client**
 - SMTP, SMTPS, SMTP (XOAUTH2)

General usage

- **E-mail message format**
 - MIME
 - UUEncode (with SMTP protocol only)

Others

SMTP and POP3 are supported only based on combination of GINIS parameters, not on systems third-party systems. Unfortunately, we cannot guarantee cooperation with all email service providers. It is possible to make validation due to option Send test email. Requests for support other mail servers (outside combination of GINIS parameters) are considered as request for new features.

Recommended

If the environment allows it, please switch to the **SecureBlacbox** type. It has two major advantages:

- Modern SSL/TLS support
- Support for non-standard login procedures - controlled by the **gin_gms_tlsstep** parameter

Support for the original SMTP implementation will be gradually reduced.

It is recommended to use **System management, Email testing** tool, there is available in the **ADM05** or **ADX05** modules.

8. Bar code support

Bar code using:

Bar code supported type

- Code 39

TrueType fonts delivered with GINIS system

- CK GINIS (for minimal 30 dot points)
- CK GINIS small (for minimal 15 dot points)
- GORDIC_PID

9. Digital signature and electronic sealing support

Digital signature and electronic sealing support:

Digital signature view in Acrobat Reader

- Acrobat Reader ver. 9.2 and higher

Rules for digital signature validation

On computer where validating process answers, it is necessary to install:

- certificates of CA that have issued the certificate used for creating the validated digital signature
- certificates of CA that have issued the certificate used for creating CRLs or OCSP answers

On-premise Qualified electronic seal support

- ProID card
- SafeNET HSM module

Remote sealing

- I.CA RemoteSeal
- I.CA RemoteSeal v2
- 602 SecuSign
- NCA Sealing (Sealing from National Certification Authority)

Cloud electronic signature

- 602 SecuSign

Qualified verification

- 602 SecuSign
- I.CA QVerify

10. Automatic scanner support

Scanner with automatic feeder support:

Document scanning

- **Resolution**
 - 300 DPI recommended
 - 600 DPI maximal
- **Type of file**
 - multipage TIFF recommended

Scanning software

- **GINIS GSL** - recommended 3rd party solution
 - Tesseract OCR
 - ABBYY FineReader Engine 11, 12
- **GINIS MAS** - recommended 3rd party solution
 - ABBYY Recognition server
 - Konica Minolta
 - Sirius

11. File conversion to PDF and PDF/A format

File conversion to PDF and PDF/A format:

Only one MS Office version can be installed on a conversion computer (MS Office version combination is not allowed). (the combination of MS Office versions is not possible)

Conversion to PDF/A format

- **Server solutions**

- GORDIC DKS - Document conversion server
- Adobe Experience Manager Forms 6.4
- Adobe LiveCycle Enterprise Suite ver. 2, 3
- Adobe LiveCycle Enterprise Suite ver. 4 (recommended according to PDF/A standard)
- S602 Long-Term Docs

- **Conversion on client's PC (for thick client GINIS only)**

- Microsoft Office 2013, 2016, 2019, 2021, 365 (recommended for best results according to PDF/A standard)
- PDF Creator version 1.7.3
- LibreOffice version 7.5, 7.6 a 24.2

Conversion to PDF format

- **Server solutions**

- GORDIC DKS - Document conversion server
- Adobe Experience Manager Forms 6.4
- Adobe LiveCycle Enterprise Suite ver. 2, 3, 4
- S602 Server Enterprise Edition (Print2PDF 8, 9, X)
- S602 Long-Term Docs

- **Conversion on client's PC (for thick client GINIS only)**

- PDF Creator od version 1.7.3
- Microsoft Office 2013, 2016, 2019, 2021, 365
- LibreOffice version 7.5, 7.6 a 24.2
- Software602 Print2PDF 8, 9, X

12. GORDIC DKS - Document conversion server

Minimal requirements

- RAM min. 6 GB
- CPU (in the case of using multiple functions, it is necessary to make a sum)
 - for verify el. signature min. 8 core
 - for sealing min. 4 core
 - for conversion to PDF min. 4 core
 - for validation PDF/A min. 2 core
 - for file format validation min 2 core

Operating system

- Microsoft Windows 11
- Microsoft Windows 10
- Microsoft Windows Server 2022
- Microsoft Windows Server 2019
- Microsoft Windows Server 2016

Another system software

- **Required:**
 - LibreOffice 32 bit version 7.0, 7.1, 7.2, 7.3, 7.4 (the combination of LibreOffice and OpenOffice is not possible)
 - Ghostscript 32bit, 9.10 and higher
 - PDF24 10.0 and higher
 - WKHTMLTOPDF (for conversion EML and HTML to PDF)
 - Adobe Reader DC
 - Microsoft SQL Server (according to the specifications in the chapter 2.3.)
- **Optional:**
 - PDFCreator version 1.7.3
 - Microsoft Office Word 2013, 2016, 2019, 2021, 365
 - Microsoft Office Excel 2013, 2016, 2019, 2021, 365
 - Microsoft Office PowerPoint 2013, 2016, 2019, 2021, 365
 - Microsoft Office Outlook 2013, 2016, 2019, 2021, 365 (conversion MSG to PDF)
 - MS Office Word, Excel, PowerPoint verze 2013 CZ - Is not supported in GINIS 5.25. For a fee, support can be extended until the end of GINIS 5.25
 - S602 FormFiller 4.52.29.13.0726 and higher (conversion ZFO to PDF)
 - ABBYY FineReader Engine 11,12

13. Communication with the ISZR interface

Use the TLS 1.2 protocol for communication with the interface of ISZR basic registers

14. Communication with the ISDS interface

- It is necessary to use the POD - and ZUD in 64-bit version for work with large-volume data messages
- Work with large-volume files using antivirus interface AMSI is limited to 20 MB. It is necessary to use other than AMSI interface for work with larger than 20MB files.
- The limit for a single message cannot exceed 1 GB.

15. Microsoft Azure support

GINIS runs in hosting centers (clouds) as IaaS (as an application installed on virtual machines).

In addition, in Microsoft Azure environment is possible:

- to use Azure SQL Database
- to use Azure Blob Storage
- to run GINIS thin client as Azure WebApp

Azure WebApp specification of scaling for GINIS applications operation

- Minimal supported Plan for operation environment has to take count of users, count of apps, count of organizations and size of database into account
- Minimal supported Plan for test environment is P0v3 1Cpu/4GB for operation 15 apps GINIS Web Client technology and one user.

16. Multi-factor authentication

Supported multi-factor authentication types:

Type authentication

- TOTP

Supported mobile applications

- Google Authenticator
- TOTP Authenticator (fy. Binaryboot)

17. Payment terminals support

Payment terminals are supported according to specific protocols in relation to the type of client:

Fat client

- Protocol GPE - support Ethernet a ComPort - ČS a KB bank
- Protocol HyperCom - support Ethernet a ComPort - Unicredit, Raiffeisen, Moneta Money Bank bank
- Protocol Monet+Gapa - support Ethernet - ČSOB bank
- Protocol Monet+ - support Ethernet - ČSOB bank - support will be produced until the end of year 2024

Web client

- Protocol Monet+Gapa - support Ethernet - ČSOB bank
- Protokol GPE - support only Ethernet - ČS a KB bank
- *from version 5.25 Hypercom Ethernet*
- Comgate - payment terminal, WiFi, 2G/3G, terminal must be operated on local network. Integration is according GSA Bluetooth API version 2.0
- Dotypay - payment terminal, SIM, LTE, WiFi, 2G/3G, terminal is operated via Internet. Integration is according Nexo protocol v3.1