



Invoke Regulatory

TECHNICAL REQUIREMENTS

v9.6



Contents

Introduction.....	5
Architecture.....	5
Minimum Configuration Required.....	7
Database Server.....	7
CPU and RAM Requirements.....	7
Additional Requirements for the Collector Feature.....	8
Additional Requirements for the Archiving Module.....	9
Additional Requirements for Viewing the System Resources in Invoke FAS Regulatory.....	9
Invoke FAS Regulatory Presentation Server.....	9
CPU and RAM Requirements.....	10
Invoke e-Regulatory Web Server.....	11
CPU and RAM Requirements.....	11
Processing Server for Invoke Services.....	12
ICM import and Automated production.....	12
Scheduled tasks.....	13
Automated email notification - FAS Regulatory.....	14
XBRL import.....	14
Reception stack.....	16
WS import.....	16
XBRL extract.....	17
Task processor.....	17
Automated email notification - e-Regulatory.....	18
Sync Analyzer.....	19
Web Server for Invoke Web services.....	19
CPU and RAM Requirements.....	20
MongoDB Database Server.....	20
CPU and RAM Requirements.....	20
Client Workstations.....	21
Invoke FAS Regulatory Client.....	21
Invoke e-Regulatory Client.....	22
Glossary.....	24
A.....	24
C.....	24
D.....	24
H.....	25
I.....	25
J.....	25
L.....	25
M.....	26
O.....	26
R.....	26
S.....	27
T.....	27
U.....	28
W.....	28
X.....	28

Introduction

This guide presents the minimum configuration required for installing and using **Invoke Regulatory**.

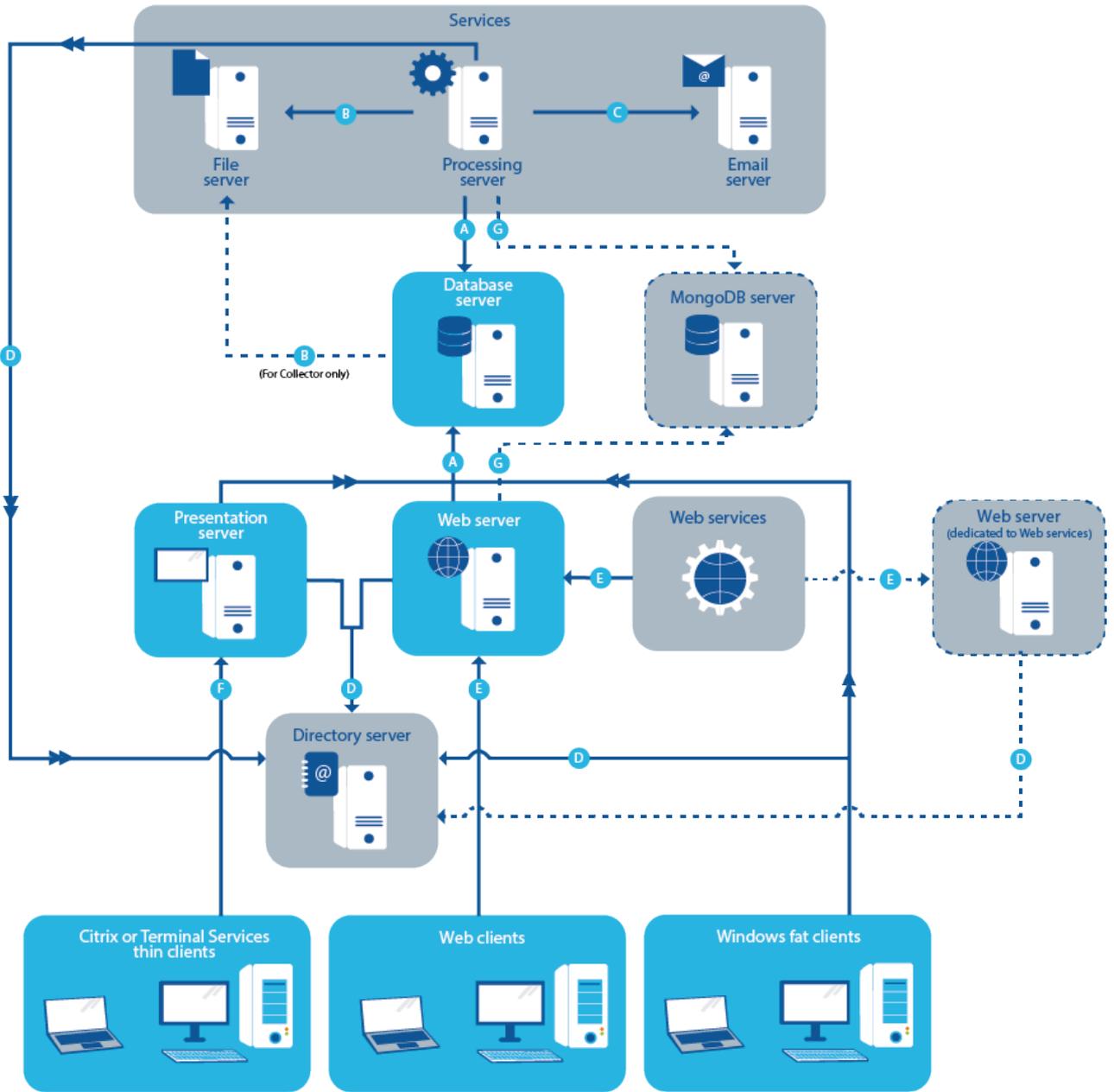
These requirements are based on a standard configuration. If you have a specific configuration, technical preparation workshops will be necessary to define the most appropriate configuration. Whatever the configuration, a technical study is recommended for a deployment adapted to the project to implement.

Moreover, **Invoke** reserves the right to modify these requirements according to the evolution of regulation.

Architecture

The **Invoke Regulatory** solution relies on the following protocols:

- *OleDB (ODBC)*
- *SMB*
- *SMTP*
- *LDAP(S)*
- *HTTPS*
- *RDP*
- *ICA*
- *MongoDB*



- A OleDb - minimum 100 Mb/s connection
- B SMB - minimum 100 Mb/s connection
- C SMTP - minimum 100 Mb/s connection
- D LDAP(S) - minimum 100 Mb/s connection
- E HTTPS - minimum 512 kb/s connection
- F RDP or ICA - minimum 512 kb/s connection
- G MongoDB Wire - minimum 100 Mb/s connection
- Optional modules and services
- Optional servers

Minimum Configuration Required

Database Server

The database server hosts all the data of **Invoke Regulatory**.

Invoke recommends to:

- Put the database on a secure disk array (RAID 1, RAID 5, etc.).
- Run a maintenance plan on a daily basis on the database(s) to:
 - check database integrity,
 - rebuild the index,
 - update statistics.

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	Varies according to the project; to be defined during the workshops
Rotation speed	15000 RPM or SSD
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Time zone	Same time zone as the Invoke e-Regulatory Web server
Software	Microsoft SQL Server 2012, 2014, 2016, 2017, or 2019 (64-bit version)
Authentication mode	Mixed
Collation	Latin1_General_CS_AS_WS

CPU and RAM Requirements

Regarding the processor and the memory:

- If the **Invoke FAS Regulatory** and **Invoke e-Regulatory** databases are not on the same database server, take into consideration the configuration indicated for each server below independently.
- If the **Invoke FAS Regulatory** and **Invoke e-Regulatory** databases are on the same database server, sum up the configuration required for both products.

The processor and memory configuration required varies according to the project typology. The different types are:

- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (500 000 to 1 400 000 cells with values).
- Vol. 4: Reporting models requiring instance rendering and validation, with a very high amount of data (up to 40 000 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Number of users and processes running concurrently - Invoke FAS Regulatory						
		5	10	20	30	40	50	100
Vol. 1	CPU (cores)	2	3	5	7	9	11	21
	RAM (GB) 1333 MHz min	6	9	14	19	24	29	54
Vol. 2	CPU (cores)	3	4	7	10	13	16	31
	RAM (GB) 1333 MHz min	8	12	20	27	35	42	80
Vol. 3	CPU (cores)	3	5	8	12	15	19	36
	RAM (GB) 1333 MHz min	11	16	26	36	46	56	106
Vol. 4	CPU (cores)	3	5	8	12	15	19	36
	RAM (GB) 1333 MHz min	16	21	31	41	51	61	111

		Number of users and processes running concurrently - Invoke e-Regulatory						
		5	10	20	30	40	50	100
CPU (cores)		2	2	2	3	3	4	6
RAM (GB) 1333 MHz min		4	5	6	8	9	11	18

Additional Requirements for the Collector Feature

If you use the **Collector** feature of the **ICM import** service, take into account the elements below for the **Invoke FAS Regulatory** database server.

Type	Requirements
Connection account	The bulkadmin server role must be granted to the login (indicated in the connection string) of the ICM service executing the ICM Import .

Type	Requirements
Storage location	The SQL Server service should be able to access the storage location of the files imported by the <i>ICM import</i> service. Thus, the connection account executing the SQL Server service or the account of the computer hosting the SQL Server service must be granted the read/write permissions on the folder or the shared location containing the files to import.

See also...

ICM Import and Production (p.12)

Additional Requirements for the Archiving Module

If you use the *Archiving* module of the *Scheduled tasks* service, take into account the elements below for the **Invoke FAS Regulatory** database server.

Type	Requirements
Linked servers	If the <i>Archiving</i> module uses databases located on another server, the latter must be configured as a linked server.

See also...

Scheduled tasks (p.13)

Additional Requirements for Viewing the System Resources in Invoke FAS Regulatory

To view the system resources (CPU, RAM, etc.) of the different servers in the *About...* window of **Invoke FAS Regulatory** and in the user audit trail, also take into account the elements below.

Type	Requirements
Connection account	In the <i>Securables</i> section of the login properties, grant the View server state permission to the login.

Invoke FAS Regulatory Presentation Server

The presentation server is used only for accessing the application in thin client mode. It hosts **Invoke FAS Regulatory** and delivers it to the remote workstations for local execution.

The presentation server is connected to the database server through the *OleDB (ODBC)* protocol.

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	500
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	<ul style="list-style-type: none"> Citrix XenApp or Windows Remote Desktop Services .NET Framework 4.8
Network latency between the presentation server and the database server	Less than 1 ms

CPU and RAM Requirements

The processor and memory configuration required varies according to the project typology. The different types are:

- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (500 000 to 1 400 000 cells with values).
- Vol. 4: Reporting models requiring instance rendering and validation, with a very high amount of data (up to 40 000 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Number of users connected						
		5	10	20	30	40	50	100
Vol. 1	CPU (cores)	2	3	5	7	9	11	21
	RAM (GB) 1333 MHz min	4	5	8	10	13	15	28
Vol. 2	CPU (cores)	2	4	6	9	11	14	26
	RAM (GB) 1333 MHz min	9	12	18	24	30	36	66
Vol. 3	CPU (cores)	3	5	8	12	15	19	36
	RAM (GB) 1333 MHz min	14	18	25	32	39	46	81
Vol. 4	CPU (cores)	3	5	8	12	15	19	36
	RAM (GB) 1333 MHz min	48	56	71	86	101	116	191

Invoke e-Regulatory Web Server

The Web server is connected to the database server through the *OleDB (ODBC)* protocol.

The minimum requirements are listed below.

Type	Requirements
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (32-bit or 64-bit version)
Time zone	Same time zone as the database server
Software	<ul style="list-style-type: none"> .NET Framework 4.8 IIS8 or higher version, including the installation of the CGI and ASP.NET role services
Network latency towards the database server	Less than 1 ms

CPU and RAM Requirements

The processor and memory configuration required varies according to the project typology. The different types are:

- Typ. Ø: Only reporting models that do not require instance rendering and validation .
- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (up to 1 400 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Number of users connected						
		5	10	20	30	40	50	100
Typ. Ø	CPU (cores)	2	2	3	4	5	6	11
	RAM (GB) 1333 MHz min	3	3	4	4	5	5	8
Vol. 1	CPU (cores)	2	2	3	4	5	6	11
	RAM (GB) 1333 MHz min	4	4	5	6	7	8	13
Vol. 2	CPU (cores)	2	3	4	5	6	8	14
	RAM (GB) 1333 MHz min	7	8	10	12	14	16	26
Vol. 3	CPU (cores)	2	3	5	7	8	10	19

		Number of users connected						
		5	10	20	30	40	50	100
RAM (GB)	1333 MHz min	8	10	12	15	17	20	32

Processing Server for Invoke Services

- ⊖ The services are covered by specific licenses. Contact **Invoke** for further information.

Invoke services are processes that run in the background of the application and that execute some tasks automatically.

Eleven services can be used:

- **Invoke FAS Regulatory:**
 - *ICM import*
 - *Automated production*
 - *Scheduled tasks*
 - *Automated email notification*
- **Invoke e-Regulatory:**
 - *XBRL import*
 - *Reception stack*
 - *WS import*
 - *XBRL extract*
 - *Task processor*
 - *Automated email notification*
 - *Sync Analyzer*

The services can be installed on different types of servers, that is to say a dedicated server, a presentation server, a database server or a file server. In that case, sum up the requirements. However, **Invoke** recommends the installation on a dedicated server.

ICM import and Automated production

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	100 + space needed for the files imported or produced (varies according to the project; to be defined during the workshops)
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)

Type	Requirements
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

The processor and memory configuration required varies according to the project typology. The different types are:

- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (500 000 to 1 400 000 cells with values).
- Vol. 4: Reporting models requiring instance rendering and validation, with a very high amount of data (up to 40 000 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Number of processes running concurrently			
		3	6	9	12
Vol. 1	CPU (cores)	2	3	3	4
	RAM (GB) 1333 MHz min	4	4	5	6
Vol. 2	CPU (cores)	2	4	5	7
	RAM (GB) 1333 MHz min	8	11	13	16
Vol. 3	CPU (cores)	2	4	5	7
	RAM (GB) 1333 MHz min	16	22	28	34
Vol. 4	CPU (cores)	2	4	5	7
	RAM (GB) 1333 MHz min	48	57	66	75

 If you use the *Collector* feature of the *ICM import* service, take into account the [specific requirements of the database server](#).

Scheduled tasks

The minimum requirements are listed below.

Type	Requirements
CPU (cores)	1
RAM (GB) 1333 MHz minimum	4
Hard disk space (MB)	100
Network connection	Ethernet 100 Mb/s or 1 Gb/s

Type	Requirements
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

 If you use the *Archiving* module, take into account the [specific requirements of the database server](#).

Automated email notification - FAS Regulatory

The minimum requirements are listed below.

Type	Requirements
CPU (cores)	1
RAM (GB) 1333 MHz minimum	2
Hard disk space (MB)	100
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms
Email server	Any <i>SMTP</i> -compatible email server

XBRL import

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	100 + space needed for the imported files (varies according to the project; to be defined during the workshops)
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

The processor and memory configuration required varies according to the project typology. The different types are:

- Typ. Ø: Only reporting models that do not require instance rendering and validation .
- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (up to 1 400 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

Without Reception stack

		Number of processes running concurrently				
		1	3	6	9	12
Typ. Ø	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	3	3	3	4	4
Vol. 1	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	3	3	3	4	4
Vol. 2	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	4	4	5	6	6
Vol. 3	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	6	6	7	8	8

With Reception stack

		Number of processes running concurrently				
		1	3	6	9	12
Typ. Ø	CPU (cores)	This typology does not require to use this service.				
	RAM (GB) 1333 MHz min					
Vol. 1	CPU (cores)	1	2	3	3	4
	RAM (GB) 1333 MHz min	3	3	3	3	3
Vol. 2	CPU (cores)	1	2	3	3	4
	RAM (GB) 1333 MHz min	3	3	3	3	3
Vol. 3	CPU (cores)	1	2	3	3	4
	RAM (GB) 1333 MHz min	3	3	3	3	3

Reception stack

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	100
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

The processor and memory configuration required varies according to the project typology. The different types are:

- Typ. Ø: Only reporting models that do not require instance rendering and validation .
- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (up to 1 400 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Number of processes running concurrently				
		1	3	6	9	12
Typ. Ø	CPU (cores)	This typology does not require to use this service.				
	RAM (GB) 1333 MHz min					
Vol. 1	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	3	3	4	4	5
Vol. 2	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	4	4	5	6	6
Vol. 3	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	6	6	7	8	8

WS import

The minimum requirements are listed below.

Type	Requirements
CPU (cores)	1
RAM (GB) 1333 MHz minimum	4
Hard disk space (MB)	100
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

XBRL extract

The minimum requirements are listed below.

Type	Requirements
CPU (cores)	1
RAM (GB) 1333 MHz minimum	4
Hard disk space (MB)	100 + space needed for the imported files (varies according to the project; to be defined during the workshops)
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

Task processor

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	100
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8

Type	Requirements
Network latency towards the database server	Less than 1 ms

The processor and memory configuration required varies according to the project typology. The different types are:

- Typ. Ø: Only reporting models that do not require instance rendering and validation .
- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (up to 1 400 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Number of processes running concurrently				
		1	3	6	9	12
Typ. Ø	CPU (cores)	This typology does not require to use this service.				
	RAM (GB) 1333 MHz min					
Vol. 1	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	3	3	4	4	4
Vol. 2	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	6	7	7	8	9
Vol. 3	CPU (cores)	1	2	4	5	7
	RAM (GB) 1333 MHz min	7	8	8	9	10

Automated email notification - e-Regulatory

The minimum requirements are listed below.

Type	Requirements
CPU (cores)	1
RAM (GB) 1333 MHz minimum	2
Hard disk space (MB)	100
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

Type	Requirements
Email server	Any <i>SMTP</i> -compatible email server

Sync Analyzer

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	100
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Software	.NET Framework 4.8
Network latency towards the database server	Less than 1 ms

Web Server for Invoke Web services

- ⊖ The Web services are covered by specific licenses. Contact **Invoke** for further information.

The **Invoke** Web services are used to exchange data between **Invoke e-Regulatory** and third-party software. The Web services can be installed on the Web Server on which **Invoke e-Regulatory** has been installed. In that case, sum up the requirements.

The Web server is connected to the database server through the *OleDB (ODBC)* protocol.

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	300
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows Server 2012, 2012 R2, 2016 or 2019 (64-bit version)
Time zone	Same time zone as the database server
Software	<ul style="list-style-type: none"> .NET Framework 4.8 IIS8 or higher version, including the installation of the CGI and ASP.NET role services
Network latency towards the database server	Less than 1 ms

CPU and RAM Requirements

The processor and memory configuration required varies according to the project typology. The different types are:

- Typ. Ø: Only reporting models that do not require instance rendering and validation .
- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (up to 1 400 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Number of processes running concurrently				
		1	3	6	9	12
Typ. Ø	CPU (cores)	1	3	6	9	12
	RAM (GB) 1333 MHz min	3	3	3	3	4
Vol. 1	CPU (cores)	1	3	6	9	12
	RAM (GB) 1333 MHz min	3	3	4	4	4
Vol. 2	CPU (cores)	1	3	6	9	12
	RAM (GB) 1333 MHz min	6	7	8	9	10
Vol. 3	CPU (cores)	1	3	6	9	12
	RAM (GB) 1333 MHz min	7	9	10	12	14

MongoDB Database Server

Type	Requirements
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Network latency towards the database server	Less than 1 ms

*Amount of data observed for a significant entity in the whole filing scope of the European Banking Authority for 9 years.

CPU and RAM Requirements

The processor and memory configuration required varies according to the project typology. Please contact your in-house business experts to determine your type of profile.

Client Workstations

Invoke FAS Regulatory Client

Two access modes are available:

- Fat client mode, that is to say local installation of the software on each client workstation.
- Thin client mode, that is to say remote connection with Citrix XenApp or Windows Remote Desktop Services.

Fat Client

The minimum requirements are listed below.

Type	Requirements
Hard disk space (MB)	500
Screen resolution	1280x1024
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows 7, Windows 8, or Windows 10 (64-bit version)
Network latency towards the database server	Less than 1 ms
Software	.NET Framework 4.8
Printer	Any PCL5 or PCL6 compatible printer

The processor and memory configuration required varies according to the project typology. The different types are:

- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).
- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (up to 1 400 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Client workstation
Vol. 1	CPU (cores)	2
	RAM (GB) 1333 MHz min	3
Vol. 2	CPU (cores)	2
	RAM (GB) 1333 MHz min	6
Vol. 3	CPU (cores)	2

		Client workstation
	RAM (GB) 1333 MHz min	12

Thin Client

The minimum requirements are listed below.

Type	Requirements
CPU (cores)	1
RAM (GB)	2
Hard disk space (MB)	-
Screen resolution	1280x1024
Network connection	Ethernet 100 Mb/s or 1 Gb/s
Operating system	Windows 7, Windows 8, or Windows 10 (32-bit or 64-bit version)
Software	Any client supported by Citrix XenApp or Windows Remote Desktop Services
Remote desktop connection parameters	Anti-aliasing activated

Invoke e-Regulatory Client

The minimum requirements necessary to launch **Invoke e-Regulatory** from a client workstation are listed below.

Type	Requirements
Hard disk space (MB)	-
Screen resolution	1280x1024
Network connection	512 kb/s (minimum)
Operating system	Windows 8, or Windows 10 (32-bit or 64-bit version)
Supported Web browsers	Microsoft Edge version 38 (minimum) Google Chrome version 75 (minimum) Mozilla Firefox version 69 (minimum)

The processor and memory configuration required varies according to the project typology. The different types are:

- Typ. Ø: Only reporting models that do not require instance rendering and validation .
- Vol. 1: Reporting models requiring instance rendering and validation, with a small amount of data (less than 60 000 cells with values).

- Vol. 2: Reporting models requiring instance rendering and validation, with a standard amount of data (60 000 to 500 000 cells with values).
- Vol. 3: Reporting models requiring instance rendering and validation, with a high amount of data (up to 1 400 000 cells with values).

Please contact your in-house business experts to determine your type of profile.

		Client workstation
Typ. Ø	CPU (cores)	1
	RAM (GB) 1333 MHz min	2
Vol. 1	CPU (cores)	1
	RAM (GB) 1333 MHz min	4
Vol. 2	CPU (cores)	1
	RAM (GB) 1333 MHz min	4
Vol. 3	CPU (cores)	1
	RAM (GB) 1333 MHz min	4

Additional Requirements for Using InvokeSign Signature Module as a JNLP

The signature is performed by running a Java application outside the Web browser via a [JNLP](#) file. If you want to use this mode of signature, take into account the elements below.

Type	Requirements
Java platform	<ul style="list-style-type: none"> • Java 1.7 (1.7.0_76 minimum, 32-bit version) • Java 1.8 (32-bit or 64-bit version). • OpenJDK8 (8u282-b08 minimum) and OpenJ9 (9-0.24.0 minimum), including the installation of IcedTeaWeb, 64-bit version

Glossary

A

Archiving

Feature in **Invoke FAS Regulatory** allowing data synchronization between source databases and target databases.

Automated email notification

Service allowing users to send emails whenever a given action is executed within **Invoke FAS Regulatory** and to use the messaging service features in **Invoke e-Regulatory**.

Automated production

Service allowing users to plan the production of documents in different formats via tasks run at predefined dates and times in **Invoke FAS Regulatory**.

C

Collector

In **Invoke FAS Regulatory**, optional component of the *ICM import* service allowing data to be refined by using SQL functions.

D

DBMS

DataBase Management System

System software used for creating and managing databases. The DBMS provides users and programmers with a systematic way to create, retrieve, update and manage data.

H

HTTPS

HyperText Transfer Protocol Secure

Protocol used for Web applications.

I

ICA

Independent Computing Architecture

Protocol used by Citrix to provide users with the display of a graphical interface installed on another computer.

ICM import

Service allowing files to be imported automatically into **Invoke FAS Regulatory** without any user action.

J

JNLP

Java Network Launching Protocol

Protocol allowing an application to be launched on a client desktop by using resources that are hosted on a remote web server.

L

LDAP(S)

Lightweight Directory Access Protocol (Secure)

Standard protocol used for accessing and updating information in a corporate directory.

M

MDAC

Microsoft Data Access Components

Framework of interrelated Microsoft technologies that provides programmers with a uniform and comprehensive way of developing applications that can access almost any data store. Its components include ActiveX Data Objects (ADO), OLE DB, and Open Database Connectivity (ODBC).

MongoDB Wire

Protocol allowing to communicate with MongoDB database server through network.

O

OleDB (ODBC)

Object Linking and Embedding DataBase (Open DataBase Connectivity)

Standard used to exchange data between a program and a database server. OleDB standardizes the access to the database and is part of [MDAC](#), a set of software components included in Windows Server.

R

RDP

Remote Desktop Protocol

Protocol used by Windows Remote Desktop Services to provide users with the display of a graphical interface installed on another machine.

Reception stack

Feature in [Invoke e-Regulatory](#) allowing the visualization of the files loaded into the portal manually or via services.

Service used to load XBRL instances or Excel files loading in asynchronous mode.

S

Scheduled tasks

In **Invoke FAS Regulatory**, service allowing users to plan and execute an event or a data archiving process.

SMB

Server Message Block

Network file sharing protocol that allows applications on a computer to read and write files and to request services from server programs in a computer network.

SMTP

Simple Mail Transfer Protocol

Transfer protocol used for sending email messages to an email server.

Sync Analyzer

Service allowing you to synchronize **Invoke e-Regulatory** portal SQL database with the MongoDB database in order to retrieve instances.

T

Task processor

Service in **Invoke e-Regulatory** allowing the instance visualization, validation, approval, signature, Excel export and/or iXBRL export task(s) to run in the background of the portal.

U

UAC

User Account Control

Security component that enables users to perform common tasks as non-administrators (called standard users), and as administrators without having to switch users, log off, or use Run As.

W

WS import

Service allowing the collection of feedback reports via Web services.

X

XBRL extract

Service allowing users to automate the extraction of instances from **Invoke e-Regulatory** to an output directory.

XBRL import

Service allowing instances to be imported automatically into **Invoke e-Regulatory** without any user action.