Adfinity
Infrastructure and prerequisites

Classification: Published

adfinity

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2 Configuration choice

Easi provides infrastructure recommendations to help users get the most out of Adfinity's current reference version over the long term.
For recommendations regarding previous versions, consult the following link: https://easi-support.xurrent.com/self-service/knowledge_articles/452281

These recommendations are based on five theoretical indicators and can be discussed with your IT team.

Each indicator allows you to target a type of infrastructure. It is recommended to put the resulting infrastructure in place to host Adfinity.

	Use threshold				
Infrastructure	**Rich users**	**Web Users**	**Purchase Invoices**	**Sales Invoices**	**Purchase orders**
BASIC	< 3	0	<500	< 2500	< 2500
ESSENTIAL	< 4	< 5	< 1000	< 5000	< 5000
STANDARD	< 8	< 30	< 25000	< 55000	< 30000
ENTREPRISE	< 20	< 70	< 100000	< 650000	< 90000
CORPORATE	> 20	> 70	> 100000	> 650000	> 90000

3 Server requirements in a virtualized environment

3.1 Global overview

The tables below provide an overview of the requirements for all infrastructures.

The associated values indicate the minimum components to be installed, or a range of values between the recommended minimum and the optimal configuration for long-term use.

"Adfinity - Hybrid" servers host several components and can be split according to the use that will be made of the software. This split should be discussed with an Easi consultant. For example, the number of servers required for a Standard configuration varies between 2 (SQL + Hybrid = minimum requirement) and 4 (SQL + Web + Services + File).

Software requirements

Config.	Servers	Windows server	Microsoft SQL Server	IIS	SQL Native access driver	VC Redist	.Net
BASIC	Adfinity - Hybrid	2019 -2025 Standard	2017 - 2022 Standard	7.5 min		2015-2019 + 2010 (x64)	3.5 & 4.8
ESSENTIAL	SQL	2019 -2025 Standard	2017 - 2022 Standard				
	Adfinity - Hybrid	2019 -2025 Standard		7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
STANDARD	SQL	2019 -2025 Standard	2017 - 2022 Standard				
	Adfinity - Hybrid	2019 -2025 Standard		7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
	>> Web	2019 -2025 Standard		7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
	>> Easi Services	2019 -2025 Standard			2012 (sqlncli11x64)	2015-2022 (x64)	4.8
	>> File Server	2019 -2025 Standard					
	>> AA & MDM	2019 -2025 Standard	2017 - 2022 Standard	7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
ENTREP.	SQL	2019 -2025 Standard	2017 - 2022 Standard				
	Adfinity - Hybrid	2019 -2025 Standard		7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
	>> Web	2019 -2025 Standard		7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
	>> Easi Services	2019 -2025 Standard			2012 (sqlncli11x64)	2015-2022 (x64)	4.8
	>> File Server	2019 -2025 Standard					
	>> AA & MDM	2019 -2025 Standard	017 - 2022 Standar	7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
CORP.	SQL	2019 -2025 Standard	2017 - 2022 Standard				
	Web	2019 -2025 Standard		7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
	Adfinity - Hybrid	2019 -2025 Standard			2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
	>> Easi Services	2019 -2025 Standard			2012 (sqlncli11x64)	2015-2022 (x64)	4.8
	>> File Server	2019 -2025 Standard					
	>> AA & MDM	2019 -2025 Standard	2017 - 2022 Standard	7.5 min	2012 (sqlncli11x64)	2015-2022 (x64)	3.5 & 4.8
OPTIONAL	Shared desktop	2019 -2025 Standard			2012 (sqlncli11x64)	2015-2022 (x64)	4.8
	User Workstation	Windows 11 min			2012 (sqlncli11x64)	2015-2022 (x64)	4.8

Specificities in a virtualized environment

Adfinity will only be supported on VMware ESX version 7.0 and higher. Player, Workstation, Server or GSX versions are not supported.
Adfinity will only be supported on Hyper-V from version 2012R2.

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Hardware requirements

Config.	Servers	VCPU	RAM	Disk	Partitions	LAN	IOPS
BASIC		4 VCPU 1.8-2.5GHz	10 GB	15K	System (90GB)	1GB	250
	Adfinity - Hybrid			15K	DB, Paging File, Backup, File Share (70 - 100GB)		
ESSENTIAL	SQL	2 VCPU 1.8-2.5GHz	10 GB	15K	System (90GB)	1GB	250
				15K	DB, Paging File, Backup (70 - 100GB)	Connection between VM 1GB	
	Adfinity - Hybrid	2 VCPU 1.8-2GHz	6 GB	15K	System (90GB)	1GB	50
				15K	Applications, File Share (30 - 60GB)	Connection between VM 1GB	
STANDARD	SQL	4 VCPU 1.8-2.5GHz	20 GB	SSD	System (90GB)	1GB	1000
				SSD	DB, Paging File, Backup (120 - 200GB)	Connection between VM 1GB	
	Adfinity - Hybrid	4 VCPU 1.8-2GHz	10 GB	15K	System (90GB)	1GB	250/ 1000
				15K 15K/SSD	Applications (10GB) FileShare (20-75GB)	Connection between VM 1GB	
	*>> Web (WebAccess, Webservice) **	8 VCPU 1.8-2GHz	18 GB	15K 15K	System (90GB) Applications (10GB)	1GB Connection between VM 1GB	250
	>> Easi Services	2 VCPU 1.8-2GHz	6 GB	15K 15K	System (90GB) Applications (10GB)	1GB Connection between VM 1GB	250
	>> File Server	1 VCPU 1.8-2GHz	6 GB	15K	System (90GB)	1GB	250/ 1000
				15K/SSD	File Share (20-75GB)	Connection between VM 1GB	
	>> AA & MDM	2 VCPU 1.8-2.5GHz	16-24 GB	SSD	System (90GB) DB, Paging File, Backup (60 - 100GB)	1GB Connection between VM 1GB	1000
ENTREP.	SQL	2*4 VCPU 1.8-2.5GHz	48 GB	SSD/Flash	System (90GB)	10GB	1000/ 3000
				SSD/Flash	DB, Paging File, Backup (400-550GB)	Connection between VM 10GB	
	Adfinity - Hybrid	2*4 VCPU 1.8-2GHz	14 GB	15K 15K 15K	System (90GB) Applications (20GB) FileShare (100-150GB)	1GB Connection between VM 10GB	250
	*>> Web (WebAccess, Webservice) **	10 VCPU 1.8-2GHz	20 GB	15K 15K	System (90GB) Applications (20GB)	1GB Connection between VM 10GB	250
	>> Easi Services	4 VCPU 1.8-2GHz	6 GB	15K 15K	System (90GB) Applications (20GB)	1GB Connection between VM 10GB	250
	>> File Server	2 VCPU 1.8-2GHz	8 GB	SSD	System (90GB)	1GB	1000
				SSD	File Share (100-150GB)	Connection between VM 10GB	
	>> AA & MDM	2 VCPU 1.8-2.5GHz	16-24 GB	SSD	System (90GB) DB, Paging File, Backup (200-275GB)	1GB Connection between VM 1GB	1000
CORP.	SQL	2*4 VCPU 1.8-2.5GHz	64 GB	Flash	System (90GB)	10GB	3000
				Flash	DB, Paging File, Backup (600-800GB)	Connection between VM 10GB	
	Web (WebAccess, Webservice) *	12 VCPU 1.8-2GHz	22 GB	SSD/Flash	System (90GB)	1GB	1000/ 3000
				SSD/Flash	Applications (40GB)	Connection between VM 10GB	
	Adfinity - Hybrid	2*4 VCPU 1.8-2GHz	12 GB	SSD/Flash	System (90GB)	1GB	1000/ 3000
				SSD/Flash SSD/Flash	Applications (40GB) FileShare (200-300GB)	Connection between VM 10GB	
	>> Easi Services	2*4 VCPU 1.8-2GHz	8 GB	SSD/Flash	System (90GB)	1GB	1000/ 3000
				SSD/Flash	Applications (40GB)	Connection between VM 10GB	
	>> File Server	2 VCPU 1.8-2GHz	8 GB	SSD/Flash	System (90GB)	1GB	1000/ 3000
				SSD/Flash	File Share (200-300GB)	Connection between VM 10GB	
	>> AA & MDM	2 VCPU 1.8-2.5GHz	16-24 GB	SSD	System (90GB) DB, Paging File, Backup (300-400GB)	1GB Connection between VM 1GB	1000
	Shared desktop **	8 VCPU 1.8-2.5GHz	32 - 64 GB	SSD/Flash	System (90GB)	1GB	1000/ 3000
				SSD/Flash	Applications (150GB)	1GB	
	User Workstation	CPU Core I5	4 - 8 GB	x	x	x	x

* +2VCPU + 4GB RAM /500 web users (max 2000)
** +2VCPU + 32GB RAM/35 rich users

3.2 SQL Server

Goal

The main server will host the databases and will be dedicated to the Adfinity software package.

Hardware requirements in a virtualized environment

Processor

See 3.1

Memory

See 3.1

The RAM should be the sum of the size of the three largest databases tables plus 4GB for the operating system.

Storage

As a minimum, Easi recommends a logical separation of disks as follows:

- 1 for the Operating System
- 1 for Microsoft SQL Server files and backup

A physical separation of the disks is however recommended in order to optimise the performance of this main Adfinity server.

The recommended partition is as follows:

- 1 for the Operating System
- 1 for the Database data files (Microsoft SQL Server)
- 1 for the Database log files (Microsoft SQL Server)
- 1 for the temporary database (Microsoft SQL Server)
- 1 for the paging file (10K/min)
- 1 for the backup

Software requirements

Microsoft Windows Server

Windows Server 2019 minimum but Easi **recommends** installing Windows Server 2025 Standard Edition with all updates and security patches installed.

It is not recommended to install SQL Server on a computer with the Active Directory installed on it.

Microsoft SQL Server

Although Adfinity is compatible with SQL Server 2017, Easi **recommends** installing SQL Server 2022 Standard version (the Express version can only be used for an Adfinity BASIC configuration, cfr. Chapter 2).

We recommend installing only the Adfinity database on this server.

Adfinity is not compatible with Azure SQL Database and Azure SQL Managed Instance. In an Azure environment, it will only be possible to use SQL Server via a virtual machine containing an SQL instance.

Easi has a licensing agreement with Microsoft for SQL Server. Therefore, you can take advantage of special terms to purchase SQL licenses if they are only used for our Adfinity software package.

Please contact Easi for a customized offer.

Database backup and maintenance

Microsoft SQL Server has tools to manage database backup and maintenance. These jobs can for example be scheduled and run every night.

Easi cannot be held responsible for the operation and maintenance of these procedures or the day-to-day operation of these procedures.

We can provide a budget to support you in running these procedures.

Security and performance

For security and performance purposes, the Adfinity production database is only accessible through the Adfinity solution itself and through our standard Adfinity Analytics product.

3.3 Web server

Goal

The main web server will host the platform that allows, among other things, to manage invoice approvals, purchase requests, account consultations, etc. via a web or mobile application.

These tools require access to a Web Service that will be installed on the same server.

It is recommended to install an additional web service on a dedicated server in case of heavy exploitation of the Adfinity REST API when interfacing with other software.

Remarks:

- The CPU is used to handle the speed of WS execution
- The memory is used to handle the number of simultaneous users

Hardware requirements in a virtualized environment

The sizing of this server is usually based on the **number of active and simultaneous users** that need to connect to it.

Processor

Easi recommends a minimum of 2 1.8GHz VCPUs for every 500 web users. Above 2000 users, an additional server should be installed.

Memory

Easi recommends a minimum of 6GB of RAM for every 500 web users. Above 2000 users, an additional server should be installed.

Storage

As a minimum, Easi recommends a logical partition of disks as follows:

- 1 for the Operating System
- 1 for the applications

Software requirements

Operating System

Windows Server 2019 minimum but Easi **recommends** installing Windows Server 2025 Standard Edition with all updates and security patches installed.

Linux OS is not supported.

HTTP Server

It is recommended to host the website on IIS Server version 7.5 minimum with PHP.

The version of PHP must be aligned with each version of Adfinity (see our internal PHP migration documentation).

Although not recommended for practical maintenance reasons, we will support Apache version 2.4.x (if already installed). Apache must then be installed as (local) Administrator.

The use of other types of HTTP web servers is not excluded, however Easi has no experience with other HTTP web servers than the ones mentioned above and therefore does not guarantee compatibility or customer support in server configuration.

If a web server other than IIS has to be used, a detailed analysis will be required.

Ports

If the Web Server has to be accessible from the outside, via the mobile application for example, a dedicated port is required and access to this port must be authorised in the firewall.

.NET Framework

Adfinity Web Server will require the .NET Framework 4.8.

MS Visual C++ 2010 and 2015-2022 (x86 and x64) redistributable will also be required.

A SQL driver will also be required to allow native access to databases.

Windows access right and dedicated account

It will be necessary to create a gMSA service account dedicated to the WebService and having the following access:

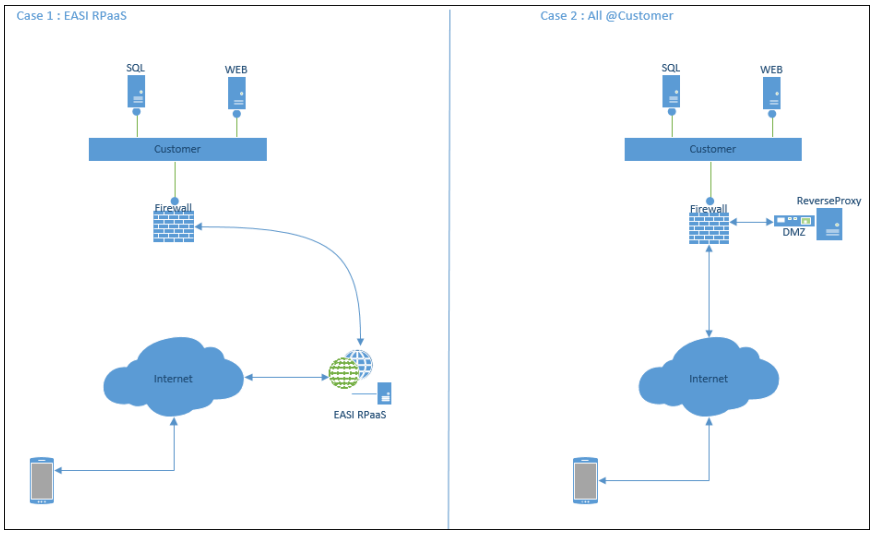
- Read/Write/Modify access to the installation folder
- Network access to the shared folders

All requests sent to the Web Service will be processed with the login information of this account. Access to shared folders on the network (to retrieve PDFs for example) will also use this account. The shared folder containing the Adfinity data (i.e. "ADFINITY_DATA") will therefore have to be configured to allow read/write/modify access for this dedicated Windows account.

Security management and external access

In case the web application must be accessible from outside the company's network (*), it is recommended to use a reverse proxy placed in a DMZ. This will allow access to the different servers of the company from outside while securing this process. There are two different

solutions to implement the reverse proxy, depending on the existence of certain prerequisites.



(*) For the mobile application, the external access is mandatory.

Solution 1 – Reverse proxy management by Easi

Easi recommends the use of a reverse proxy directly available in its infrastructure (Easi Reverse Proxy as a Service), which will then act as an intermediate gateway between the outside world (Internet) and the company's firewall (and its WEB and SQL servers).

A cost per user/month is required as well as a budget for RPaaS activation and firewall configuration at the customer's site. Easi will provide an estimate of the time required for this.

The **advantage** of this solution is that it avoids the need to invest in the purchase of a reverse proxy and the purchase and maintenance of a digital certificate (TLS or SSL certificate) for the use of the https protocol, as Easi's solution also includes the certificate.

This solution is offered as a service. Please contact Easi for a customized offer.

Solution 2 – Security management by yourself

If your infrastructure already has a reverse proxy in its own DMZ, or if you wish to acquire your own, Easi recommends that you manage Mobile Approvals security independently. To do this, you will only need a digital certificate to set up the https protocol for the target domain (to secure access to the web server). The certificate will always be limited in time and will generally have to be renewed every year.

The estimated rates for the implementation of this solution are therefore as follows:

License/material costs

Purchase of a Reverse Proxy server: +/- 3000€.

Price of a specific domain prefix certificate: +/-80€ / year (the price may vary if the purchase is made for a longer period)

Price of a free domain prefix certificate (wildcard): +/-200€ / year

The wildcard allows the use of a free domain ex: *.<domain>.net

To these costs will be added the configuration of the Reverse Proxy server and the Firewall.

HTTP requirements

On the Proxy server (Reverse proxy), the HTTP 1.1 protocol must be activated for full compatibility with the Adfinity Webserver.

Activating only HTTP 2.0 could block the Webservice responses.

3.4 Easi Services server

Goal

The Services Management server will host the platform that allows, among other things, the management of automatic tasks and the sending of e-mails.

Hardware requirements in a virtualized environment

Processor

See 3.1

Memory

See 3.1

Storage

As a minimum, Easi recommends a logical partition of disks as follows:

- 1 for the Operating System
- 1 for the applications

Software requirements

.NET Framework

Easi Services requires the .NET Framework 4.8. MS Visual C++ 2010 and 2015-2022 (x86 and x64) redistributable are also required.

A SQL driver is also required to allow native access to databases.

If OCR is used, the server must be able to connect to the following URL: https://adfinity-apiocr.easi.net/dep/v1/api/

The following requirements only apply if the task management module is integrated into outlook (calendar update).

Microsoft Exchange Server

The optional synchronisation of the Lotus Notes tasks management/calendar module in Adfinity with the Outlook calendar will require the presence of an Exchange server.

The minimum required version of Exchange is 2010. A mailbox will also have to be made available.

IIS Server

Calendar synchronisation will also require the presence of an IIS server on the server hosting Exchange Server.

This is normally installed by default along with Exchange Server.

The minimum version required is 7.5.

Visual Studio 2010 Tools

The installation of the Task Management for Outlook plugin will require the presence of Visual Studio 2010 or higher on the client machine where the plugin has to be installed.

Windows access rights and dedicated account

It will be necessary to create a gMSA service account dedicated to the Easi Services server and having the following access:

- Read/Write/Modify access to the installation folder
- Network access to the shared folders

All requests sent to the Services Manager will be processed with the login information of this account. Access to shared folders on the network will also use this account. The shared folder containing the Adfinity data (i.e. "ADFINITY_DATA") will therefore have to be configured to allow read/write/modify access for this dedicated Windows account.

3.5 File Server

Goal

The File server will host the directories used by the Adfinity applications.

Hardware requirements in a virtualized environment

Processor

See 3.1

Memory

See 3.1

Storage

As a minimum, Easi recommends a logical partition of disks as follows:

- 1 for the Operating System
- 1 for the files storage (File Share)

Software requirements

No application must be installed on this server.

3.6 Remote Desktop Server

Goal

Adfinity is compatible with **Citrix "Share Desktop" solutions and Microsoft Remote Desktop Service** (formerly Microsoft Terminal Server). RemoteApp is not supported.
We recommend this solution if a remote connection mode is regularly required.
If you choose this mode, an application server will be required to enable the application to be published. If required, Easi can provide all the necessary licenses to set up a remote desktop.
We have experience with Citrix platforms and we can help you with the choice of the Citrix server location and setup.

Please contact EASI to receive a personalised offer.

Hardware requirement in a virtualized environment

You can of course install the machines used for the "Remote Desktop" mode in a virtualized environment.

The sizing of this server is usually based on the number of users that need to be connected.

Processor

For up to 40 simultaneous users for the Adfinity rich client, the minimum configuration is 8 2.5 GHz VCPUs.

An additional server should be installed for every 40 additional users.

Memory

For up to 40 users for the Adfinity rich client, the minimum configuration is 32GB of RAM.

For every additional 40 users, an additional server must be installed.

Storage

See 3.1

Software requirement

Microsoft Windows Server

Windows Server 2019 minimum but Easi **recommends** installing Windows Server 2025 Standard Edition with all updates and security patches installed.

Citrix

XenApp 7.15 is the minimum version to be installed to work with Adfinity in Citrix mode.

.NET Framework

The terminal server will require the .NET Framework 4.8 to be installed. MS Visual C++ 2010 and 2015-2022 (x86 and x64) redistributable will also be required.

A SQL driver will also be required to allow native access to the databases.

If IsabelGo is used on the workstation, the Visual C++ 2010 x86 and x64 redistributable and the .NET Framework 3.5 must be installed for Security components version prior to 6.36.0005.

Microsoft Office

All applications of Microsoft Office Suite must be installed in 64bits mode only.

3.7 Adfinity Analytics Server

Goal

The main Adfinity Analytics server will host the Adfinity-related data warehouse. The Adfinity Analytics module aims to provide our customers with a high added-value tool that enables them to exploit the data contained in the Adfinity production database through a dedicated, efficient and secure data warehouse.

Tables in Adfinity Analytics are built to generate a data model optimized for reporting and BI use. This model can be interfaced with any reporting / BI tool (Spoom, PowerBI, Qlik View, Qlik Sense, Excel, etc.).

Hardware requirement in a virtualized environment

Processor

See 3.1

Easi recommends a minimum of 2CPU 2,0GHz.

Memory

See 3.1

Easi recommends a minimum of 16 GB RAM.

Storage

The minimum disk space required must correspond to the space currently allocated in production for hosting the Adfinity SQL database.

Software requirements

Microsoft Windows Server

Windows Server 2019 minimum but Easi **recommends** installing Windows Server 2025 Standard Edition with all updates and security patches installed.

Microsoft SQL Server

Although Adfinity Analytics is compatible with SQL Server 2017, Easi **recommends** installing SQL Server 2022 Standard version (the Express version can only be used for an Adfinity BASIC configuration, cfr. Chapter 2).

If an isolated server is deployed for Adfinity Analytics installation, the SQL Server version must (at the very least) correspond to the version of the Adfinity database engine.

Adfinity

The minimum version of Adfinity is 1.8.

Security and performance

For security and performance purposes, the Adfinity production database is only accessible through the Adfinity solution itself and through our standard Adfinity Analytics product.

3.8 Master Data Manager [MDM] Server

Goal

The Master Data Manager server will host the Adfinity Analytics MDM platform.

The MDM is a tool for managing the Adfinity Analytics data warehouse. Amongst other things, the MDM enables our customers to track the latest reloads of Adfinity Analytics, modify its configuration, refresh data on demand, and much more features.

Hardware requirement in a virtualized environment

The VM is scalable, we should be able to increase the CPU, RAM, and Storage if needed.

Processor

Easi recommends a minimum of 2CPU 2,5GHz.

Memory

Easi recommends a minimum of 8 GB RAM.

Storage

Easi recommends a minimum of 30 GB disk storage.

As a minimum, a logical partition of disks as follows:

- 1 for the Operating System
- 1 for the applications

Software requirements

Microsoft Windows Server

Windows Server 2019 minimum but Easi **recommends** installing Windows Server 2025 Standard Edition with all updates and security patches installed.

Windows access right and dedicated account

A “MDM User” technical user to connect to and administrate the VM, and access external systems.

Security management and external access

The VM DNS is configured with domain name in order for the VM to be accessible from local network.

Adfinity Analytics SQL Server is accessible from the MDM server.

Server firewall is configured to open useful inbound and outbound ports: 443 for HTTPS, 25 & 587 for SMTP, 1433 for SQL Server.

A SSL certificate valid for the VM configured domain name.

An accessible SMTP server to send emails and let the user reset his password himself.

A SQL Server user dedicated to manage connections from MDM (db_owner accesses on Adfinity, AA and MDM DB's).

4 Client workstation requirements

4.1 Client workstation for Adfinity (rich client)

Configuration:

- CPU Core I5 minimum
- 4GB memory minimum, 8GB recommended
- 64bit Operating System Pro version : Windows 11
- HDD 7200 RPM, SSD recommended
- .NET Framework 4.8
- All applications of Microsoft Office Suite must be installed in 64bits mode only

The application does not require any special attention in terms of hard disk space. In order to increase the comfort of use considerably, we recommend a large screen (>=21 inches) with a resolution of at least 1600 by 900 and the use of the "dual screen" mode. Facilities are provided for this mode.

The resolution of screens increases over time. On laptop screens, high resolutions such as full HD sometimes lead to a visual issue because the characters can be too small. Microsoft Windows offers the possibility to apply a "magnifying glass" effect to screens and fonts. However, this function is not compatible with Adfinity.

Please note that the standard Adfinity reporting engine uses a lot of RAM on the client workstation.

The .NET Framework 4.8, the MS Visual C++ 2010 and 2015-2022 (x86 and x64) redistributable and the SQL driver (sclncli11x64) will have to be installed on each client workstation.

A PDF reader capable to handle the "print" command is required.

This PDF reader must be set as the default application to open PDF files.

Several operations within Adfinity involve merging PDFs.

In such cases, printing of a merged PDF document is done via the default PDF reader installed on the client workstation and not via the application's native PDF printer. It is also important that the reader supports silent printing.

If IsabelGo is used on the workstation, the Visual C++ 2010 x86 and x64 redistributable and the .NET Framework 3.5 must be installed for Security components version prior to 6.36.0005.

4.2 Client workstation for Adflow

Adflow is a tool to manage the incoming flow of pdfs developed by Easi. The goal is to offer an ergonomic interface allowing the user to cut, merge or delete PDFs in a few clicks. Adflow can also read mailboxes in order to download .pdfs and make them directly available for encoding in Adfinity.

It is recommended to provide a computer for the installation of this module.

Minimal configuration:

- CPU Core I5 minimum, I7 recommended (the computing power is important for scanning operations)
- 8GB memory minimum
- 64bit Operating System: Windows 11
- Software: .NET Framework 4.8, the Visual C++ 2010 x86 and x64, the Visual C++ 2015-2022 x86 and x64

Note: It is possible to install Adflow on a Windows Server.

4.3 Client workstation for the Adfinity Analytics Excel Add-in

The Adfinity Analytics Excel Add-in is installed directly on client workstations.

The prerequisites for installing the Adfinity Analytics Excel Add-in are as follows:

- Excel version: Excel 2016 64bit or Office 365 64bits (on-prem)
- .NET Framework version: .NET Framework 4.8 minimum
- SQL Server Native Client: SQL Server Native Client 11
- Operating system: Windows

The Excel Add-in cannot be installed on a Mac machine. Possible workarounds are:

- Installation of the Add-in on a Windows server accessible to users
- Installation of the Add-in on a virtual machine running on the user's local workstation

4.4 Client workstation for the WebAccess

Browser

Recommended: Google Chrome, Mozilla Firefox or Microsoft Edge

Forbidden:

- Mozilla Firefox (version <= 46)
- Internet Explorer

If one of the recommended browsers is used, there is no need for a PDF plugin to be installed in addition to the browser.

4.5 Mobile application

The approval mobile application is available on iOS (>= 13) and Android (>=14.0).

4.6 Mobile Stock Manager (PDA)

PDA terminals must meet the following requirements in order to host the Mobile Stock Manager application.

OS - Version

Android version 14.0 minimum.

Type

We recommend the following terminals:

- Zebra TC53E / TC58E
- Honeywell CT40

Other terminals are not excluded, but the tests were only made with the terminals mentioned above. We do not guarantee that the application will work on these other devices.

Please contact an Easi consultant for more information.

Screen

A 6' screen is necessary to be able to display the information correctly.

5 LAN requirements

5.1 Local mode

A 1 Gb/s connection is recommended (at the network card level but also for the underlying infrastructure such as switches...).

5.2 Remote desktop mode

Easi recommends that 200KB of bandwidth per user be available for downstream.

Easi recommends 50KB of bandwidth per user for uploads.

5.3 VPN mode with the rich client (on client workstation)

This way of working should be avoided.

5.4 Useful links

There are various tools available on the web to test bandwidth capacity. Be aware, however, that the result is valid for your entire organisation.

This tool is one of the most common: www.speedtest.net

6 Rights management

6.1 Users group

It is necessary to create 3 groups of Windows users:

- 1 UserGroup « **AdfinityUsers** » : for the rich client users ;
- 1 UserGroup « **AdfinityConsultants**» : for the Easi functional consultants
- 1 UserGroup « **AdfinityAdmins** » : for the Easi technical consultants and Windows Services accounts.

The user rights linked to each group are listed below :

Servers	AdfinityAdmins	Adfinity Consultants	AdfinityUsers
SQL	Remote + Admin	None	None
Web (WebAccess, Webservice)	Remote + Admin	None	None
Easi Services	Remote + Admin	Remote + Read, Modify, Execute	None
File Server	Remote + Admin	None	None
Shared desktop	Remote + Admin	Remote + Read, Modify, Execute	Remote + Read, Modify, Execute
User Workstation	None	None	Read, Modify, Execute

These groups will also be used to manage user accesses to the various application directories, SQL Server and databases.

6.2 Users

It is necessary to create several users:

- One user by consultant, known on the domain and member of the group AfinityAdmins/AdfinityConsultants. The list of all consultants working on this project and the associated rights group will be provided to you during the technical analysis.
- One service account gMSA known on the domain and **dedicated** for the Web Service (see 3.1).
  This account must be the local administrator of the server and must have the following rights :
  - Log on as Service
  - Log on as Batch job

- One service account gMSA known on the domain and **dedicated** for the Easi Services (see 3.1).
  This account have the following rights :
  - Log on as Service
  - Log on as Batch job

6.3 File Server

Adfinity uses a data directory called "ADFINITY_DATA".

This directory must be installed on the file server.

It is imperative that all Adfinity user groups have full access to this directory.

7 « Cloud2be for Adfinity » requirements

Adfinity also operates in Cloud SaaS (Software as a Service) mode. The users' workstations on which the application will be deployed must meet the following requirements:

Bandwidth

Easi recommends 200KB of bandwidth per concurrent user for downstream and 50KB of bandwidth per concurrent user for upstream.

Network latency should not exceed 20ms.

Please note that it is also possible to reserve a part of your line exclusively for Adfinity via your firewall.

Operating System

Windows 11
MAC OS X 10.11 and higher

Browser (in their latest released versions)

Chrome
Firefox
Microsoft Edge
Safari for MAC

Citrix Workspace

The Citrix workspace is a software that allows remote access to the different applications hosted on our servers.

For the supported version please refer to:

Windows : https://docs.citrix.com/en-us/citrix-workspace-app-for-windows/system-requirements.html

MAC : https://docs.citrix.com/en-us/citrix-workspace-app-for-mac/system-requirements.html

It is important to note that only the default printer on the user workstation will be accessible in workspace and therefore in Adfnity.

Adfinity Connector

Adfinity Cloud2be is an isolated environment. This means that you will not be able to access the data on our servers directly.
The Connector is a tool developed by Easi that manages the automated and secure transfer of files to and from the Adfinity Cloud.

The Adfinity Connector client will need to be installed on your infrastructure in order to send/receive files to/from the Cloud.
HTTPS protocol is used for file transfer procedures.

Transfers will only be allowed from and to a Master Folder defined on the computer where the Connector is installed. One configuration will be saved per user (in the AppData Roaming folder).
The Adfinity Connector client can be installed as a Windows service on a server. The configuration will then have to be done with the dedicated Windows Service connection user or imported into its roaming profile folder. The user must have read and write rights to the Master Folder.
Finally, the Firewall and Antivirus rules must allow the "massive" creation and deletion of files and folders in the Master Folder.

The requirements to install the Connector on your infrastructure are as follows:

- OS : Windows
- .NET Framework 4.8 minimum

Adfinity Analytics Excel Add-in
As mentioned in chapter 4.3, the Adfinity Analytics Excel Add-in is installed directly on client workstations.

Therefore, all prerequisites listed in the 4.3 chapter are required for Cloud2be users' workstations using the Excel Add-in.