aras INNOVATOR® VERSION 10.0

Technology Specifications: Platforms & Standards

Aras ® is committed to standard Internet protocols and common platforms. Aras Innovator® provides businesses with flexible configuration options to manage based on tomorrow's market requirements not yesterday's decisions.

Aras Innovator Specifications

Standards	HTML HTTP / HTTPS	XML SOAP	SQL JavaScript

Databases	Microsoft SQL Server 2012 Microsoft SQL Server 2008 R2		

Servers	Microsoft .NET [4.0]	IIS [8, 7]

Clients	Microsoft Internet Explorer [10, 9] Firefox [24 ESR] Microsoft.NET 3.5 (IE Only)

	Server	**Client**
Operating Systems	MS Windows Server 2012	Windows 8
	MS Windows Server 2008 R2	Windows 7
		OS X 10.8 (Mountain Lion)
		OS X 10.7 (Lion)

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Technology Specifications: Recommendations & Requirements

To optimize Aras Innovator® performance Aras® Corporation recommends the following software and hardware components. Please keep in mind that the **minimum requirements** are listed as a baseline and following recommendations ensures system performance. Recommendations also assume that Aras Innovator will be running with minimum additional network activity. Other active applications on the network or on the PCs will affect performance and must be taken into account when selecting hardware.

Database Server

Database Engine	Microsoft SQL Server 2008 R2, or Microsoft SQL Server 2012 – Recommend Enterprise Edition
Network OS	Any supported O/S platform for the selected database
CPU	Recommend quad CPU 2.4 GHz or higher
	Minimum requirement dual CPU 2.0 GHz – Supports 25 concurrent users
Memory	Minimum requirement 2 GB RAM up to 50 concurrent users – Recommend increasing 10 MB per concurrent user
HDD	Recommend RAID using 4 to 6 physically separate disks (RAID 0/1) – Striping data across disks improves performance
	NOTE: NEVER use OS based mirroring of the database – The OS should be on a separate disk from the Database
	It is recommended that the Operating system and virtual memory file be separated from the SQL server data and log files. Optimal SQL server performance is achieved when SQL server log files also reside on a separate physical disk. The following recommended guideline is a good price/performance compromise:

- Operating System disk(s) – could be RAID 1
- SQL Server data files (RAID 5 array, minimum of 3 drives)
- SQL Server log files (RAID 1 array, 2 drives)

	Recommend > 10,000 RPM SCSI Drives – Disk speed impacts performance

Application Server

Network OS	Windows Server 2008 R2, or Windows Server 2012 – Recommend Enterprise Edition
Web Server	IIS version 7 or higher
.NET	Microsoft .NET Framework 4.0
CPU	Recommend quad CPU 2.4 GHz or higher – Minimum requirement dual CPU 2.0 GHz
Memory	Recommend 8.0 GB RAM – Minimum requirement 2 GB Ram
HDD	Recommend 1.0 GB free disk space – Aras Innovator will use approximately 100 MB for each environment (Production, Development, Test, and Training)
Connectivity	Internet connection suggested for online support and update downloading – recommend VPN to support remote access

Vault Server

Network OS	Windows Server 2008 R2, or Windows Server 2012 – Recommend Enterprise Edition
Web Server	IIS version 7 or higher
.NET	Microsoft .NET Framework 4.0
CPU	Recommend quad CPU 2.4 GHz or higher – Minimum requirement dual CPU 2.0 GHz
Memory	Recommend 4.0 GB RAM – Minimum requirement 2 GB Ram
HDD	Recommend RAID array – Vault disk capacity planning should consider 2-year growth of total file.
	NOTE: End-user predictions of Vault Server data volume are typically under estimated and quickly surpassed
	Recommend 1.0 GB free disk space for the OS and software – Aras Innovator will use 50MB
	Recommend > 10,000 RPM SCSI Drives – Disk speed impacts performance

Clients

Client OS	Windows 7, Windows 8, MAC OS X 10.8 (Mountain Lion), or MAC OS X 10.7 (Lion)
Browser	Firefox 24 ESR, Internet Explorer 9, or Internet Explorer 10
.NET	Microsoft .NET Framework 3.5 SP1
CPU	Minimum requirement CPU 2.0 GHz or higher
Memory	Minimum requirement 2 GB RAM
HDD	Minimum requirement 80 MB free disk space for Internet temporary folders
Monitor	Recommend 1280 x1024 monitor and adapter – Minimum requirement 1024 X 768

Network

	Recommend 100 mbps network between Application Server and Clients
	Recommend dedicated sub-LAN of 100 mbs or 1.0 GB copper between the Application Servers and Database Server

Backup Equipment

Aras Corporation recommends investment in a reliable backup system.

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TECHNOLOGY SPECIFICATIONS: HARDWARE BY CONFIGURATION

Aras Innovator® offers numerous configuration options designed to fit your business requirements and technology environment with the ability to scale to meet future needs. Migrating from one configuration to the next is designed to be straightforward.

Option 1: Single Server
250 Users
Combined Database, File Vault, and Web / App Servers

INNOVATOR
Database – Web / App Server – Vault

	CPU	RAM	HDD [1,2]
Single Combined Server	Quad CPU @ 2.4 GHz	8.0 GB	RAID 100 GB Vault SCSI/IDE 2 GB OS

[1] HDD capacity requirements depend directly on the CAD, EDA and document formats employed in conjunction with the aggregate file count and total size.
[2] Preferred configuration for SQL Server database: Operating System disk(S), RAID 5 array for SQL server data files, RAID 1 array for SQL Server log files. Using three sets of physical disks and separating the log files and data files minimizes contention for physical disks. The Innovator application and vault can also reside on the RAID 5 array.

Option 2: Separate Servers
500 Users
Separate Database, File Vault, and Web / App Servers

INNOVATOR
Database | Web / App Server | Vault

	CPU	RAM	HDD
Database Server [2]	Quad CPU @ 2.4 GHz	4.0 GB	See note 2
Web / App Server	Quad CPU @ 2.4 GHz	8.0 GB	20 GB
Vault Server [1]	Quad CPU @ 2.4 GHz	4.0 GB	RAID 200 GB Vault SCSI/IDE 2 GB OS

[1] HDD capacity requirements depend directly on the CAD, EDA and document formats employed in conjunction with the aggregate file count and total size.
[2] Preferred configuration for SQL Server database: Operating System disk(S), RAID 5 array for SQL server data files, RAID 1 array for SQL Server log files. Using three sets of physical disks and separating the log files and data files minimizes contention for physical disks. The Innovator application and vault can also reside on the RAID 5 array.

Option 3: Distributed Servers
Over 1000 Users
Multiple Vault and Web / App Servers, Single Database Server

INNOVATOR
Database | Web / App | Vault | Vault | Vault

	CPU	RAM	HDD
Database Server [2]	Quad CPU @ 2.4 GHz	4.0 GB	See Note 2
AppServer Servers	Quad CPU @ 2.4 GHz	8.0 GB	20 GB
Vault Servers [1]	Quad CPU @ 2.4 GHz	4.0 GB	RAID 500 GB Vault SCSI/IDE 2 GB OS

[1] HDD capacity requirements depend directly on the CAD, EDA and document formats employed in conjunction with the aggregate file count and total size.
[2] Preferred configuration for SQL Server database: Operating System disk(S), RAID 5 array for SQL server data files, RAID 1 array for SQL Server log files. Using three sets of physical disks and separating the log files and data files minimizes contention for physical disks. The Innovator application and vault can also reside on the RAID 5 array.

Option 4: Development Server
Used for Customization, Testing, or Training Environments

INNOVATOR
Database – Web / App Server – Vault

	CPU	RAM	HDD
Single Development Server	Dual CPU @ 2.8 GHz	4.0 GB	4 GB