



IPRO eCapture Software Requirements

IPRO eCapture SQL Server

	Description	Notes
SQL Server Software: (any)	SQL Server Standard Edition 2005 or 2008 (R1 or R2)	Licensing Models – Either (Server plus device CALs) OR (Per Processor License) will work. Please consult your vendor who you would purchase SQL from for the best options for your organization
	SQL Server Enterprise Edition 2005 or 2008 (R1 or R2)	

IPRO eCapture Controller/Limited Controllers/Workers/QC Stations

	Description	Notes
Operating Systems: (any)	32-bit Microsoft Windows XP Professional -Service Pack 2 -Service Pack 3	Max Memory: 4 GB
	32-bit Microsoft Windows Server 2003 -R2 -Service Pack 2	Max Memory: 4 GB
	32-bit Microsoft Windows Server 2008 Standard Edition	Max Memory: 4 GB
	64-bit Microsoft Windows Server 2008 Standard Edition	Application runs in 32-bit mode; Max Memory: 32 GB
	64-bit Microsoft Windows 7 Professional	Application runs in 32-bit mode; Max Memory: 192 GB

IPRO eCapture Workers/QC Stations

	Description	Notes
Software Requirements:	MS Office 2003 Professional (SP1, SP3)	
	MS Office 2007 Professional (any service pack)	
	Ms Office 2010 Professional	
	Lotus Notes Client Install (8.0 Basic, 8.0 Standard or 8.5)	Required if desired to handle
	GroupWise Client Install (6.5, 7.0, 8.0)	Required if desired to handle
	Internet Explorer -Version 6 -Version 7 -Version 8	

IPRO eCapture Hardware Recommendations

Network

Level	Network Capacity	Notes
Recommended:	Gigabyte (1 GBps)	Network traffic includes accessing native data, reads/writes on the IPRO eCapture client directories and writes to export output directories. Varying levels of SQL communication occur in all IPRO eCapture modules, and will benefit from a larger network bandwidth.

IPRO eCapture File Server

Level	CPU Processor(s)	Memory	Storage	Burst I/OPS Support
Minimum: (1-5 workers)	1x Dual Core Ex: Intel Xeon 2.6GHz	2 to 4 GB	Direct Attached RAID	5k-15k
Recommended: (5-20 workers)	2x Dual Core or 1x Quad Core Ex: Intel Xeon 2.6GHz, 1333MHz FSB, 12M cache	4 to 12 GB	NAS	15k-30k
Optimum: (20+ workers)	1x Quad Core or 2x Quad Core -With hyper-threading Ex: Intel Xeon 2.8GHz or greater, 12M or greater cache	12 GB or greater	NAS or SAN	30k-45k

IPRO eCapture SQL Server

Level	CPU Processor(s)	Memory	Capacity	Notes
Recommended:	2x Dual Core or 1x Quad Core or Ex: Intel Xeon 2.6GHz, 1333MHz FSB, 12M cache	8 to 12 GB	Direct Attached RAID5	SQL Server can be configured to store databases and transaction logs in alternate locations, such as on an iSCSI-connected drive or dedicated LUN. Doing so could allow greater storage capacity and flexibility for growth.
Optimum:	1x Quad Core or 2x Quad Core -With hyper-threading Ex: Intel Xeon 2.8GHz or greater, 12M or greater cache	16 GB or greater	Direct Attached RAID10 or SAN	

IPRO eCapture Controller/Queue Manager/Limited Controller				
Level	CPU Processor(s)	Memory	Capacity	Notes
Recommended:	1x Dual Core	2 GB	80 GB	Controller/Queue Manager machine requires USB port for licensing dongle.
Optimum:	2x Dual Core or 1x Quad Core	4 GB	160 GB	
IPRO eCapture Worker				
Level	CPU Processor(s)	Memory	Capacity	Notes
Minimum:	Single Core or 1x Dual Core Ex: Intel Core Duo 1.6GHz, 667MHz FSB	2 – 4 GB	40 GB SATA 5400 RPM	Many of the IPRO eCapture Worker's functions are performed in local directories. Indexing, searching and rules application are CPU-intensive. Memory is utilized when performing OCR, working with large mail stores and spooling large documents for image generation.
Recommended:	2x Dual Core or 1x Quad Core Ex: Intel Xeon 2.6GHz, 1066MHz FSB	4 - 8 GB	80 GB SATA 7500 RPM	
Optimum:	2x Dual Core or 1x Quad Core Ex: Intel Xeon X5000 series	4 – 8 GB	160 GB SATA or Fiber channel 10k+ RPM	
IPRO eCapture QC				
Level	CPU Processor(s)	Memory	Capacity	Notes
Recommended:	1x Dual Core	2 GB	80 GB	QC machines can be shared with IPRO Worker machines, but the applications cannot run concurrently.
Optimum:	2x Dual Core or 1x Quad Core	4 GB	160 GB	

Virtualization

Component	Recommendation	Notes
File Server	Not Recommended	The File and SQL Server components of the IPRO eCapture environment are best run on physical machines due to the high volume of requests that impact CPU, Disk and Memory usage. These components, in a virtual environment, can hinder the performance of an otherwise well designed IPRO eCapture deployment.
SQL	Not Recommended	
IPRO eCapture Controller	OK	The IPRO eCapture Controller/Queue Manager can be virtualized, however the host machine and virtual machine must have USB support in order to accomodate the licensing dongle.
IPRO eCapture QC	OK	Individual QC machines do not require significant resources, and as such can be highly virtualized to accomodate document review needs. It is recommended that the virtualization notes for the IPRO eCapture Worker be used as a starting point for designing the host machine.
IPRO eCapture Worker	OK	In order to receive the best possible performance from a virtualized IPRO eCapture Worker machine, special considerations must be taken. See the next section below.

IPRO eCapture Worker Virtualization

Due to a variety of options available for host servers, there are a number of ways to configure a host server with virtual images. The following are general recommendations for a virtualized IPRO eCapture Worker machine based on extensive testing and usage in a standard production environment.

Option	Recommendation	Notes
Host Operating System	VMWare ESXi/ESX	Microsoft Hyper-V has not been tested or used by IPRO, but should be supported.
Host to Processor Core Ratio	1:1	At least one CPU core should be dedicated to the host operating system.
Host Memory Requirement	Host operating system requires 2 to 4 GB. Remaining memory is allocated to virtual images; the amount of memory should reflect the number of images deployed on the host machine.	
Worker Image to Processor Core Ratio	1:1	IPRO has found that each core of the host machine can efficiently support one virtual machine. More than one virtual image per CPU core will degrade performance.
Worker Image Virtual Processor Cores	1	Virtual CPU usage should mimic the CPU configuration of the images themselves.
Worker Image Memory Allocation	2 to 4 GB	
Virtual Image Storage Location	High-speed Direct Attached RAID or SAN	Read/write speed to the virtual image is critical to the performance of the IPRO eCapture Worker application in a virtual environment. These speeds improve when image-related files are stored on a high-speed storage device. Host machine disk and CPU activity is reduced by shifting disk I/O operations to remote storage.