



Level 1

Up to 500 System Users

InformationNOW Application Server Hardware Specifications	
Processor	Intel Dual-Core Xeon® Processor 3.0GHz or higher.
Memory	4 GB
Storage	30 GB (minimum) SCSI, SATA, SAS or IDE RAID 1.
Operating System	Microsoft Windows Server 2003 R2 Standard or Enterprise edition, 32-bit (x86) w/ current service pack applied.
Server Network Connectivity	100 MB connectivity (minimum) between application server and the DB (SQL) server. 1000MB preferred.
Encryption	128-bit (minimum) SSL certificate installed.

InformationNOW Database Server Hardware Specifications	
Processor	Intel Dual-Core Xeon® Processor 3.0GHz or higher.
Memory	6 GB (minimum)
Storage (OS)	30 GB (minimum) SCSI, SATA, SAS or IDE. Non-Raid or RAID 1.
Storage, DB (.MDF file)	10GB +300KB per student for current academic year +100KB per student for each archived academic year. SCSI or SAS RAID 1 or 1+0. (15K RPM Drives recommended)
Storage, Transaction Logs (.LDF file)	50GB (minimum) SCSI or SAS. RAID 1 or RAID 1+0. (15K RPM Drives recommended)
Storage, TempDB	50GB Minimum, SCSI or SAS. RAID 1 or RAID 1+0 (15K RPM Drives recommended)
Operating System	Microsoft Windows Server 2003 R2 Standard or Enterprise, X64 edition w/ current service pack applied.
Server Network Connectivity	100MB connectivity (minimum) between the Application server and the DB (SQL) server. 1000MB preferred.



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Database Software	<p>For Implementations <i>before</i> December 2009: Microsoft SQL Server 2005 Standard Edition x64 w/ current service pack applied (Per Processor license).</p> <p>For Implementations <i>after</i> December 2009: Microsoft SQL Server 2008 Standard Edition x64 w/ current service pack applied (Per Processor license).</p>
Backup	Tape, Disk or Network.

InformationNOW Workstation Specifications	
Browser	<p>Windows: Microsoft Internet Explorer 6.0 or 7.0 or Mozilla Firefox 2.0 or 3.0.</p> <p>Mac: Mozilla Firefox 2.0 or 3.0.</p> <p>Targeted: Microsoft Internet Explorer 7.0 and Mozilla Firefox 3.0</p>
Display Resolution	All screens will be designed to look best when viewed at a resolution of 1024x768.
Productivity	<i>Optionally</i> , have MS Office or Excel and Adobe Reader installed for exporting of output to those formats.

Each Server hosting *InformationNOW* must be dedicated to *InformationNOW*. No non-STI applications or services should be installed unless specifically directed by STI Technical support.

<u>InformationNOW Database Storage Requirements</u>	
Based on Microsoft's recommended best practices, as well as direct input from Microsoft Subject Matter Experts, the following storage architecture is being recommended for <i>InformationNOW</i> database servers:	
Each database server will have four separate disk arrays, listed below by function:	
Array 0: Windows Operating system and program files	
Array 1: SQL Database (.MDF) files	
Array 2: SQL Transaction Log (.LDF) files	
Array 3: SQL TempDB files	



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The minimum specification for each of these arrays is RAID1, using SAS or SCSI disks at 15K RPM. RAID must be implemented in hardware. Software (OS) RAID is not supported.

For optimum performance, it is recommended that RAID 1+0 (4 drive minimum) be implemented on Arrays 1, 2 and 3 (mandatory for Level 3 implementations). These arrays may be internal, external or SAN, provided that the basic specification is met.

- **Bandwidth from schools to district:**

- *InformationNOW* is a Web-based enterprise application that is reliant on a certain standard of network capacity. Network administrators commonly use network switches to isolate the administrative network traffic from the traffic generated by students. However, schools tend to be networked to the district office in a hub-and-spoke design. Much of the traffic, including e-mail and all Internet activity, is routed from each school back to the district office. All of this traffic consumes a certain percentage of the available bandwidth for each school. The remaining bandwidth is available to new applications, such as *InformationNOW*. For *InformationNOW*, each district has varied requirements for bandwidth due to their own use of the product, including such factors as teacher use of *InformationNOW*; the taking of classroom attendance; whether the district uses multiple bell schedules (these tend to spread the network load); and other factors. As a standard guideline, STI recommends you use the following bandwidth allowance.

- Elementary Schools – Dedicate a minimum of 750Kbs for *InformationNOW* traffic.
- Secondary Schools – Dedicate a minimum of 1.5Mbs for *InformationNOW* traffic.



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- **Redundancy:**
 - Although hardware redundancy is not specifically addressed in these specifications, *InformationNOW* can be implemented in a redundant load balancing configuration. Whether or not to implement these measures is solely the decision of the district.
 - Application servers will support either software-based load balancing (such as Microsoft NLB clustering) or hardware-based load balancing. Districts should consult with STI Technical Services before implementing hardware-based load balancing.
 - The database server may be implemented as a Microsoft Active/Passive SQL cluster.
- These specifications are subject to change as required. STI will provide as much advance notice to our customers as possible.