



## Xap Technology Questions and Answers

### INFRASTRUCTURE

- How many servers do you have?
  - We currently have over 50 servers that perform the various tasks necessary to run Xap's systems.
- What happens if one of your servers goes down?
  - We have at least two and as many as ten of every mission critical server or network device. If a web server was to crash or slow down, a device called a load balancer seamlessly routes traffic to the fastest server available. If a database server was to crash, a hot spare would take over in seconds.
- What do you do to guard against data loss?
  - All user data is stored on redundant disk systems in our Storage Area Network. Database logs are stored on different disk arrays than data and backed up off-site every 15 minutes. Data is also backed up to additional disk systems hourly and to tape nightly.
- What infrastructure do you have that ensures high availability of your website?
  - We have redundancy at the server level, the network component level, and the Internet connectivity level. We also have redundant air conditioners, a backup battery system, and diesel generator system. Finally, our datacenters are redundant and geographically distributed.
- What do you do to guard against major disasters?
  - We have a failover facility in Seattle, WA where we synchronize user data every 15 minutes and source code nightly. Should a disaster occur that renders our Culver City datacenter inoperable, we can activate the Seattle facility to take over system operation. Both our Culver City facility and the Seattle facility have redundant power and data-safe fire suppression systems.
- What kind of bandwidth do you have?
  - Our primary datacenter has dual DS3 lines from different service providers that combine for a total bandwidth of 90 Mbps. This is equivalent to 60 T1 lines. With the millions of users that we have serviced, we have yet to approach even half of our capacity.
- How much dedicated bandwidth are you providing for my project?
  - We recommend using the tremendous capacity of Xap's bandwidth. While we are willing to explore the option of dedicated Internet lines for our customers, a reasonable alternative (i.e. 2 T1 lines) would have a total capacity that is far less than the dual DS3s that we currently offer. No customer has ever elected to do this.

### SECURITY

- Does the data that you send get encrypted?
  - It is our standard practice to encrypt all user information. We use two encryption protocols: PGP and SSL. 128 bit SSL is used whenever user information is exchanged with Xap's servers. The sole exception is when communicating with the UT Austin server for transcripts, where we use PGP.
- What level of SSL encryption do you support?
  - We support 128 bit SSL encryption using Verisign's Standard or Global secure certificates. Domestically, both types of certificates offer 128 bit encryption.
- What do you do to protect personal data?



- We use a host of tools to protect the data with which we have been entrusted. First, our system is protected by redundant firewalls. Second, information sent out over the Internet is encrypted using strong encryption. Third, our network is partitioned to limit access to appropriate segments – for example, our employee network is separated from our databases and web servers by a firewall. Fourth, we have security policies in place to lock down accounts after repeated logon attempts, to expire passwords, and to encourage safe practices among our employees and clients. Our database servers are not accessible directly from the web.

## SOFTWARE

- What operating system do you use?
  - We use several operating systems for various tasks. Our web servers run on Windows 2000 Server and Windows Server 2003. Our database servers run on Windows 2003 Enterprise Edition. We use Redhat Linux for several tasks including MentorMail.
- What database software do you use?
  - Our databases run SQL Server 2005 Enterprise Edition.
- What web development tools do you use or what does your website run on?
  - Our primary web environment is .NET for Mentor v3 and above and for all web services. We use ASP as our environment for all previous versions of Mentor and admission applications. Our Number2 test preparation tools use ColdFusion MX.
- What language do you use for development?
  - We use a number of different languages for various projects as appropriate. The programming languages currently used include C#, C++, Visual Basic, VBScript, JavaScript, JAVA, CFML, and SQL.
- Do you support standards such as SOAP and XML Web Services?
  - Yes. With each new version of Mentor, we offer a more extensive support through our service oriented architecture.
- We use (Unix/Linux/Oracle/Mac OS/Solaris/etc). Will we be compatible?
  - Our systems are designed to require only a reasonably current standards-based web browser to access. You will be able to use our tools to format data to facilitate import and export without regard for your operating system, database system, or web environment.
- How do I automate getting my data?
  - We offer a tool called the Xap Communicator to manage scheduled, automated, and secure data transfers between your system and ours. This tool is currently available for Windows only but can operate on a desktop in your office rather than directly on your SIS or other server.
- I have (Unix/Linux/MacOS). Can I use the Xap Communicator?
  - Currently, the Xap Communicator can only run on a Windows with access to your student system server but it does not require that your student system or database run on Windows. We plan to release an XML Web Services solution with the launch of Xap's Control Center upgrade in Q2 2008.

Xap has partnered with the Illinois Student Assistant Commission to host the Illinois College and career planning portal known as WhatsNextIllinois.org. In addition Xap hosts, operates and maintains portions of the US Department Of Education Student Aid On The Web site. Xap is also in partnership with US Department Of Education to provide FASFA Transfer functionality for WhatsNextIllinois.org.