SchoolDude’s Cloud-based Solutions

When you utilize SchoolDude’s on-demand solutions, your data is hosted in a secure data center on powerful servers where all server and system maintenance issues are addressed quickly and easily for you. Advanced technology is used to protect and secure your data within our data center, a secure and reliable environment that most educational institutions cannot typically provide for themselves, and we strive to provide you with 99.9% system availability and uptime.

When operating any enterprise solution (e.g., a networked version of a computerized operations or on-demand products from SchoolDude), the data for all the users in your enterprise is stored on a server. Rather than store your data on onsite servers behind a firewall, SchoolDude’s solutions offer the ability to utilize cloud applications, which store data offsite in a secure data center. Advances in Internet technology have made cloud applications a far more beneficial and economical option for educational institutions.

10 Reasons Offsite Data Storage is Ideal for Schools

1. **Backup Services:** The frequency and reliability of backup services and procedures is of critical importance because all servers storing data eventually experience problems. SchoolDude performs backups hourly in a highly automated and monitored process, minimizing data loss in the event of a server problem. In our experience working with educational institutions, backups typically occur only once per day and are frequently missed. SchoolDude offers a far more reliable performance in the frequency of data backups.

2. **Storage of Backup Data:** Backed up data must be properly protected. Ideally, the educational institution moves data backups to a remote site and places it in a secure and locked facility; however, institutions do not always properly store their backup data. SchoolDude moves all backup data to another facility located in another state every day. This reduces the risk of loss of both primary and backup data due to a flood, fire, storm or other catastrophic events. This offers far greater protection of back up data.

3. **Security:** Hardware in any location is subject to security issues. This can range from vandalism to intentional acts of malice. Many organizations have experienced major network outages due to a disgruntled employee or a malicious individual. Most educational institutions have little or no protection from this form of catastrophe. SchoolDude stores your data in a secure facility. Only authorized personnel are allowed in the facility, which is secured by a sophisticated, biometric security system. The facility is staffed and monitored 24 hours a day, 7 days a week, 365 days per year.

4. **Communication Reliability:** It doesn’t matter if your data is secure if you cannot access it across from your network, intranet, or the Internet. SchoolDude uses a fully meshed network with independent fiber connection feeds, ranging from OC-12 to OC-192 for connection to the Internet. These connections are provided by separate carriers and utilize dynamic flow control technology to optimize Internet access and performance. With the many connections and providers, a loss of feed or provider issues does not result in the capacity of the network dropping below what is required to operate normally.

5. **Fire Protection:** Although your data may be backed up correctly and stored remotely, a potential disaster like a fire could ruin your server hardware and cause an extended outage. Many educational institutions have limited fire prevention and protective systems for their servers. SchoolDude utilizes an advanced fire protection system for our servers at a cost that far exceeds what most educational institutions can justify. Should a fire occur, the server is housed in an environment protected by a sophisticated and costly Inergen gas system which can stop a fire with minimal or no damage to server hardware. In the unlikely event the Inergen system fails to extinguish a fire, a dual pre-action dry pipe system serves as a secondary means of extinguishing any fires. SchoolDude’s fire protection system provides you with unparalleled protection.

6. **Disaster Recovery:** Independent of the investments made to protect a single facility, a catastrophic event may occur. All organizations should have a disaster recovery program, although very few educational institution operations management systems have a program actively in place. Therefore, a catastrophic event could leave your institution waiting an extended period of time for a replacement system to be brought online while also dealing with other problems that require a system to schedule and track work being performed to recover from the catastrophic event. SchoolDude uses a network of data centers to address this issue. Your backup data is stored in another data center (as described previously) in another part of the country. Should a catastrophic event occur, your backup data is readily available. We replicate...
10 Reasons ....continued

you data on a nightly basis and validate it daily. In addition, our product delivery team conducts unannounced disaster recovery drills every three months to verify that your data and applications are functioning properly at the disaster recovery site. Our goal is to have your system operational in a short period of time.

7. **Data Security**: One of the biggest issues you face now and in the future is the security of your data. Educational institution network administrators work to provide a firewall to secure your data from potential threats, such as hackers and computer viruses. But is that the best, most secure firewall to protect your data? When your data resides on SchoolDude’s servers, it is conceptually NOT outside your firewall as commonly stated! Instead, SchoolDude provides an advanced firewall to protect your data that resides on our servers, providing you with an additional layer of security. SchoolDude invests in market-leading security technology and leverages industry consultants to provide a secure firewall and intrusion detection system for your data. More importantly, the SchoolDude team monitors network traffic to your applications 24 hours a day, 7 days a week, 365 days per year. The SchoolDude firewall service is tied to a larger grid of firewalls, giving us the ability to proactively detect and block new threats that appear across the globe. Many educational institutions are typically limited in the amount of investment they can make in firewall protection because they are usually protecting a limited number of applications for a single organization. SchoolDude strives to protect the data of thousands of educational institutions and therefore can make significant technology investments with the manpower to support it. Although your data is not behind your firewall, it is protected by SchoolDude’s secure firewall and our team of IT professionals.

8. **Access to Your Data**: You own your data and want it readily available at all times. That’s why SchoolDude gives you the power to download and format your data (in PDF or Excel) on your network whenever you want.

9. **Power Outages**: A power outage can range from a blink of less than a second to several days after a severe weather incident. In a typical client-server application environment, a power outage takes your system down and can cause you to lose all your data since the last data backup procedure was performed. Power outages create a major productivity loss when they occur. Typically, you are dealing with a host of other issues after a power failure and do not need to lose valuable resources dealing with the issues caused by loss of data. SchoolDude’s servers are housed in a facility where a power failure is rare. All power sources are filtered and cleaned inside the data center. In the event that the power feed is shut down, the data center has an N + 1 battery backup system allowing the servers to stay in continuous, uninterrupted operation. If the power cannot be restored before the battery backup system is exhausted, a 6.25 megawatt N + 1 Generator Farm system comes online to provide power to the data center. There are multiple companies on contract to supply diesel fuel to maintain operation of the micro-generation system until power is restored.

10. **Server Hardware Failure**: Sooner or later, all servers experience problems. Server hardware failures are inevitable events that you must plan for and manage. In the event of a hardware server failure, here are the steps you must take to get your desktop system back up and running with your data stored on an in-house server:

   a. Identify the server hardware failure.
   b. Contact the server manufacturer for support.
   c. Work with the server manufacturer to further troubleshoot the failure.
   d. Wait for the server manufacturer to send replacement parts, if you don’t keep spare parts in-house. This could range from four hours to the next business day, depending on the support purchased for the server.
   e. Receive the replacement parts, install and verify the hardware failure has been corrected.
   f. Load the last data backup, if required. All work done since the last backup will be lost.
   g. Confirm that everything now functions correctly.
   h. Resume normal operation.

A server hardware failure is much less detrimental if your data is stored on SchoolDude’s servers. We maintain a redundant network and server infrastructure, ensuring your applications continue to function shortly after a hardware failure occurs. Typically, you are up and running on SchoolDude’s servers before you could have gotten off the phone with the manufacturer during an in-house server failure.

The result of SchoolDude’s efforts to protect and secure our clients’ data speaks volumes. For 2011 and 2012, SchoolDude’s servers and infrastructure provided 99.9% system availability and uptime during business hours (7:00am to 10:00pm by time zone).

As the entire software industry migrates from desktop applications to cloud or SaaS applications, educational institutions must go through an evaluation and learning curve on the issues of data storage and management. When you conduct a thorough evaluation – especially if you visit a SchoolDude data facility – we believe you will conclude that the most sensible course of business is to move as much data as possible, as quickly as possible, to a SchoolDude data center.

Today, you’re probably asking the question, “Should I move my data and applications from onsite servers?” But within a year, your administration will probably be asking you, “Why haven’t you moved our data and applications to a secure, offsite environment?”

Over the next few years, virtually all of your software systems (such as financials, student records, curriculum and other major applications) will move to cloud solutions with both the application software and your data being managed from a state of the art facility and provided to you via the Internet. Cloud or SaaS solutions reduce the total cost of ownership for these applications by as much as 90%, while providing far superior performance.
Experience and Service from SchoolDude

The SchoolDude team has unmatched experience in providing innovative technology to educational institutions nationwide. Our expertise has guided us to build in the application services that we know you need, but that you have rarely been able to provide in the past. Now, you can have technology, business, and facility management applications that are managed in a secure and reliable environment with support and services from a technology partner that knows educational institutions. We have built our integrated suite of SaaS operations management services in an environment that allows us to provide you with unprecedented levels of service and reliability at an affordable price.

Reliability & Performance

- High performance, multi-processor clustered database servers
- High performance load balanced web servers
- Redundant internal server power supplies
- Redundant, hot swappable hard drive array (RAID 1, 5, 10)
- Redundant high performance 10GBPS network
- Redundant high performance storage systems with Double Parity RAID 6 and global spare disks, preventing data loss when two drives fail
- Redundant OC-12 thru OC-192 connections to top tier Internet providers
- Redundant backup power systems including 6.25 Megawatt N + 1 Generator Farm and N + 1 battery backup system
- 128-bit SSL encrypted management applications built to scale to multiple servers and databases
- Redundant server and application monitoring on 2 minute intervals
- Daily backups of all system data replicated and restored to a disaster recovery data center
- Quarterly disaster recovery drills
- Hourly backups of appended data (data that has changed)
- 96% of application pages load in less than two seconds, with 99.5% loading in less than six seconds.
- Product quality rating of 99.6% or better on average

Privacy of Your Data

The data you place in our applications belongs to you. We will never share, sell, or distribute data that specifically identifies your organization.

We may offer services that allow you to view “average” or aggregated data from other educational institutions, but this data will never be specifically identified to you or your organization. Our privacy statement has additional information.

If you decide to cancel your service, you can always take your data with you. SchoolDude gives you the power to download and format your data (in PDF or to Excel) on your network.

Security Features

- Physical security monitoring 24x7x365
- IDS/Network security monitoring 24x7x365
- Application security by unique username and password or via claims based single sign-on
- Annual security audit by third party security consultants
- All systems run industry standard antivirus software that is monitored and updated daily
- Patch management process to evaluate, test, and apply patches as needed when released by vendors