**File Exchange Hosting and Security**

The LRS FileExchange is built using Microsoft ASP.NET and utilizes Microsoft SQL Server data storage to store and retrieve files. The FileExchange is configured to use SSL for all communication between the client and the server. An SSL Certificate will be purchased if not already provided by the client.

File storage remains in SQL and not on the file system. The FileExchange may be optionally configured to encrypt files while in storage by using a machine key and the Microsoft System Cryptography functions. This is only available as requested when running on a dedicated LRS server plan.

User passwords in the FileExchange are salted with a unique key and then hashed using SHA-256 cryptography before being written to the database.

Hosting facilities infrastructure is located at Springfield, Illinois. The Springfield data center includes the following:

- Secure climate controlled server room.

- Redundant firewall security, routers, switches, internet connections, and DNS servers.

- Servers which include:

  - Smart Array RAID controller for faster disc subsystem, performance and availability

  - Mirrored OS and RAID Level 5 Data on hot pluggable disk drives.

  - Redundant load balanced network adapters and power supplies.

  - Spare parts inventory for rapid exchange of server components to address failures or additional capacity requirements.

- Multiple 45 - 50Mb/s Internet connections.

- Full backups every week and incremental backups each day.

- Professional 24/7 server maintenance provides up-to-date, industry standard security, anti-virus protection and server stability.

- N+1 redundant battery-driven uninterrupted power supplies (UPS) protect the data center from short-term power outages.

  - Units are tested monthly

  - Battery replacement on regular schedule

- In the event of longer power outages, a 500KW diesel powered generator automatically assumes the load from the UPS. LRS staff monitors and tracks all aspects of generator operation.

  - Tested weekly

  - Generator has fuel capacity to operate continuously for 7 days

  - LRS has agreement for 24/7 access for refueling

- Recorded video surveillance of all access points, and security mechanism access to hosting facility

- The data center is restricted to authorized LRS Personnel. A security company provides a checkpoint system for our cameras, card access, water, fire, glass breakage, and HVAC monitoring. Card access reader logs as well as security camera output are archived for future reference. The data center is built of fire retardant materials with a separately monitored HVAC system. In the event of an alarm, appropriate emergency personnel and LRS staff respond to the situation.

Network services for the Managed Infrastructure, including, but not limited to:

- Firewall and router management for the Managed Infrastructure

- Network optimization for the Managed Infrastructure

- Managed Infrastructure network diagram maintenance

Monitoring services for the Managed Infrastructure, including, but not limited to:

- System performance monitoring
- System utilization monitoring
- System availability reporting
- Capacity optimization planning
- Downtime tracking and validation

**Network Security Strategy for Intrusion Detection and Prevention**

LRS has invested in a multi-layered approach to securing hardware and software on a 24 hour/day, 7 day/week basis. Working from the outside in, LRS provides several layers of firewall and VLAN's to segregate the information that is allowed on to the physical network. This provides immediate security results for unwanted communication traffic. LRS also utilizes an intrusion prevention system (IPS) which is monitored by its internal IT staff. Past history of LRS' environment as well as current activity is continually monitored by LRS for malicious network communications (virus, spyware, Trojans and worms). LRS also uses automated systems for maintaining virus software (including signature files) and patches for all of our systems.