

Software as a Service FAQ's

The following is a collection of the most frequently asked questions about our Software as a Service (SaaS) hosting services. If you need additional information on any of these topics or on a new topic please feel free to contact us at any time.

1.0 – FACILITIES

Datacenter features include:

- Secure limited access facility
- 16,000 square foot facility (all raised flooring)
- ~5,000 square foot main server space
- ~2,000 square foot secondary server space provisioned
- 100+ tons of cooling and environmental controls – Liebert
- 225KVA on-line UPS System – Liebert
- 750KWatt Kohler diesel generator (1,000 gallon fuel tank)
- FM 200 dry fire protection system in main server space
- Smoke and leak detection below raised flooring
- 72 fiber runs to main facility
- 18 fiber runs terminated in datacenter currently
- (3) Separate fiber optic (self healing) local network connections
- (3) Separate internet providers
- (4) Cisco 7200 series core routers
- All connectivity and routing is fully redundant with auto failover
- Cisco routers / firewalls / switches
- 24 x 7 system monitoring for all facility systems

All fiber services to our datacenter are ethernet facilities. We have control over maximum bandwidth capability so as we need additional bandwidth we simply provision it in our routers.

We also have ample facility for all copper-based connectivity services from standard phone lines to T1, T3, and larger.

We also support all types of point-to-point private facilities as well.

2.0 – CONNECTIVITY

- a) What internet providers are we currently using?
- b) How much bandwidth does each carrier provide to the facility that would host our apps?
- c) Is routing redundant for your connections?
- d) Can you reverse route in the event of a failure?

Facility Type	Internet Carrier	Base Bandwidth	Maximum Bandwidth
ATM 155Mbps Fiber Self Healing Ring	Cincinnati Bell Fuse	10 Mbps	100 Mbps
Gigabit Ethernet Fiber Self Healing Ring	Level (3)	15 Mbps	100 Mbps
100 Mbps Ethernet Fiber Self Healing Ring	Time Warner Telecom	10 Mbps	100 Mbps

All three internet connections are on separate self healing fiber-optic networks. There are multiple entry points for the fiber networks into our facility.

We maintain (4) Cisco 7200 series routers at the core of our network. These routers allow us to hold the entire routing table for the internet at all times in our network so we always know the best route to any destination on the internet.

We also maintain BGP routing capability with all of our carriers so in the event of a failure with any one of our carriers we can route traffic through all remaining carriers to maintain total network redundancy at all times.

We never saturate our connectivity to more than 30% so that in the event of a total failure of any two carriers we will have adequate reserve bandwidth available through our remaining carrier(s) to handle our client's needs.

- e) How many IP addresses have you been assigned by each carrier for the facility that our applications would be hosted on?

We maintain our own IP's, we currently have a 4,096 IP range allocated from ARIN. This can be expanded as needed.



3.0 – DATA BACKUP

a) What type of backup hardware and software do you use for the hosted application environment?

We employ a multi-drive Dell Power Vault 136T LTO-3 Tape Drive System, using Veritas Backup Exec with all Open File Agents. Each tape has a capacity of 800 GB of data. The tape drive has a capacity of up to 6 tape drives and 72 tapes in the auto loader. All tapes are bar coded and setup for both on-site and off-site rotation.

b) What type of offsite storage schedule do you employ?

We have 2 scenarios for off-site data storage.

We work with each client to configure a backup server at the client's primary business location. This accomplishes two goals.

1. By utilizing a backup server at the client's location we can have as many days of backup data as desired. We usually configure anywhere from 10 – 30 days of live backup on the remote client's server. This is a very efficient cost effective way to handle backup. We employ the same live backup configurations as described in the previous section.
2. In most hosting environments the main point of failure is the internet connectivity at the client side of the connection. We have multiple redundant connections to the internet but in almost all cases our client's do not. So by configuring a server at the client side to handle backups we are also providing a way to for our clients to have access to their data in the event of an internet connectivity interruption.

Many times we will take the backup server at our client's location and configure it to allow a certain number of users to be able to run a thin client session on that server. We will work with our client to determine the number of "mission critical" user sessions they would need in the event of a connectivity failure. If the client needs to modify the data on their server we can then take that data and sync it back up to our server farm when normal connectivity is restored.

In addition to the client based off-site backup we also have an off-site backup location for all of our farm specific data.



4.0 – ENVIROMENTAL CONTROLS

a) What type of cooling systems do you use?

There are five Liebert 20-ton environmental units in the main datacenter space (approx. 5,000 square feet). There are additional 10-ton units in the ancillary datacenter spaces as well. The units are networked together into a central console that enables them to all communicate with each other. On seven minute intervals the units will sample the air and then make the appropriate adjustments to maintain the assigned temp and humidity settings.

We have a total of 100-tons of cooling capacity in the main datacenter area.

b) Do you have fully operational redundant cooling units?

Yes we do! The Liebert systems have internal compressor redundancies as well as having multiple (five) units networked together.

5.0 – POWER SYSTEMS

What type of backup power considerations do you have in place?

All of the electrical power is supplied to the datacenter via Liebert 225Kva On-Line UPS (Uninterrupted Power Supply). All of the devices connected are actually running from the cleaned filtered battery power of the Liebert Unit. In the event of a power failure the Liebert Unit will run the datacenter for up to 4 hours. Within 10 seconds of a power failure our Kholer 750KWatt diesel generator will resume and maintain power to the datacenter until normal utility power is restored.

The Kholer diesel generator powers the following equipment in the event of a failure.

Liebert On-Line UPS System	Liebert Environmental Systems
Electronic Keycard Security System	Lighting Systems

The generator has a 1,000 gallon fuel tank that can keep the generator operational for up to 100 hours of continuous operation. We have agreements with (2) sources of Diesel fuel providers to have fuel delivered on a 12 hour notice.

6.0 – SECURITY SYSTEMS

The datacenter is a completely locked down limited access facility. We employ the following security measures:

- 24 x 7 onsite security personnel
- Security personnel patrol the facility during off hours
- Locked limited access facility
- Key card access only
- All visitors (customer and/or vendor) require an escort