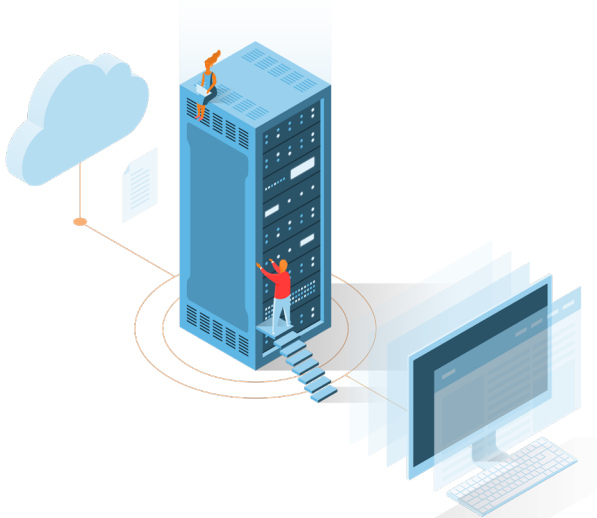


## Abacus Solutions & Green Cloud for Windows Cloud

Abacus Solutions, an established IBM i Cloud and Managed Services provider, leverages its strategic partnership with Green Cloud to extend the same degree of care and expertise to our customers' Windows workloads.



### Our Windows Cloud Partnership

Abacus stacks operations management on top of the Green Cloud Infrastructure as a Service (IaaS) to create a robust Platform as a Service (PaaS) solution for our Windows customers. Both companies house their respective cloud infrastructures in the same data center facilities, operated by QTS, and take advantage of physical proximity to eliminate concerns about latency. Customers use Abacus connectivity to access the cloud so there are no additional or unnecessary hops.

We then package all this together in one contract to keep things simple, and act as the primary point-of-contact for ultimate accountability. The Abacus and Green Cloud best-of-breed cloud solution can provide the platform-specific focus and expertise required to successfully manage the enterprise Windows workloads that are critical to your business operations.

#### About Green Cloud

Green Cloud - <http://greenclouddefense.com> – founded in 2011 and headquartered in Greenville, SC, is a partner focused windows cloud provider offering Infrastructure as a Service (IaaS), Backup as a Service (BaaS), Disaster Recovery as a Service (DRaaS), Managed Security, Office 365 Backup (O365 Backup), and Desktops as a Service (DaaS). Green Cloud has invested heavily in our architecture, infrastructure, & engineering teams in order for our clients to deploy enterprise cloud solutions. Our mission is for our clients and partners to consume our Windows/Linux workloads for their computing needs with unprecedented client support.

#### About Abacus Solutions

Abacus Solutions - <https://www.abacusllc.com> – headquartered in Atlanta, GA, is an IBM i focused platform provider offering customer premise, managed services, and cloud service solutions. The AS/400 is our wheelhouse and has been at the Abacus core since our founding days in 2000. Our multitude of skills and offerings for the IBM Power Systems, System i, IBM iSeries, and the AS/400 is unmatched in the industry. We're positioned and ready to meet our goal: Run the last 10,000 IBM i environments with, and for, our customers.

## About Green Cloud

### Services



IaaS



DRaaS



BaaS



DaaS



Security

### Compliance



### Technology

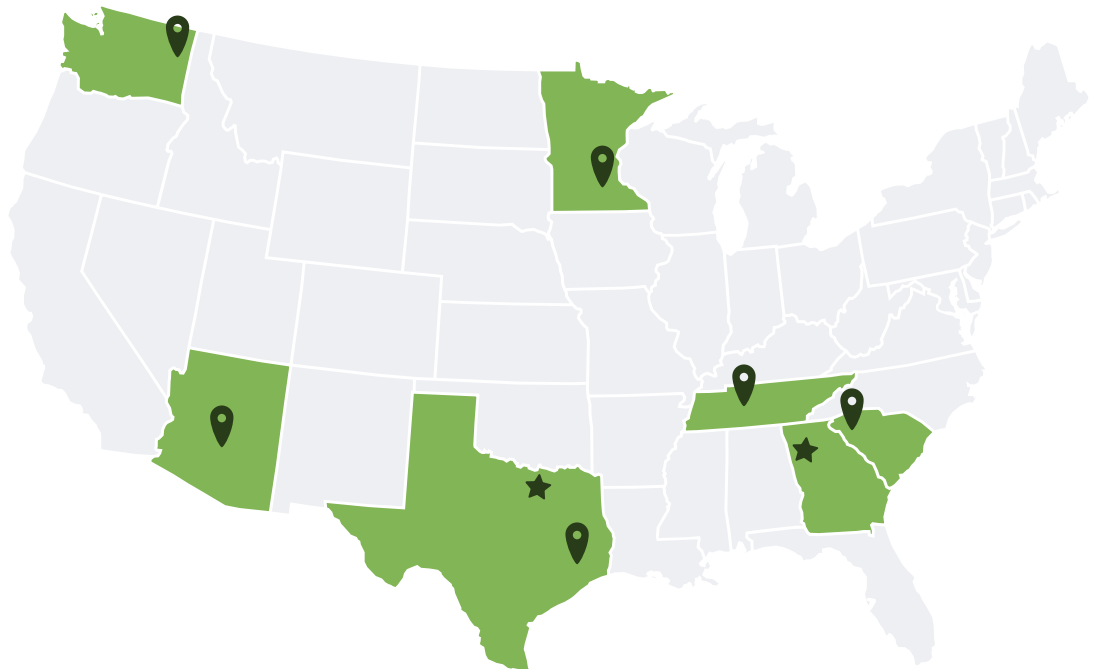
Green Cloud's technology is backed by partnerships with some of the most powerful and respected names in the business.



### Locations

Green Cloud data centers are held to the highest standard and are located in seven strategic locations across the country.

- \* Atlanta, GA
- \* Irving, TX
- Houston, TX
- Nashville, TN
- Greenville, SC
- Minneapolis, MN
- Phoenix, AZ
- Spokane, WA (SOC)



# Abacus and Green Cloud Windows Operations Management Responsibility

	SERVICE	PREMISE	HYBRID	CLOUD
PRODUCTION ENVIRONMENT	Application	Customer	Customer	Customer
	Operations Management - High	Customer	Customer	Customer
	Network Connectivity	Customer	Customer	Customer/Abacus
	Operations Management - Medium/Low	Customer	Customer	Abacus
	Backups (Local)	Customer	Customer	Abacus/Green Cloud
	Hardware	Customer	Customer	Green Cloud
	Data center	Customer	Customer	Green Cloud
TARGET ENVIRONMENT	Application	Customer	Customer	Customer
	Operations Management - High	Customer	Customer	Customer
	Network Connectivity	Customer	Customer	Customer/Abacus
	Operations Management - Medium/Low	Customer	Customer	Abacus
	Backups (Offsite)	Customer	Customer/Abacus/Green Cloud	Abacus/Green Cloud
	Disaster Recovery	Customer	Customer/Abacus/Green Cloud	Abacus/Green Cloud
	Hardware	Customer	Green Cloud	Green Cloud
	Data center	Customer	Green Cloud	Green Cloud

PREMISE	Customer is responsible for all Production and Target environments.	
HYBRID	PRODUCTION	Customer is responsible for all Production environments.
	TARGET	Target cloud environment options provided by Abacus and Green Cloud with response, uptime, and more SLAs.
CLOUD	Production and Target cloud environments provided by Abacus and Green Cloud with response, uptime and more SLAs. Customer is responsible for all applications and high level of operations management.	

## Abacus and Green Cloud Windows Operations Management Responsibility Details

		BASIC	LEVEL 1	CUSTOM
SERVICE	DESCRIPTION	RESPONSIBLE PARTY		
Host Level Monitoring & Alerting	Constant monitoring and alerting of host infrastructure and resources (i.e. - physical hardware infrastructure such as servers, hard drives, server components, power, etc.)	Green Cloud	Green Cloud	Green Cloud
Host Level Patch Management	Patch management of host infrastructure: firmware, ESXi host, and additional host level components (networks adapters, HBAs, etc.)	Green Cloud	Green Cloud	Green Cloud
Backup Notifications	As contracted and requested, email notifications regarding confirmations for Abacus backups. Frequency is dependent on customer request.	Green Cloud/ Abacus	Green Cloud/ Abacus	Green Cloud/ Abacus
Manage Backups	Per supported contract, Abacus provides daily backups retained for 30-day periods. Additionally after 24 hours, backups are replicated to offsite data center for site-to-site redundancy. Complete backups and/or file level backups can be restored at the request of the customer.	Green Cloud/ Abacus/ Customer	Green Cloud/ Abacus/ Customer	Green Cloud/ Abacus/ Customer
DR Notifications	Per supported contract, email notifications regarding disaster recovery alerts and status. Frequency is dependent on customer request.	Green Cloud/ Abacus/ Customer	Green Cloud/ Abacus/ Customer	Green Cloud/ Abacus/ Customer
Manage DR	Per supported contract, in the event a disaster is declared Windows Virtual Machines are restored based on disaster recovery planning.	Green Cloud/ Abacus/ Customer	Green Cloud/ Abacus/ Customer	Green Cloud/ Abacus/ Customer
OS Configuration Best Practices	Provide best practices per vendor specifications as approved by Abacus Support Team. Up to 3 restores will be processed per environment/month.		Abacus	Abacus
Monitor/Alert VM Status (Guest OS)	Provide monitoring and alerting based on VM status. Monitor boot-time. Custom monitoring/alerting can be configured per Abacus approval.		Abacus	Abacus

		BASIC	LEVEL 1	CUSTOM
SERVICE	DESCRIPTION	RESPONSIBLE PARTY		
Monitoring/Alerting CPU Utilization	Monitor CPU usage and trigger alerts for utilization above 70%. Custom monitoring/alerting can be configured per Abacus approval.		Abacus	Abacus
Monitoring/Alerting Memory Utilization	Monitor memory usage and trigger alert when utilization is above 75%. Custom monitoring/alerting can be configured per Abacus approval.		Abacus	Abacus
Monitoring/Alerting Disk Utilization	Monitor disk usage and trigger alert when free disk space is less than 15% of the volume remaining. Custom monitoring/alerting and thresholds can be configured per Abacus approval.		Abacus	Abacus
ICMP Alerting	Agent based device management. Heartbeat ping to confirm constant VM uptime. If unable to reach the IPv4 of the VM, an alert will be triggered to investigate this matter.		Abacus	Abacus
Reporting	Performance reporting to monitor monthly usage and utilization. Graphical performance report is provided with statistics for CPU, memory, and disk usage and utilization.		Abacus	Abacus
Custom Windows Service Alerting	Submit ASC tickets and reach out to customer regarding infrastructure alerts within the VM infrastructure. Definitions provided by customer and approved by Abacus support team.			Abacus
Custom Critical Event Alerting	Web based monitoring via WMI to discover and manage your environment. Dependent on customer requests as approved by Abacus support team.			Abacus