



vGRID Infrastructure

Products & Services Definitions

LayerX

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Introduction

LayerX Cloud Limited, through platform brand 'vGRID', delivers on-demand hosted services over the Internet providing technology solutions that were once only available to large corporates. These enterprise technologies are now available to smaller organisations as a result of economies of scale and buying power. Coupling these technologies with software interface 'smarts' make the programs and technology easier to use – we call this the vGRID Service Provider Stack.

The purpose of this document is to define each of the products and services available through the vGRID infrastructure services platform. These definitions represent the current go-to-market thinking and use-case understanding. All vGRID services are delivered via the vGRID Service Provider Stack – a software platform designed from the ground up to deliver cloud services in real-time.

What is vGRID?

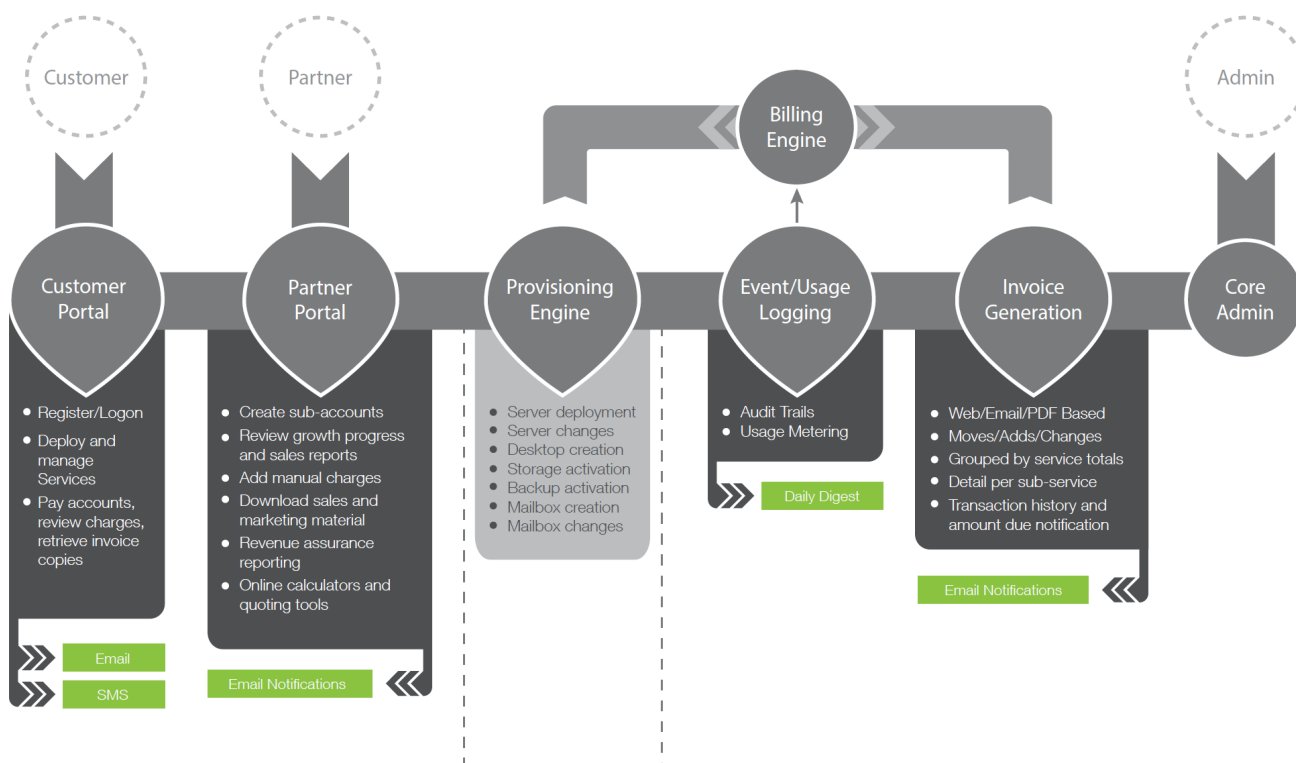
Cloud computing has become an important tool for IT managers in controlling the cost and complexity of business-critical applications and data. Cloud computing is compelling to enterprises because it allows them to consolidate resources, provision services more quickly, and even rationalise costs more effectively with new business models.

As virtualisation is now a critical component to an overall IT strategy, it is important to choose the right vendor. vGRID uses VMware for server infrastructure because it is the leading business virtualisation infrastructure provider, Veeam as the industry leader in virtualisation backup services, and HPE 3PAR StoreServ as the world leader in high performance SAN technology, offering the most trusted and reliable platform for building our cloud platforms.

vGRID delivers industry-leading performance, increased flexibility, and benefits from high availability self-service enterprise infrastructure and platforms.

vGRID Service Provider Stack (SPS)

The software platform responsible for making the hard stuff easy, for empowering end-users to manage their own information technology needs, is known as the vGRID Service Provider Stack. Developed from the ground up to enable elastic cloud services consumption, the platform delivers automation for the provisioning, management and billing of cloud based services. Accommodating scale without the burden, cost and delays attributed to a provisioning process involving human touch-points.

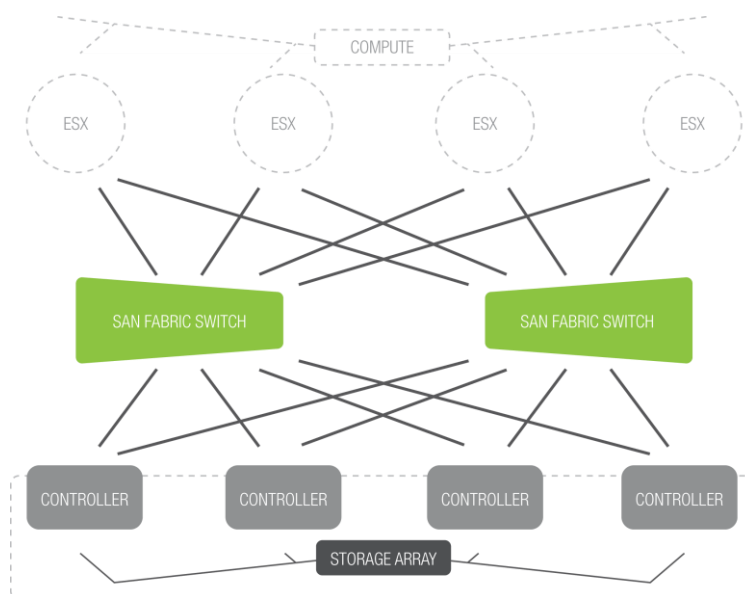


Virtual Machines – vGRID Enterprise

A virtual machine (VM) is a mixture of compute and storage resources consumable in the same way a physical machine would be, but with a significant number of additional benefits. The use-cases for a VM are widespread, anything from a web-application through to enterprise software solutions, delivered across a VPN or a direct LAN extension. To differentiate vGRID from other providers we focus on two very prominent benefits – all VMs on the vGRID platform enjoy industry leading resilience and flagship performance.

Resilience

Operating a VM on the vGRID platform means the server resources are delivered from an inherently resilient cluster of compute nodes, all with multi-path attachment to highly resilient storage area networks (SAN). The following diagram shows the structure of a typical vGRID compute cluster.



Every compute node connects to multiple controllers and every controller connects to every other controller as well as the storage environment (mesh architecture). If the compute node that a VM is running on has any sort of failure or fault, the VM will immediately reboot on an alternate compute node and continue, minimising the impact of any unforeseen hardware or system failure.

Performance

With HPE 3PAR StoreServ at the core of every vGRID cluster, boasting the latest in disk technologies and performance management, customer applications can rely on and expect a consistent level of performance. With tiered storage and live migration technologies in the stack, customers can also move workloads into higher performing or lower cost modes as and when required.

The performance of any application requires a balance of resource capability, CPU / RAM / Disk, able to deliver what the application needs, when it needs it. Improper balance can cause unforeseen bottlenecks, for example too much RAM and not enough CPU can create a situation where the server becomes ‘CPU Bound’ because too much CPU resource is being tied up dealing with RAM allocation, addressing and coping with all the pages of data stored in memory. On the flip-side, too many CPU’s and not enough RAM can result in a combination of excessive CPU load not related to the application itself and increased disk IO caused by the constant need to swap pages of data out of RAM and on to the disk storage to free up RAM for active threads.

Whilst there is no avoiding the need to plan and tune the resources assigned to a server, the vGRID platform ensures that all resource elements are high performing and able to cope with even the heaviest workloads. Taking this one step further, the vGRID platforms offer multiple tiers of storage based on performance requirements, aligning storage costs with storage performance.

- All VM infrastructure is delivered via VMware vCloud v6.x and is vCloud certified
- All backups are performed using Veeam Backup and Restore Availability Suite v9.x.

Backup Plans – vGRID Enterprise

	Basic	Premium	Premium Plus	Enterprise	Enterprise Plus
Daily On Site	14 Days	14 Days	14 Days	14 Days	14 Days
Hourly On Site*	-	-	-	2 Days	2 Days
Weekly Off Site		12 Weeks	12 Weeks	12 Weeks	12 Weeks
Monthly Off Site	-	-	12 Months	-	12 Months
Cost per GB of Disk**	\$0.50 /GB	\$1.00 /GB	\$1.25 /GB	\$1.25 /GB	\$1.50 /GB

On Site Data

All references to “On Site” relate to the storage of backup data in the same datacenter location as the production Virtual Machine (VM). This backup data is stored on separate physical media from production storage and can be used to restore an entire VM or files within a VM at the local site. Because this data is stored at the same location as the production data however, the risk of data loss is the same as the production data in the event of a catastrophic event at the location itself, such as a building fire or natural disaster.

Off Site Data

All references to “Off Site” relate to the storage of backup data in a remote site connected to the primary site by high speed fiber optic networking. This ensures the data is geographically dispersed and not at risk of loss that could be caused by a catastrophic event at the production site. The restoration of this remote site data is dependent upon the availability of resource capacity at the remote site at the time of the event. To guarantee availability of resources at the remote site a “DR Reservation” package would need to be included in the solution.

Notes

* Hourly backups are performed between the hours of 7am and 6pm, Monday to Saturday.

** Costs are per GB of disk presented to the VM, per calendar month.



File Backup – vGRID Protect

vGRID Protect file level backups run in almost real-time behind the scenes ensuring users can conduct their daily business with the confidence of a very granular incremental backup solution.

Leveraging the well-known and very elegant software solution from CrashPlan, the vGRID Protect file level backup solution provides end-users with full control over backup policies and recovery processes. It also provides for multiple location backups (local USB hard drive, cloud target or another computer) and has mobile device clients for remote access to backup repositories.

By running silently in the background, vGRID Protect continuously protects data created and stored on employee laptops and desktops without disruption. vGRID Protect automatically backs up data to the destinations of your choice, with no user intervention required. Users can quickly and easily restore data on their own, to any device.

Enterprise-Grade Security

All files are encrypted on the device and remain encrypted in-transit and at rest. Support for two-factor authentication, directory services and single sign-on facilitates secure user management.

Secure Mobile Access

The mobile app adheres to the same security as the desktop app while keeping employees productive and in touch with all their work, no matter where they are or which device they use.

Restore Wherever You Go

Whether you're at your desk, on your phone, at home or at the airport, vGRID Protect provides secure, self-service file restore, and access on any network or platform.

Protect Every Device

Protect all major desktop operating systems and provide file access on all major mobile platforms with a single solution.



Infrastructure Backup – vGRID Cloud Connect

Get your backups off site without the cost and complexity of managing an offsite infrastructure. Veeam Cloud Connect provides a fully integrated, fast and secure way to backup and restore from the cloud.

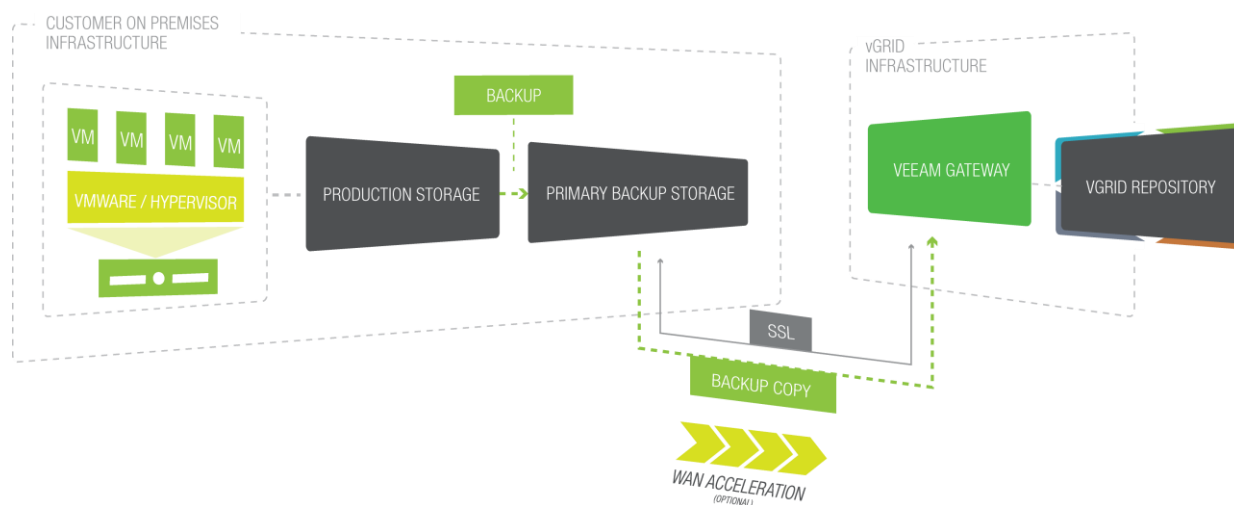
Simply point your backups to the vGRID Infrastructure Backup repository – offsite backup has never been so easy!

The added benefit of targeting the vGRID Infrastructure Backup repositories is that these backups can be ‘powered on’ as operational machines on the vGRID platform in the event of any failure of the on-premise production solution (capacity reservation required).

A Veeam Cloud Connect license is required per VM being backed up. A Veeam Backup and Replication VM instance license is required per VM being restored from the backup within the vGRID infrastructure - reported only for the month(s) active.

The process of testing the replicated data, for BCP integrity compliance, takes only a few minutes because the VM’s can be mounted into the vGRID compute clusters directly from the vGRID Cloud Connect backup store. This tier of disk is very slow compared with production workload tiers but should be fine for most integrity check functions.

The process of going into production from the replicated data is also very smooth as the VM’s can be mounted into the vGRID compute clusters within a few minutes and powered on, then whilst running the underlying disks can be live-migrated to the production storage tiers negating the need for a full ingest of the data prior to powering on the VM.



Key Benefits:

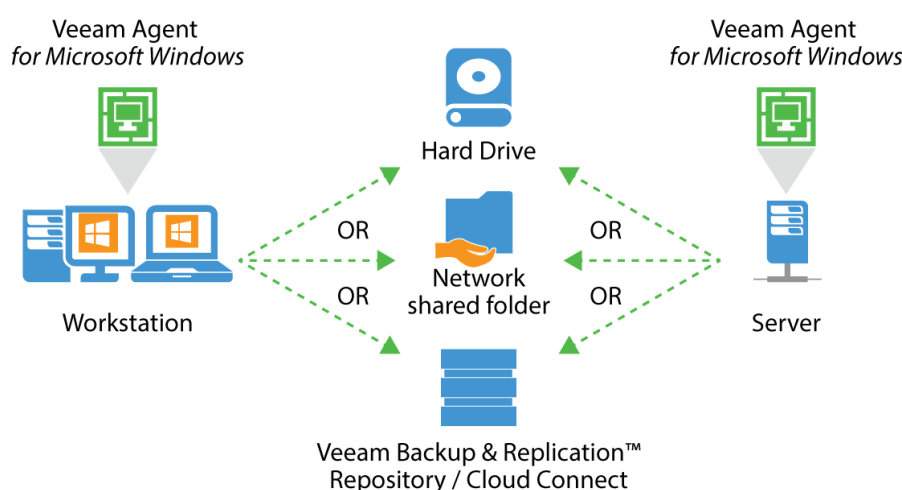
- Complete visibility and control - Access and recover data in hosted backup repositories directly from the backup console; track cloud repository consumption and receive reminders and alerts for storage usage
- A modern backup architecture – Leverage the latest in backup technology from Veeam, including backup copy jobs with built-in WAN acceleration, incremental-forever backups, GFS (grandfather-father-son) retention policies and more
- End-to-end encryption – Rest easy by encrypting all data at source (before it leaves your network perimeter), data in flight and data at rest, without negatively impacting the data reduction ratios of built-in compression and WAN acceleration.



Infrastructure Backup – vGRID Cloud Agent

Due to various factors, including complex hardware configurations and regulatory compliance requirements, some physical servers and workstations cannot be virtualized. And everyday occurrences such as lapses in connectivity, hardware failures, file corruption — even ransomware or theft — can leave an organization’s data at risk.

Veeam Agent for Microsoft Windows — a key component of the Veeam Availability Platform — solves these issues by closing the gap that some enterprises face with large, heterogeneous or multi-cloud environments and further enables workload mobility by delivering Availability for Windows-based workstations, physical servers and cloud instances.



Backup

Changed block tracking (CBT) driver¹ NEW: Improve backup performance and decrease the backup window for server workloads, in comparison to existing driver-less change tracking, to meet more stringent business requirements for mission-critical applications and high transactional workloads

Active full backups: Mitigate risk and ensure backup chain continuity by scheduling periodic active full backups

Synthetic full backups: Eliminate the need for a periodic full Windows backup by creating forever-incremental backups that save time and storage

Application-aware processing¹ NEW: Create application-consistent backups with advanced, application-aware processing (including transaction log truncation)

Server-specific scheduling and retention¹ NEW: Advanced scheduling options and server-based retention logic to protect most critical server applications, including Microsoft Active Directory, Exchange, SharePoint, SQL Server, Oracle and file servers.

Recovery

Application-item recovery: Use Veeam Explorers™ for Microsoft Active Directory, Exchange, SharePoint, SQL Server and Oracle to restore application items directly from backup files

Instant Recovery to Microsoft Hyper-V VM: Quickly restore service to users by starting a VM directly from agent backup file

File indexing and search: A catalog of files enables effortless search of individual files so you can find and restore a file without knowing its precise location or when it was deleted

Integration with Veeam Backup & Replication: Take full advantage of Veeam backup repositories as target locations for your Veeam Agent for Microsoft Windows backup jobs

Transaction log backup for databases: Achieve low RPOs for Microsoft SQL Server and Oracle databases

vGRID Retail Price Guide

The following price book should be used as a guide for the suggested retail pricing of products and services delivered from the vGRID platform. Certain markets and certain opportunities may require special pricing – please contact us for this. A quote calculator can be found in the partner portal. Note: Some services have setup fees, please contact the service desk for more information.

vGRID Enterprise – Virtual Server Resources

Server Resource – Base VM Fee	per VM	\$90.00
Server Resource – vCPU	per vCPU	\$22.00
Server Resource – RAM	per 1GB	\$30.00
Server Resource – Hard Disk: Performance+ (Enterprise SSD)	per 1GB	\$ 0.75
Server Resource – Hard Disk: Performance (Enterprise SSD)	per 1GB	\$ 0.50
Server Resource – Hard Disk: Capacity (Enterprise NearLine)	per 1GB	\$ 0.20
Backup Policy – Basic: Daily on-site with 14-day retention	per 1GB	\$ 0.50
Backup Policy – Premium: Basic + Weekly off-site with 12-week retention	per 1GB	\$ 1.00
Backup Policy – Premium Plus: Premium + Monthly off-site with 12 month retention	per 1GB	\$ 1.25
Backup Policy – Enterprise: Premium + Hourly (7am-9pm) with 2 day retention	per 1GB	\$ 1.25
Backup Policy – Enterprise Plus: Premium Plus + Enterprise	per 1GB	\$ 1.50

vGRID Enterprise Software – for Virtual Server Resources

Software – Windows Server Standard Edition (up to 4 vCPU)	per 4 vCPU	\$30.00
Software – Microsoft SQL Server Web Edition (minimum is 4vCPU)	per 2 vCPU	\$25.00
Software – Microsoft SQL Server Standard Edition (minimum is 4vCPU)	per 2 vCPU	\$380.00
Software – Microsoft SQL Server Enterprise Edition (minimum is 4vCPU)	per 2 vCPU	\$1,580.00

vGRID FTP Storage

FTP Container (FTP or FTP over SSL) Storage Consumption	per GB	\$0.10
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vGRID Protect

Software license – allowing up to four (4) devices to be backed up	per license	\$15.00
Storage – Metered by peak storage consumed in the month	per 1GB	\$0.10

vGRID CSP Licensing and Azure Workloads

Using the vGRID Customer Portal, you can instantly add or remove licenses, and add new Microsoft services directly to your account without having to call or email and wait 24 hours for someone to do it for you. With vGRID you are finally in **control!**

A key benefit is one single bill for simplified billing administration and reporting insights.

vGRID is a Tier-1 CSP Provider on the Microsoft Partner Program.

Software subscriptions and per user license allocations	per subscription	request a quote
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vGRID Cloud Connect & Cloud Agent

Software license – Veeam Cloud Connect Copy License (backup target only)	per VM	\$12.00
Software license – Veeam Cloud Connect Replication License (backup target only)	Per VM	\$24.00
Software license – Veeam VM Instance License (allows VM to be powered on in vGRID)	per VM	\$25.00
Software license – Veeam Agent for Windows/Linux (enables Cloud Connect target)	per Agent	\$32.00
Software license – Veeam Agent for Workstation (enables Cloud Connect target)	per Agent	\$9.50
Storage – Sold in 'storage packs' that can be stacked as needed		
Per 1TB providing off-site backup retention at \$0.100 per GB (10 cents)	per 1TB	\$100.00
Per 10TB providing off-site backup retention at \$0.050 per GB (5 cents)	per 10TB	\$500.00
Per 100TB providing off-site backup retention at \$0.025 per GB (2.5 cents)	per 100TB	\$2,500.00

vGRID Enterprise Voice

SIP Line (single call, in or out)	per Line	\$10.00
Toll Free Number (inbound toll free routing)	Per Number	\$35.00
DDI Number (local/regional number)	per Number	\$2.00
Number Porting (from Vodafone or Spark)	Per Number	\$14.00
Number Porting (from any other provider)	Per Number	\$28.00

vGRID Voice Calling Rates

Outbound Calling – Local	Per Minute	\$0.03
Outbound Calling – National	Per Minute	\$0.05
Outbound Calling – Mobile	Per Minute	\$0.10
Inbound Toll Free – Local	Per Minute	\$0.06
Inbound Toll Free – National	Per Minute	\$0.10
Inbound Toll Free – Mobile	Per Minute	\$0.27
International / Special / Other	Per Minute	POA

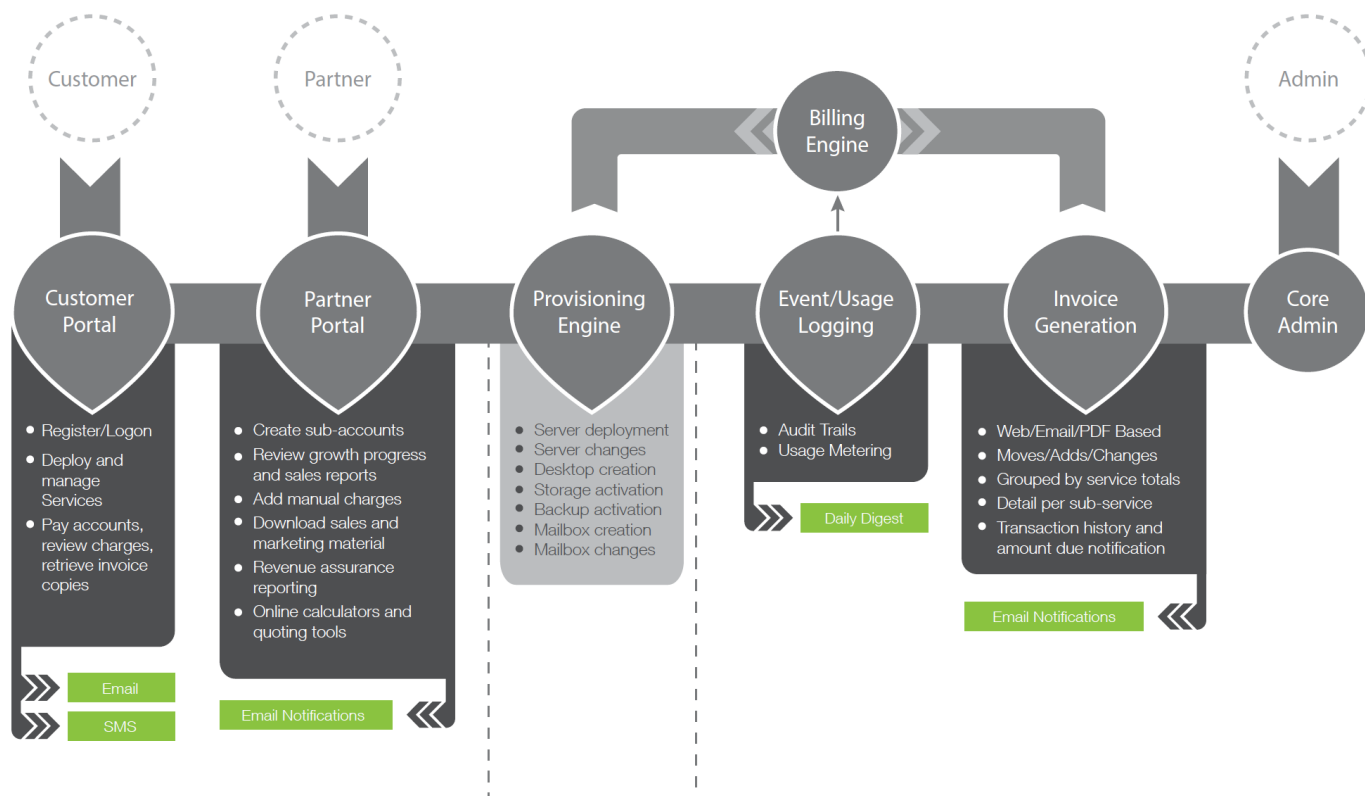
vGRID SecurePath

SecurePath UFB 100 – Layer 2 direct to your vGRID servers	starting from	\$120.00
SecurePath UFB 200 – Layer 2 direct to your vGRID servers	starting from	\$140.00
SecurePath UFB 1000 – Layer 2 direct to your vGRID servers	starting from	\$160.00
SecurePath Wireless – Layer 2 direct to your vGRID servers	starting from	\$175.00

Note: All pricing is monthly billed in advance, in New Zealand Dollars and exclusive of applicable taxes and subject to change.

vGRID Service Provider Stack

The software platform responsible for making the hard stuff easy, for empowering end-users to manage their own information technology needs, is known as the vGRID Service Provider Stack. Developed from the ground up to enable elastic cloud services consumption, the platform delivers automation for the provisioning, management and billing of cloud based services. Accommodating scale without the burden, cost and delays attributed to a provisioning process involving human touch-points.



The decoupling of each subsystem that drives the vGRID environment not only ensures no single subsystem can adversely impact the rest of the stack, but also allows for constant evolution and upgrade of the tools and technologies employed without major disruption to the myriad of user interfaces. This decoupled approach also allowed the development to take a ‘tool for the job’ approach to design and build, allowing technologies to be used where they best fit rather than attempting to achieve all functions within a single technology or framework.

The vGRID Service Provider Stack is also endlessly scalable. Billing functions operate on a queue system ensuring no single account processing event can disrupt the remaining accounts. Every subsystem within the stack can also be hosted on separate servers and even separate locations, allowing for both scale and resilience.

Customer Portal

When an end-user signs up to the vGRID service, they do so via the customer portal. The registration process is safe-guarded by enforcing the entry of a verification code that is sent to the mobile number provided during sign-up. This prevents anonymous usage of the portal and provides a traceable contact in the event of fraudulent or malicious activity. The activation of the account also requires verification of email address, ensuring the email account is real and accessible by the end-user – as this is where the majority of communications are sent.

Within the customer portal users are able to configure their account, add users and control access to account functions. If a user has access to manage a vGRID service such as VMs, the view below would be accessible and allow for the deployment, power management, resource allocation and remote console access to VMs on the account.

The screenshot displays the vGRID Virtual Servers management interface. On the left, there is a navigation sidebar with options: vGRID Demo, Account, Event Log, Services (with Virtual Servers selected), Exchange Mail, and Storage. The main content area is titled 'VIRTUAL SERVERS' and includes tabs for 'Virtual Machines' and 'Networking'. At the top right, there are buttons for 'Plugins', 'Data Center', and 'Task History'. A dashed box highlights a 'Create New Virtual Server' button. The interface shows a grid of virtual machine cards, each with a name, status (ON), and a table of specifications.

Virtual Machine Name	Status	Internal IP	CPU	RAM	HDD
APIADMINDEV01	ON	10.50.2.23	1 vCPU	3 GB	14 GB
APIADMINPROD01	ON	10.50.2.239	1 vCPU	2 GB	18 GB
APILBDEV02	ON		1 vCPU	1 GB	5 GB
APILBPROD03	ON		1 vCPU	1 GB	5 GB
APIPROD06	ON		4 vCPU	4 GB	8 GB
APIPROD07	ON		4 vCPU	4 GB	8 GB
APIPROD08	ON		4 vCPU	8 GB	8 GB

STEP 1
Enter Machine Details

Choose Location:

Machine Name:

Password:

Confirm Password:

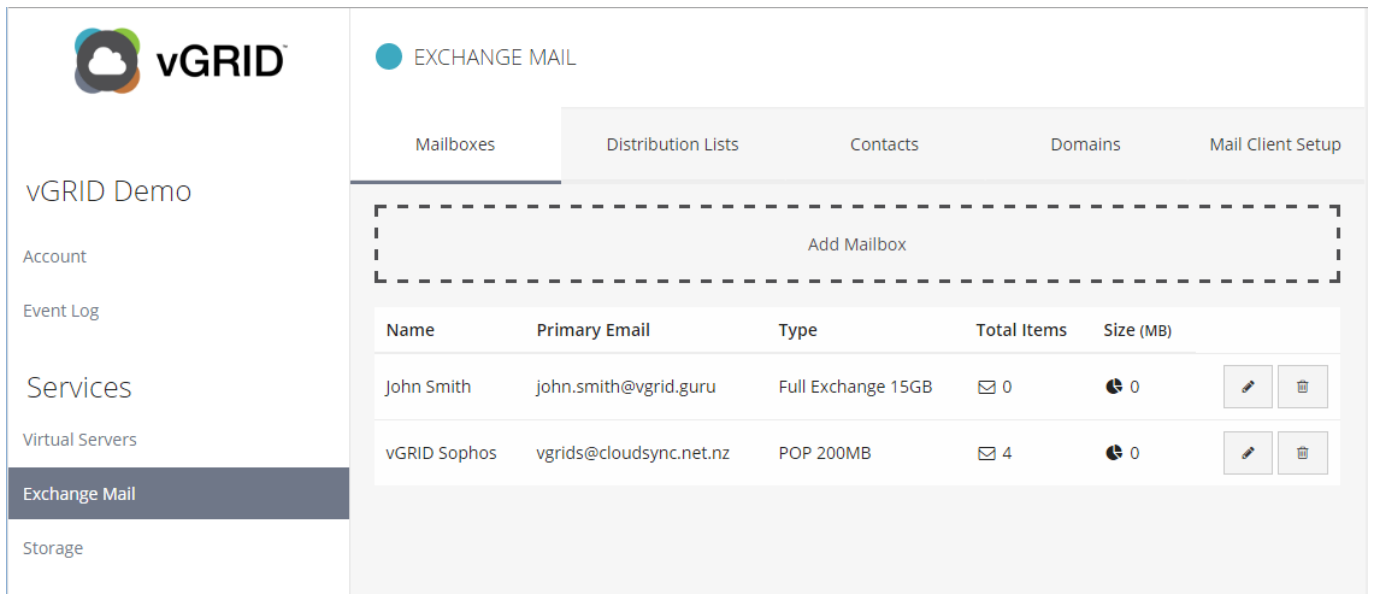
Cancel, I've changed my mind Next Step

Select A Backup Solution

☆	No Backup	Don't want a backup solution. No worries.	Free!	<input checked="" type="checkbox"/>
★	Basic	Daily backup onsite in the same location as the server, on 14 day rotation.	\$0.50 Per GB	Select
★	Premium	Basic backup (daily onsite) plus weekly offsite backups, on 12 week rotation.	\$1.00 Per GB	Select

Cancel Confirm





vGRID Mail (Hosted Exchange) is another fully-automated service allowing channel partners or end-users to directly manage the mailboxes, aliases, distribution groups and mail flow security for an organisation.

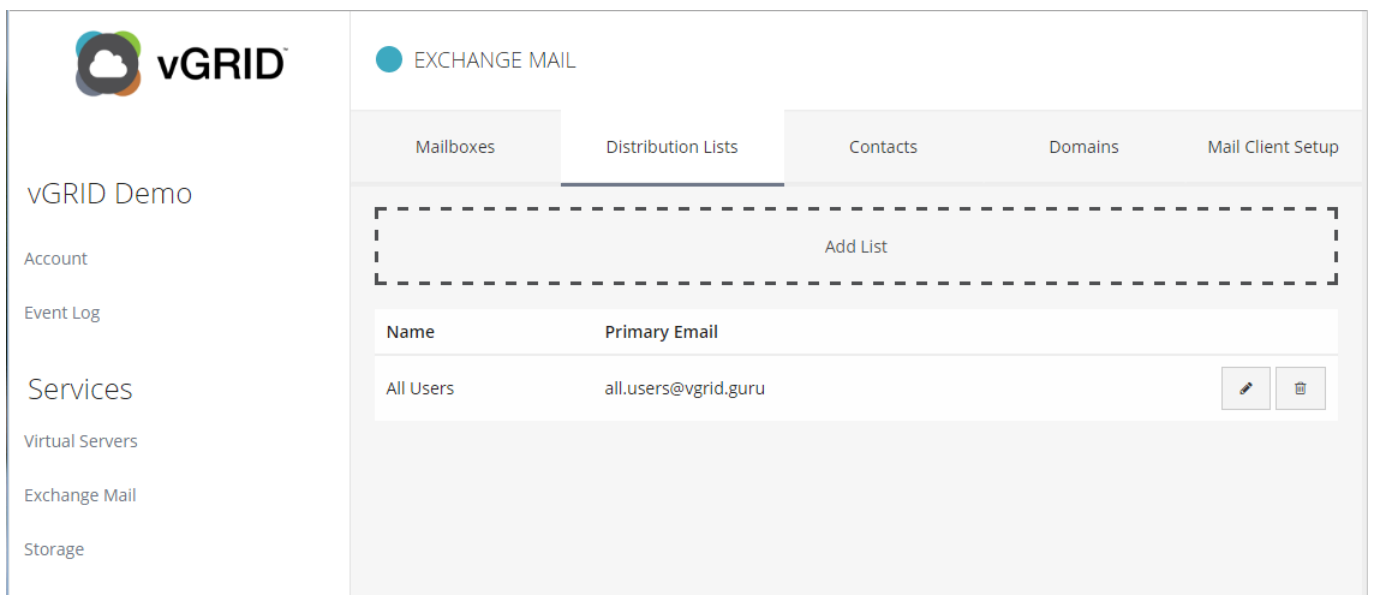


EXCHANGE MAIL

Mailboxes | Distribution Lists | Contacts | Domains | Mail Client Setup

Add Mailbox



Name	Primary Email	Type	Total Items	Size (MB)	
John Smith	john.smith@vgrid.guru	Full Exchange 15GB	0	0	 
vGRID Sophos	vgrids@cloudsync.net.nz	POP 200MB	4	0	 



EXCHANGE MAIL

Mailboxes | Distribution Lists | Contacts | Domains | Mail Client Setup

Add List

Name	Primary Email	
All Users	all.users@vgrid.guru	 

Partner Portal

**For Partners/Resellers Only*

The partner portal is a filtered view of the core admin system, providing channel partners with the same account visibility and sales insights that the vGRID support staff see. This common interface approach streamlines the support process by removing the 'our system is different' hurdle.

Financial functions such as adding a credit or disabling an account are restricted to the core admin user roles, however the partner portal still provides a comprehensive toolkit for channel partners to effectively create and manage vGRID customer accounts.



Network Status: ● 3 Scheduled Maintenance

Accounts ▾ Services ▾ Reports ▾ Operations ▾ Marketing ▾ Quotes ▾ Admin ▾ Bruce Trevarthen ▾

Search for a client

VGRID AUCKLAND DEMO
SUB ACCOUNT OF LAYERX CLOUD LIMITED

Account Tools ▾

Details CRM Discounts Invoices & Payments Micro-Transactions Users Projects Products & Services ▾ Zendesk Tickets Event Log MBIE

ACCOUNT		BILLING DETAILS (INHERITED FROM RESELLER)	
Account ID	A994D5D0-FFEA-4D61-9F90-B1ED9B760CFB	Billing Type	Never Bill
Known As		Current Balance	\$0.00
Account Manager	Bruce Trevarthen	Monthly Charges	\$0.00
Reseller:	LayerX Cloud Limited	Tax Code	GST (15%) (15.00%)
Address	New Zealand	PO Number	
Account Created	23-Oct-15 03:55 PM	Auto Bill	✘
Account Notes	Auckland Demo Account	Balance last updated	23-Oct-15 03:55 PM
SLA Comments		Charges last updated	16-May-18 12:00 AM
Security Code <small>max 6 characters</small>	Validate Caller		

CONTACTS (INHERITED FROM RESELLER)				
	Name	Phone	Email	Alternate Email
Technical	Bryce Farmilo	021567520	bryce@thecloud.net.nz	
Accounts	Doesjka Trevarthen		accounts@thecloud.net.nz	

Automated Billing Engine

**For Partners/Resellers Only*

The vGRID Service Provider Stack incorporates a fully automated billing engine to ensure activation of services or modification of assigned resources results in billable transactions.

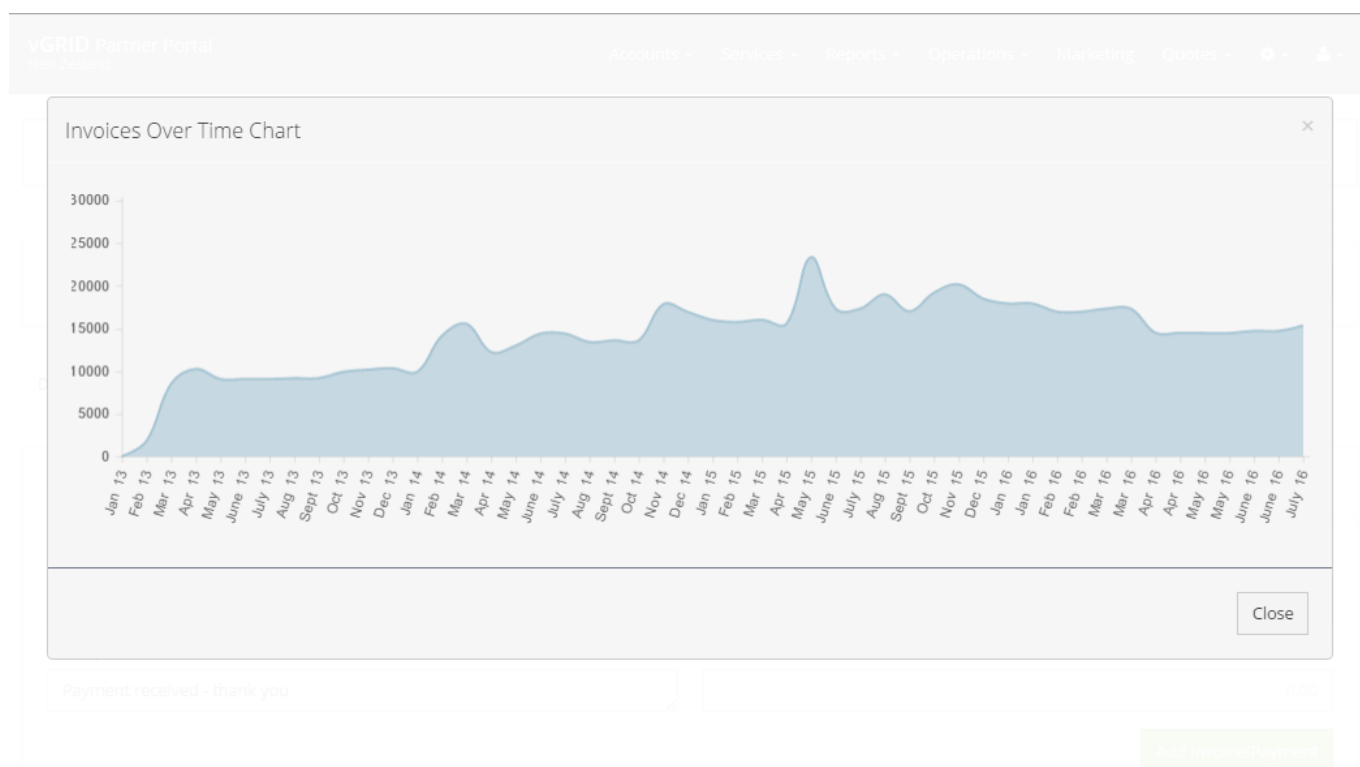
The billing engine collects resource change data hourly and rolls-up billable event transactions overnight (daily). When a new resource is deployed the billing engine will calculate a part-month charge for the balance of the current billing cycle. At the end of the billing cycle (calendar month) all changes for the period are represented on the invoice as moves/adds/changes.

Monthly automated invoice creation occurs on the 1st day of each calendar month. Any service that is active at the start of the period (12am on the 1st of the month) is billed for the full calendar month in advance.

As an example of this:

A customer deploys a \$100 service on the 15th of the month and the month (November) has 30 days, the system generates a part-month transaction for \$50 being the pro-rated amount for the balance of the billing period. At the end of the month the system creates the invoice for this customer, the invoice contains the \$50 part-month charge and a \$100 full month charge for December (the month in advance).

All billing information for an account is kept in original format (non-aggregated data) and therefore can be retrieved from the customer invoice page as per the screen shot below. This historical data is also useful for displaying growth trends such as the monthly spend for each customer over time.



Contact Us Today

To learn more about any of our products please visit www.vgrid.nz, contact us on 0800 425 383 or email sales@vgrid.nz.

If you are interested in applying for the partner program, please contact our Channel Distribution Partner 'exeed Limited' via phone on 09 3028253 or email the exeed vGRID partner team at vgrid@exeed.co.nz