



**100%IT**

## Service Definitions

[www.100percentit.com](http://www.100percentit.com)

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## Introduction

100 Percent IT is a UK ISP founded in 2000. We provide cloud platforms on both VMware and OpenStack to offer a complete solution to our Government and Academic customers.

100 Percent IT has over 10 years experience of running and managing VMware clouds. This expertise has been used to develop a highly reliable system – so much that it has not had any unscheduled downtime in the past five years.

We have invested a significant amount of time and money customising and improving the Open Source code in the OpenStack suite including publishing some of these changes to the upstream repositories to create a fully managed, ultra-reliable, self-healing cloud platform “Public Cloud” which combines the flexibility and cost-savings of a public cloud with the security, privacy and performance of a private cloud.

Public Cloud from 100 Percent IT is an affordable, reliable and easy way to provision and manage cloud servers. Our portal allows users to provision their servers in just a few clicks and have them live almost instantly.

This flexible, scalable, self-healing and self-managing cloud is designed with users firmly in mind. It is easy to use and administer reducing administration overheads and providing excellent value for the IT budget.

Public Cloud has been designed to be ultra-reliable and user friendly right from the start. It is truly elastic and you can increase and decrease resources in just a few clicks. Your Public Cloud servers all run on an ultra-reliable network solely in UK based data centres. Each instance runs on a compute host and automatically fails over to run on another compute host in the unlikely event of a problem with the first. Data is persistently striped across multiple storage arrays and even the very rare event of a simultaneous failure of two arrays it would not result in data loss. Daily snapshots are taken (again stored in triplicate) and weekly disaster recovery snapshots are stored (in triplicate!) off site.

This storage is not just reliable but very fast with guaranteed levels of IOPS. The basic storage comprises spinning disks and enhanced storage is tiered with SSDs to provide rapid access to mission critical data.

100 Percent IT follows ISO27001 standards so we understand the importance of keeping your data secure. Our network has been designed by engineers not accountants with no expense spared when it comes to provisioning the most reliable network possible. But don't just take our word for it, contact us for a 30-day trial to see for yourselves.

## Overview of the G-Cloud Service

Public Cloud are elastic servers with guaranteed resources and persistent storage. They are provisioned automatically on an ultra-reliable and resilient network based in UK data centres. Back up and disaster recovery snapshots are included as standard. All data remains in the UK at all times.

### **All Cloud Servers have:**

- ✓ Automatic Physical Compute Host Failover
- ✓ Persistent Storage
- ✓ All data stored with triple redundancy duplicated across multiple storage arrays
- ✓ Daily server snapshots included
- ✓ Weekly off site Disaster Recovery snapshots included



- ✓ All data stored in UK only Tier 3 data centres accredited to ISO27001
- ✓ 100% Service Level Agreement with 100x Service Credits
- ✓ Customisable firewall protection
- ✓ 1 Gbps Network Speed

## **Our portal allows you to:**

- ✓ Provision servers and have them live in just a few clicks
- ✓ View all your servers and see Key Performance Indicators at a glance via your personal dashboard
- ✓ See real time and historic server performance statistics
- ✓ Easily upgrade or downgrade your server's resources with immediate effect
- ✓ View your account and payment history
- ✓ Order new servers
- ✓ Generate automatic alerts sent to your email when your resources near capacity

## Trusted Cloud

100 Percent IT's is also able to offer "Trusted Cloud" for Government. This provides secure virtual servers and storage utilising 100 Percent IT's patent pending "Trusted Cloud" technology to detect intrusions into the platform and take appropriate action. This service is built on our secure, resilient UK-based infrastructure with 100% up-time SLA. More information is available on request.

## Ordering and Provisioning (On-boarding)

For the OpenStack system, virtual machines are ordered and provisioned via the secure portal. Once payment is taken by credit card, the server is immediately configured using the image selected during set up. Most servers are live and ready for you to log into in less than 2 minutes using the username and password or SSH key supplied during setup.

Virtual machines on the VMware system are provisioned manually within 30 minutes of a request.

Orders must be accompanied by a fully completed purchase order. The purchase order must include details of the legal entity, billing and contact information. Once the purchase order is received and accepted by 100 Percent IT the customer will be given access to the relevant provisioning portals.

During the provisioning process, we have a range of images in the portal to choose from. If you would prefer to supply your own, we can arrange this manually.

While the portal allows you to specify, provision and install your server (instance) automatically, you can always call our UK Engineering team at any point and we'll be happy to discuss your requirements or help in any way we can.

## Support

In the unlikely event that you do need support on the system, users can call the UK based engineering team during office hours. Out of hours support via a telephone helpline is available for an additional monthly fee.

100 Percent IT is responsible for the infrastructure (hardware and management software) that your Public Cloud server runs on and the portal that you use to manage your servers. You are responsible for the operating system and all software running on the server. We can provide support with other aspects of your server. Please see the SIFA rate card for details of support charges.

## **Availability:**

Public Cloud Servers are available 24 hours a day subject to scheduled maintenance. Failure of an instance resulting from failure of a compute host will usually be automatically fixed as the instance will be brought up on a new host. Persistent storage as standard means that the instance will act as though it was a physical machine that had lost power and then been turned back on.

Failure of one or two storage arrays should not be detectable from the instances. The highly unlikely event of failure of three arrays will require restoration from the DR site.

## **Severity Definitions:**

100 Percent IT aims to respond to all faults within 30 minutes during working hours (in practice we respond much sooner than this!). Priority will be given to Level 3 faults but our target time to fix all faults is 1 working hour from our first response to the problem. All our engineers are highly qualified and take ownership of faults. We do not have junior support technicians; everyone is capable of resolving faults themselves however for your peace of mind, the CTO is notified of all Level 3 faults and any other faults not resolved within 1 working hour.

- A level 1 incident is defined as reduced throughput and or usability of one instance caused by a fault in 100 Percent IT's systems. The instance is still available but performance may be reduced.
- A level 2 incident is one caused by a fault in 100 Percent IT's systems in which one instance is not available or throughput and usability of multiple instances are affected.
- A level 3 incident is one caused by a fault in 100 Percent IT's systems in which multiple instances are not available.

## **Back up and Disaster Recovery**

Public Cloud servers are run on an ultra-reliable redundant network. The instances automatically failover between compute hosts in the event of a problem. Data is stored with triple redundancy across multiple storage arrays.

As standard instances are automatically snapshotted on a daily basis and these images are stored in triplicate on multiple storage arrays. As standard, the back-up snapshots are kept for 7 days. Weekly, the backup snapshot is automatically copied to a geographically separate UK datacentre where it is stored in triple redundancy across multiple storage arrays. As standard, these disaster recovery snapshots are kept for 14 days.

Additional one-off snapshots can be taken by the customer and these are kept indefinitely subject to sufficient storage space being available on the customer's account.

## Service Level Agreement (SLA)

100 Percent IT is exceedingly confident about the reliability of our network. You want your server to always be available and on the internet 100% of the time so we have a 100% SLA with 100x service credits in the highly unlikely event of a service failure.

The SLA only applies for outages caused by a failure of the 100 Percent IT network or service. It does not cover:

- Outages caused by you or your users
- A fault in software running on your **Public Cloud** instance
- Suspension of service due to lack of payment including if an automatic payment fails
- Violation of our Acceptable Use Policy
- Scheduled or Emergency Maintenance
- Outages due to third parties including but not limited to denial of service attacks, viruses and security breaches
- Factors outside our control, including but not limited to any force majeure events; failures, acts or omissions of our upstream providers or failures of the internet

To apply for a credit under this SLA, customers simply need to inform us in writing within 72 hours of the incident that they are claiming for. The total service credits available in any month shall not exceed the total fees for that service for that month.

## Billing

Contracts with pre-committed spend agreements will be billed in advance at the committed rates. Usage over this commitment will be billed as used monthly in arrears according to the rates table. No further discounts will be given for usage over the committed rate.

Pay as you go customers will be billed for usage as per the rates table monthly in arrears. Data transfer charges are also billed monthly in arrears for all data transferred out from the platform in the previous month. SIFA consultancy, installation, configuration and support services are billed monthly in arrears as used.

All billing is calculated by calendar months. All invoices are payable 14 days after the date of the invoice.

## Cancellation (Off-boarding)

To terminate a virtual machine service, customers simply need to log onto the secure portal and delete the virtual server. This will automatically cease the service from the next billing period. Instances can be temporarily shut down but not deleted by selecting the relevant option from the portal. These servers will still be billed each month but will not be available to the internet.

If customers wish to take a copy of their server, this must be done by taking a snapshot via the portal prior to cancelling and deleting the server. The snapshot is stored as a raw disk image. The snapshot can either be stored on our storage arrays or downloaded to external media via the portal. It is the customer's responsibility to extract all the data they require prior to cancellation. Data charges may apply for data transfer out from the instances.

When servers are deleted, all data is removed from the Compute hosts and the Storage servers. Backups are automatically deleted within 14 days of the server being cancelled.

If the customer breaches any aspect of the terms and conditions or fails to pay outstanding invoices (whether demanded or not) then 100 Percent IT shall be entitled to terminate the service with immediate effect. All data may be erased within 14 days of this point.

## Termination

In the event that services are terminated during a committed contract period cancellation will only take effect at the end of the committed period. In the event of termination of a usage only contract, cancellation will take effect when the resources are no longer consumed.

100 Percent IT will ensure that no customer data is stored on the Public Cloud system 30 days after contract termination.

## Typical Use Cases

The 100 Percent IT cloud can be used for a wide variety of uses. The highly-available, guaranteed resources on the 100 Percent IT cloud mean that the Public Cloud is ideally suited for Government and Academic customers who need reliable cost effective cloud solutions. Combined with the highly skilled UK development and engineering team who directly support customers, the 100 Percent IT is typically used for:

- Web hosting
- File storage, synchronisation and data sharing
- Disaster Recovery
- Test and Development Infrastructure
- Business intelligence
- Capacity bursting for projects
- Financial data storage / ecommerce

Typical use cases of the cloud storage include:

- Real time data access including for mission critical data
- Disaster Recovery as a Service (DRaaS)
- Data archiving
- Object storage
- Big Data projects
- Media and content libraries
- Database storage

## Definitions:

### Elastic / Burstable resources

Public Cloud is an elastic service configurable by users through the portal. CPU, Disk space and RAM can all be configured independently for each server. CPU and RAM can be increased or decreased at any point from the portal. The boot disk remains constant for any instance and additional volumes can easily be specified, mounted and un-mounted at any time from the portal.

### Open Standards

100 Percent IT uses standard OpenStack and VMware software for virtualisation and as such supports the upload and download of QEMU and VMDK disk images. 100 Percent IT supports other open standards such as Microsoft office and PDFs.

### Open Source software

100 Percent IT both uses and supplies Public Cloud servers running the Linux operating system. Public Cloud is based on VMware and on the OpenStack platform with the KVM hypervisor.

### Compatibility

100 Percent IT's cloud storage is based on Ceph which provides compatibility with Amazon S3 and OpenStack Swift APIs. 100 Percent IT can provide an OCCI interface for users that require this.

### Guaranteed and Non-Guaranteed Resources

Memory and CPU are contended at a maximum of 1.5x i.e. each instance is guaranteed 66% of the ordered capacity. Our engineers have specified compute servers that are significantly larger than standard (e.g. they have Intel Xeon 8 Core CPUs as standard) as the increased resources mean that the probability of nonguaranteed resources not being available when required is greatly reduced.

### Persistence of Storage

All instances have persistent storage as standard. Instances can be rebooted and migrated between compute hosts (live-migration or to recover from a host failure) without any loss of data.

### Hypervisor

Public Cloud uses the Linux KVM Hypervisor. VMware is also available for manually provisioned Cloud Servers.

### API interface

The OpenStack REST based API is available via a TLS secured connection. This API is compatible with commonly available orchestration and automation tools such as Ansible, Chef, SaltStack, Puppet and Terraform. 100 Percent IT can provide an OCCI interface for users that require this.

### Virtual Machine Images

We offer Windows Server 2012 R2 in Web, Standard and Enterprise. We also offer CentOS Linux and Ubuntu. If you would prefer to supply your own image, we can arrange this manually.

### Service Management

An SSL protected web front end is used to manage virtual servers. This allows the customer to create a new virtual machine, reboot their virtual machine, take snapshots, view usage statistics and manage it from its console if they cannot get to its network interface.

### Maintenance

Scheduled maintenance windows will be published at least one week in advance. The distributed nature of the Public Cloud means that maintenance is rarely service affecting. Maintenance notifications will be sent via the



email address specified during the sign up process. Emergency maintenance may be carried out with little or no notice if it is required. All reasonable efforts will be made to carry out such maintenance with as little disruption as possible.

## **Training**

The customer is responsible for ensuring that all people that access their Public Cloud server are suitably trained. 100 Percent IT is not responsible for any training in operating system management etc. The portal is very self-explanatory but video guides on how to provision and manage servers will be available shortly.

In addition extensive online resources are available for OpenStack including:

<https://docs.openstack.org/draft/training-guides/>

VMware free online training resources include:

<https://mylearn.vmware.com/portals/www/mL.cfm?menu=topfreecourses>

## **Data restoration / service migration**

This follows the same process as on-boarding and off-boarding

## **Consumer responsibilities**

The customer is responsible for all software and data on their Public Cloud instance and for ensuring that its usage complies with the terms and conditions and acceptable use policy.

The customer is responsible for ensuring that all software running on the VM is suitably licenced. The customer is responsible for all maintenance and management of the instances operating system and other software on the instance.

## **Details of any trial service available**

100 Percent IT's cloud services are very reliable and easy to configure but we understand that you might want to 'try before you buy' to ensure that they are a great fit for your requirements. To help you fully evaluate the system and see how it can benefit you, 100 Percent IT will provide a 30 day free trial (other than software costs e.g. Microsoft operating system licence rental) of up to 20 vCPUs and associated resources. Please see our price list for further details.

## **Technical Requirements / Technical Boundaries/Interfaces and Support boundaries/interfaces of the service**

The service can be managed through Internet Explorer or Google Chrome running on Windows Vista or newer. The customer should specify any minimum bandwidth / latency / quality of service requirements during the ordering process.

The customer is responsible for the configuration and management of their instance's operating system and any other software/services running on the instance. 100 Percent IT is responsible for the provision of a connection between the instance and the Internet and is also responsible for providing the underlying physical hardware that the instance runs on. 100 Percent IT supports the network and the physical infrastructure of the cloud. It does not provide support for operating systems or software running on customer instances.

## **Encryption**

Whole disk encryption is available as standard on both the VMware and OpenStack public cloud platforms. Customers are responsible for maintaining copies of their encryption keys – 100 Percent IT will not store this.

## **Data processing and storage locations**

100 Percent IT uses three UK data centre locations for Public Cloud and are listed below. All data centres are Tier 3 and accredited to ISO27001:

# 100 Percent IT G-Cloud 10 Service Definitions



New Greenham Park  
Berkshire  
RG19 6HN  
UK

6-7 Harbour Exchange Square  
London  
E14 9GE  
UK

Telehouse North  
14 Coriander Avenue  
London  
E14 2AA  
UK

All data centres have multiple redundant links to the Internet and 100 Percent IT peers at the LONAP and LINX exchanges.

## **Bandwidth**

Bandwidth to the instances from the public internet is not chargeable. Internal network traffic between instances is also not chargeable. Bandwidth from the server to the public internet is chargeable as per the pricing guide. Customers are limited to 2.5 million API calls per month which is approximately 1 per second.

## **Real time management**

100 Percent IT provides customers with SSL encrypted access to a web portal to manage their virtual servers. This allows the customer to reboot their virtual machine or manage it from its console if they cannot get to its network interface. The portal also shows a close to real time view of their instance's bandwidth usage (data is updated every minute).

## **Indicative time for provisioning / de-provisioning**

100 Percent IT's portal aims to provision VMs and de-provision Public Cloud servers with immediate effect. Provisioning usually takes less than two minutes.

## **Option for OS installation**

Public Cloud servers can be provisioned via the portal with a copy of Windows Server, CentOS or Ubuntu pre-installed. Users can also upload their own ISO images.



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