



Making transformation happen.

# Pricing Guide

## IaaS, PaaS and SaaS

version 10.1

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## 1 Overview

This guide provides the pricing for products, options and other requirements relating to UKCloud's G10 Service Definitions, which are available on the [Digital Marketplace](#).

The guide is divided into six sections:

- Infrastructure as a Service
- Platform as a Service
- Software as a Service
- Cloud Transition Services
- UKCloudX Services
- Connectivity and additional services

Each service has a per-unit price. Billing is per unit. For example:

- The billing unit for a virtual machine (VM) is one hour, so for a VM that's powered on for 10 minutes, you'll be billed for one hour
- The billing unit for an email mailbox is one month, so for an email mailbox that's used for 10 days, you'll be billed for one month
- The billing of storage is on per GiB — meaning that there is 1,024MiB per GiB and 1,024GiB per TiB.
- The billing of network bandwidth is per GB — meaning that there is 1,000MB per GB and 1,000GB per TB of bandwidth usage

If worked pricing examples are appropriate for a service, you'll find them in the relevant Service Definition.

For more help with pricing calculations, contact UKCloud sales on 01252 303300.

## 2 Infrastructure as a Service (IaaS)

### 2.1 UKCloud for VMware

UKCloud for VMware VMs are priced per hour. Your bills are based on actual consumption, so if you're not using it, you can turn it off so you don't need to pay for it.

Our flexible VM sizes enable you to map neatly to your existing specifications. You can also scale resources up or down based on new or changing requirements — you're not limited to the resources identified in a design phase.

UKCloud for VMware includes as standard:

- Virtual firewalls. Manage connectivity into and out of your environment, self-service and free of charge
- IPsec and SSL VPN/SDN. Create secure connections between users and other environments using a variety of included tunnelling technologies
- Basic load balancing. Configure active/active solutions that are resilient to outages and can handle large levels of activity using our on-platform out-of-the-box load balancers

- VMware HA (High Availability) protection. On-platform protection ensures that in the event of a hardware failure, or increased platform contention, your workload is seamlessly moved — along with any associated storage — no need for manual restarts
- Persistent storage. Your data remains, even when a VM is turned off, so your application data remains consistent and available
- Free DDoS-protected internet access. Out-of-the-box protection against distributed denial of service attacks
- Personalised support. Offered via Customer Success Managers, Technical Account Managers and telephone support desk. Speak to people who understand your success criteria and what you're trying to achieve, to maximise the benefits you can achieve from the UKCloud platform

Building your application on UKCloud is easy, and our transparent pricing enables you to clearly understand all the components of your solution and assess the value it offers.

### Calculating the cost

Follow these easy steps to define your solution and calculate the costs:

1. Choose the security domain your workload needs to use — the DDoS-protected internet-connected Assured OFFICIAL domain or the non-internet facing Elevated OFFICIAL domain.
2. Choose the workload type and VM size that best suits your application, for example, a medium VM of the POWER type.
3. **[Optional]** Choose any additional storage needed to support your application. You can add as many storage options as you need for the different aspects of your application, for example, Tier 1 for the high I/O database application and Tier 2 to store seldom accessed media.
4. **[Optional]** Choose the VM protection and Block Storage protection needed for your solution, this could be either snapshot or Journaling, or both. However, you must match your VM protection and Block Storage protection in each case. For example, if you choose Journaling protection for your VM you must select Journaling protection for your block storage; i.e. Journaling protection will apply to both.
5. **[Optional]** Choose your distributed networking requirements, Distributed Firewall, Distributed Logical Router, and L2 VPN.
6. **[Optional]** Choose your OS licensing, such as Windows or Red Hat Enterprise Linux.
7. Add up the options you've chosen:
  - $\text{VM total/hour} = \text{VM} + \text{Protection Cost} + \text{Licensing}$
  - $\text{Storage GiB/month} = \text{Storage} + \text{Protection Cost}$
8. To understand your likely monthly cost:
  - $\text{VM} = \text{VM total/hour} \text{ multiplied by hours in operation}$
  - $\text{Storage} = \text{Storage cost multiplied by GiB allocated}$
9. To model a total cost of ownership, you may also want to consider additional elements such as connectivity; and service options such as cloud enablement and cross domain services.

## 2.1.1 UKCloud for VMware – Assured OFFICIAL domain

COMPUTE - VM (per hour)					
	2GHz vCPU	RAM (GiB)	ESSENTIAL	POWER	PRIORITY
Micro <sup>[1]</sup>	1 <sup>[1]</sup>	0.5	£0.01	£0.02	£0.030
Tiny	1	2	£0.03	£0.09	£0.135
Small	2	4	£0.04	£0.12	£0.180
Medium	4	8	£0.06	£0.22	£0.330
Medium High Memory	4	16	£0.14	£0.35	£0.520
Large	8	16	£0.18	£0.45	£0.675
Large High Memory	8	32	£0.35	£0.55	£1.125
Tier 1 Apps Small	8	48	£0.50	£0.60	£1.575
Tier 1 Apps Medium	8	64	£0.70	£0.99	£2.085
Tier 1 Apps Large	8	96	£0.95	£1.45	£2.675
Tier 1 Apps Extra Large	12	128	£1.30	£2.30	N/A



VM PROTECTION (per hour) <sup>[2]</sup>							
	14-day Snapshot	28-day Snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Micro <sup>[1]</sup>	£0.02	£0.02	£0.10	£0.10	£0.10	£0.10	£0.22
Tiny	£0.04	£0.04					£0.18
Small	£0.06	£0.06					£0.20
Medium	£0.08	£0.08					£0.19
Medium High Memory	£0.08	£0.08					£0.30
Large	£0.18	£0.18	£0.20	£0.20	£0.20	£0.20	£0.40
Large High Memory	£0.25	£0.25					£0.80
Tier 1 Apps Small	£0.35	£0.35					£1.05
Tier 1 Apps Medium	£0.41	£0.41					£1.26
Tier 1 Apps Large	£0.70	£0.70					£1.90
Tier 1 Apps Extra Large	£0.75	£0.75					N/A



BLOCK STORAGE (per GiB/per month)	
Tier 1	£0.25
Tier 2 <sup>[4]</sup>	£0.10
Geo-resilient <sup>[6]</sup>	£1.10



BLOCK STORAGE PROTECTION (per GiB/per month)							
	14-day snapshot	28-day snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Tier 1	£0.20	£0.30	£0.28	£0.33	£0.40	£0.54	N/A
Tier 2 <sup>[4]</sup>	£0.10	£0.20	£0.12	£0.15	£0.18	£0.25	N/A
Geo-resilient <sup>[5]</sup>	Inc.	£0.15	N/A	N/A	N/A	N/A	Inc.



Distributed Networking (per VM/per hour)						
	Option 1 - Advanced Networking Bundle			Option 2 - Enterprise Networking Bundle		
	<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> </ul>			<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> <li>L2 VPN</li> </ul>		
	Essential	Power	Priority	Essential	Power	Priority
Micro <sup>[1]</sup>	£0.001	£0.001	£0.001	£0.001	£0.001	£0.002
Tiny	£0.002	£0.002	£0.003	£0.004	£0.004	£0.008
Small	£0.003	£0.003	£0.006	£0.008	£0.008	£0.015
Medium	£0.006	£0.006	£0.012	£0.015	£0.015	£0.029
Medium High Memory	£0.012	£0.012	£0.024	£0.029	£0.029	£0.058
Large	£0.012	£0.012	£0.024	£0.029	£0.029	£0.058
Large High Memory	£0.024	£0.024	£0.035	£0.058	£0.058	£0.087
Tier 1 Apps Small	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087
Tier 1 Apps Medium	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087
Tier 1 Apps Large	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087
Tier 1 Apps Extra Large	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087



Licensing										
VM Size	Microsoft Windows Server OS		Microsoft SQL Standard <sup>[3]</sup>		Microsoft SQL Enterprise <sup>[3]</sup>		Microsoft RDS		Red Hat Enterprise Linux	Bring Your Own Subscriptions
	£ / hour / VM	Academic £ / hour / VM	£ / hour / VM	Academic £ / hour / VM	£ / month / VM	Academic £ / month / VM	SAL Licence per month	Academic SAL Licence per month	Subscribe through UKCloud £ / hour / VM	
Micro, Tiny VM	£0.012	£0.002	£0.310	£0.054	£825.00	£195	£4.19	£0.44	£0.04	No charge
Small VM	£0.023	£0.003								
Medium VM	£0.046	£0.007								
Medium High Memory	£0.046	£0.007	£0.580	£0.15	£1650.00	£390			£0.09	
Large VM, Large High Memory, Tier 1 Apps	£0.135	£0.020								

<sup>[1]</sup> Micro VM pricing has 500MHz, 10GiB of Tier 2 storage; all other VMs include 60GiB of Tier 2 storage.

<sup>[2]</sup> You must choose the same protection option for both VMs and storage.

<sup>[3]</sup> SQL Enterprise is bought on a monthly basis. You must report the quantity of SQL Standard and Enterprise licences you need each month to UKCloud.

<sup>[4]</sup> 60GiB of Tier 2 storage is included in the pricing for all VMs whilst they are powered on, except for Micro. For VMs in powered-off state, consumed storage will be charged at the prevailing rate.

<sup>[5]</sup> Geo-resilient storage and synchronous protection must be purchased together.

<sup>[6]</sup> Consumed storage includes VM catalogue images and snapshots.

<sup>[7]</sup> VMs with additional allocated storage will be charged at the prevailing storage rate regardless of their powered-on/off state. <sup>[8]</sup> If you wish to host Oracle solutions on our platform, please consult our Cloud Architects, or consider our Dedicated Compute or UKCloud for Oracle Software services to avoid licensing issues.

<sup>[9]</sup> For user-defined VMs, the highest resource closest to the VM size will dictate the cost. For example 2 vCPU and 16GiB will be charged at the Medium High Memory cost

For all services above, billing is per unit.

## 2.1.2 UKCloud for VMware – Elevated OFFICIAL domain

COMPUTE - VM (per hour)					
	2GHz vCPU	RAM (GiB)	ESSENTIAL	POWER	PRIORITY
Micro <sup>[1]</sup>	1 <sup>[1]</sup>	0.5	£0.02	£0.04	£0.060
Tiny	1	2	£0.05	£0.12	£0.180
Small	2	4	£0.06	£0.15	£0.225
Medium	4	8	£0.10	£0.26	£0.390
Medium High Memory	4	16	£0.18	£0.40	£0.600
Large	8	16	£0.22	£0.50	£0.825
Large High Memory	8	32	£0.35	£0.75	£1.350
Tier 1 Apps Small	8	48	£0.60	£1.05	£1.800
Tier 1 Apps Medium	8	64	£0.80	£1.39	£2.375
Tier 1 Apps Large	8	96	£1.10	£1.85	£3.300
Tier 1 Apps Extra Large	12	128	£1.45	£2.65	N/A



VM PROTECTION (per hour) <sup>[2]</sup>							
	14-day Snapshot	28-day Snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Micro <sup>[1]</sup>	£0.02	£0.02	£0.10	£0.10	£0.10	£0.10	£0.28
Tiny	£0.07	£0.07					£0.31
Small	£0.12	£0.12					£0.36
Medium	£0.19	£0.19					£0.41
Medium High Memory	£0.25	£0.25					£0.65
Large	£0.35	£0.35	£0.20	£0.20	£0.20	£0.20	£0.85
Large High Memory	£0.60	£0.60					£1.40
Tier 1 Apps Small	£0.85	£0.85					£1.90
Tier 1 Apps Medium	£1.05	£1.05					£2.40
Tier 1 Apps Large	£1.55	£1.55					£3.50
Tier 1 Apps Extra Large	£1.60	£1.60					N/A





BLOCK STORAGE (per GiB/per month)	
Tier 1	£0.25
Tier 2 <sup>[4]</sup>	£0.10
Geo-resilient <sup>[6]</sup>	£1.10



BLOCK STORAGE PROTECTION (per GiB/per month)							
	14-day snapshot	28-day snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Tier 1	£0.20	£0.30	£0.28	£0.33	£0.40	£0.54	N/A
Tier 2 <sup>[4]</sup>	£0.10	£0.20	£0.12	£0.15	£0.18	£0.25	N/A
Geo-resilient <sup>[5]</sup>	Inc.	£0.15	N/A	N/A	N/A	N/A	Inc.



Distributed Networking (per VM/per hour)						
	Option 1 - Advanced Networking Bundle			Option 2 - Enterprise Networking Bundle		
	<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> </ul>			<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> <li>L2 VPN</li> </ul>		
	Essential	Power	Priority	Essential	Power	Priority
Micro <sup>[1]</sup>	£0.001	£0.001	£0.001	£0.001	£0.001	£0.002
Tiny	£0.002	£0.002	£0.003	£0.004	£0.004	£0.008
Small	£0.003	£0.003	£0.006	£0.008	£0.008	£0.015
Medium	£0.006	£0.006	£0.012	£0.015	£0.015	£0.029
Medium High Memory	£0.012	£0.012	£0.024	£0.029	£0.029	£0.058
Large	£0.012	£0.012	£0.024	£0.029	£0.029	£0.058
Large High Memory	£0.024	£0.024	£0.035	£0.058	£0.058	£0.087
Tier 1 Apps Small	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087
Tier 1 Apps Medium	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087
Tier 1 Apps Large	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087
Tier 1 Apps Extra Large	£0.035	£0.035	£0.035	£0.087	£0.087	£0.087



Licensing										
VM Size	Microsoft Windows Server OS		Microsoft SQL Standard <sup>[3]</sup>		Microsoft SQL Enterprise <sup>[3]</sup>		Microsoft RDS		Red Hat Enterprise Linux	Bring Your Own Subscriptions
	£ / hour / VM	Academic £ / hour / VM	£ / hour / VM	Academic £ / hour / VM	£ / month / VM	Academic £ / month / VM	SAL Licence per month	Academic SAL Licence per month	Subscribe through UKCloud £ / hour / VM	
Micro, Tiny VM	£0.012	£0.002	£0.310	£0.054	£825.00	£195	£4.19	£0.44	£0.04	No charge
Small VM	£0.023	£0.003								
Medium VM	£0.046	£0.007								
Medium High Memory	£0.046	£0.007								
Large VM, Large High Memory, Tier 1 Apps	£0.135	£0.020	£0.580	£0.15	£1650.00	£390			£0.09	

<sup>[1]</sup> Micro VM pricing has 500MHz, 10GiB of Tier 2 storage; all other VMs include 60GiB of Tier 2 storage.

<sup>[2]</sup> You must choose the same protection option for both VMs and storage.

<sup>[3]</sup> SQL Enterprise is bought on a monthly basis. You must report the quantity of SQL Standard and Enterprise licences you need each month to UKCloud

<sup>[4]</sup> 60GiB of Tier 2 storage is included in the pricing for all VMs whilst they are powered on, except for Micro. For VMs in powered off state, consumed storage will be charged at the prevailing rate.

<sup>[5]</sup> Geo-resilient storage and synchronous protection must be purchased together.

<sup>[6]</sup> Consumed storage includes VM catalogue images and snapshots.

<sup>[7]</sup> VMs with additional allocated storage will be charged at the prevailing storage rate regardless of their powered-on/off state. <sup>[8]</sup> If you wish to host Oracle solutions on our platform, please consult our Cloud Architects, or consider our Dedicated Compute or UKCloud for Oracle Software services to avoid licensing issues.

<sup>[9]</sup> For user-defined VMs, the highest resource closest to the VM size will dictate the cost. For example 2 vCPU and 16GiB will be charged at the Medium High Memory cost

For all services above, billing is per unit.

## 2.1.3 Shared disk

Shared disk (per month per VM)	Setup fee (per VM)	Charge per change
£200	£500	£325

## 2.2 High Performance Compute

Compute Intensive Infrastructure includes as standard:

- Virtual firewall
- One production virtual data centre (VDC) and one non-production VDC
- VMware HA (High Availability) protection (only with persistent storage)
- Basic load balancing
- DDoS-protected internet
- Personalised support via Customer Success Managers, Technical Account Managers and a telephone support desk

To model a total cost of ownership, you may also want to consider additional elements such as connectivity and service options such as cloud enablement and cross-domain services.

Compute Intensive Infrastructure is subject to the following:

- The minimum cluster size is 1,920 cores; which can be scaled in units of 960 cores.
- All VMs within the cluster must exist within a single production VDC and within a single site.
- All VMs within the cluster must be identically configured and programmatically deployed with appropriate workload distribution such as a Grid Engine. This is because the SLA does not apply to availability of individual VMs.
- If any VMs are deployed with MS Windows Server OS, all provisioned cores must be licensed and will be charged at the current rate.
- There is a two-year (24 month) fixed-term commitment.
- Committed Compute Spend is calculated as the effective hourly cost multiplied by the number of hours in a two-year period (for example  $24 \times 365 \times 2 = 17,520$ ).
- 50% of the Committed Compute Spend must be paid upfront; the remaining 50% will be invoiced equally over 24 months.
- Early Termination Fee: if the contract is terminated before month 24, the customer will be liable for the remaining cost of the Committed Compute Spend.
- In addition to the Committed Compute Spend, a final balancing payment equivalent to 20% of the Committed Compute Spend will be due at month 24 of the contract. The final balancing payment will not apply in the event that the customer enters into a further two year (24 month) fixed term commitment.

Building your application on UKCloud is easy, and our transparent pricing enables you to clearly understand all the components of your solution and assess the value it offers. Follow these steps to define your solution and calculate the costs:

1. Choose the initial size of your Compute Intensive Infrastructure.
2. Choose the most appropriate virtual CPU mode for your workloads.
3. Choose the core-to-memory ratio that best suits your application.
4. Choose the security domain for your workload to use — the DDoS-protected internet connected Assured OFFICIAL or the non-internet-facing Elevated OFFICIAL domain.
5. Choose the storage tier for your application.

6. Optionally, choose your OS licensing, such as Windows or Red Hat Enterprise Linux (see the UKCloud Pricing Guide for details). Note that the nature of Microsoft Windows Server licensing, if it is chosen for any VM, means it will be charged based upon the number of cores that have been deployed.

Cluster size and virtual CPU mode			X	Cluster configuration <sup>1,2</sup> — effective price per core-hour		+	Security domain	
vCPU mode	Starter pack	Upgrade pack		1 core:12GiB RAM ratio	1 core:16GiB RAM ratio		Assured OFFICIAL	Elevated OFFICIAL
Hyper-threaded cores	1,920 <sup>5</sup>	960 <sup>5</sup>		£0.05	£0.065		0%	20%
Native cores	960	480		£0.10	£0.13		0%	20%

Storage <sup>3</sup> (per GiB/per month)	
Tier 0 block <sup>4</sup>	£0.10
Tier 1 block	£0.25
Tier 2 block	£0.10

<sup>1</sup> Maximum configuration per VM applies (currently 48 hyper-threaded or 24 native cores)

<sup>2</sup> Minimum configuration per VM applies (currently 8 hyper-threaded cores or 4 native cores)

<sup>3</sup> Tier 2 storage capacity is included on the basis of 15GiB per 2 hyper-threaded cores and 15GiB per native core

<sup>4</sup> Tier 0 storage is directly attached to the compute host for fast low latency disk interactions. Customers will be allocated the full disk in a Tier 0 configuration

<sup>5</sup> As UKCloud provide the customer with full access to resources in the cluster, including the resources traditionally reserved for maintenance, under normal operation – if these resources are not required - customers will receive access to any additional cores available within the cluster. Presently 192 hyper-threaded cores in the starter pack configuration and 86 hyper-threaded cores for the upgrade pack.

## 2.3 UKCloud for OpenStack

### 2.3.1 Virtual machines

Instance type	Ephemeral	Persistent boot from block
<b>Use case</b>	Disposable Instances used in environments that can tolerate the failure of an Instance and its associated data	Instances serving mission critical data and needing a higher level of data resilience and persistence
<b>Instance placement options</b>	Choice of multiple availability zones	Choice of multiple availability zones
<b>Internet IP addresses included per project</b> <sup>[1]</sup>	3	3
<b>Automated disaster recovery between data centres</b>	Configured at customer application layer	Configured at customer application layer
<b>Storage included</b>	Yes	None <sup>[2]</sup>
<b>Storage type</b>	Ephemeral Directly Attached Storage <sup>[3]</sup> (non-persistent)	Persistent block storage <sup>[4]</sup> Tier 1 or Tier 2
<b>Effective number of file copies</b>	1	3
<b>Instance protection option</b>	Snapshot to persistent block storage <sup>[5]</sup>	Snapshot to persistent block storage <sup>[5]</sup>

[1] You can request additional IP addresses

[2] Persistent block storage Instances will still be allocated with ephemeral storage; however, this will not be the primary block device when using persistent boot from block.

[3] Ephemeral drives and associated data exist only until an Instance is terminated. For persistent block storage capabilities, see the next section.

[4] Boot from block volumes will be charged based upon the amount of storage consumed on block storage.

[5] Snapshots will be charged at the standard block storage rate defined below, based on the storage consumed.

Instance pricing is based on a minimum billing period of one hour and depends on the choice of:

- Instance flavour
- Security domain

Instance flavour	vCPU	RAM (GiB)	Ephemeral HDD (GiB)	Security domain	
				Assured £/hr	Elevated £/hr
<b>t1.nano</b>	1	0.5	10	£0.01	£0.02
<b>t1.tiny</b>	1	1	10	£0.015	£0.03
<b>t1.small</b>	1	2	20	£0.03	£0.05
<b>t1.medium</b>	2	2	40	£0.035	£0.055
<b>t1.large</b>	2	4	40	£0.04	£0.06
<b>m1.small</b>	4	8	60	£0.06	£0.10
<b>m1.medium</b>	4	16	60	£0.14	£0.18
<b>m1.large</b>	4	32	60	£0.30	£0.36
<b>r1.small</b>	8	16	60	£0.16	£0.22
<b>r1.medium</b>	8	32	60	£0.35	£0.40
<b>r1.large</b>	8	64	60	£0.70	£0.80

In addition to the cloud native application optimised Instances shown above, customers with larger, bare metal style workloads can chose from the following Instances:

Instance flavour	vCPU	RAM (GiB)	Ephemeral HDD (GiB)	Security domain		GPU
				Assured £/hr	Elevated £/hr	
<b>b1.medium</b>	28	220	7200	£3.50	£4.00	Extra
<b>b1.large</b>	56	440	14400	£5.00	£5.50	Extra

## 2.3.2 Licensing options

The standard terms and conditions from Microsoft state that if you want to run a Windows Server operating system in the cloud, you must license it via the Service Provider Licence Agreement (SPLA), which must be provided by UKCloud. Microsoft Developer Network (MSDN) and Windows desktop operating system licences are generally not permitted by Microsoft's terms and conditions. UKCloud offers the option for you to bring your own Red Hat licensing, or certain Microsoft application licensing under Microsoft Mobility using software assurance.

If you're licensing Microsoft Windows Server OS, Microsoft SQL Server, Microsoft RDS or Red Hat Enterprise Linux, licensing charges apply. See the pricing guide for details.

Licensing										
Instance size	Microsoft Windows Server		Microsoft SQL Standard *		Microsoft SQL Enterprise *		Microsoft RDS		Red Hat Enterprise Linux	Bring Your Own Operating System
	£ / hour / Instance	Academic £ / hour / Instance	£ / hour / Instance	Academic £ / hour / Instance	£ / month / Instance	Academic £ / month / Instance	SAL Licence per month	Academic SAL Licence per month	Subscribe through UKCloud £ / hour / Instance	
t1.nano	£0.012	£0.002	£0.310	£0.008	£825.00	£195	£4.19	£0.44	£0.04	No charge
t1.tiny	£0.012	£0.002								
t1.small	£0.012	£0.002								
t1.medium	£0.023	£0.003								
t1.large	£0.023	£0.003								
m1.small	£0.046	£0.007								
m1.medium	£0.046	£0.007								
m1.large, r1.small, r1.medium, r1.large	£0.135	£0.020	£0.580	£0.15	£1650.00	£390			£0.09	

\* Note that SQL Enterprise is bought on a monthly basis. You must report the quantity of SQL Standard and Enterprise licences you need each month to UKCloud.

\* Oracle instances are not currently supported. However, we do offer either Dedicated Compute or the UKCloud for Oracle service for Oracle specific workloads

Note that each service has a per-unit price. Billing is per unit.

## 2.3.3 Persistent block storage

Persistent block storage is a highly scalable and resilient. It can:

- Scale beyond the default ephemeral, non-persistent storage provided with each Instance
- Provide resilient persistent block storage for Instances
- Create Instance snapshots to deliver a level of Instance protection
- Boot from block<sup>[4]</sup>, enabling you to boot your Instance from a remotely attached volume; the underpinning Ceph technology provides some of the fastest Instance deployments, which accelerates the time to deploy and scale environments

Cost is calculated based on the average storage provisioned by the customer at the end of the month, which is based on daily average measurements.

	Tier 1 Persistent block storage	Tier 2 Persistent block storage
<b>Overview</b>	Provides our most performant block storage for workloads requiring consistently higher disk throughput	Block storage with typical performance characteristics for use by production applications or storage
<b>Number of file copies</b>	3	3
<b>Use cases</b>	Data warehouses High-performance NoSQL databases such as MongoDB or Cassandra Randomly executing workloads	Production-level system and application workloads with midrange traffic loads (for example Apache Web Server)
<b>£ per GiB per month</b>	£0.25	£0.10

In addition, our Cloud Storage product is available to provide an API-accessible and S3-compatible object storage solution that complements your cloud-native compute environment. For full details, see the service definition published on the Digital Marketplace.

## 2.4 UKCloud for Microsoft Azure

### 2.4.1 VM Pricing

UKCloud for Microsoft Azure pricing is simple – you simply pay for the vCPU and Memory you use, any additional storage consumed.

Machine Type	Assured OFFICIAL		Elevated OFFICIAL	
	(£/vCPU /hour)	(£/GiB /hour)	(£/vCPU /hour)	(£/GiB /hour)
A Series Machines*	£0.03	£0.013	£0.036	£0.016
D Series Machines*	£0.03	£0.013	£0.036	£0.016
F Series Machines*	£0.03	£0.013	£0.036	£0.016

\*includes temporary storage allocated to machine size

### 2.4.2 Storage pricing

Storage	Assured OFFICIAL (£/GiB/month)	Elevated OFFICIAL (£/GiB/month)
Additional Storage (All variants)	£0.10	£0.10

### 2.4.3 Example Pricing

Size	vCPU	RAM (GiB)	Temp Storage (GiB)	Assured OFFICIAL (£/hour)	Elevated OFFICIAL (£/hour)
Standard_D1_v2	1	3.5	50	£0.08	£0.09
Standard_D2_v2	2	7	100	£0.15	£0.18
Standard_D3_v2	4	14	200	£0.30	£0.36
Standard_D4_v2	8	28	400	£0.60	£0.72
Standard_A0	1	0.768	20	£0.04	£0.05
Standard_A1	1	1.75	70	£0.05	£0.06
Standard_A2	2	3.5	135	£0.11	£0.13
Standard_A3	4	7	285	£0.21	£0.25
Standard_A4	8	14	605	£0.42	£0.51
Standard_A5	2	14	135	£0.24	£0.29
Standard_A6	4	28	285	£0.48	£0.58
A0\Basic_A0	1	0.768	20	£0.04	£0.05
A0\Basic_A1	1	1.75	40	£0.05	£0.06
A0\Basic_A2	2	3.5	60	£0.11	£0.13
A0\Basic_A3	4	7	120	£0.21	£0.25
A0\Basic_A4	8	14	240	£0.42	£0.51
Standard_DS11_v2	2	14	28	£0.24	£0.29
Standard_DS12_v2	4	28	56	£0.48	£0.58



Storage	Assured OFFICIAL (£/GiB/month)	Elevated OFFICIAL (£/GiB/month)
Additional Storage (All variants)	£0.10	£0.10

For all services above, billing is per unit.

## 2.4.4 Licensing

The Azure marketplace allows you to select the Microsoft licensing that you require, and you will be invoiced at the end of each month for your exact usage. UKCloud offers Azure on a multi-tenant basis, and according to [Microsoft Azure licensing guidelines](#), the Azure Hybrid Use Benefit (AHUB) option is not applicable for Windows Server Operating Systems (OS). This means that you will be unable to bring your own on-premise OS licensing.

With regards to Microsoft SQL Server, you can either bring your own SQL Server licensing (you must have valid Software Assurance) and utilise License Mobility, or choose for UKCloud to invoice you based on your exact usage under our SPLA contract as per the licensing pricing table.

Red Hat (once certified by Microsoft), is available via the BYOL process, or we can invoice you based on your exact usage.

Microsoft Windows OS Server (£/vCPU/hour)	Microsoft SQL Server Standard (£/hour)		Microsoft SQL Server Enterprise (£/month)		Microsoft SQL Web Server (£/month)		Red Hat Enterprise Linux (£/hour)	
	0 – 4 vCPUs	5+ vCPUs	0 – 4 vCPUs	5+ vCPUs	0 – 4 vCPUs	Additional 2 vCPUs	0 – 4 vCPUs	5+ vCPUs
£0.035	£0.310	£0.580	£825.000	£1650.000	£20.000	£10.000	£0.040	£0.090

## 2.5 Basic Managed VM

This service is in addition to any charges accrued by the underlying VM.

The standard pricing for this service is given below. Bespoke work or contract terms can be discussed.

For standard pricing, you need to identify individual VMs to be managed. The price includes routine management of each VM you specify, such as backups and updating of definitions; plus three hours' management time per VM per month, when an unpredicted issue or request requires more manual intervention (such as an image redeploy or recovery from backups).

You can buy additional hours of management time if you need them.

Type	Included hours	Price per month	Additional hour price	Minimum commitment <sup>[2]</sup>
Per VM	3	£220	£100 <sup>[1]</sup>	3 months

<sup>[1]</sup> VMs are charged per hour.

<sup>[2]</sup> After three months, this service will continue on a rolling monthly basis until cancelled by the customer.

### 2.5.1 Commitment discount

You can receive significant discounts by committing to a longer contracted period of time and for a quantity of concurrent VMs (in batches of 20). Each assigned VM will be managed for a minimum of one month before management can be assigned to a new VM.

20 concurrent VMs	12 months 12% discount	24 months 18% discount
Standard cost	£52,800	£105,600
Discount	£6,336	£19,008
Contract cost	£46,464	£86,592

## 2.6 Dedicated Compute

Pricing for Dedicated Compute is based on the number of Starter Packs and Upgrade Packs purchased and the domain, storage, backup and retention policies needed.

For more details, see the Service Definition for UKCloud for VMware.

To establish Dedicated Compute pricing, follow these steps:

**Step 1:** Choose the number of Starter Packs and Upgrade Packs

**Step 2:** Choose the storage amount and type

**Step 3:** Choose backup and retention policies

**Step 4:** Select OS and application licences

**Step 5:** Determine network requirements and additional services (see section 0)

Note that:

- You can buy nine Upgrade Packs before you need buy another Starter Pack
- The lead time is at least 10 days
- The minimum term is 90 days
- The cancellation notice required is 90 days

Starter and upgrade packs (per month)			Storage (per GiB / per month)		Protection <sup>[2]</sup> (per GiB / per month)	
Pack <sup>[1]</sup>	Assured OFFICIAL	Elevated OFFICIAL	Tier 1	Tier 2	14-day snapshot	28-day snapshot
Starter	£9,000	£11,000	£0.25	£0.10	£0.20	£0.30
Upgrade	£4,500	£5,500	£0.25	£0.10	£0.10	£0.20

+      +      +

Licensing (per month)			
Microsoft Windows SPLA	Red Hat Enterprise Linux (RHEL)	Bring Your Own subscriptions	Microsoft RDS SAL per licence
£150	£100	No charge	£4.19
£75	£50		

[1] Starter packs and upgrade packs have 20 cores and 300GiB RAM (usable).

[2] You must choose the same protection option for both VMs and storage.

## 2.7 UKCloud for Oracle Software

Oracle workloads are priced per hour for compute resources, and monthly for storage. Your bills are based on the resources you actually allocate to your solution. In contrast to traditional hosting models, this ensures there's no lock-in to unnecessarily licensed or under-utilised hardware.

Our flexible pricing enables you to map neatly to your existing specifications and scale resources up or down based on new or changing requirements. You're not constrained to the resources identified in a design phase.

To model a total cost of ownership, you should consider additional elements, such as licensing, connectivity and service options, which are described in the UKCloud pricing guide.

Cores (per hour)		+	Memory (per hour)		+	Storage (per GiB/per month)	
1 Core	£0.08		8GiB RAM	£0.12		Tier 1	£0.25
2 Core	£0.15		16GiB RAM	£0.24		Tier 2	£0.10
4 Core	£0.30		32GiB RAM	£0.48		Object	From £0.0146
8 Core	£0.60		64GiB RAM	£0.96			
12 Core	£0.90		96GiB RAM	£1.44			
Per 2 Additional cores	£0.15		128GiB RAM	£1.92			
			Per additional 8GiB RAM	£0.12			

- Prices are per hour for the compute component (cores and memory) and per month for storage
- Cores refers to virtual CPUs pinned to physical processor cores (excluding hyperthreading)
- UKCloud reserves the right to charge for the onboarding of complex configurations in line with its SFIA rate card

### 2.7.1 UKCloud for Oracle Software licensing

UKCloud for Oracle Software includes the base OVM platform licences, which provide VM containers that meet Oracle's definition of hard partitioning.

Our service doesn't include licences for the Oracle applications and databases you choose to run. As the underlying platform is powered by OVM technology, you can either transfer your existing licences, or confidently buy new licences based on the quantity of virtual processors you allocate within each VM.

If you need help defining the best licensing approach for your situation, we can introduce you to one of our partners who specialise in Oracle licensing compliance, optimisation and fulfilment.

## 2.8 Cloud GPU

To support the chosen solution, you need to purchase one of UKCloud for VMware, Compute Intensive Infrastructure, or UKCloud for OpenStack; and create a VM with appropriate specification in a GPU-enabled zone.

## 2.8.1 Cloud GPU for UKCloud for VMware & UKCloud for OpenStack Pricing

Cloud GPU within UKCloud for VMware and UKCloud for OpenStack are priced per hour. Your bills are based on actual consumption, so if you're not using it, you can turn it off so you don't need to pay for it.

<b>Cloud GPU for Compute Card</b>		£1.23	Price per card per hour
<b>Cloud GPU for Visualisation *</b>	<b>1 GiB profile</b>	£0.08	Price per profile per hour
	<b>2 GiB profile</b>	£0.16	
	<b>4 GiB profile</b>	£0.32	
	<b>8 GiB profile</b>	£0.64	

\* Visualisation can only be purchased in the profile sizes as indicated for each VM

## 2.8.2 Cloud GPU for High Performance Compute Pricing

Cloud GPU in High Performance Compute is priced per month, and is a private GPU resource dedicated to your workload only.

<b>Cloud GPU for Visualisation or Compute Card</b>	<b>No. of Cards</b>	<b>Price per card per month</b>
	11	£899
	22	£809
	33	£759
	44	£720
	55	£708
	66	£700
	77	£694
	88	£690
	89+*	£688

Cloud GPU for High Performance Compute is subject to the following:

- Cloud GPU for High Performance Compute must be purchased in batches of 11
- Once the next tier is purchased all GPUs are priced at the new pricing tier
- All GPUs must be installed within the same High Performance Compute cluster for pricing tiers to be applicable (for example, you can't buy 22 GPUs and spread them between two HPC clusters and still retain the discount – you must buy 2 x 11 GPUs). The exception to this is when you fill a High Performance Compute cluster with GPUs and begin to populate a new cluster, in which case discounts continue to apply
- There is a minimum one-year (12-month) fixed-term commitment, which can be extended to co-term with the associated High Performance Compute contract subject to the standard procedures
- Early Termination Fee: if the contract is terminated before month 12, the customer will be liable for the remaining cost of the committed compute spend.

## 2.8.3 Cloud GPU licensing

Licensing to NVIDIA GRID is included in the rental price of Cloud GPU. Customers are responsible for licensing any application software leveraging the benefits of the GPU.

## 2.9 Licensing

The standard terms and conditions from Microsoft state that if you want to run a Windows Server operating system in the cloud, you must license it via the Service Provider Licence Agreement (SPLA).

If you're licensing Microsoft Windows Server OS, Microsoft SQL Server or Red Hat Enterprise Linux, the following licensing charges apply:

Licensing										
VM Size	Microsoft Windows Server OS		Microsoft SQL Standard <sup>[3]</sup>		Microsoft SQL Enterprise <sup>[3]</sup>		Microsoft RDS		Red Hat Enterprise Linux	Bring Your Own Subscriptions
	£ / hour / VM	Academic £ / hour / VM	£ / hour / VM	Academic £ / hour / VM	£ / month / VM	Academic £ / month / VM	SAL Licence per month	Academic SAL Licence per month	Subscribe through UKCloud £ / hour / VM	
Micro, Tiny VM	£0.012	£0.002	£0.310	£0.054	£825.00	£195	£4.19	£0.44	£0.04	No charge
Small VM	£0.023	£0.003								
Medium VM	£0.046	£0.007								
Medium High Memory	£0.046	£0.007								
Large VM, Large High Memory, Tier 1 Apps	£0.135	£0.020	£0.580	£0.15	£1650.00	£390			£0.09	

<sup>[1]</sup> MS Windows Server OS, licensing for Compute Intensive Infrastructure is charged on the basis of £16.36 per pair of cores provisioned in your VDC.

<sup>[2]</sup> Note that SQL Enterprise is bought on a monthly basis. You must report the quantity of SQL Standard and Enterprise licenses that you need each month to UKCloud.

<sup>[3]</sup> Compute Intensive Infrastructure VMs provisioned larger than 8 cores will be quoted separately for MS SQL Standard, Enterprise and Red Hat licensing purposes.

## 2.10 Cross Domain Security Zone

There are two service options for the UKCloud Cross Domain Security Zone service.

### 2.10.1 UKCloud Guard

The UKCloud Guard is priced as per the table below. Once the consumption of the service reaches the next pricing tier, all usage for the month will be charged at that lower price.

Data volume	Monthly price	Dual site*
Starter Pack (1TiB)	£500	£500 per month
Next 4,000GiB	£0.50 per GiB	
5,001GiB+	£0.10 per GiB	

\* Please note that the cost for dual site is in addition to the monthly price

### 2.10.2 Walled Garden

The self-managed Walled Garden is priced with a baseline monthly fee plus a fee per VM per hour depending on the VM size and inclusion of Snapshot protection options, as follows:

Baseline (per DC / month)	£500
---------------------------	------

VM (per hour) <sup>[1]</sup>				VM Protection <sup>[2]</sup>	
	2GHz vCPU	RAM (GiB)	POWER	14-day snapshot	28-day snapshot
Tiny	1	2	£0.12	£0.07	£0.07
Small	2	4	£0.15	£0.12	£0.12
Medium	4	8	£0.26	£0.19	£0.19
Medium High Memory	4	16	£0.40	£0.25	£0.25
Large	8	16	£0.50	£0.35	£0.35
Large High Memory	8	32	£0.75	£0.60	£0.60
Tier 1 Apps Small	8	48	£1.05	£0.85	£0.85
Tier 1 Apps Medium	8	64	£1.39	£1.05	£1.05
Tier 1 Apps Large	8	96	£1.85	£1.55	£1.55

+

Block Storage (per GiB/per month) <sup>[2]</sup>		Block Storage Protection (per GiB/per month)	
Tier 1	£0.25	£0.20	£0.30
Tier 2	£0.10	£0.10	£0.20

+

<sup>[1]</sup> 60GiB of Tier 2 storage is included in the pricing for all VMs while they are powered on. For VMs in powered-off state, consumed storage will be charged at the prevailing rate.

<sup>[2]</sup> VMs with additional allocated storage will be charged at the prevailing storage rate regardless of their powered-on/off state.

## 2.11 Secure Remote Access

This service is priced per licence per calendar month (regardless of how many days it is used in the month) and is available in packs as outlined below. Prices include:

- Access to managed NCSC-approved VPN gateways
- Cisco AnyConnect licence for the end-user device
- Two-factor authentication using device certificates
- A 'walled garden' virtual data centre where customers can deploy their application services

Remote Access pack	Monthly price	Effective monthly price per licence
3 licences	£350	£116.67
10 licences	£500	£50.00
25 licences	£1,000	£40.00
100 licences	£2,500	£25.00
1,000 licences	£5,000	£5.00

All Secure Remote Access deployments require a bastion host to complete the connection to the Elevated platform.

UKCloud includes a Small VM as part of the monthly licensing cost. If you would like a larger VM size, you will be charged for the difference in cost between the free-of-charge Small VM and the size you require.

There's no limit to the number of hosts you can provision; and you can purchase them at the rates set out below:

VM (per hour) <sup>[1]</sup>				VM Protection <sup>[2]</sup>	
	2GHz vCPU	RAM (GiB)	POWER	14-day snapshot	28-day snapshot
Tiny	1	2	£0.12	£0.07	£0.07
Small	2	4	£0.15	£0.12	£0.12
Medium	4	8	£0.26	£0.19	£0.19
Medium High Memory	4	16	£0.40	£0.25	£0.25
Large	8	16	£0.50	£0.35	£0.35
Large High Memory	8	32	£0.75	£0.60	£0.60
Tier 1 Apps Small	8	48	£1.05	£0.85	£0.85
Tier 1 Apps Medium	8	64	£1.39	£1.05	£1.05
Tier 1 Apps Large	8	96	£1.85	£1.55	£1.55
Tier 1 Apps Extra Large	12	128	£2.30	£1.60	£1.60

+

Block Storage (per GiB/per month) <sup>[2]</sup>		Block Storage Protection (per GiB/per month)	
Tier 1	£0.25	£0.20	£0.30
Tier 2 <sup>[4]</sup>	£0.10	£0.10	£0.20

+

<sup>[1]</sup> 60GiB of Tier 2 storage is included in the pricing for all VMs while they are powered on. For VMs in powered-off state, consumed storage will be charged at the prevailing rate

<sup>[2]</sup> VMs with additional allocated storage will be charged at the prevailing storage rate regardless of their powered-on/off state

## 2.12 Private Cloud for Compute

UKCloud offers three packaging options for Private Cloud for Compute: All-inclusive, UKCloud Hosted and Crown Campus Hosted.

### 2.12.1 All-inclusive

Provides a turnkey solution including the hardware and underlying Assured cloud platform.

Asset options	Single-site platform size	£ / VM / month†	Upgrade options* £ / VM / month		
			Automated VM backup	Site replication and failover	50VM pack: compute and storage
Small	500 VMs	From £20	From £50	From £150	From £16
Medium	1,000 VMs	From £18			
Large	2,000 VMs	From £16			

† Based on 24-month contract and average VM size of 2vCPU, 8GiB RAM and 100GiB disk. The price will vary depending on specific hardware and performance requirements.

\* Assuming 24-month contract; however, upgrades will be coterminous with the original contract, so the price will increase on a prorata basis. Based on average VM size of 2vCPU, 8GiB RAM and 100GiB disk. The price will vary depending on specific hardware and performance requirements.

	CAPEX-optimised	OPEX-optimised
Upfront payment — design and installation	10% of asset cost	From £10,000
Annual payment — asset prepayment	Asset cost / 2	£0
Monthly charge — asset finance	£0	Asset cost + 20% / 24 months



<b>Monthly charge — platform fee</b>	From £150 per VM*	From £1,000 per KW
<b>Minimum term</b>	3 months	24 months
<b>Early exit charge</b>	Remainder of asset cost	Remainder of asset Finance
<b>Premium for Elevated OFFICIAL</b>	20%	20%
<b>Unit of billing</b>	VM capacity upfront Platform fee per month	VM capacity per month (includes platform fee per month)

\* Based on 24-month contract and average VM size of 2vCPU, 8GiB RAM and 100GiB disk. The price will vary depending on specific hardware and performance requirements.

## 2.12.2 UKCloud Hosted

Provides you with the underlying UKCloud Assured Cloud platform to host and manage your Private Cloud – Compute platform. We supply the environment specification, so that you can procure the hardware. We will then arrange for the build and support the infrastructure for you.

UKCloud Hosted	
<b>Upfront payment — design and deploy</b>	From £25,000
<b>Monthly charge</b>	From £150 per VM
<b>Minimum term</b>	24 months
<b>Early exit charge</b>	Remainder of fee
<b>Premium for Elevated OFFICIAL</b>	20%
<b>Unit of billing</b>	Per VM fee per month

### Service options include:

- Offline facilities to support data ingestion and extraction
- Connectivity options including HybridConnect, PSN, N3/HSCN, Janet, RLI, DDoS-protected internet and data centre interconnect

Other service options are available.

## 2.12.3 Crown Campus Hosted

Have your compute infrastructure hosted directly within the Crown Campus, whilst benefiting from UKCloud running your infrastructure as a private cloud. This enables you to consume Compute as a Service from your assets running in your Crown Campus suite.

We supply the environment specification, so that you can procure the hardware. We will then arrange for the build and support the infrastructure for you.

Crown Campus Hosted	
<b>Upfront payment — design and deploy</b>	From £10,000
<b>Monthly charge — platform fee (excludes hosting)</b>	From £250 per host per month
<b>Minimum term</b>	24 months
<b>Early exit charge</b>	Remainder of contract
<b>Premium for Elevated OFFICIAL</b>	20%
<b>Unit of billing</b>	Per host per month



## 2.13 Private Cloud for Storage

Private Cloud for Storage offers three packaging options:

- All-inclusive
- UKCloud hosted
- CHDC hosted

### 2.13.1 Option 1: All-inclusive

Choose an Assured OFFICIAL or Elevated OFFICIAL cloud storage platform for your exclusive use.

We offer cost-effective purchasing options to suit your preferred budget model, including upfront capital expenditure (CAPEX) and ongoing operational expenditure (OPEX).

Private Cloud for Storage can span both our UK data centres, which have exceptional geographic diversity.

### 2.13.2 Option 2: UKCloud Hosted

We supply you with data centre capacity and give you the choice of hosting your storage infrastructure our Assured OFFICIAL or Elevated OFFICIAL security domain.

You choose your own storage infrastructure and arrange for the build. You must provide a maintenance contract with your vendor and enable us to contact them, for example, to arrange for hardware maintenance and obtain software updates and patches.

We provide network connectivity and perform platform monitoring and maintenance.

#### Service options for All-inclusive and UKCloud hosted packages include:

- Offline facilities to support data ingestion and extraction
- Connectivity options including HybridConnect, PSN, N3/HSCN, Janet, RLI, DDoS-protected internet and data centre interconnect



Other service options are available. See our UKCloud Pricing Guide.

### 2.13.3 Option 3: Crown Campus Hosted

Have your storage infrastructure hosted directly within your Crown Campus facility, while benefiting from UKCloud running your storage infrastructure as a private cloud — enabling you to consume storage as a service.

You supply your own storage infrastructure and arrange for the build (which must be compliant with UKCloud requirements). You must provide a maintenance contract with your vendor and enable us to contact them, for example to arrange for hardware maintenance and obtain software updates and patches. A disk retention policy / replacement policy should also be considered.

## 2.13.4 Pricing Comparison by Platform

	All-inclusive		UKCloud Hosted	CHDC Hosted
Upfront payment design and installation	CAPEX From 10% of asset cost	OPEX From £10k	From £10k	From £10k
Platform Fees <sup>†</sup> charged monthly				
1 Rack	from <b>£30,000</b> per Rack *		from <b>£30,000</b> per Rack	from <b>£15,000</b> per Rack
2–3 Racks	from <b>£16,000</b> per Rack *		from <b>£16,000</b> per Rack	from <b>£8,000</b> per Rack
4–8 Racks	from <b>£10,000</b> per Rack *		from <b>£10,000</b> per Rack	from <b>£4,000</b> per Rack
9–12 Racks	from <b>£6,500</b> per Rack *		from <b>£6,500</b> per Rack	from <b>£2,500</b> per Rack
13+ Racks	from <b>£5,000</b> per Rack *		from <b>£5,000</b> per Rack	from <b>£2,000</b> per Rack
	* additional asset cost applies		customers own storage infrastructure	customers own storage infrastructure
				
	CAPEX	OPEX		
Asset prepayment charged annually	Asset Cost / 2 years	N/A	N/A	customer responsibility for CHDC hosting fee
Asset Finance charged monthly	N/A	Asset Cost + 20% / 24 months		
Minimum term	24 months		24 months	24 months
Early exit charge	Remainder of asset cost		Remainder of contract	Remainder of contract
Premium for Elevated OFFICIAL	From 20%		From 20%	From 20%
Unit of billing	Usable storage upfront + Platform fee per month		Platform fee per month	Platform fee per month

<sup>†</sup> Platform Fees are priced as per the table above. Once the number of racks used reaches the next pricing Tier, all usage for the month will be charged at that lower price. Based on 8 node rack with consumption of 750W per node, total rack power consumption of 6.5KW

## 2.14 Private Cloud for Oracle Software

Private Cloud for Oracle offers three packaging options:

- All-inclusive
- UKCloud Hosted
- UKCloud Hosted & Managed

The packaging options are available to the following products:

	All-inclusive	UKCloud Hosted	UKCloud Hosted & Managed
Oracle Cloud at Customer		✓	
Exadata Cloud at Customer		✓	
Oracle Big Data Cloud at Customer		✓	
Exadata Engineered Systems	✓	✓	✓

### Option 1: UKCloud Hosted

We supply you with data centre capacity and provide you with the choice of hosting your Oracle infrastructure in our Assured OFFICIAL or non-internet facing Elevated OFFICIAL security domain.

You choose your own Oracle infrastructure and arrange for the build. You must provide a maintenance contract with your vendor and enable us to contact them, for example to arrange for hardware maintenance and support. UKCloud will provide you with the relevant network connectivity.

Please note that either you or Oracle would be responsible for providing monitoring and maintenance for this option.

### Option 2: All-inclusive (Exadata only)

Choose an Oracle Exadata system size for your exclusive use in our Assured OFFICIAL or Elevated OFFICIAL security domain.

We offer cost-effective purchasing options to suit your preferred budget model, including upfront capital expenditure (CAPEX) and ongoing operational expenditure (OPEX).

Private Oracle can span both our UK data centres, which offer exceptional geographic diversity, and we provide network connectivity and perform platform monitoring and maintenance.

## Option 3: UKCloud Hosted and Managed (Exadata Only)



We supply you with data centre capacity and give you the choice of hosting your Oracle infrastructure in our Assured OFFICIAL or Elevated OFFICIAL security domain.

You choose your size of Exadata and arrange for the build. You must provide a maintenance contract with your vendor and enable us to contact them, for example, to arrange for hardware maintenance and support. We provide network connectivity, monitoring and maintenance.

### Package feature comparison and responsibilities

	All-inclusive		UKCloud Hosted		UKCloud Hosted & Managed	
	UKCloud	Customer	UKCloud	Customer/ Oracle	UKCloud	Customer
Hardware design	✓	✓	✓	✓	✓	✓
Provision of data centre capacity	✓		✓		✓	
Procurement of hardware	✓			✓		✓
Installation of hardware — including additional capacity	✓			✓	✓	
Installation of networking infrastructure	✓		✓		✓	
Availability management	✓			✓	✓	
Capacity management — including additional capacity	✓			✓	✓	
Health management	✓			✓	✓	
Platform monitoring and maintenance	✓			✓	✓	
Performance management	✓			✓	✓	
Assurance and compliance	✓		✓	✓	✓	

## Pricing comparison by platform

	All-inclusive	UKCloud Hosted	UKCloud Hosted & Managed
<b>Upfront payment</b> design and installation	From £20k	From £10k	From £20k
<b>Platform fees</b> charged monthly			
1/8 Rack	from £12,000 *	from £2,000	from £12,000
1/4 Rack	from £16,000 *	from £4,000	from £16,000
1/2 Rack	from £30,000 *	from £8,000	from £30,000
Full Rack	from £50,000 *	from £16,000	from £50,000
	* additional asset cost applies	Customers own Oracle infrastructure	Customers own Oracle infrastructure
	<div>   </div>		
	CAPEX      OPEX		
<b>Asset prepayment</b> charged annually	Asset Cost / no. years of contract	N/A	N/A
<b>Asset Finance</b> charged monthly	N/A	Asset Cost + 20% / no. years of contract	
Minimum term	24 months	24 months	24 months
Early exit charge	Remainder of asset cost	Remainder of contract	Remainder of contract
Premium for Elevated OFFICIAL	From 20%	From 20%	From 20%
Unit of billing	Asset payment + Platform fee per month	Platform fee per month	Platform fee per month

## 2.15 Cloud Storage

Cloud Storage is charged per GiB per month based on the storage tier you fall within. These tiers are calculated on the average consumption at the end of the month, which is based on daily average measurements. For example, if the volume of customer data peaks on one day during the month at 750TiB, but the average across all days in the month is measured at 500TiB, billing for that month will be at the 251TiB–500TiB tier rate.

To establish your Multi-Cloud Storage pricing, follow these steps:

**Step 1:** Select the required Service Level

**Step 3:** Choose the security domain

**Step 3:** Choose the storage Tier

### 2.15.1 STANDARD Service Level

Storage Tier	Assured OFFICIAL £ / GiB / month	Elevated OFFICIAL £ / GiB / month
Up to 250TiB	£0.0200	£0.0260
251TiB to 500TiB	£0.0180	£0.0234
501TiB to 1,000TiB	£0.0162	£0.0211
1,001TiB+	£0.0146	£0.0190

### 2.15.2 ENHANCED Service Level

Storage Tier	Assured OFFICIAL £ / GiB / month	Elevated OFFICIAL £ / GiB / month
Up to 250TiB	£0.0400	£0.0520
251TiB to 500TiB	£0.0360	£0.0468
501TiB to 1,000TiB	£0.0324	£0.0421
1,001TiB+	£0.0292	£0.0379

## 2.15.3 Cloud Storage Gateway option (Dell EMC CloudArray)

	3 Month Commitment*		12 Month Commitment		24 Month Commitment	
	£ / Month	£ / Annum	£ / Month	£ / Annum	£ / Month	£ / Annum
Discount	0%		5%		20%	
3TiB Base*	£375	£4500	£356.25	£4275	£300	£3600
+1TiB (i.e. 4TiB)	£90	£1080	£85.50	£1026	£72	£864
+10TiB (i.e.13TiB)	£830	£9960	£788.50	£9462	£664	£7968

\*Minimum order commitment is 3 months

±Minimum order quantity is 3TiB

Customers wishing to use a free of charge Dell EMC tool offering similar functionality may want to consider the CIFS-ECS Tool available from the UKCloud Portal.

## 2.16 Multi-Cloud Backup Storage

Multi-Cloud Backup Storage is charged per GiB per month based on the VM data protected, and is calculated on the average consumption at the end of the month, which is based on daily average measurements. For example, if the volume of your data peaks on one day during the month at 8TiB, but the average across all days in the month is measured at 5TiB, billing for that month will be for 5TiB.

### STANDARD service level

Assured OFFICIAL £ / GiB / month	Elevated OFFICIAL £ / GiB / month
£0.10	£0.12

### REPLICATED service level

Assured OFFICIAL £ / GiB / month	Elevated OFFICIAL £ / GiB / month
£0.20	£0.24

## 2.17 Disaster Recovery as a Service

The pricing for UKCloud's Disaster Recovery as a Service is simple.

Protected VM (per hour)			
2 Day	7 Day	14 Day	28 Day
£0.025	£0.025	£0.025	£0.025



Protected storage (per GiB/per month)				
Storage Tier	2 Day	7 Day	14 Day	28 Day
Tier 1	£0.28	£0.33	£0.40	£0.54
Tier 2	£0.12	£0.15	£0.18	£0.25

### Example:

*Protected VM \* (per hour):*

- 1 VM protected for 744 hours (31 day month) = **£18.60** ( 744 x £0.025 ) *Protected storage (per GiB/per month):*
- 300 GiB of Tier 2 Protected Storage with 7 Day Journal Retention = **£45.00** (300 x £0.15)
- Total Charge = £63.60 for the month (£18.60 + £45.00)

**\* Important Note: Protected VM** – A protected VM is charged all the time that VM is contained within a VPG, and is charged regardless of the VM power state.

## 2.18 Migration to the Cloud

The pricing for UKCloud's Migration to the Cloud is simple.

Protected VM (per hour)	
1 Day	
£0.025	



Protected storage (per GiB/per month)	
Storage tier	1-day retention
Tier 1	£0.25
Tier 2	£0.10



## Example:

*Protected VM \* (per hour):*

- 1 VM protected for 744 hours (31 day month) = **£18.60** (744 x £0.025) *Protected storage (per GiB/per month):*
- 300 GiB of Tier 2 Protected Storage (1 Day Journal Retention) = **£30.00** (300 x £0.10) • Total Charge = £48.60 for the month (£18.60 + £30.00)

**\* Important Note: Protected VM** – A protected VM is charged all the time that VM is contained within a VPG, and is charged regardless of the VM power state.

## 3 Platform as a Service (PaaS)

### 3.1 UKCloud for OpenShift

OpenShift is packaged to provide you with a high level of flexibility to scale your environments in-line with your workloads. Your OpenShift services is built and prices using the following model;



#### 3.1.1 UKCloud Deployed Red Hat OpenShift Container Platform

This deployment option provides a full Red Hat OpenShift Container Platform that has been deployed by UKCloud and is ready to consume without delay.

We will deploy an OpenShift Project in which you can run multiple Pods, with each Pod containing a group of related Docker Containers. The number of Pods running within your project will dictate the monthly charge.

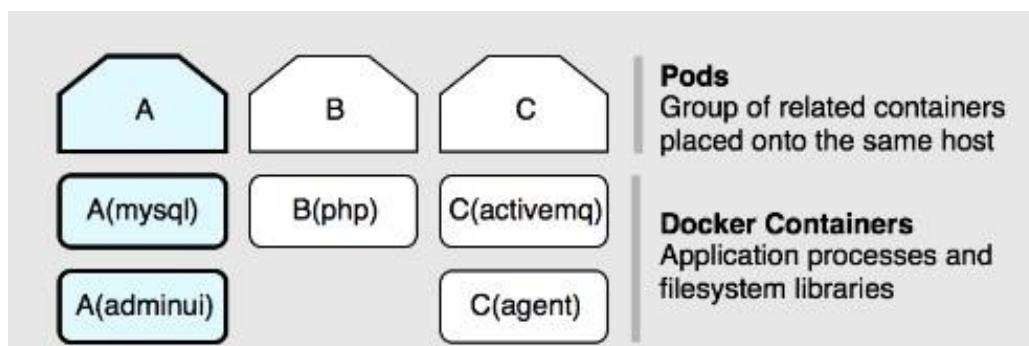


Figure 1. OpenShift Pods and Containers

## 3.1.2 Pack pricing

Foundation Pack					
Assured OFFICIAL			Elevated OFFICIAL		
£550 / month*			£660 / month*		
Runtime Packs					
Small 16GiB RAM	Medium 32GiB RAM	Large 64GiB RAM	Small 16GiB RAM	Medium 32GiB RAM	Large 64GiB RAM
£390 / month*	£560 / month*	£820 / month*	£470 / month*	£670 / month*	£980 / month*

\* One-month minimum commitment for the UKCloud for OpenShift; Service is provided subject to availability. Pricing includes the cost for all virtual infrastructure, initial configuration and Red Hat support subscription costs associated with providing the OpenShift service.

**Foundation Pack:** Provides the foundation OpenShift services to support the orchestration and management of the container runtime environments. Each customer environment requires only a single Foundation Pack.

**Runtime Pack:** Provides the footprint to host customer's containerised applications and services. Customers can choose to mix and match their Runtime Packs and Runtime Packs can be called off individually, however UKCloud strongly recommends the initial deployment of two or more Runtime Packs for production environments to provide resilience to your workloads in the event of the failure of a single Runtime Pack.

Note: An operational OpenShift cluster must consist of a minimum of a Foundation Pack plus a single Runtime Pack.

## 3.1.3 Persistent volume pricing

	Tier 1 Persistent Volume	Tier 2 Persistent Volume
<b>Overview</b>	Provides our most performant block storage for workloads requiring consistently higher disk throughput	Block storage with typical performance characteristics for use by production applications or storage
<b>Number of file copies</b>	3	3
<b>Use cases</b>	Web caching. Containerised analytics Highly performant, real-time web/mobile applications.	Standard, containerised web/mobile applications. Storing OpenShift logs and metrics.
<b>£ per GiB per month</b>	£0.25	£0.10

### 3.1.4 Additional networks

By default, your OpenShift cluster will only be connected to the internet. Your OpenShift environment can be provisioned on other networks such as N3/HSCN, JANET, RLI and PSN at a flat fee of £50 per month per network plus the additional network charges as defined within the connectivity options section below.

### 3.1.5 Registry Storage

UKCloud provides you with an initial 60GB of registry storage as part of your Starter Pack; any additional registry storage will be charged at £0.05 per GiB per month.

### 3.1.6 Enhanced Aggregated Logging

UKCloud will deploy as part of your Starter Pack a simple EFK (Elasticsearch, Fluentd, Kibana) stack to aggregate logs for a range of OpenShift Enterprise services. In order to provide this service UKCloud will need to provision an initial 20GiB of Tier 2 Persistent Volume at the rate defined above.

### 3.1.7 Enhanced Metric Collection

As part of your Starter Pack, UKCloud will provision a single Hawkular metrics instance backed by a single Cassandra instance to collect and publish your cluster's metrics from all containers and components in one user interface. In order to provide this service UKCloud will need to provision an initial 10GiB of Tier 2 Persistent Volume at the rate defined above.

### 3.1.8 Infrastructure nodes

Additional nodes to support OpenShift core services such as OpenShift routers, registry, metric collection and aggregated logging. Each additional Infrastructure Node will cost £100 per month and provides your cluster with an additional 2vCPUs and 16GiB RAM for OpenShift supporting services. Infrastructure nodes cannot be used for containerised workloads.

## 4 Software as a Service (SaaS)

### 4.1 Email and Collaboration as a Service

The pricing in the table below is based on GBP (£) per mailbox per calendar month (a part month is charged as a whole month) and is subject to a minimum of 25 mailboxes. When the number of mailboxes moves to the next tier, the pricing for that tier applies only to the mailboxes in that tier.

To establish your pricing, follow these steps:

**Step 1:** Select number of mailboxes.

**Step 2:** Choose the assurance level.

**Step 3:** Determine additional storage requirements.

**Step 4:** Determine network requirements and additional services (see section 0).

Number of mailboxes	Assured OFFICIAL			Elevated OFFICIAL		
	Price per month	Additional mailbox storage	Archive storage	Price per month	Additional mailbox storage	Archive storage
<499	£5.50	£1.00 / GiB / month (Above the initial 1GiB storage included)	£0.34 / GiB / month	£6.00	£1.00 / GiB / month (Above the initial 1GiB storage included)	£0.37 / GiB / month
500–999	£5.25			£5.75		
1,000–2,499	£4.75			£5.25		
2,500–4,999	£4.25			£4.50		
5,000–9,999	£3.50			£3.75		
10,000+	£3.25			£3.25		

## 5 Cloud Transition Services

The pricing below covers the following services;

- UKCloud Assessment Service
- UKCloud Migration Service
- UKCloud Optimisation Service
- UKCloud Transformation Service

Pricing is based on the scope and complexity of requirements. UKCloud will analyse your requirements and the output from any pre-engagement or discovery work to create a fixed-price proposal comprising a number of work packages. Work packages are usually procured sequentially but occasionally in parallel and each work package will be invoiced independently.

UKCloud also provide a Jumpstart service which provides a 4 day package of work to help you get going with whichever UKCloud technology you are planning to use. This is provided at a fixed price of £3,500.

Engineer	£550
Consultant	£900
Senior Consultant	£1,000
Lead Consultant	£1,100
Architect	£1,250
Project Manager	£800
Programme Manager	£1,250

## 6 UKCloudX services

### 6.1 UKCloudX for VMware

There are two options for the pricing of UKCloudX for VMware:

- VMs are priced per hour. Your bills are based on actual consumption, so if you're not using it, you can turn it off so you don't need to pay for it. Minimum Term is 3 months.
- Monthly. Your bill is based on a fixed charge per month. Minimum Term is 6 months. In addition, our flexible VM sizes enable you to map neatly to your existing specifications, and scale resources up or down based on changing requirements. You're not constrained to the resources identified in a design phase. UKCloud for VMware includes as standard:
  - Virtual firewalls. Allows you to manage connectivity into and out of your environment — self-service and free of charge
  - IPsec and SSL VPN/SDN. Create secure connections between users and other environments in the same Community of Interest using a variety of included tunnelling technologies
  - Basic load balancing. Configure active/active solutions that are resilient to outages and can handle large levels of activity using our on-platform out-of-the-box load balancers
  - VMware HA (High Availability) protection. On-platform protection that ensures that, in the event of a hardware failure or increased platform contention, your workload is seamlessly moved — along with any associated storage — no need for manual restarts
  - Persistent storage. Your data remains, even when a VM is turned off. Our persistent storage ensures that your application data remains consistent and available
  - Personalised support via customer success managers, TAMs and telephone support desk. Speak to people who understand your success criteria and what you're trying to achieve, to maximise the benefits you can gain from the UKCloudX platform. The beginning of every solution is a Starter Pack. The Starter Pack contains:
    - One production virtual data centre (VDC) and one non-production VDC
    - 5 Tiny Power VMs
    - 2 Small Power VMs
    - 1 Medium Power VM
    - 1 TiB Tier 1 Storage

Our transparent pricing lets you understand all the components of your solution and assess the value it offers. Follow these steps to define your solution and calculate the costs.

10. Choose the workload type and VM size that best suits your application, for example, a medium VM of the POWER type.

11. **[Optional]** Choose any additional storage needed to support your application. You can add as many storage options as you need for the different aspects of your application, for

example, Tier 1 for the high I/O database application and Tier 2 to store seldom-accessed media.

12. **[Optional]** Choose the VM protection and Block Storage protection needed for your solution, this could be either snapshot or Journaling, or both. However, you must match your VM protection and Block Storage protection in each case. For example, if you choose Journaling protection for your VM you must select Journaling protection for your block storage; i.e. Journaling protection will apply to both.
13. **[Optional]** Choose your OS licensing, such as Windows or Red Hat Enterprise Linux.

Per Hour Pricing	Monthly Pricing
<p>Add up the options you've chosen:</p> <ul style="list-style-type: none"> <li>• VM total/hour = VM + Protection Cost + Licensing</li> <li>• Storage GiB/month = Storage + Protection Cost</li> </ul>	<p>Add up the options you've chosen:</p> <ul style="list-style-type: none"> <li>• Starter Pack charge</li> <li>• VM total/month = VM + Protection Cost + Licensing</li> <li>• Storage GiB/month = Storage + Protection Cost</li> </ul>
<p>To understand your likely monthly cost:</p> <ul style="list-style-type: none"> <li>• Starter Pack charge</li> <li>• VM = VM total/hour multiplied by hours in operation</li> <li>• Storage = Storage cost multiplied by GiB allocated</li> </ul>	

## Pricing — Per Hour Option

Starter Pack	
Per Month <sup>1</sup>	£15,000

COMPUTE - VM (per hour)					
	2GHz vCPU	RAM (GiB)	ESSENTIAL	POWER	PRIORITY
Micro[1]	1[1]	0.5	£0.07	£0.14	£0.210
Tiny	1	2	£0.07	£0.14	£0.210
Small	2	4	£0.21	£0.63	£0.945
Medium	4	8	£0.28	£0.84	£1.260
Medium High Memory	4	16	£0.98	£2.45	£3.640
Large	8	16	£0.42	£1.44	£2.310
Large High Memory	8	32	£2.45	£3.85	£7.785
Tier 1 Apps Small	8	48	£3.50	£4.20	£11.025
Tier 1 Apps Medium	8	64	£4.90	£6.93	£14.595
Tier 1 Apps Large	8	96	£6.65	£10.15	£18.725
Tier 1 Apps Extra Large	12	128	£9.10	£16.10	N/A



<sup>1</sup> Commences from creation of customer environment.



VM PROTECTION (per hour) <sup>[2]</sup>							
	14-day Snapshot	28-day Snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Micro <sup>[1]</sup>	£0.10	£0.10	£0.50	£0.50	£0.50	£0.50	£1.10
Tiny	£0.28	£0.28					£0.90
Small	£0.30	£0.30					£1.00
Medium	£0.40	£0.40					£0.95
Medium High Memory	£0.40	£0.40					
Large	£0.90	£0.90	£1.00	£1.00	£1.00	£1.00	£2.80
Large High Memory	£1.80	£1.80					£4.20
Tier 1 Apps Small	£1.55	£1.55					£5.25
Tier 1 Apps Medium	£2.05	£2.05					£6.30
Tier 1 Apps Large	£3.50	£3.50					£9.50
Tier 1 Apps Extra Large	£3.75	£3.75					N/A



BLOCK STORAGE (per GiB/per month)	
Tier 1	£1.75
Tier 2 <sup>[4]</sup>	£0.70



BLOCK STORAGE PROTECTION (per GiB/per month)							
	14-day snapshot	28-day snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Tier 1	£1.40	£2.10	£1.96	£2.31	£2.80	£3.78	N/A
Tier 2 <sup>[4]</sup>	£0.70	£1.40	£0.84	£1.05	£1.26	£1.75	N/A



Distributed Networking (per VM/per hour)						
	Option 1 - Advanced Networking Bundle			Option 2 - Enterprise Networking Bundle		
	<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> </ul>			<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> <li>L2 VPN</li> </ul>		
	Essential	Power	Priority	Essential	Power	Priority
Micro[1]	£0.007	£0.007	£0.007	£0.007	£0.007	£0.007
Tiny	£0.014	£0.014	£0.021	£0.028	£0.028	£0.056
Small	£0.021	£0.021	£0.042	£0.056	£0.056	£0.105
Medium	£0.042	£0.042	£0.084	£0.105	£0.105	£0.203
Medium High Memory	£0.084	£0.084	£0.168	£0.203	£0.203	£0.406
Large	£0.084	£0.084	£0.168	£0.203	£0.203	£0.406
Large High Memory	£0.168	£0.168	£0.245	£0.406	£0.406	£0.609
Tier 1 Apps Small	£0.245	£0.245	£0.245	£0.609	£0.609	£0.609
Tier 1 Apps Medium	£0.245	£0.245	£0.245	£0.609	£0.609	£0.609
Tier 1 Apps Large	£0.245	£0.245	£0.245	£0.609	£0.609	£0.609
Tier 1 Apps Extra Large	£0.245	£0.245	£0.245	£0.609	£0.609	£0.609



Licensing										
VM Size	Microsoft Windows Server OS		Microsoft SQL Standard <sup>[3]</sup>		Microsoft SQL Enterprise <sup>[3]</sup>		Microsoft RDS		Red Hat Enterprise Linux	Bring Your Own Subscriptions
	£ / hour / VM	Academic £ / hour / VM	£ / hour / VM	Academic £ / hour / VM	£ / month / VM	Academic £ / month / VM	SAL Licence per month	Academic SAL Licence per month	Subscribe through UKCloudX £ / hour / VM	
Micro, Tiny VM	£0.012	£0.002	£0.310	£0.054	£825.00	£195	£4.19	£0.44	£0.04	No charge
Small VM	£0.023	£0.003								
Medium VM	£0.046	£0.007								
Large VM	£0.135	£0.020	£0.580	£0.15	£1650.00	£390			£0.09	

<sup>[1]</sup> Micro VM pricing has 500MHz, 10GiB of Tier 2 storage; all other VMs include 60GiB of Tier 2 storage.

<sup>[2]</sup> You must choose the same protection option for both VMs and storage.

<sup>[3]</sup> SQL Enterprise is bought on a monthly basis. You must report the quantity of SQL Standard and Enterprise licences you need each month to UKCloudX

<sup>[4]</sup> 60GiB of Tier 2 storage is included in the pricing for all VMs whilst they are powered on, except for Micro. For VMs in powered off state, consumed storage will be charged at the prevailing rate.

<sup>[5]</sup> Geo-resilient storage and synchronous protection must be purchased together.

<sup>[6]</sup> Consumed storage includes VM catalogue images and snapshots.

<sup>[7]</sup> VMs with additional allocated storage will be charged at the prevailing storage rate regardless of their powered-on/off state.

For all services above, billing is per unit.

## Pricing — Per Month Option

Starter Pack	
Per Month <sup>2</sup>	£15,000

COMPUTE - VM (per month)					
	2 GHz vCPU	RAM (GiB)	ESSENTIAL	POWER	PRIORITY
Micro <sup>[1]</sup>	1 <sup>[1]</sup>	0.5	£43.20	£86.40	£129.60
Tiny	1	2	£129.60	£388.80	£583.20
Small	2	4	£172.80	£475.20	£777.60
Medium	4	8	£259.20	£950.40	£1425.6
Medium High Memory	4	16	£604.80	£1512.0	£2246.4
Large	8	16	£777.60	£1944.0	£2916.0
Large High Memory	8	32	£1512.0	£2376.0	£4860.0
Tier 1 Apps Small	8	48	£2160.0	£2592.0	£6804.0
Tier 1 Apps Medium	8	64	£3024.0	£4276.8	£9007.2
Tier 1 Apps Large	8	96	£4104.0	£6264.0	£11556
Tier 1 Apps Extra Large	12	128	£5616.0	£9936.0	N/A



<sup>2</sup> Commences from creation of customer environment

VM PROTECTION (per month) <sup>[2]</sup>							
	14-day Snapshot	28-day Snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Micro <sup>[1]</sup>	£57.60	£57.60	£288.0	£288.0	£288.0	£288.0	£633.60
Tiny	£115.2	£115.2					£518.40
Small	£172.8	£172.8					£576.00
Medium	£230.4	£230.4					£547.20
Medium High Memory	£230.4	£230.4					£864.0
Large	£518.4	£518.4	£576.0	£576.0	£576.0	£576.0	£2.80
Large High Memory	£720.0	£720.0					£4.20
Tier 1 Apps Small	£1008	£1008					£5.25
Tier 1 Apps Medium	£1181	£1181					£6.30
Tier 1 Apps Large	£2016	£2016					£9.50
Tier 1 Apps Extra Large	£2160	£2160					N/A



BLOCK STORAGE (per GiB/per month)	
Tier 1	£1.75
Tier 2 <sup>[4]</sup>	£0.70



BLOCK STORAGE PROTECTION (per GiB/per month)							
	14-day snapshot	28-day snapshot	2-day Journaling	7-day Journaling	14-day Journaling	28-day Journaling	Synchronous <sup>[5]</sup>
Tier 1	£1.40	£2.10	£1.96	£2.31	£2.80	£3.78	N/A
Tier 2 <sup>[4]</sup>	£0.70	£1.40	£0.84	£1.05	£1.26	£1.75	N/A



Distributed Networking (per VM/per month)						
	Option 1 - Advanced Networking Bundle			Option 2 - Enterprise Networking Bundle		
	<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> </ul>			<ul style="list-style-type: none"> <li>Distributed Firewall (DFW)</li> <li>Distributed Logical Router (DLR)</li> <li>L2 VPN</li> </ul>		
	Essential	Power	Priority	Essential	Power	Priority
Micro[1]	£5.04	£5.04	£5.04	£5.04	£5.04	£5.04
Tiny	£10.08	£10.08	£15.12	£20.16	£20.16	£40.32
Small	£15.12	£15.12	£30.24	£40.32	£40.32	£75.60
Medium	£30.24	£30.24	£60.48	£75.60	£75.60	£151.20
Medium High Memory	£60.48	£60.48	£120.96	£146.16	£146.16	£192.32
Large	£60.48	£60.48	£120.96	£146.16	£146.16	£192.32
Large High Memory	£120.96	£120.96	£176.40	£292.32	£292.32	£438.48
Tier 1 Apps Small	£176.40	£176.40	£176.40	£438.48	£438.48	£438.48
Tier 1 Apps Medium	£176.40	£176.40	£176.40	£438.48	£438.48	£438.48
Tier 1 Apps Large	£176.40	£176.40	£176.40	£438.48	£438.48	£438.48
Tier 1 Apps Extra Large	£176.40	£176.40	£176.40	£438.48	£438.48	£438.48



Licensing										
VM Size	Microsoft Windows Server OS		Microsoft SQL Standard <sup>[3]</sup>		Microsoft SQL Enterprise <sup>[3]</sup>		Microsoft RDS		Red Hat Enterprise Linux	Bring Your Own Subscriptions
	£ / hour / VM	Academic £ / hour / VM	£ / hour / VM	Academic £ / hour / VM	£ / month / VM	Academic £ / month / VM	SAL Licence per month	Academic SAL Licence per month	Subscribe through UKCloudX £ / hour / VM	
Micro, Tiny VM	£0.012	£0.002	£0.310	£0.054	£825.00	£195	£4.19	£0.44	£0.04	No charge
Small VM	£0.023	£0.003							£0.09	
Medium VM	£0.046	£0.007							£0.09	
Large VM	£0.135	£0.020	£0.580	£0.15	£1650.00	£390				

<sup>[1]</sup> Micro VM pricing has 500MHz, 10GiB of Tier 2 storage; all other VMs include 60GiB of Tier 2 storage.

<sup>[2]</sup> You must choose the same protection option for both VMs and storage.

<sup>[3]</sup> SQL Enterprise is bought on a monthly basis. You must report the quantity of SQL Standard and Enterprise licences you need each month to UKCloudX

<sup>[4]</sup> 60GiB of Tier 2 storage is included in the pricing for all VMs whilst they are powered on, except for Micro. For VMs in powered off state, consumed storage will be charged at the prevailing rate.

<sup>[5]</sup> Geo-resilient storage and synchronous protection must be purchased together.

<sup>[6]</sup> Consumed storage includes VM catalogue images and snapshots.

<sup>[7]</sup> VMs with additional allocated storage will be charged at the prevailing storage rate regardless of their powered-on/off state.

For all services above, billing is per unit.

## 6.2 UKCloudX Cloud Storage

Storage tier	Assured OFFICIAL £ / GiB / month
Standard Service Level	£0.12
Enhanced Service Level	£0.24

Cloud Storage is charged per GiB per month based on the storage tier you fall within. These tiers are calculated on the average consumption at the end of the month, which is based on daily average measurements.

### 6.2.1 UKCloudX Cloud Storage Gateway option (Dell EMC CloudArray)

	3 Month Commitment*		12 Month Commitment		24 Month Commitment	
	£ / Month	£ / Annum	£ / Month	£ / Annum	£ / Month	£ / Annum
Discount	0%		5%		20%	
3TiB Base <sup>‡</sup>	£375	£4500	£356.25	£4275	£300	£3600
+1TiB (i.e. 4TiB)	£90	£1080	£85.50	£1026	£72	£864
+10TiB (i.e.13TiB)	£830	£9960	£788.50	£9462	£664	£7968

\*Minimum order commitment is 3 months

‡Minimum order quantity is 3TiB

Customers wishing to use a free of charge Dell EMC tool offering similar functionality may want to consider the CIFS-ECS Tool available from the UKCloud Portal.

## 6.3 UKCloudX Disaster Recovery as a Service

The pricing for UKCloudX's Disaster Recovery as a Service is simple:

Protected VM (per hour)			
2 Day	7 Day	14 Day	28 Day
£0.175	£0.275	£0.375	£0.475



Protected storage (per GiB/per month)				
Storage Tier	2 Day	7 Day	14 Day	28 Day
Tier 1	£1.96	£2.31	£2.80	£3.78
Tier 2	£0.84	£1.05	£1.26	£1.75

## 6.4 UKCloudX for Microsoft Azure

UKCloud for Microsoft Azure pricing is simple – you simply pay a Starter Pack and the vCPU and Memory you use, and any additional storage consumed.

Starter Pack	
Per Month <sup>3</sup>	£15,000

Machine Type	(£/vCPU /hour)	(£/GiB /hour)
A Series Machines*	£0.21	£0.91
D Series Machines*	£0.21	£0.91
F Series Machines*	£0.21	£0.91

\*includes temporary storage allocated to machine size

Storage	(£/GiB/month)
Additional Storage (All variants)	£0.70

<sup>3</sup> Commences from creation of customer environment

## Example Pricing

Size	vCPU	RAM (GiB)	Temp Storage (GiB)	(£/hour)
Standard_D1_v2	1	3.5	50	£0.56
Standard_D2_v2	2	7	100	£1.05
Standard_D3_v2	4	14	200	£2.10
Standard_D4_v2	8	28	400	£4.20
Standard_A0	1	0.768	20	£0.28
Standard_A1	1	1.75	70	£0.35
Standard_A2	2	3.5	135	£0.77
Standard_A3	4	7	285	£1.47
Standard_A4	8	14	605	£2.94
Standard_A5	2	14	135	£1.68
Standard_A6	4	28	285	£3.56
A0\Basic_A0	1	0.768	20	£0.28
A0\Basic_A1	1	1.75	40	£0.35
A0\Basic_A2	2	3.5	60	£0.77
A0\Basic_A3	4	7	120	£1.47
A0\Basic_A4	8	14	240	£2.94
Standard_DS11_v2	2	14	28	£1.68
Standard_DS12_v2	4	28	56	£2.96

Storage	(£/GiB/month)
Additional Storage (All variants)	£0.10

## 6.5 UKCloudX for OpenStack

Starter Pack	
Per Month <sup>4</sup>	£15,000

<sup>4</sup> Commences from creation of customer environment



Instance flavour	vCPU	RAM (GiB)	Ephemeral HDD (GiB)	£/hr
t1.nano	1	0.5	10	£0.07
t1.tiny	1	1	10	£0.105
t1.small	1	2	20	£0.21
t1.medium	2	2	40	£0.245
t1.large	2	4	40	£0.28
m1.small	4	8	60	£0.42
m1.medium	4	16	60	£0.98
m1.large	4	32	60	£2.10
r1.small	8	16	60	£1.12
r1.medium	8	32	60	£2.25
r1.large	8	64	60	£4.90

In addition to the cloud native optimised Instances shown above, customers with larger, bare metal style workloads can choose from the following Instances:

Instance flavour	vCPU	RAM (GiB)	Ephemeral HDD (GiB)	£/hr	GPU
b1.medium	28	220	7200	£24.50	Extra
b1.large	56	440	14400	£35.00	Extra

Note: Due to the specialised nature of these instance, provisioning lead-times may be longer than our standard instances.

In addition, customers can also choose to add GPU capabilities to these Instances to accelerate computational workloads. For full details and charging of GPU capabilities please see the 'UKCloudX – Cloud GPU' service definition.

## Persistent block storage

Cost is calculated based on the average storage provisioned by the customer at the end of the month, which is based on daily average measurements.

	Tier 1 Persistent block storage	Tier 2 Persistent block storage
<b>Overview</b>	Provides our most performant block storage for workloads requiring consistently higher disk throughput	Block storage with typical performance characteristics for use by production applications or storage
<b>Number of file copies</b>	3	3
<b>Use cases</b>	Data warehouses High-performance NoSQL databases such as MongoDB or Cassandra Randomly executing workloads	Production-level system and application workloads with midrange traffic loads (eg Apache Web Server)
<b>£ per GiB per month</b>	£1.75	£0.70

In addition, our Cloud Storage product is also available to provide an API-accessible and S3-compatible object storage solution which complements your cloud-native compute environment. For full details, see the service definition published on the Digital Marketplace.

## Cloud load balancers

OpenStack provides basic virtual load balancing features, delivering a localised load balancer to distribute traffic among two or more servers. This service supports end-to-end SSL/TLS encryption between the end-user device and your web servers.

	£ per hour
<b>First cloud load balancer Instance with each project</b>	FREE
<b>Additional cloud load balancer Instances</b>	£0.14

## 6.6 UKCloudX for OpenShift

OpenShift service is packaged to provide you with a high level of flexibility to scale your environments in-line with your workloads. Your OpenShift service is built and priced using the following model;



Foundation Pack		
From £15000 / month <sup>5</sup>		
Runtime Packs		
Small 16GiB RAM	Medium 32GiB RAM	Large 64GiB RAM
£2730 / month*	£3920 / month*	£5740 / month*

\* Six-month minimum commitment for the UKCloud for OpenShift; Service is provided subject to availability. Pricing includes the cost for all virtual infrastructure, initial configuration and Red Hat support subscription costs associated with providing the OpenShift service.

<sup>5</sup> Commences from creation of customer environment

## Persistent Volumes

	Tier 1 Persistent Volume	Tier 2 Persistent Volume
<b>Overview</b>	Provides our most performant block storage for workloads requiring consistently higher disk throughput	Block storage with typical performance characteristics for use by production applications or storage
<b>Number of file copies</b>	3	3
<b>Use cases</b>	Web caching. Containerised analytics Highly performant, real-time web/mobile applications.	Standard, containerised web/mobile applications. Storing OpenShift logs and metrics.
<b>£ per GiB per month</b>	£1.75	£0.70

## Optional Extras

### Registry Storage

A benefit of OpenShift is its ability to build Docker images directly from your source code, deploy them, and manage their lifecycle. To enable this, OpenShift utilises an integrated Docker registry to locally manage images. This registry is stored securely outside of your OpenShift environment to help ensure the resilience and availability of your images.

UKCloudX provides you with an initial 60GB of registry storage as part of your Foundation Pack; any additional registry storage will be charged at £0.05 per GiB per month.

### Enhanced Aggregated Logging

UKCloudX will deploy as part of your Foundation Pack a simple EFK (Elasticsearch, Fluentd, Kibana) stack to aggregate logs for a range of OpenShift Enterprise services. Application developers can view the logs of the projects for which they have view access. The EFK stack aggregates logs from hosts and applications, whether coming from multiple containers or even deleted pods.

In order to provide this service UKCloudX will need to provision an initial 20GiB of Tier 2 Persistent Volume at the rate defined above.

As your workloads increase or become more critical and you want to increase the performance and resilience of your Elasticsearch cluster by scaling it across three nodes, this can be achieved by deploying an additional Infrastructure Node (see below for Infrastructure Node costs).

### Enhanced Metric Collection

As part of your Foundation Pack, UKCloudX will provision a single Hawkular metrics instance backed by a single Cassandra instance to collect and publish your cluster's metrics from all containers and components in one user interface.

In order to provide this service, UKCloudX will need to provision an initial 10GiB of Tier 2 Persistent Volume at the rate defined above.

To provide resilience and added performance to your cluster's metrics, it is possible to deploy additional Infrastructure Nodes to support this (see below for Infrastructure Node costs).

**Infrastructure Nodes**

Additional nodes to support OpenShift core services such as OpenShift routers, registry, metric collection and aggregated logging. Each additional Infrastructure Node will cost £100 per month and provides your cluster with an additional 2vCPUs and 16GiB RAM for OpenShift supporting services. Infrastructure nodes cannot be used for containerised workloads.

## 6.7 Connectivity options

Connection type	DDoS-protected internet	PSN Assured	PSN Protected	N3	HSCN	Janet	SLI	Hybrid Connect	Crown Connect	Cloud Connect
Standard	FREE	FREE	£250	£250	£220	FREE	N/A	N/A	From £200	From £200
Unlimited	FREE	£2,500	£3,500	£3,500	£3,000	FREE	N/A	N/A	N/A	N/A
Set-up fee	N/A	N/A	N/A	N/A	N/A	N/A	£10,000	£2,000	£1,000	£1,000

UKCloudX provides one of the best-connected cloud platforms for the UK public sector. We offer a range of flexible connectivity options that enables access to our secure platform by virtually any community of government users and systems. The variety of government, public and private networks is shown in the following diagram:

## 7 Connectivity and additional services

To use our services, you may need to have appropriate accreditations and connectivity in place.

### 7.1 Assured OFFICIAL

Assured OFFICIAL	Notes	Metric	Price
DDoS-protected Internet	Access to DDoS-protected internet	Inbound and outbound data transfer	Free: £0.00 per GB
JANET	Access to the JANET network	Inbound and outbound data transfer	Free: £0.00 per GB
PSN (Assured) connectivity	Access via UKCloud's resilient, scalable PSN (Assured) connectivity on a shared bandwidth model.	Inbound and outbound data transfer	Free: £0.00 per GB
PSN IP addresses	If required, UKCloud can provide PSN IP addresses. You get one address as standard. If you require large pools of PSN IP addresses, you can request them directly from the PSN authority.		There is an admin fee of £20 for each PSN IP address. No charge if you bring your own PSN IP addresses.
N3 access bandwidth	Access to the NHS National Network (N3) via UKCloud's resilient, scalable N3 connectivity on a shared bandwidth model.	Standard (Priced per N3 connection)	£250 per month
		Unlimited (Unlimited N3 connections)	£3,500 per month
HSCN access bandwidth	Access to a share of UKCloud's resilient, scalable HSCN connectivity on a shared bandwidth model.	Standard (Priced per HSCN connection)	£220 per month
		Unlimited (Unlimited HSCN connections)	£3,000 per month
N3/HSCN IP addresses	If required, UKCloud can provide N3/HSCN IP addresses with the first provided free of charge.		There is an admin fee of £20 for each N3/HSCN IP address.  No charge if you bring your own N3/HSCN IP addresses.
Internet-based data centre connectivity	Inter-datacentre connectivity using UKCloud's DDoS-protected internet facing circuits. Customers can use a site-to-site VPN to suitably encrypt data if required.		Free: £0.00 per GB
Dedicated inter-data centre connectivity	If there are performance-sensitive cross-data centre requirements, customers can pay for an allocation of UKCloud's assured, accredited, resilient inter-data centre connections for point-to-point connectivity.	Standard (Priced per cross-site network)	£175 per month

Assured OFFICIAL	Notes	Metric	Price
Dedicated L3 VPN	<p>Customers who have complex networking requirements can opt to have a dedicated network within the core network of UKCloud, connected to multiple endpoints within any Cloud.</p> <p>Standard tier includes two endpoints within the cost of the network. Additional endpoints are at additional cost. Unlimited tier allows unlimited endpoints to be connected to a network</p>	Standard (Priced per network. Includes two endpoints)	£175 per month
		Additional endpoints connected to network	£75 per device per month
		Unlimited (Priced per network. Unlimited endpoints per network)	£1000 per month
Private Region Connectivity	Enables customers to have seamless connectivity between Clouds within a single multi-cloud region using UKCloud's private networks. Customers can connect their own endpoints to the network		Free: £0.00 per GB
Inter-Region Connectivity	<p>Self-service connectivity between UKCloud regions based on software defined network technology. Can be used to connect any Cloud in any region or site within the multi-cloud platform using encrypted layer 2 and layer 3 networks. Utilises UKCloud's software-defined endpoint devices to enable a full mesh connection between all regions.</p>	Priced per device. Private network connectivity included within price of device.	£0.52 per device per hour (1Gb bandwidth)
			£0.40 per device per hour (500Mb bandwidth)
			£0.36 per device per hour (200Mb bandwidth)
HybridConnect	<p>Enables customers to bring private connectivity into UKCloud.</p> <p>Connectivity is ordered and managed by the customer directly with a UKCloud approved service provider. Termination must be within service provider infrastructure in UKCloud core network locations</p> <p>This charge covers the connectivity from termination point to the UKCloud platform and not the actual private connection.</p>		<p>Per-data centre charge: £2,000 one off setup charge per installation.</p> <p>No recurring charge.</p>
CrownConnect	<p>Enables customers to:</p> <ol style="list-style-type: none"> <li>1) Connect their UKCloud environment to a private network circuit within the same Crown Campus (ARK Datacentre Campus).</li> <li>2) Connect their UKCloud environment to a private data suite within the same Crown Campus (ARK Datacentre Campus).</li> </ol> <p>Private connectivity (leased lines, MPLS etc) would be ordered and managed by the customer directly with their service</p>		<p>Per-data centre charge: £1,000 one off setup charge per installation. 1Gb port £200 per month 10Gb port £500 per month</p>

Assured OFFICIAL	Notes	Metric	Price
	<p>provider. Termination must be within service provider-owned locations within Crown Campus. UKCloud will establish cross-connects from your termination point into the UKCloud platform.</p> <p>Connectivity can also be provided from private infrastructure in Crown Campus into workloads within UKCloud.</p> <p>UKCloud will establish cross-connects from your private infrastructure into the UKCloud platform.</p> <p>Connectivity can be provided with an optional encryption overlay using dedicated, UKCloud provided hardware</p>	Optional encryption overlay	1Gb: £175 per month 10Gb: £1150 per month
CloudConnect	<p>Enables customers to establish connectivity to UKCloud-approved public cloud providers through peering exchanges or via private connections. Customers are responsible for establishing a connection to the public cloud provider and enabling connectivity within the public cloud provider.</p>		Per-data centre charge: £1,000 one off setup charge per installation. 1Gb port £200 per month 10Gb port £500 per month
Public internet IP addresses	<p>IP addresses in addition to those supplied as standard can be provided (this option requires approval from UKCloud).</p> <p>In regions 1 &amp; 2, IP addresses will be allocated in blocks of five or more.</p>		An admin fee of £20 will be charged for each IP address. Addresses may be bought in blocks of 5 (useable) (£100) or 13 (useable) (£260).
Cloud Enablement	To enable access to our cloud, you can co locate encryption or access devices		£2,000 per setup / additional installation per data centre. £500 per month per data centre.
Smart Hands	<p>Available for customers using our Cloud Enablement service. The service is available 24x7 and can be used for a variety of tasks such as physical 'pushbutton' tasks, replacing hardware, and checking equipment status.</p>		£85 per hour
Mass Transfer Facility	<p>You can use your own compatible hard disk drive or NAS to move virtualised environments in the form of VMs:</p> <ul style="list-style-type: none"> <li>• Into your virtual data centre</li> <li>• Between the Assured OFFICIAL and Elevated OFFICIAL security domains</li> <li>• Between our data centres in Farnborough and Corsham</li> </ul>		Charged according to the current SFIA rate card, which will be prorated to a minimum of half a business day to cover the time taken to set up and manage the transfer, and detach the HDD/NAS.



Assured OFFICIAL	Notes	Metric	Price
Data Transfer Facility	Sometimes transferring data over a wide area network (WAN) isn't viable, for example, if you have insufficient network bandwidth or are waiting for appropriately accredited connectivity to be installed.  To help you meet these challenges, we offer you a room where you can use the secure, network connections between our Farnborough office and our data centre.		Access to a data transfer facility costs £500 per day for one room within UKCloud's secure offices. The price includes data transfer charges, site and network administration, use of one computer, and escort duties.
Cloud Credits	You can purchase Cloud Credits upfront and redeem them against our cloud services over a maximum two-year period.  This allows you to effectively commit your CAPEX or budget spend in advance, with monthly usage deducted from the balance until depleted.  Cloud Credits can be used for a single service or a combination of services or orders.		Every £1 spent on Cloud Credits = £1 to be spent on our cloud services.
Global Load Balancing	Enables you to direct internet traffic across multiple end-points (which can be across different sites or platforms).  UKCloud subcontracts this service to Neustar, global leaders in network and security services.  This service requires a 12-month minimum term commitment.	Starter Pack (1 million DNS queries)	£350 per month
		Each additional 1 million DNS queries	£150 per month
Application-tuned DDoS protection	Complements UKCloud's platform-level DDoS protection with a domain-based service that can be more finely tuned to the profile of specific applications and workloads.  UKCloud subcontracts this service to Neustar, global leaders in network and security services.  This service requires a 12-month minimum term commitment.	Provides protection for up to 10 DNS domains and up to 50Mbps of clean DDoS-protected internet traffic.	£3,000 one-off deployment charge. £5,000 per month recurring charge.
HSCN Independent Assessment	Consultative service to validate and advise on the people, processes and technology within an organisation that is connecting to HSCN. This involves a self-assessment followed by an independent on-site audit by a member of the UKCloud Compliance team who will issue a report of findings and recommendations.	Non-customer	£3000
		UKCloud Customer	Free: £0.00

## 7.2 Elevated OFFICIAL

Elevated OFFICIAL	Notes	Metric	Price
PSN (Protected) connectivity	Encrypted access to the PSN (Protected) service (using the IPED) via UKCloud's resilient, scalable PSN connectivity on a shared bandwidth model.	Standard (Priced per PSN connection)	£250 per month
		Unlimited (Unlimited PSN connections)	£3,500 per month
PSN IP addresses	If required, UKCloud can provide PSN IP addresses. You get one address as standard. If you require large pools of PSN IP addresses, you can request them directly from the PSN authority.		There is an admin fee of £20 for each PSN IP address.  No charge if you bring your own PSN IP addresses.
Dedicated inter-data centre connectivity	If there are performance-sensitive cross-data centre requirements, customers can pay for an allocation of UKCloud's assured, accredited, resilient inter-data centre connections for point-to-point connectivity.	Priced per cross-site network	£250 per month
Dedicated L3 VPN	Customers who have complex networking requirements can opt to have a dedicated network within the core network of UKCloud, connected to multiple endpoints within any Cloud.  Standard tier includes two endpoints within the cost of the network. Additional endpoints are at additional cost. Unlimited tier allows unlimited endpoints to be connected to a network	Standard (Priced per network. Includes two endpoints)	£250 per month
		Additional endpoints connected to network	£100 per device per month
		Unlimited (Priced per network. Unlimited endpoints per network)	£1,250 per month
Private Region Connectivity	Enables customers to have seamless connectivity between Clouds within a single multi-cloud region using UKCloud's private networks. Customers can connect their own endpoints to the network.		Free: £0.00 per GB
Inter-Region Connectivity	Self-service connectivity between UKCloud regions based on software defined network technology. Can be used to connect any Cloud in any region or site within the multi-cloud platform using encrypted layer 2 and layer 3 networks.  Utilises UKCloud's software-defined endpoint devices to enable a full mesh connection between all regions.	Priced per device. Private network connectivity included within price of device.	£0.52 per device per hour (1Gb bandwidth)
			£0.40 per device per hour (500Mb bandwidth)
			£0.36 per device per hour (200Mb bandwidth)
RLI	Customers are responsible for arranging their own RLI connection. UKCloud will connect this RLI		Charges will be applied as per

Elevated OFFICIAL	Notes	Metric	Price
	connection to the relevant platform using HybridConnect or CrownConnect. UKCloud is not responsible for obtaining this connection or for any associated costs.		HybridConnect.or CrownConnect
HybridConnect	Enables customers to bring private connectivity into UKCloud. Connectivity is ordered and managed by the customer directly with a UKCloud-approved service provider. Termination must be within service provider infrastructure in UKCloud core network locations This charge covers the connectivity from termination point to the UKCloud platform and not the actual private connection.		Per-data centre charge: £2,000 one off setup charge per installation. No recurring charge.
CrownConnect	Enables customers to: 1) Connect their UKCloud environment to a private network circuit within the same Crown Campus (ARK Datacentre Campus). 2) Connect their UKCloud environment to a private data suite within the same Crown Campus (ARK Datacentre Campus).  Private connectivity (leased lines, MPLS etc) would be ordered and managed by the customer directly with their service provider. Termination must be within service provider-owned locations within Crown Campus. UKCloud will establish cross-connects from your termination point into the UKCloud platform.  Connectivity can also be provided from private infrastructure in Crown Campus into workloads within UKCloud. UKCloud will establish cross-connects from your private infrastructure into the UKCloud platform. Connectivity can be provided with an optional encryption overlay using dedicated, UKCloud provided hardware		Per-data centre charge: £1,000 one off setup charge per installation. 1Gb port £200 per month 10Gb port £500 per month
		Optional encryption overlay	1Gb: £175 per month 10Gb: £1,150 per month
Elevated OFFICIAL VPN solutions	CAPS-approved or appropriate CPA assured solutions are ordered and managed by the customer directly, requiring VPN devices to be hosted within the UKCloud data centre(s).		Per-data centre charge: £2,000 one-off setup charge per installation. £500 per month.
Cloud Enablement	To enable access to our cloud, you can co-locate encryption or access devices.		£2,000 per setup / additional installation per data centre £500 per month per data centre.

Elevated OFFICIAL	Notes	Metric	Price
Smart Hands	Available for customers using our Cloud Enablement service. This service is available 24x7 and can be used for a variety of tasks such as physical 'push-button' tasks, replacing hardware, and checking equipment status.		£85 per hour
Mass Transfer Facility	You can use your own compatible hard disk drive or NAS to move virtualised environments in the form of VMs: <ul style="list-style-type: none"> <li>• Into your virtual data centre</li> <li>• Between the Assured OFFICIAL and Elevated OFFICIAL security domains</li> <li>• Between our data centres in Farnborough and Corsham</li> </ul>		Charged according to the current SFIA rate card, which will be pro-rated to a minimum of half a business day to cover the time taken to set up and manage the transfer, and detach the HDD/NAS.
Data Transfer Facility	Sometimes transferring data over a wide area network (WAN) isn't viable, for example, if you have insufficient network bandwidth or are waiting for appropriately accredited connectivity to be installed.  To help you meet these challenges, we offer you a room where you can use the secure, network connections between our Farnborough office and our data centre.		Access to a data transfer facility costs £500 per day for one room within UKCloud's secure offices. The price includes data transfer charges, site and network administration, use of one computer, and escort duties.

UKCloud's Fair Use Policy applies to all shared network connections. For more information on the Fair Use Policy, please see the G10 terms and conditions.

'Connection' when applied as a metric within the Connectivity pricing guide refers to a network that has been provisioned and associated with a device or devices within a single customer environment.

'Endpoint' when applied as a metric within the Connectivity pricing guide refers to either a layer 3 device that has been provisioned by/for a customer within a customer environment, such as a router or virtual firewall, or a network entity that is then presented into a customer environment for their use with their own layer 3 device, such as Bring Your Own Firewall.

## 7.3 Discount and purchase schemes

You can choose between four discount and purchase schemes:

### 7.3.1 Commitment discount

Customers commit to spending a specific minimum amount each month for a minimum of 12 months. The discount level attained is based on the total spend committed.

To achieve the discount, the customer will fix a value that they will commit to spend for each month of the term. This must be in a single purchase order (PO) with each month as a separate line item. As customers can consume more than their committed amount each month, they must also add an additional line item and value to cover any overspend. This must be part of the same PO.

If the customer has an existing contract, they need to accept a Contract Change Notice and set the values as outlined above. If multiple contracts are affected, any changes will be made via a Side Letter.

PO value	Discount level
<£250K	0%
£250K–£499K	9%
£500K–£749K	13%
£750K–£1,499k	16%
£1,500K +	19%

- Individual projects or departments (billing entities associated with each monthly spend) can be amended during the year through discussion with, and agreement from, UKCloud; however the committed value cannot be reduced midterm.
- Customers get a discounted rate for each month up to the set monthly figure only, not for overuse.
- At the end of each month UKCloud will do one of two things:
  - If the actual usage is above the committed value, UKCloud will take the value from the monthly commitment line item and the remaining balance from the overspend line item.
  - If the actual usage is below the set value, UKCloud will bill the customer the committed value.
- At the end of the 12 months, UKCloud will rebate the customer the value of the applicable discount over the 12-month period minus any overuse for the last month; so, the invoice for month 12 is for the committed consumption plus any overuse at standard prices, with the potential for a 12-month rebate.
- If the overspend PO line item value is spent before the end of the 12 months, the customer must issue a top-up PO value for the remainder of the 12 months, or increase their spend and commit to a further 12 months.
- The customer will pay for any usage above the set amount at the standard rates.
- The discount is set based on the committed PO value, not the actual usage.

### 7.3.2 Annual subscription discount

Customers can gain a discount off the standard rates by subscribing to pay for VMs for a minimum 12-month period. UKCloud will take the discount off the annualised hourly cost of the VM which is payable in 12 equal monthly payments, regardless of actual usage.

Subscription period	Discount level
12 months	9%

Customers must specify the quantity of VMs (by VM size and service level) they wish to subscribe to. The UKCloud billing system will automatically offset the cost of VMs which exactly match the size and service level of the specified VMs. All other VMs and ancillary services (additional storage allocated to subscribed VMs) will be billed at standard UKCloud rates.

#### Worked example

If you know you'll consume a minimum of 20 Large, Assured OFFICIAL ESSENTIAL VMs for at least a year, you can make an annual subscription to those 20 VMs and receive an effective 9% discount.

A Large, Assured OFFICIAL ESSENTIAL VM costs £0.18 per hour, therefore £1576.80 per year ( $£0.18 \times 24 \text{ hours per day} \times 365 \text{ days}$ ), so 20 of these VMs would usually cost £31,536 per year.

If you subscribe to these 20 VMs for a year, you'll get a 9% discount (£2838.24), reducing the annual cost to £28,697.76, billed at £2,391.48 per month. In months where you use less than 20 VMs, you'll still be billed £2,391.48. In months where you use more than 20 VMs, the additional VMs will be billed at standard UKCloud rates.

### 7.3.3 Large-scale High Performance Compute cluster discount

UKCloud can deliver the Tier 1 Apps Large VM with a significantly higher discount for customers who have a persisting requirement for very large-scale deployments. This model is especially suitable for workloads such as High Performance Compute (HPC) clusters.

In these cases, customers will be entitled to a discounted price of £0.40 per VM per hour, subject to the following:

- Availability is at the PRIORITY service level only and on the Assured OFFICIAL cloud platform.
- All VMs within the HPC cluster must exist within a single virtual data centre (VDC) and within a single site.
- All VMs within the HPC cluster must be identically configured and programmatically deployed.
- There is a two-year fixed term commitment.
- The minimum volume commitment is (240 VMs / 1,920 cores).
- The scale unit is 120 VMs / 960 cores.
- The Committed Compute Spend is calculated as the number of committed VMs (for example, 240) x the number of hours in a two-year period (for example  $24 \times 365 \times 2 = 17,520$ ) x the discounted hourly rate (£0.40).



- 50% of the Committed Compute Spend must be paid upfront; the remaining 50% will be invoiced equally over 24 months.
- Early Termination Fee: if the contract is terminated before month 24, the discount will be forfeited and the customer will be liable for all hourly consumption up to the point of termination invoiced at the non-discounted hourly rate.
- In addition to the Committed Compute Spend, a final balancing payment equivalent to 20% of the Committed Compute Spend will be due at month 24 of the contract.

### Worked example

If you commit to 240 VMs for two years, you'll get a discounted price of £0.40 per VM per hour for each VM, reducing the two-year cost to £1,681,920 (the Committed Compute Spend). 50% (£840,960) will be billed upfront and £35,040 will be billed each month for 24 months. A final balancing payment equivalent to 20% of the Committed Compute Spend (£336,384) will be billed at month 24.

If you know you'll consume a minimum of around 240 identical Tier 1 Apps Large, Assured OFFICIAL, PRIORITY service level VMs for at least two years, you can commit to a minimum spend and receive a significant discount. Each VM of this size and type costs £1.85 per hour, so 240 of them would cost £7,778,880 for two years.

Additional VMs above the 240 will be billed as per our standard catalogue pricing based on consumption.

### 7.3.4 Cloud Credits

You can purchase Cloud Credits upfront and redeem them against our cloud services over a maximum two-year period. This allows organisations to effectively commit their CAPEX or budget spend in advance, with monthly usage deducted from the balance until depleted.

- Every £1 spent on Cloud Credits equals £1 to be spent on our cloud services.
- The purchase of Cloud Credits can be made against any G9 Service Definition and Cloud Credits are transferable between services.
- Cloud Credits can be used for a single service or a combination of services or orders.
- Any unused Cloud Credits at the end of the two-year period will be non-refundable.

### Worked example

If you know you'll consume at least £550,000 worth of cloud services over a two-year period based on previous or projected usage, you may choose to pre-pay this amount. You'll receive £550,000 worth of Cloud Credits to be used against any UKCloud service over a maximum two year period.

You'll receive a monthly invoice, with payment automatically taken from your Cloud Credits, if available. You'll need to inform our finance department if you wish to make any amendments to how your invoices are paid.

## 7.3.5 Discount and purchase scheme eligibility

	Commitment discount	Annual subscription discount	Large-scale HPC cluster discount	Cloud Credits
UKCloud for VMware	✓	✓	✓	✓
High Performance Compute				✓
UKCloud for OpenStack	✓	✓		✓
Dedicated Compute	✓	✓	✓	✓
UKCloud for OpenShift	✓			✓
UKCloud for Microsoft Azure	✓	✓		✓
Email and Collaboration as a Service	✓			✓
Walled Garden	✓			✓
UKCloud Guard	✓			✓
Private Cloud for Compute				✓
Private Cloud for Storage				✓
Private Cloud for Oracle				✓
Basic Managed VM	✓			✓
Cloud Storage				✓
UKCloud for Oracle Software	✓			✓
Disaster Recovery as a Service				✓
End User Compute	✓			✓



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UKC-GEN-758