

SERVICE SCHEDULE

PRIVATE CLOUD

This is a Service Schedule as defined in the Conditions. Where the Services set out in this Service Schedule form part of the Services to be supplied under a Contract (as defined in the Conditions), this Service Schedule forms part of the Contract.

In this Service Schedule, references to Clauses are to Clauses of the Conditions, and references to paragraphs are to the paragraphs of (i) this Service Schedule or (ii) whichever other document is specifically referred to.

1 Additional Definitions

In this Service Schedule the following words and expressions shall have the following meanings:

- 1.1 "Guest" – a Virtual Machine and Operating System which runs on a Host server.
- 1.2 "Host" – a physical server running a Hypervisor which runs and manages Guest Virtual Machines.
- 1.3 "Hypervisor" – a special server Operating System designed to run on a physical server (the Host) which provides the ability to securely run one or more Virtual Machines (the Guests.) The Hypervisor ensures each Virtual Machine is entirely segregated from one another and manages resources, using configurable rules, which are available to each.
- 1.4 "Compute resources" – physical CPU and memory which will be allocated to Virtual Machine(s).
- 1.5 "Operating System" – a software system designed to run directly on physical or virtual hardware which manages the hardware state and allows running of additional application software.
- 1.6 "Private Cloud" – a specific configuration of hardware and software components that provides a virtualisation environment that is dedicated to the Customer. Specifically, the Supplier defines "Private Cloud" as a private virtualisation environment where the Customer has a private instance of the system controller (and therefore the environment configuration) and dedicated, physical cloud Hosts. Some components of the platform may be either physically dedicated or logically dedicated as specified by the Service Order Form.
- 1.7 "Virtual Machine" – a virtualised server environment running a guest operating system including the data files which define the Virtual Machine and those which contain the Virtual Machine's associated virtual disk drives and their data.

2 Private Cloud - Service Scope and Description

- 2.1 Pulsant Private Cloud delivers a platform which gives the customer access to virtualisation resources in which the Customer can operate Virtual Machines. The service provides;
 - 2.1.1 Compute resources which are provided by physical servers which are for the sole use of the Customer, and for the allocation to Virtual machines which are created by the customer or the supplier. The specification of the physical servers is detailed on the Service Order Form and service described by Pulsant Service Description – Dedicated Server.
 - 2.1.2 Management services which control and assure the availability (in line with the SLA as defined in paragraph 4.2 of this schedule) of the resources.
 - 2.1.3 Storage resources, which are provided as storage volumes for the allocation to Customer Virtual Machines. They are for the sole use of the Customer. Storage resources are provided as specified on the Service Order Form by either:
 - 2.1.3.1 A Customer dedicated storage system as described by Pulsant Service Description – Managed Storage System.
 - 2.1.3.2 Storage resources provided by Pulsant Cloud Storage as described by Pulsant Service Description – Cloud Storage.
 - 2.1.4 Storage network(s), over which the storage resources are provided, are logically secured. These networks are provided as specified on the Service Order Form by either:
 - 2.1.4.1 Customer dedicated network switching as described by Pulsant Service Description – Managed Switch.

- 2.1.4.2 Pulsant Cloud Fabric as described by Pulsant Service Description – Cloud Fabric.
- 2.1.5 Management network(s), which enable control of the assigned Virtual Machine resources from the virtualisation management services and systems, are logically secured and for the sole use of the Customer. These networks are provided as specified on the Service Order Form by either:
 - 2.1.5.1 Customer dedicated network switching as described by Pulsant Service Description – Managed Switch.
 - 2.1.5.2 Pulsant Cloud Fabric as described by Pulsant Service Description – Cloud Fabric.
- 2.1.6 Virtual Machine networks, to which the Customer's Virtual Machines connect, are logically separated and for the sole use of the Customer. These networks are provided as specified on the Service Order Form by either:
 - 2.1.6.1 Customer dedicated network switching as described by Pulsant Service Description – Managed Switch.
 - 2.1.6.2 Pulsant Cloud Fabric as described by Pulsant Service Description – Cloud Fabric.
- 2.1.7 Network perimeter security, which provides protection of the trusted Private Cloud networks from external, untrusted networks, is provided by "Pulsant Managed Firewall". The firewall appliances are dedicated to the Customer, and are for the sole use of the Customer, running either as virtual appliances on the Customer's Private Cloud environment or as physical appliances. These services are described by Pulsant Service Description - Managed Firewall.
- 2.2 Private Cloud Services are provided to the Customer for so long as the Contract remains in force in accordance with the terms of this Contract and the Supplier's acceptable use, security and access policies and procedures.
- 2.3 Private Cloud Services are subject to payment by the Customer of the Supplier's Charges for installation and support Services, as set out in the Order Form or as subsequently agreed between the parties from time to time.
- 2.4 Private Cloud must be specified and maintained so as ensure it meets the requirements placed on it such as performance, capacity and security. The Customer holds full responsibility for ensuring that it's requirements are met and for informing the Supplier where those requirements changes so the Supplier may recommend changes to the Private Cloud to accommodate.
- 2.5 Private Cloud is provided to the Customer on a managed basis where the Customer is not able to directly configure the Private Cloud platform. Changes may be requested to the configuration of the platform. Change requests received by the Supplier are reviewed prior to implementation so as to confirm they are appropriate so as to achieve the Customer's objective and that they uphold performance, capacity and security practises and deployment standards within the service.
- 2.6 The scope of the Services being provided by the Supplier is detailed in the Pulsant Service Description – Private Cloud in the section headlined Management Scope. This Document also contains recommended specific considerations under the section "Service Dependencies and/or Related Services". The Customer confirms that it has considered and retains full responsibility for all scenarios relating to Private Cloud conditions and functionality of each related or dependent service and that the Supplier has no responsibility for any failure of any of these related or dependent services.
- 2.7 The Customer accepts that Private Cloud environments have various high availability features allowing for continuation of normal service in the event of failure of physical components. Each feature recovers from a component failure in a particular way and some involve a short period of consideration of the failure scenario and then a reaction to recover if required. During this consideration and reaction period, some interruption of services may occur and during this time the Private Cloud is considered to be available as it is operating within its designed parameters. All Private Cloud high availability features and recovery processes are entirely automated by the Private Cloud virtualisation management services and systems.
- 2.8 The Supplier will configure the virtual environment and virtual hardware resident on the environment within the best practises set out by the Hypervisor vendor. Where the Customer requests changes which breach best practises the Supplier shall advise against proceeding and should those changes become applied the Supplier is no longer able to guarantee service levels.
- 2.9 The Supplier will monitor the health of the infrastructure which forms the Private Cloud in line with those component services (such as Pulsant Dedicated Server) and will resolve any issues with consideration of how the Private Cloud environment operates. For example, Private Cloud physical Host servers will be specified with a minimum of

N+1 and where that level is maintained a physical server can be safely removed from the Private Cloud for maintenance rather than risking running Virtual Machines with live changes.

- 2.10 The Supplier will monitor the available capacity and performance of the Private Cloud platform and make recommendations for capacity increments as required. Where recommendations are made by the Supplier and not accepted by the Customer, the Supplier will not guarantee the availability of the Private Cloud.
- 2.11 The Customer is responsible for ensuring that a suitable data backup service is maintained to protect data within the Private Cloud. Where the Supplier provides such backup services the Customer remains responsible for determining which data must be protected and communicating that requirement with the Supplier.

3 Private Cloud Security

- 3.1 Private Cloud and its component infrastructure services, implement technology designed to ensure security is maintained where configured within the environment. Where Private Cloud is configured to enforce internal security (for example, network separation between groups of Virtual Machines) those configurations will be mirrored by the Supplier in any infrastructure services that participate in the configuration. Where changes are requested that could compromise security principles the Supplier will advise and recommend available alternatives.
- 3.2 Where untrusted networks, such as the Internet, are connected to the Private Cloud, Pulsant recommends in all cases that fully capable firewall is employed as a perimeter security measure. Where such recommendations are not employed Pulsant reserves the right to either suspend the SLA or in cases where a potential threat to the Customer environment or a Pulsant environment is identified suspend and prevent access to the services from the internet and or the Pulsant Private Cloud network(s).

4 Service Levels

- 4.1 The Supplier will use its reasonable endeavours to deliver the following Response Times in respect of incidents as set out in the table below.

Event Type	Service Hours	Response Time
Critical	24/7/365 (Issue must be notified by telephone)	Within 15 minutes
Service Affecting	24/7/365 (Issue must be notified by telephone)	Within 30 minutes
Routine	Business Hours	Within 30 minutes, measured during Business Hours

- 4.2 The Supplier will use its reasonable endeavours to deliver the following Service Levels in respect of the Services as set out in the table below.

4.2.1 The below table defines the SLA for the Private Cloud service.

4.2.2 Consumption of Private Cloud services relies on connectivity to the services. This SLA defines the provision of the Private Cloud service only and does not include such connectivity.

Measure	Service Hours	Response Time
Service Hours	The hours during which the service and SLA is provided	24/7/365
Availability	% of the service hours during which service availability is guaranteed (excluding planned maintenance in clause 6 below)	99.995%

5 Fee Credits

- 5.1 Any Fee Credits which fall due pursuant to this Clause 5 are payable subject to and in accordance with Clause 5 of the Conditions.

	Service Hours	Target Availability	Fee Credits
Private Cloud	24/7/365 (Issue must be notified by telephone)	99.995%	Pro rata proposition of the Monthly Charges for any Non-Availability Period

A pro rata proportion shall be calculated according to the number of complete minutes in the relevant calendar month and the number of complete minutes of Non-Availability in that calendar month.

"Non-Availability" means a period of time during which the relevant Service is unavailable in breach of the Availability Service Levels set out in paragraph 4.2 above.

6 Planned Maintenance

6.1 Save in situation which is an Event of Force Majeure or in the case of an emergency, where the Supplier considers (in its sole discretion) that it is necessary to carry out maintenance activities that will affect or can reasonably be expected to affect the Customer's operations, the Supplier shall notify the Customer at least 48 hours in advance of the commencement of the works detailing the nature of the work to be carried out and the timetable for completion of the works. These works will be carried out in accordance with the Supplier's standard procedures which are available upon request by the Customer. In the case of an Event of Force Majeure or an emergency, no advance notice is required.

6.2 During the period of Planned Maintenance, the SLAs will not apply.