

SERVICE SCHEDULE

DEDICATED SERVER SERVICES

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.

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

"Early Release" – early deployment of the latest stable releases of key software packages on a hosting platform, which will not have the same regression testing applied by operating system or package vendors;

"RIPE IP Address" means the Supplier provided Independent Resource IP Address or IP Addresses obtained directly from RIPE NCC;

"SMB" - a network protocol known as server message block;

"SSH" - a network protocol known as secure shell;

"Supplier IP Address" - a resource IP Address or IP Addresses which are capable of aggregation and which have been obtained by the Customer from the Supplier.

"Managed Application" – Any software stated on the Customer order form that is installed, configured, licensed and managed by the Supplier in accordance with the terms of this service schedule

"Virtual Machine(s)" – an operating system and the Managed Hosted Applications or Customer-managed applications sitting on that system that reside on a Hypervisor, which allows for more than one virtual implementations of that system and application software to reside on the same hardware platform;

"Virtualisation Management" – a Dedicated Server deployed with a Managed Service and with a managed Hypervisor as a host platform for Virtual Machines.

1 Dedicated Server Service - Service Scope and Description

1.1 The Supplier grants to the Customer the right for so long as the Contract remains in force to use the Dedicated Server for web-hosting, internet-related, or hosted application purposes;

1.2 Installation of the Dedicated Server shall be carried out by the Supplier at the rates of Charge set out in the Order Form. Following installation of the Dedicated Server the Supplier will connect the Dedicated Server to the internet, via the supplier network unless otherwise requested not to. To be clear, the Customer agrees that it is not permitted to make such connection.

1.3 Single or dual unmetered power supplies (as appropriate for the Dedicated Server) are provided for the Dedicated Server via IP-based power distribution units ("PDUs") to allow remote power cycling. If the Dedicated Server uses dual supply, these will be provided from diverse UPS battery systems and PDUs.

2 Service Provisions - The following provisions also apply to all Dedicated Server services unless otherwise stated in section 4 of this service schedule

- 2.1.1 the Customer may have full administrative access and privileges, and access to the Dedicated Server, via FTP, SMB, SSH and Terminal Services (in the case of Windows 2008 or an alternative or updated version). However, if the Supplier is required to investigate any Service-impacting issues that are later found to be caused by configuration changes or actions performed by the customer, Fee Credits will not be payable and the Supplier reserves the right to charge pro rata for any time/resources used in either investigating, implementing a work-around or restoring the Service, including any re-installation and configuration of the operating systems and applications;
- 2.1.2 in the case of the Dedicated Server option being selected by the Customer, the Supplier will perform, at the beginning of the Contract, the initial installation of the chosen operating system as specified on the Order Form;
- 2.1.3 the exact installed versions of the operating system, code libraries and individual software applications, along with the default configuration parameters, will be specified and published by the Supplier from time to time on the Supplier's Website. If the Customer requires alternative versions of the relevant operating system, applications or individual libraries, this may be installed, configured and managed on a bespoke basis at the Supplier's prevailing rates from time to time or as agreed in the Order Form;
- 2.1.4 where the Customer has selected the Early Release option for operating system and software versions, the latest stable release of key packages will be installed. These will however not be regression tested between releases, and are not functionality-static. The Supplier accepts no responsibility for data loss or loss of functionality of applications as a result of use of any of these packages.

3 The Supplier's obligations in respect of all Dedicated Server Services;

3.1 The Supplier will provide the Customer with the following:

3.1.1 the Dedicated Server, which will be maintained in good working order for so long as it is located in the Co-location Facility, such maintenance to be in accordance with the Contract and Good Industry Practice;

3.1.2 single or dual power, protected by in-line UPS battery systems and on-site generator, as appropriate to the power supply needs of the Dedicated Server;

3.2 In the event of loss of an operable operating system (e.g. catastrophic hard disk failure or software failure), the Supplier will resolve the underlying issue and provide a new base operating system install, in the same manner as a newly provisioned server. Where the issue was caused by the Customer the Supplier will provide a new base operating system install on a time and materials basis at its prevailing Charge rates. Where it is agreed that the Supplier is providing a backup service, the Supplier will be responsible for restoration of the latest backed up configuration and data, and the time taken to restore any Customer data will not be included within the time to fix targets within the Service Levels;

3.3 The Supplier will monitor the IP network interface to the Dedicated Server via simple ICMP Ping unless the Customer prohibits such access via any firewalls or similar devices. The Service Levels, where applicable, for IP Transit or other network services shall only apply in the event that suitable monitoring is possible. By firewalling the Supplier monitoring tools, the Customer is explicitly relinquishing the rights to the relevant Service Levels. The alerts for these ping tests will be sent to the Customer by email and/or SMS except where the Managed and Managed + Application support services are selected by the Customer. If the Managed or Managed + Application option is selected, all monitoring alerts will be received and responded to by Pulsant support.

3.4 The Supplier will use reasonable endeavours to provide the Customer with an appropriate physical environment for the Customer Equipment including air conditioning and humidity control.

3.5 The Supplier will use all reasonable endeavours to provide the Customer with a 24x7x365 secure environment with a fully manned site, CCTV, proximity card access control system, argonite fire suppression system (technical details and choice of fire suppression materials will vary according to the Customer choice of datacentre).

3.6 In the case of the Dedicated Server option being selected by the Customer, the Supplier will perform, at the beginning of the Contract, the initial installation of the chosen operating system as specified on the Order Form.

4 **Additional Services for Dedicated Server Service Components;**

4.1 The features set out in the following table shall apply to the additional Dedicated Server Services provided by the Supplier to the Customer and shall be detailed on the Order Form:

Patch and Monitor	Managed	Managed + Application Support
Core Services Monitoring	Core Services Monitoring	Extended Service Monitoring
Automatic Patch	Supervised Security Patching	Supervised Security Patching
	Configuration Changes	Configuration Changes
	Pro-Active Management	Pro-Active Management
		Application Installation and On-going configuration

4.2 The following clauses, 4.3 up to and including 5.4.4, detail the service components being provided for the 4 services detailed in the above table, these being;

- Patch and Monitor – clauses 4.3 to 4.4.1
- Managed – clauses 4.5 to 4.8.2
- Managed + Application Support – clauses 4.14 to 4.18.5

Patch and Monitor Service

Where a Customer has selected Patch and Monitor on the Customer order form the following service provisions shall apply;

Automatic Patch

4.3 As part of the **Patch and Monitor** Service the Supplier will provide the Customer with the following Automatic patch service component;

4.3.1 the Supplier will apply non-urgent hot fixes, service packs and updated versions of packages as supplied by the vendor of the operating system or applications in a timely manner and in coordination with the Customer, usually with a notice period of seven (7) days;

4.3.2 in the event of the need to apply critical level or security Hotfixes from the relevant operating system or application vendor, the Supplier reserves the right to upgrade the relevant software with no prior warning due to the urgent nature and security implications of some of these updates;

4.3.3 the Supplier will contact the Customer to confirm that the upgrade has been applied successfully and to confirm with the Customer that no Services have been disrupted by the upgrade. If there has been an issue with any upgrade which affects Customer applications or web applications, the Supplier will roll-back the upgrade, and will use all reasonable efforts to provide the Customer with the technical information needed to resolve the relevant problems in advance of a further scheduled upgrade which must take place within two (2) Business Days. The Supplier will not accept responsibility however for any code modification or updates needed to Customer software in such an event;

4.3.4 the Supplier may also provide a self-service control panel for web-based (or other) remote administration of user accounts and facilities by the Customer without the need for operating system administrator rights or privileges. This may be subject to additional fees, depending on the features requested by the Customer.

Core Services Monitoring

4.4 As part of the **Patch and Monitor** Service the Supplier will provide the Customer with the following Core Services Monitoring service component;

4.4.1 the Supplier will monitor the following server resources continually and alerts will be received and dealt with by the Supplier support team:

- RAID array (including physical disks and cache battery)
- Memory
- Fans
- Power supplies
- System temperatures
- System voltages

Managed Service

Where a Customer has selected **Managed** on the Customer order form the following service provisions shall apply;

Core Services Monitoring

4.5 As part of the **Managed** Service the Supplier will provide the Customer with same Core Services Monitoring as per the **Patch and Monitor** service, but in addition, the following Core Services Monitoring service component;

4.5.1 the Supplier will monitor the following at the Operating System level and alerts will be received and dealt with by the Supplier support team:

- IP connectivity (ping)
- Disk Usage
- Memory Usage
- CPU Usage (Windows only)
- Load Average (Linux only)

Supervised Security Patching Service

4.6 As part of the **Managed** Service the Supplier will provide the Customer with the following Supervised Security Patching service component;

4.6.1 the service applies to all supported Operating Systems. Supervised patching of systems will occur by default on a bi-weekly basis, unless a customer requests that a given server is specifically excluded, either temporarily or permanently from the schedule, or a less frequent schedule is required (monthly, bi-monthly, etc.). Prior to the deployment the identified patches will be tested on the Supplier Patch test system. Such tests cannot guarantee compatibility with all customer configurations. Where a deployed patch causes a failure to the customer environment, the failure will be investigated, and if required, and where possible, the patch will be rolled back. Where the patch is a critical security update any rollback will be subject to a risk assessment. As a guide, the down time required per server to apply patches and perform any required restarts is one hour. Where the solution allows, any test or development systems will be patched first on agreement with the customer, and following successful deployment of patches to the test/development systems, the production systems will then be updated. Please note that the downtime experienced while patching a system is to be considered to be Planned Maintenance.

Configuration Changes

4.7 As part of the **Managed** Service the Supplier will provide the Customer with the following OS Configuration Changes;

4.7.1 The Supplier will undertake to perform the initial configuration of the Dedicated Server, including but not exclusively the OS, platforms, virtual hosts and backups in accordance with the Provisioning Order Form as agreed between the Supplier and the Customer

4.7.2 Once in service, the Supplier will make simple configuration changes to the operating system and supported services within 24 hours of receiving a written request from the Customer Nominated Contact.

4.7.3 Where a change request is determined to be a complex change, a formal change control document will be agreed with risks and a roll back plan, and works scheduled at a mutually agreed time between the Customer and Supplier. Such requests will be actioned during normal Business Hours. Configuration changes may be made outside these hours, on request by the Customer and may be charged at the Supplier's prevailing rates as set out in the Order Form, or as communicated by the Supplier to the Customer from time to time.

4.7.4 The Supplier reserves the right to charge administrative fees for additional configuration requests beyond the average volumes per month referenced in the Acceptable Use Policy, as published on the Pulsant website.

Pro-active Management

4.8 As part of the Managed Service the Supplier will provide the Customer with the following Pro-active Management service component;

4.8.1 Supported OS and platforms are continually monitored and analysed to identify potential areas of risk as the demands and workloads placed on them inevitably expand and/or change over their lifetime. Key performance metric and event log analysis with capacity trend analysis highlights incoming issues and also allows for planning for future requirements to ensure that any required changes are carefully planned and considered to minimise risk.

4.8.2 the exact supported versions of the operating system, code libraries and individual software applications, along with the default configuration parameters, will be specified and published by the Supplier from time to time on the Supplier's Website. If the Customer requires alternative versions of the relevant operating system, applications or individual libraries, this may be installed, configured and managed on a bespoke basis at the Supplier's prevailing rates from time to time or as agreed in the Order Form.

Virtualisation Management

4.9 The following clauses will apply to Customer's that have selected Virtualisation Management and Managed Virtual Machine(s) on the Customer Order Form;

4.10 Where a Customer requires Pulsant to provide **Patch and Monitor, Managed** or **Managed + Applications** services (as set out in these terms) on any Virtual Machine(s) which reside on a Pulsant Dedicated Server the Customer must select **Virtualisation Management** on the Customer order form for the Dedicated Server(s) Service.

4.11 Where a Customer has selected the **Patch and Monitor, Managed** or **Managed + Applications** Service for any Virtual Machines running on the Dedicated Server (in line with 4.10 above), Pulsant will provide the appropriate level of service to each Virtual Machine as stated on the Customer Order Form and this service will be provided in line with the clauses set out in this service schedule and applied to each Virtual Machine accordingly.

4.12 Management of the either a Microsoft Hyper-V or VMWare Hypervisor, will be done in accordance with the terms set-out in this document for Configuration Changes:

4.12.1 Network configuration of the hypervisor (VLANs, IP address, subnet mask, gateway)

4.12.2 Storage configuration (use of shared or dedicated SAN storage by the hypervisor only)

4.12.3 vSwitch/virtual network configured

- 4.12.4 Configuration of virtual servers (at the hypervisor)
- 4.12.5 Deployment of template Virtual Machine images (either Pulsant provided or customer provided, but Managed/Managed with Application support can only be provided on Pulsant template images)
- 4.12.6 VMware clusters, HA, and DRS

4.13 The following configurations can be supported, but only as an additional service to the standard Virtualisation Management service:

- 4.13.1 Configuration of resource pools or equivalent
- 4.13.2 Configuration of extended hypervisor functions
- 4.13.3 Clustered Hyper-V
- 4.13.4 Bespoke template virtual machine or virtual machine template configuration

Managed + Application Support

Where a Customer has selected **Managed + Application Support** on the Customer order form the following service provisions shall apply.

Extended Services Monitoring

4.14 As part of the **Managed + Application Support** Service the Supplier will provide the Customer with the same monitoring as per the **Managed** service, but also the following Extended Services Monitoring service component;

4.14.1 the Supplier will monitor the following continually depending on the Application selected for support on the Order Form, and alerts will be received and dealt with by the Supplier support team:

- HTTP (content or value)
- SNMP
- TCP port
- SMTP
- POP3
- MySQL (connection, replication and query)
- MS SQL (connection, replication and query)
- Windows Services
- Exchange RPC/OWA Access
- Lync calling capability

Supervised Security Patching Service

4.15 As part of the **Managed + Application Support** Service the Supplier will provide the Customer with the following Supervised Security Patching service component;

4.15.1 The Patching service applies to all supported Operating Systems, Platforms and the Applications designated on the Order Form. Supervised patching of systems will occur by default on a bi-weekly basis, unless a customer requests that a given server is specifically excluded, either temporarily or permanently from the schedule, or a less frequent schedule is required (monthly, bi-monthly, etc.). Prior to the deployment the identified patches will be tested on the Supplier Patch test system. Such tests cannot guarantee compatibility with all customer configurations. Where a deployed patch causes a failure to the customer environment, the failure will be investigated, and if required, and where possible, the patch will be rolled back. Where the patch is a critical security update any rollback will be subject to a risk assessment. As a guide, the down time required per server to apply patches and perform any required restarts is one hour. Where the solution allows, any test or development systems will be patched first on agreement with the customer, and following successful deployment of patches to the test/development systems, the production systems will then be updated. Please note that the downtime experienced while patching a system is to be considered to be Planned Maintenance.

Configuration Changes

4.16 As part of the **Managed + Application Support** Service the Supplier will provide the Customer with the following OS Configuration Changes service component;

- 4.16.1 The Supplier will undertake to perform the initial configuration of the Dedicated Server, including but not exclusively the OS, platforms, virtual hosts and backups in accordance with the Provisioning Order Form as agreed between the Supplier and the Customer
- 4.16.2 Once in service, the Supplier will make simple configuration changes to the operating system and supported services within 24 hours of receiving a written request from the Customer Nominated Contact.
- 4.16.3 Where a change request is determined to be a complex change, a formal change control document will be agreed with risks and a roll back plan, and works scheduled at a mutually agreed time between the Customer and Supplier. Such requests will be actioned during normal Business Hours. Configuration changes may be made outside these hours, on request by the Customer and may be charged at the Supplier's prevailing rates as set out in the Order Form, or as communicated by the Supplier to the Customer from time to time.
- 4.16.4 The Supplier reserves the right to charge administrative fees for additional configuration requests beyond the average volumes per month referenced in the Acceptable Use Policy, as published on the Pulsant website.

Pro-active Management

- 4.17 As part of the **Managed + Application Support** Service the Supplier will provide the Customer with the following Pro-active Management service component;
 - 4.17.1 Supported OS and Applications are continually monitored and analysed to identify potential areas of risk as the demands and workloads placed on them inevitably expand and/or change over their lifetime. Key performance metric and event log analysis with capacity trend analysis highlights incoming issues and also allows for planning for future requirements to ensure that any required changes are carefully planned and considered to minimise risk.
 - 4.17.2 the exact supported versions of the operating system, code libraries and individual software applications, along with the default configuration parameters, will be specified and published by the Supplier from time to time on the Supplier's Website. If the Customer requires alternative versions of the relevant operating system, applications or individual libraries, this may be installed, configured and managed on a bespoke basis at the Supplier's prevailing rates from time to time or as agreed in the Order Form;

Application Installation and On-going Configuration

- 4.18 As part of the **Managed + Application Support** Service the Supplier will provide the Customer with the following Application Installation and On-going Configuration service component;
 - 4.18.1 the Supplier will monitor all supplier installed applications on a 24x7x365 basis to ensure the applications services are operational. The Supplier will monitor service response speed and latency for web services only.
 - 4.18.2 should any Managed Application fail, the Supplier will take immediate action to diagnose and rectify the fault. If the fault is caused by any other application than those specifically managed by the Supplier, the Customer's nominated technical contact will be contacted during Business Hours. Outside Business Hours, the Supplier will contact the Customer's nominated 24x7 contact, where such contact has been communicated to the Supplier.

4.18.3 the Supplier will apply non-urgent hot fixes, service packs and updated versions of packages as supplied by the vendor of the operating system or Managed Applications in a timely manner and in coordination with the Customer, with a minimum notice period of five (5) Business Days.

4.18.4 Any additional support or configuration services not provided as part of the Contract may be provided by the Supplier to the Customer at the prevailing pricing rates set out in the Order Form, or as communicated by the Supplier to the Customer from time to time on request.

4.18.5 The technology layer is supported by the Supplier as part of the Managed Applications Services, but any business logic, consultancy or setup of the Managed Applications to suit the Customer's specific requirements is not part of the Managed Applications Services and will be carried out under separately agreed consultancy terms.

5 Service Levels

5.1 The supplier will use its reasonable endeavours to deliver the following Response Times, Fix Times and Change Requests in respect of Events as classified in the tables in paragraphs 6.2, 6.3 and 6.4 below.

5.2 INCIDENT RESPONSE TIMES

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

5.3 HARDWARE FIX TIMES

Event Type	Service Hours	Fix Time
Critical	24/7/365 (Issue must be notified by telephone)	Within 1 hour fix from fault diagnosis (for standard configuration servers & components) Within 4 hour fix from fault diagnosis (for custom configuration servers)
Impacting Service	24/7/365 (Issue must be notified by telephone)	Within 8 hours
Routine	24/7/365	Within 24 hours

6 Service Availability

	Service Hours	Target Availability	Fee Credits
Target Availability for each Component of a Non-Resilient Solution	24/7/365 (Issue must be notified by telephone)	99.87%	Pro rata proportion of the Monthly Charges for any Non-Availability Period
Target Availability for each Component of a Resilient Solution	24/7/365 (Issue must be notified by telephone)	100%	5% of the Monthly Charge for every complete 30 Minute Period during the relevant calendar month.

6.1 The above targets relate to the availability of the relevant Component (as defined below), measured on a calendar monthly basis. They are subject to paragraph 8 below and to clause 3.7 of the General Terms and Conditions.

6.2 In the table in section 7:

6.2.1 "30 Minute Period" means a Non-Availability period of 30 concurrent minutes.

6.2.2 "Component" means an item of Customer Equipment which constitutes a component of the Dedicated Server Service, such as a server, storage or firewall, which is identified as a Component in the Order Form and for which a separately identified Charge is payable.

6.2.3 "Monthly Charge" means the recurring Charges for the relevant Component for the relevant calendar month, net of VAT.

6.2.4 "Non-Availability" means a period of time during which the relevant Component is unavailable in breach of the Target Availability Service Level set out in the table.

6.2.5 Whether the Service selected by the Customer is resilient or non-resilient will be indicated on the Order Form.

6.2.6 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.

7 Fee Credits

7.1 Any Fee Credits which fall due pursuant to paragraph 6 above are payable subject to and in accordance with Clause 5 of the General Terms and Conditions.

8 Planned maintenance

8.1 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.