REDCENTRIC

MANAGED SERVER SERVICE DEFINITION

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1) OVERVIEW

The Managed Server service (MSS) provides access to Redcentric's 24x7 support capability, technical skills and economies of scale, to manage the Customer's server operating systems deployed on Redcentric virtual or physical servers.

The standard service includes:

- Server operating system deployment
- Server monitoring
- Server operating system patching
- Anti-virus deployment and management
- Server availability management

2) SERVICE DESCRIPTION

2.1) FUNCTIONALITY

2.1.1) Supported Platforms

MSS supports the following operating system versions:

- Microsoft Windows Server 2008 R2 Standard or Enterprise edition
- Microsoft Windows Server 2012 Standard edition

2.1.2) Server Deployment

Redcentric will deploy the server operating system on behalf of the Customer, when provisioning a new managed server.

2.1.3) Monitoring

Redcentric will connect the managed server to an Redcentric server management network using a dedicated network interface. Redcentric will deploy a software agent onto the managed server that will be utilised to provide monitoring functionality for MSS.

Redcentric will monitor the managed server via the software agent for:

- Processor – alert if processor exceeds a threshold over a set time period
- Memory – alert if memory usage exceeds a threshold over a set time period
- Disk – alert if disk usage exceeds a threshold over a set time period
- Availability – alert if the software agent does not respond to polling requests
- Services – alert if services set to automatic stop over a set time period

Alerts generated by the software agent will automatically raise an incident within Redcentric's service desk. Redcentric will investigate the alert and corresponding fault, as detailed in the Remedial Action paragraph below.

2.1.4) Operating System Patching

Redcentric will apply patches to the managed server operating system. The process for applying patches will follow:

- Redcentric identify patches for each managed server based on the difference of available and applied patches
- Redcentric provide a list of identified patches to the Customer for approval
- Customer reviews and approves patches to be applied
- Customer provides maintenance window to apply patches
- Redcentric snapshot managed servers prior to patching
- Redcentric apply patches, reboot managed servers and check all services set to automatic
- Redcentric remove snapshot post patching
- Redcentric updates the Customer on patching progress

Redcentric apply patches, quarterly as a minimum, subject to the agreed priority with the Customer and available maintenance windows.

2.1.5) Anti-virus

Redcentric will install, monitor and manage anti-virus software on each managed server. The anti-virus software used is provided by Sophos and is configured with the following functions:

- On access scan, to check for virus or malware on file copy, more or open
- Tamper control, to stop non-authorised configuration changes to the anti-virus software
- Device control, to block unauthorised external storage devices and wireless connection and short range access
- Auto update, to update virus and malware definitions

2.1.6) Server Protection

Redcentric will protect the managed server for the purposes of Redcentric being able to restore to an earlier working point if required as part of fault finding. Server protection will take a daily backup of the entire managed server, performed each night, and retained for 7 days, onsite to the managed server.

Server protection is not a substitute for Customer performed backups as it does not provide:

- Granular file restoration
- Self-service access to the Customer to restore data
- Data retention beyond 7 days
- Offsite storage of backup data

Redcentric can provide a managed backup service to complement MSS.

2.1.7) Server Access

Redcentric allows the following access to the managed server.

Access method	Description
Console access	The managed server console can be accessed by a RDP session to a Windows server.

2.1.8) Remedial Actions

Redcentric will perform remedial actions on the managed server where a fault is identified through monitoring. The objective of the remedial actions is to re-instate the managed server to a working state that includes:

- Managed server responding to monitoring agent
- Managed server monitored counters all below the alert trigger thresholds
- Managed server disks not full
- All automatic servers running

To return the managed server to a working state, Redcentric will perform the following remedial actions:

- Notify the Customer upon detecting a fault with the managed server
- Investigate the fault and identify what steps are required. This could include:
- Remove temporary
- Expand disk space
- Restart the managed server
- Restore the managed server from a previous protection point

- Coordinate remedial actions with the Customer, specifically where it is identified that a Customer application is at fault

2.1.9) Software Licensing

MSS includes the following software licences:

- Sophos anti-virus to be installed on the managed server
- Microsoft System Center management agent to be installed on the managed server

Other software licences, such as the operating system licence, Customer application licences are not included within MSS.

Redcentric can provide software licences via its service provider licence agreements to complement the managed server.

2.1.10) Server Accounts

Each managed server will be created in non-domain joined mode with local user and group accounts by default.

The managed server can be deployed within an existing Customer domain if available.

Redcentric can create, configure and monitor a new domain for the managed servers as part of MSS implementation. This work will be performed as a complementary chargeable service in addition to MSS.

2.1.11) Managed Server Location

Redcentric will provide MSS on servers provided on either Redcentric's infrastructure as a service or hosted physical server services. In both scenarios, the managed servers will be provided on equipment from within Redcentric's UK data centres.

2.2) CUSTOMER DEPENDENCIES

The following are Customer Dependencies for MSS.

- Approve patches to be applied to the managed server operating systems
- Provide a patching maintenance window for the managed server that includes a reboot if required
- Install, configure, license and manage applications used on the managed server

2.3) EXCLUSIONS

The following are excluded from the scope of MSS.

- Reporting on performance metrics
- Backup or disaster recovery to a second data centre
- Patching of Customer applications
- Licensing of the operating system or Customer applications
- Support of the Customer's applications
- Backup of the Customer's data to a second data centre, unless taken as part of a separate Redcentric service

- Recovery of the Customer's managed server to a second Redcentric data centre, unless taken as part of a separate Redcentric service
- Deleting files, other than temporary files, as part of remedial actions
- Active directory domain management
- Existing Customer server deployments cannot be brought into the scope of MSS

2.4) ROLES AND RESPONSIBILITIES

The following table details roles and responsibilities that apply to MSS.

Task	Customer	Redcentric
Managed server administration		
Operating system support		✓
Maintaining configuration items with a management database for each managed server		✓
Day to day support / maintenance and incident resolution of each managed server		✓
Deployment of new managed servers on request of the Customer		✓
Implementation, configuration and maintenance of monitoring agent		✓
Implementation, configuration and maintenance of local server protection		✓
Storage management		
Disk management		✓
Storage area network (SAN) / network area storage (NAS) management (if applicable)		✓
Backups		
Install, operate and manage backup infrastructure	✓	
Ensure backup jobs are setup according to policy	✓	
Data restoration, such as individual files requests from end-users	✓	
Disaster recovery	✓	
Patching		
Review and assessment of available patches for managed servers and recommend to Customer which patches should be applied		✓
Approval of managed server patch implementation plan	✓	
Execution of managed server patch implementation plan		✓
Provide patch distribution infrastructure (e.g. Microsoft WSUS)		✓
Monitoring		
Specify/confirm monitoring alarm thresholds		✓
Implementation of monitoring agents onto the managed server		✓
Setup and manage monitoring alarm thresholds		✓
Monitoring of alarms		✓
Capacity monitoring of managed server	✓	
Capacity planning		

Task	Customer	Redcentric
Perform capacity planning of the managed server	✓	
Identify capacity recommendations the require investment	✓	
Implement identified capacity recommendations		✓
Administration of user access and permissions		
Creation/management of user accounts for access to managed server		✓
Request additional user access to the managed server	✓	
Availability management		
Monitor managed server availability		✓
Perform analysis where availability triggers a monitoring alert		✓
Remediate managed server to make managed server available		✓
Anti-virus management		
Installation, configuration, monitoring and management of anti-virus software		✓
Application management		
Installation, configuration, licensing, monitoring and management of application software	✓	

3) IMPLEMENTATION AND ACCEPTANCE

3.1) MSS IMPLEMENTATION

Redcentric will deploy new managed servers as part of the service delivery. By default this will include:

- Deployment of a managed server from an Redcentric template
- Patching to the latest available patch level
- Installation and configuration of anti-virus software
- Installation and configuration of a management agent
- Creation of a configuration item with Redcentric's configuration management database
- Setup of management agent alert thresholds
- Setup of server protection schedule
- Creation of local user accounts and groups
- Acceptance of the server into monitoring and support

Upon service activation, the Customer will be able to access the managed server to install their applications. Additionally the Customer can engage Redcentric professional services to:

- Design and deploy Microsoft active directory domain for the managed servers
- Design and deploy Redcentric's managed backup service

The target lead time to complete service delivery is detailed in the table below, for each service element. This is subject to the timescales of delivery of the specific connection mechanism used to connect the Customer to MSS, such as delivery of Ethernet access circuits, NHS network (N3) connection, Internet address allocation via RIPE, firewall configuration, options selected, etc.

Service Element	Service Activation Timescales
MSS Implementation	Target completion within 20 working days

3.2) MSS ACCEPTANCE

The following are the Acceptance Criteria applicable to MSS:

- Verify that the primary Customer contact can access the managed server

The Customer will need to nominate (pre-installation) and make available an appropriately qualified representative to work with the Redcentric representative during the service delivery. The nominated Customer representative will accept delivery of MSS as a fully commissioned service and sign the service sign-off document and return this to Redcentric. The installation will be carried out between 09:00 - 17:30, Monday – Friday, except where agreed with the Customer.

4) SERVICE LEVELS AND SERVICE CREDITS

4.1) SERVICE LEVELS

The Service Level applicable to MSS is as follows:

Service Level: Availability Measurement Period: Month	
Service Level	Not less than 99.99%

4.2) FLOOR SERVICE LEVEL

The Floor Service Level applicable to MSS in respect of Availability shall be 85% in any given Month.

4.3) SERVICE CREDITS

The Service Credits applicable to MSS shall be calculated as follows:

$$Service\ Credit = \frac{C\ x\ S}{MS}$$

Where:

- S = the number of seconds by which Redcentric fails to meet the Service Level for Availability in the relevant Month
- C = total Charges payable in respect of MSS for the same Month
- MS = the total number of seconds in the same month

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