MAINDEC

The IT Support Company

Maindec Computer Solutions Ltd
Service Definition for Infrastructure as a Service - NHS Health Cloud

Version 2.0

1. Infrastructure as a Service Overview

1.1 What is it?

Delivering an IT service that can adapt to business needs without significant capital investment is a constant challenge. In addition most organisations struggle to have the right skills and resources available to deliver a 24x7 service. Constantly having to invest in enterprise server, desktop, network and storage hardware/software assets and refresh them on a regular basis is no longer efficient for mid-market organisations. Investing in the datacentre environment required to house these assets is not core to most organisations.

Maindec Computer Solutions Ltd's Infrastructure as a Service – NHS Health Cloud solves these problems. Pay monthly / yearly for hosted server, network and storage services according to usage freeing up capital budget and delivering service levels that exceed service requirements leaving your IT team free from operational tasks to focus on business development projects.

IaaS Services can include applications platforms, application licensing and pre-provisioned application environments or desktop environments including operating system and application licensing.

Features	
24x7 Service Desk	Our highly skilled technical team will monitor and manage your service 24x7
Licencing Options	Licencing options available for operating system applications and storage options
Contractual Service Level Agreements	SLA for availability
Customer Portal Access	Online access to our portal for incident/change management and reporting
Service Reviews	Quarterly reviews with a dedicated Service Delivery Manager
Flexible Charging Model	Pay for what you use
Catalogue of online services	Online catalogue access for additional service requests
Service dashboard	Real-time service dashboard for instant view of service performance status
Integrated billing	Integrated billing platform to enable cross-charging and devolved service line reporting
Application and server templates	Pre-built templates to enable ease of new service provision

1.2 How it works

Maindec Computer Solutions Ltd's Infrastructure as a Service – NHS Health Cloud Platform is made up of a selection of products:-

NHS Health Cloud Virtual Machine

- A managed virtual cloud platform that can provide dedicated or shared server resources according to customer requirements.
- A selection of server resource sizes to match application and user requirements.
- Options to re-use a customer's Microsoft licensing or for Maindec Computer Solutions Ltd to provide OS and application licensing.
- Options for load balancing using enterprise virtual load balancing services.
- Enterprise Cloud Security and Anti-malware technology included.
- An SLA for OS availability.
- Standard, Support and Management with upgradeable options.
- Built on scalable, enterprise class; compute, storage, networking and virtualisation technologies.

NHS Health Cloud Virtual Machine (Offline)

- An offline copy of a provisioned virtual cloud platform that can provide dedicated or shared server resources according to customer requirements.
- A selection of server resource sizes to match application and user requirements.
- Options to re-use a customer's Microsoft licensing or for Maindec Computer Solutions Ltd to provide OS and application licensing.
- Options for load balancing using enterprise virtual load balancing services.
- Enterprise Cloud Security and Anti-malware technology included.
- An SLA for OS availability.
- Standard, Support and Management with upgradeable options.
- Built on scalable, enterprise class; compute, storage, networking and virtualisation technologies.

NHS Health Cloud Storage

- A managed, securely segmented and virtually shared storage platform that provides automatically tiered storage according to application and database performance and data protection requirements.
- An SLA for storage availability and performance.
- Built on enterprise class virtualised, tiered storage platforms.
- Includes the use of all application level storage technologies.
- Available as a range of formats, protocols for all OS types.

NHS Health Cloud Backup

- A managed, securely segmented and virtually shared provisioned Cloud Backup service for the NHS cloud services.
- Provides enterprise class virtual backup to a shared disk platform.
- Minimum of 50GB provision, sold per 50GB.
- Data is backed up on a Daily Delta, Weekly Full, Monthly Full
    - (retained for 1 Month)
    - Annual Full (Retained for 1 Year)
- The Service Includes all licensing and management of the platform
- Includes up to 20GB Restore per Month
- Virtual cloud storage for the backup is included

NHS Health Cloud Appliance

- A managed dedicated virtual cloud platform that can provide server resources according to customer requirements.
- A selection of server resource sizes to match application and user requirements.

- Options to re-use a customer's Microsoft licensing or for Maindec Computer Solutions Ltd to provide OS and application licensing.
- Options for load balancing using enterprise virtual load balancing services.
- Enterprise Cloud Security and Anti-malware technology included.
- Standard, Support and Management with upgradeable options.
- A securely segmented and virtually shared storage platform that provides automatically tiered storage according to application and database performance and data protection requirements.
- Includes the use of all application level storage technologies.
- Available as a range of formats, protocols for all OS types.
- A virtually integrated provisioned Cloud Backup service.
- Provides enterprise class virtual backup to a shared disk platform.
- Integrated billing, management and automation platform.
- Hybrid solution is integrated to online NHS cloud service and catalogue.
- Pre provisioned, including installation and configuration.
- Built on scalable, enterprise class; compute, storage, networking and virtualisation technologies.

Service Provision

Each customer is provisioned in a dedicated, secure virtual datacentre, created using the multi-tenant capabilities of the technology stack provide by combining best in class enterprise technologies. Virtual or physical servers are provisioned using standard templates, virtual network segments are created to ensure all network traffic remains secure and virtual partitions are used on the storage platforms and backup platforms to ensure that logical separation exists for each customer's data. The platform can also be delivered to the customer as an on-premise, appliance based solution with the ability to include off-site replication, DR and backup, as required.

Disk encryption, data encryption and backup encryption can be specified for data security and control.

1.3 Service Constraints

1.3.1 Data Extraction/Removal

Maindec Computer Solutions Ltd will provide a Service Transfer Plan (STP) after the Service Commencement Date that will define the process for exiting the service. As part of the STP Maindec Computer Solutions Ltd will commit to the following:-

- Storing all virtual machine images in a standard hypervisor or Open virtualisation format
- Storage all data in an iSCSI LUN, VVOL or RAW CIFS.
- Returning all customer generated data in the above formats in a process to be agreed with the customer
- A price for delivering the STP to be agreed with each customer

- Destruction of all customer data once the STP has been completed in accordance with the relevant IL status

1.3.2 Data storage and processing locations
Maindec Computer Solutions Ltd will provide a logically separate locale for each environment in accordance with the relevant IL status.

1.3.3 Deployment Models
Maindec Computer Solutions Ltd can offer IaaS in Public, Private and Hybrid cloud models. There is also an option for an on-premise version but costs for this vary depending on configuration.

1.3.4 Elastic Resources
Maindec Computer Solutions Ltd provides Elastic Resources to all customers to request expansion up and down in accordance with requirements.

1.3.5 Guaranteed Resources
Maindec Computer Solutions Ltd offers a resource pool model for each customer that provides guaranteed vRAM, Data capacity, disk IO, network IO and CPU resources up to the size of the resource pool purchased.

1.3.6 Persistence of Storage
Maindec Computer Solutions Ltd will provide the following types of storage for each service:-

- Persistent storage using high performance enterprise storage for virtual machine images (OS only) with snapshot functionality for creating instant backups
- Non persistent storage using high performance and low performance enterprise storage for data with snapshot functionality for creating instant backups

1.3.7 Service Provisioning
Maindec Computer Solutions Ltd will provide rapid provisioning and de-provisioning for all G-Cloud services. This will include providing "self-service" capabilities for the ordering and provisioning/de-provisioning and cancelling of G-Cloud services.

1.3.8 Utilisation Monitoring/Reporting
Maindec Computer Solutions Ltd will provide monitoring of all services provide with both a consumer and Crown level view. This will include real-time reporting of usage as well as trending and SLA reports.

1.3.9 Service Provisioning
Maindec Computer Solutions Ltd will ensure that all services are delivered from datacentres that are a minimum of TIA-9424 Tier 2. Each datacentre is self-certified and Maindec Computer Solutions Ltd can commit to providing visibility of the process plus compliance with the EU Code of Conduct for datacentre operations.

1.3.10 Network
Maindec Computer Solutions Ltd can offer services over both the public Internet, the Public Sector Network (PSN) and N3 and can provide full compliance with this strategy.

1.3.11 Use by other Suppliers
Maindec Computer Solutions Ltd can confirm that its IaaS offering is available to purchase by organisations who intend to supply SaaS offers to the Government in both a public and private form.

1.3.12 Standard Configuration
Maindec Computer Solutions Ltd offers the following standard configuration for IaaS:-

Cloud Service Type	Notes
Small NHS Cloud Virtual Machine	1 vCPU 2GB vRAM VM (inc No OS License*, OS Management, Antivirus, 30MB SAN Storage)
Medium NHS Cloud Virtual Machine	2 vCPU 4GB vRAM VM (inc No OS License*, OS Management, Antivirus, 60MB SAN Storage)
Large NHS Cloud Virtual Machine	4 vCPU 8GB vRAM VM (inc No OS License*, OS Management, Antivirus, 120MB SAN Storage)
Small NHS Cloud Virtual Machine (offline)	1 vCPU 2GB vRAM VM (inc No OS License*, OS Management, Antivirus, 30MB SAN Storage)
Medium NHS Cloud Virtual Machine (offline)	2 vCPU 4GB vRAM VM (inc No OS License*, OS Management, Antivirus, 60MB SAN Storage)
Large NHS Cloud Virtual Machine (offline)	4 vCPU 8GB vRAM VM (inc No OS License*, OS Management, Antivirus, 120MB SAN Storage)
NHS Cloud Storage Small	Tiered, Flash, SAS and SATA - Application aware, with VAAPI, Snap, CIFS, RAW, VVOL - Per 50GB
NHS Cloud Storage Large	Tiered, Flash, SAS and SATA - Application aware, with VAAPI, Snap, CIFS, RAW, VVOL - Per 1TB
NHS Cloud Backup	1 Month) , Annual Full (Retained for 1 Year) Includes all licensing, management and up to 20GB Restore per Month Including SAN.
Small NHS Cloud Appliance	Pre built NHS Cloud, with virtualisation, storage, compute and network, management, provisioning, backup, monitoring for up to 25vms - Single 8 Cores, 128 GB RAM, 100 GB SSD
Medium NHS Cloud Appliance	Pre built NHS Cloud, with virtualisation, storage, compute and network, management, provisioning, backup, monitoring for up to 50vms - Dual 12 Cores, 256 GB RAM, 400GB SSD
Large NHS Cloud Appliance	Pre built NHS Cloud, with virtualisation, storage, compute and network, management, provisioning, backup, monitoring for up to 65vms - Dual 12 Cores, 512 GB RAM, 400GB SSD

2. Service Management Overview

2.1 What is it?

Maindec Computer Solutions Ltd's Service Management is a cost-effective managed service that is designed to complement your existing IT team, allowing them to focus on business development projects rather than operational tasks.

All services are designed and delivered using ITIL principles from Maindec Computer Solutions Ltd's 24x7 Operations Centre. Service Management will be included in respect of all Infrastructure as a Service offers.

The following services are available as options;

Hardware and Software Support

Break-fix support or vendor escalation for our NHS Cloud solutions or individual components; providing a single point of contact for all your support services whether incident based or through a management contract.

Software Management

Our in depth knowledge of software licensing will help you reduce costs, reduce risk and ensure compliance of your software licensing estate.

Remote Monitoring

The Operations centre can provide proactive remote information on monitoring of your environment to ensure issues are detected, applications are available, applications are performing correctly, disaster recovery is taken care of and your environment is secure.

End User Operations Desk

A user focused support service that can provide helpdesk services to your organisation or provide an overflow service for your own services.

Technical Operations Desk

Highly qualified, consultant backed operations teams to provide the very best level of technical support for our products and solutions.

Operations Centre

Our Operations Centre provide the following key services;

- Enterprise Tier Dedicated Support Professionals available up to 24x7x365
- Full Service and Lifecycle Management
- European and Global Reach
- Vendor backed Escalation

- Dedicated Network Connection to each customer
- Access to technical labs
- Online Documentation centre

The following sections describe the options available and the deliverables.

2.2 Service Management Classes and Packages

The table below shows the available management options;

Service Component	Service Type		
	React	Control	Deliver
Remote Technical Support Mon-Fri 9-5	✓	✓	✓
Remote User Support 9-5	x	x	✓
Remote vendor Escalation	✓	✓	✓
Vendor Escalation and Support Fix ownership	x	x	✓
Configuration recommendations	✓	✓	✓
Bi-Yearly Patching and Maintenance Plan provided	x	✓	✓
Full Patching and maintenance plan implemented	x	x	✓
3rd Line Responsive Administrative and maintenance Support	✓	✓	✓
2nd and 3rd Line support and Monitoring	x	✓	✓
Full Pro-active service desk and support	x	x	✓
Basic Service Reporting	✓	✓	✓
Comprehensive Service Reporting	x	✓	✓
On Site Service reviews	x	x	✓
Documented configurations – Yearly	✓	✓	✓
Configuration Documented yearly, Change log updated per call	x	✓	✓
Full Change and Incident Management	x	x	✓
Configuration recommendations	✓	✓	✓
Virtual change board	x	✓	✓
Change board and Technical Strategy Representative	x	x	✓

All of the above can be also offered as an upgrade, based on 24x7x365 cover, as required.

Additional Services

A set of additional User Management and Deployment services can also be offered, based on the following options;

User Management Services

- The remote services required to manage users within the cloud infrastructure, including but not limited to:
  - Managing, adding, deleting and modifying user accounts

- Information assurance is available at all levels and is subject to appropriate clearance being granted for the analysts performing the services.
- No backup, restore and disaster recovery is provided within this service as standard.
- Pricing is dependent on the skill level and utilisation required
- The service is delivered in line with ITILv3 and PRINCE2
- The service is performed by suitably experienced and/or qualified personnel
- Service subject to the standard associated terms and conditions
- Customer responsibilities to be defined during the creation of the terms of reference/scope of responsibilities

Deployment Services

- The professional services required to deploy a range of IT infrastructure platforms, solutions and services. The requirement will vary, dependent on the level of customer involvement and specific service requirements, but may include a range of skilled resources, driven by a detailed implementation plan.
- Information assurance is not applicable as the service does not hold information, but the requirements of all IA levels can be accommodated in the service.
- Technical prerequisites - there are no specific technical prerequisites of the service, although the customer will be expected to provide background and detail relating to existing services and technology.

3. Service Level Agreements

This table summarises the Contractual SLAs for Infrastructure as a Service:

Class	Applies to	SLA	Service Credit
Production Service Level 1	The 'Availability' of the Recurring Service	The Recurring Service will be Available for at least **99.95%** of each month (i.e. will be unavailable for no more than 21 minutes, 54 seconds per month)	Up to 15% of the monthly charge for the Recurring Service as outlined below
Production Service Level 2	The 'Availability' of the Recurring Service	The Recurring Service will be Available for at least **99.5%** of each month (i.e. will be unavailable for no more than 3 hour 39 minutes per month)	Up to 15% of the monthly charge for the Recurring Service as outlined below
Production Service Level 3	The 'Availability' of the Recurring Service	The Recurring Service will be Available for at least **99%** of each month (i.e. will be unavailable for no more than 7 hours, 18 minutes per month)	Up to 15% of the monthly charge for the Recurring Service as outlined below

The following notes apply to these SLAs:-

- The SLA will be decided by Maindec Computer Solutions Ltd at the design stage based on the design, typically the following rules apply
    - Production Service Level 1
        - No single point of failure in the infrastructure
        - For virtual cloud services, workspace services where offline machines are included.
        - Backup must be included.
    - Production Service Level 2
        - No single point of failure in the infrastructure
        - For Utility cloud or workspace servers applies to single virtual OS environments
    - Production Service Level 3
        - For virtual services used for none production environments
        - For workspace services for under 50 users.
- Availability is determined by the customers' ability to access the operating system on the IaaS platform
- For single datacentre solutions, datacentre failure will be excluded from the SLA, for customers taking a dual datacentre solution the SLA applies to the entire solution
- The SLA will be measured monthly against a monthly target
- Service Credits will be reported on and paid quarterly

Service Credits will be paid according to the table below:-

Full or part-hours the service falls below the SLA	Service Credit paid
Up to 1 hour	5% of the Monthly Recurring Charges
Between 1 and 3 hours	7.5% of the Monthly Recurring Charges
Between 3 and 5 hours	10% of the Monthly Recurring Charges
Over 5 hours	15% of the Monthly Recurring Charges

In addition the following target SLAs will also apply to the Service Management of the service:-

Class	Applies to	SLA	Service Window	Service Credit
Service Management Level 1	A 'Priority 1 (P1) Incident'	A consultant will respond within 30 minutes	24x7	2 responses missed = 7.5% 3 responses missed = 10% 4+ responses missed = 15%
Service Management Level 2	A 'Priority 2 (P2) Incident'	A consultant will respond within 1 hour	24x7	2 responses missed = 5% 3 responses missed = 7.5% 4+ responses missed = 10%
Service Management Level 3	A 'Priority 3 (P3) Incident'	A consultant will respond within 8 hours	Mon – Fri (08:00 – 18:00)	N/A
Service Management Level 4	A 'Standard Change Request'	A consultant will initiate the change within 8 Working Hours	Mon – Fri (08:00 – 18:00)	2 CRs missed 5% 3 CRs missed 7.5% 4+ CRs missed 10%
Service Management Level 5	A 'Normal Change Request'	A consultant will respond to the request within 8 Working Hours	Mon – Fri (08:00 – 18:00)	2 CRs missed 5% 3 CRs missed 7.5% 4+ CRs missed 10%
Service Management Level 6	An 'Emergency Change Request'	A consultant will initiate the change within 4 Working Hours	24x7	2 CRs missed 7.5% 3 CRs missed 10% 4+ CRs missed 15%

The following notes apply to these SLAs:-

- Consultant response for Service Management Levels 1 – 2 will be recorded in Maindec Computer Solutions Ltd's operations desk application and reports made available to customers quarterly
- The SLA will be measured and reported on quarterly

4. On-Boarding Process

Maindec Computer Solutions Ltd will conduct a formal contract Start-up Process based on a PRINCE 2 methodology, including the following steps:

Stage	Description	Output / Documentation
Project Start up	The project team is assembled, all agreements and project collateral reviewed and internal resources allocated.	-
Project Initiation	The project kick off is arranged and project documentation is prepared. Dates are booked for the subsequent processes.	Project Initiation Document (PID)
Design and detailed planning	One or more Service Delivery/Project Initiation Workshops are arranged to plan (as appropriate) the Service Design, Service Transition and Service Operation. The parties agree the form of the remaining project/service documentation.	• Service Operations Manual • Statement of Work (SoW) • Detailed Design • Project Plan • Risks, Issues and Actions Log • Migration Plan • Acceptance Test Plan
Implementation	The SoW is executed according to the agreed Project Plan and the solution is implemented. Monitoring is deployed.	-
Testing	The solution is tested in accordance with the Acceptance Test Plan.	Acceptance documentation
Service Commencement	Subject to acceptance, delivery of the Recurring Services commences.	-

During the Service Design workshops, Maindec Computer Solutions Ltd will work with the customer using the ITIL framework in combination with Maindec Computer Solutions Ltd's extensive knowledge of the technology in scope to create a service delivery model (from a template) that is specific to the needs of each customer.

This process will prove vital for both Maindec Computer Solutions Ltd and the customer in understanding not only how the Service Management will function outside of business hours but also how Maindec Computer Solutions Ltd will integrate with the customer's service delivery during normal business hours. The result of this process is a Service Operation Manual that provides the detail of how the service will operate day to day.

Maindec Computer Solutions Ltd uses ITIL processes through its service delivery organisation for both internal and customer facing activities to ensure consistent and cost-effective delivery.

Pricing Overview

NHS Cloud provision options

Service Name	Service Description	Unit price	Units/Interval
Small NHS Cloud Virtual Machine	1 vCPU 2GB vRAM VM (inc No OS License*, OS Management, Antivirus, 30MB SAN Storage)	£803.68	Per Instance, Per Year
Medium NHS Cloud Virtual Machine	2 vCPU 4GB vRAM VM (inc No OS License*, OS Management, Antivirus, 60MB SAN Storage)	£1,607.36	Per Instance, Per Year
Large NHS Cloud Virtual Machine	4 vCPU 8GB vRAM VM (inc No OS License*, OS Management, Antivirus, 120MB SAN Storage)	£3,214.72	Per Instance, Per Year
Small NHS Cloud Virtual Machine (offline)	1 vCPU 2GB vRAM VM (inc No OS License*, OS Management, Antivirus, 30MB SAN Storage)	£599.23	Per Instance, Per Year
Medium NHS Cloud Virtual Machine (offline)	2 vCPU 4GB vRAM VM (inc No OS License*, OS Management, Antivirus, 60MB SAN Storage)	£964.42	Per Instance, Per Year
Large NHS Cloud Virtual Machine (offline)	4 vCPU 8GB vRAM VM (inc No OS License*, OS Management, Antivirus, 120MB SAN Storage)	£1,928.83	Per Instance, Per Year
NHS Cloud Storage Small	Tiered, Flash, SAS and SATA - Application aware, with VAAPI, Snap, CIFS, RAW, VVOL etc.. Per 50GB	£96.40	Per Unit, Per Year
NHS Cloud Storage Large	Tiered, Flash, SAS and SATA - Application aware, with VAAPI, Snap, CIFS, RAW, VVOL etc.. Per 1TB	£1,974.33	Per Unit, Per Year
NHS Cloud Backup	NHIS Cloud Backup service (per 50GB) - Daily Delta, Weekly Full, Monthly Full (retained for 1 Month) , Annual Full (Retained for 1 Year) Includes all licensing, management and up to 20GB Restore per Month Including SAN.	£210.10	Per Unit, Per Year
Small NHS Cloud Appliance	Pre built NHS Cloud, with virtualisation, storage, compute and network, management, provisioning, backup, monitoring for up to 25vms - Single 8 Cores, 128 GB RAM, 100 GB SSD	£41,000.00	Per Unit, 3 Years
Medium NHS Cloud Appliance	Pre built NHS Cloud, with virtualisation, storage, compute and network, management, provisioning, backup, monitoring for up to 50vms - Dual 12 Cores, 256 GB RAM, 400GB SSD	£96,000.00	Per Unit, 3 Years
Large NHS Cloud Appliance	Pre built NHS Cloud, with virtualisation, storage, compute and network, management, provisioning, backup, monitoring for up to 65vms - Dual 12 Cores, 512 GB RAM, 400GB SSD	£119,000.00	Per Unit, 3 Years

Rate Card for services

Service Name	Service Description	Unit price	Units/Interval
NHS Cloud Technical Services	Technical solution delivery for Cloud services solutions	£750.00	Per Day
NHS Cloud Healthcare Consulting	Strategic and NHS healthcare cloud consulting	£1,200.00	Per Day

Management Options

Service Name	Service Description	Unit price	Units/Interval
NHS Cloud Appliance Control Service	Upgrade for Cloud Service Support for NHS Cloud Appliance	£1,000.00	Per Unit, Per Year
NHS Cloud Appliance Manage Service	Upgrade for Cloud Service Support for NHS Cloud Appliance	£2,000.00	Per Unit, Per Year