



Managed Public Cloud AWS

Service Definition

February 2025

redcentric

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1. Service Overview

In today's business landscape, it's essential to have a strong cloud infrastructure to stay competitive. However, adopting cloud infrastructure and modernising it can be a daunting task, that requires technical expertise and a significant investment of time and resources. Many businesses are looking for a way to leverage the power of public cloud without incurring these challenges and expenses. This is where Redcentric empowers customers to mitigate these challenges and accelerate adoption. By partnering with Redcentric, businesses can focus on their core business objectives while not having to focus on the technical aspects of cloud management. This is especially important for businesses that require a flexible, evolving set of services to manage their transition to the cloud. Which is why at Redcentric, we believe in forming true partnerships with our customers; establishing long term relationships which allow us to deliver maximum value through a deep understanding of our customers' businesses to achieve maximum success.

We're a global technology company focused on consulting, implementation, and managed services and we specialise on accelerating time to value throughout every phase of your cloud journey — getting you to the cloud fast, allowing you to see results quickly. We aim to gain a deep understanding of your challenges so that we can fully apply our expertise in processes, applications, data, security, multi-cloud, and hybrid cloud to help meet your business goals.

An Extension of your Team

Redcentric Adaptive Cloud Engineering (ACE) team develop and deliver modern cloud solutions that provide a wide range of support and management options which are designed to allow your engineers to be focused on your core business objectives, thereby maximising your agility and efficiencies, while keeping costs to a minimum.

Redcentric ACE provides access to cloud expertise through a process of agile based, ongoing sprints to continually remediate, modernise, evolve, and improve your environment.

A True Partnership

Our flexible, collaborative approach to professional services allows you to dynamically change scope and priorities based on business needs while collaborating side-by-side with our highly skilled Redcentric ACE cloud experts to build, migrate, optimize, and transform your environments.

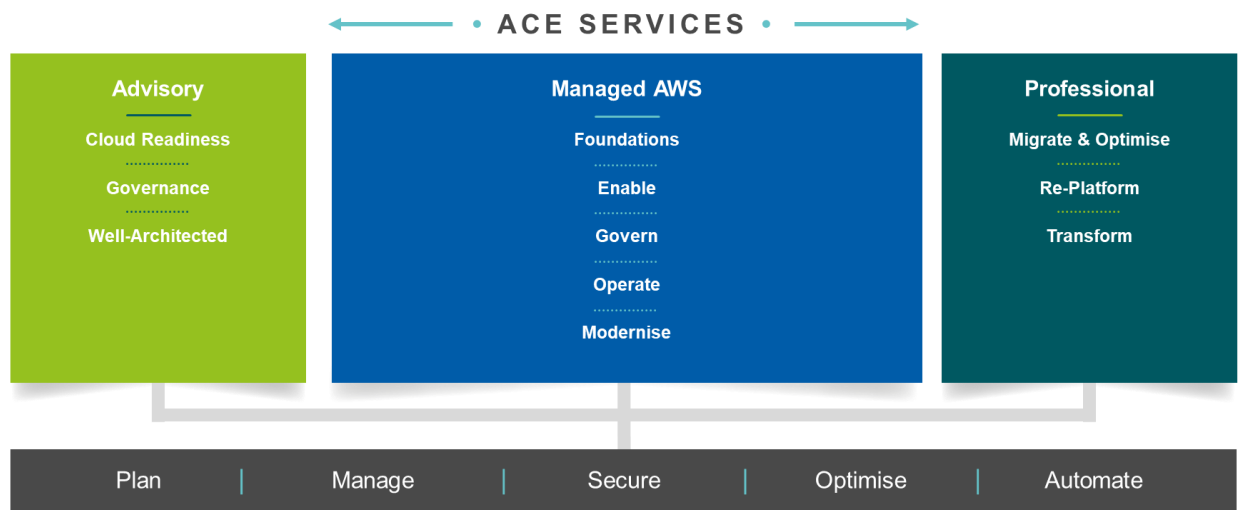
Leveraging the world's leading public cloud services, we can simplify migrations, safeguard security, ensure quality of delivery, and guarantee the requisite degree of responsive support and focused advice.

Redcentric wide portfolio of Hybrid Cloud Services provides solutions across multiple public cloud vendors, our own shared cloud, private cloud, managed network, and other technology focused services which ensures we deliver value to you, for all your technology-based requirements and help drive better outcomes for your business.

Amazon Web Services

Our AWS Services help address the challenges that businesses face when running technology workloads within any AWS; our cloud-specific services provide support for the implementation and operation of AWS environments. Each AWS service can be consumed independently to ensure we can support your business through any changes and align to your business needs and budget appropriately, with all services shown here:

Redcentric AWS Services



2. Our Approach

Redcentric have been working with AWS for over 10 years, over which time we have gained extensive experience and knowledge which we utilise, along with the Well Architected and Cloud Adoption Frameworks, to ensure every AWA environment we design, and build is aligned to best practice. Onboarding of existing AWS environments require a discovery be performed to assess how they align to our standards, any deviations found are outlined for remediation work to be carried out.

Landing Zone Considerations

- ✓ Operating Model Alignment
- ✓ Baseline Reference Architecture
- ✓ Hub & Spoke or Mesh
- ✓ Naming Conventions
- ✓ Compliance Requirements
- ✓ Security Requirements
- ✓ Monitoring Requirements
- ✓ Retention Policies
- ✓ DR, HA & Risk Mitigation
- ✓ RACI Matrix
- ✓ Deployment Timeline
- ✓ Long Term Objectives

Managed, Co-Managed or Unmanaged

*Foundations is considered Unmanaged

In situations where the customer chooses to co-manage Redcentric will need to be onboarded before Redcentric

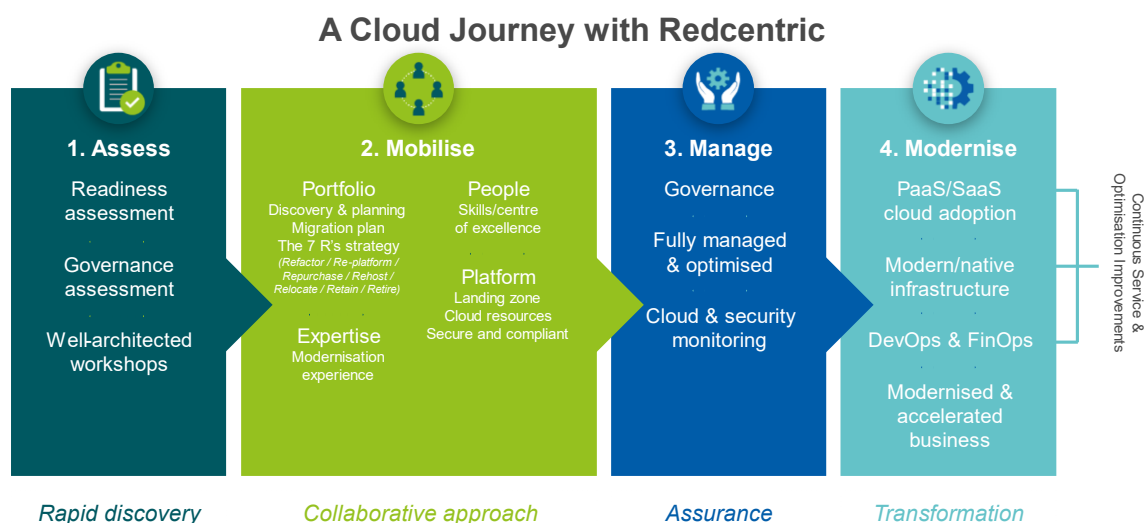


2.1. Public Cloud is a Journey, not a Destination

As organizations increasingly use the cloud to store and manage their data, it's important for decision makers to remember one key point: The cloud isn't a destination. It's a journey, and it's one that plays an essential role in enabling digital transformation for any organization.

For Redcentric, the cloud isn't simply where your organization goes with its data and applications; it's the experience required to optimize the use of your apps and data, no matter where they reside.

Increasingly, that means embarking on a journey to a hybrid cloud, a mixture of public cloud, private cloud and on-premises infrastructure that best serves your organization's IT needs by extending the cloud experience across the enterprise, which is where a partnership with Redcentric shines the most with our approach illustrated below:



3. The Redcentric ACE team

Redcentric ACE Support for AWS functions as extension or in place of the customer's internal team, providing specialized resources to deliver ongoing service and support for a customer's business. Redcentric provides customers with AWS-certified solutions architects and engineers who are ready to deliver always-on support and expertise to our customers, 24x7x365.



AWS certified Service Desk

Redcentric's Service Desk are a group of cloud-specific and certified hands-on engineers that support many different cloud infrastructures, providing wide-ranging troubleshooting and support to help ensure the customer cloud environments have maximum uptime, then escalating within Redcentric's ACE teams or AWS in the unlikely even we are unable to resolve the issue.

AWS certified Engineers and Architects

The Service Desk team is backed by a team of AWS-certified ACE engineers and architects, responsible for monitoring and operational support for AWS accounts covered by the Managed Services offering.

Account Manager

Customers will be assigned an Account Manager to help guide them through the Redcentric support process and oversee the day-to-day management of accounts, including service, change and incident management.

Service Delivery Manager

Service Delivery Managers handle the Service Reviews, which are included automatically depending on AWS environment size. This provides customers an opportunity for regular governance sessions of your environment's performance, and to review operational information such as the status of backups, patching and antivirus.

The review may include items such as:

- Support tickets.
- Monitoring alerts.
- Upcoming change or maintenance events.
- Product roadmap updates.

Onboarding Manager

When purchasing a Redcentric ACE Managed Service, the onboarding manager is the personal contact for assistance with the Redcentric onboarding process. As a dedicated guide, an onboarding manager will work with key stakeholders to coordinate the resources and project management associated with the deployment of a customer's AWS environment.

4. AWS Managed Service

4.1. Overview

Whether you're looking to spur innovation and agility with AWS cloud, lower costs or build operational efficiencies, the Redcentric offerings below delivered by our ACE teams can help guarantee success AWS or across multiple platforms if you use Multi or Hybrid-Cloud.

Our ACE AWS certified cloud experts put cutting-edge capabilities to work for your business. We apply deep expertise in cloud strategy, cloud-native development, containers, application modernization, and workload management to help you accelerate innovation with AWS.

As you pursue this evolution, you need more than just support. You need help understanding how to scale your IT organization in an agile world, how to transform your environment and how to streamline your operating models. This is why many organizations need more than the traditional managed services models, which is constrained to fit the boundaries of the past.

This is why we've packaged the complexities of the cloud journey into 5 independent managed offerings to support a customer at every stage of their journey, while achieving the best of both worlds with a cost-efficient standardised approach and the flexibility needed in the cloud, as depicted here:

Foundations	Operate	Operate+	Govern	Modernise
<ul style="list-style-type: none">✓ Redcentric Service Desk✓ Self-Service Portal✓ ACE Escalations	<ul style="list-style-type: none">✓ For Simple Environments✓ Managed Platform✓ Managed AWS Network, Security Groups & Edge Services✓ Managed Storage✓ Managed Backup✓ Tagging, Monitoring & Reports	<ul style="list-style-type: none">✓ For Complex Environments✓ Operate Features PLUS:✓ Platform Optimisations✓ Entra ID Optimisations✓ Automation, Auto Scaling & Recovery✓ Maintaining Landing Zone Standardisation✓ PaaS Configuration & Management	<ul style="list-style-type: none">✓ Advisory Led✓ Cost Monitoring & Optimisations✓ Compliance Assistance✓ Resource Consistency✓ Assisted regulatory compliance✓ Security governance✓ Discount Management✓ Reporting	<ul style="list-style-type: none">✓ Tailored Service○ DevOps○ Release Management Support○ Dedicated TAM○ Containerization○ Modernisation○ OS-Upgrades○ Custom Dashboards○ Application, Sentinel & Integration Support
<i>Free for CSP Customers</i>	<i>Percentage Based + Minimum Fees</i>	<i>Percentage Based + Minimum Fees</i>	<i>Fixed-Fees</i>	<i>Per-Block-of-Hours-Fees</i>
Supplementary Services				
Managed OS Managed DB Managed Firewall Appliances Managed Advanced Workload Network & Connectivity HSCN Connectivity Managed SIEM / SOC vCISO				

4.2. Service Geographic Availability

At this time, Redcentric customers can deploy resources to all AWS regions existing along with Redcentric Managed Services as of the publication date of this document. Foundations is only available for sale in the United Kingdom and Europe, though customers can still deploy resources to all other AWS regions. This excludes some of the AWS Regions (e.g., GovCloud). Some AWS regions are available only to customers with specific billing addresses in that region. Contact Redcentric if you have questions about a specific region.

4.3. Redcentric CSP benefits

AWS Cloud Solution Providers (CSPs) like Redcentric offer several benefits that make them the ideal partner for businesses looking to leverage cloud infrastructure. Unlike purchasing directly from AWS, CSPs provide a more personalized and tailored service that is based on the specific needs of individual customers. This includes customized pricing and support plans that are designed to meet the unique demands of each business.

Moreover, CSPs offer a single point of contact for all AWS services, which makes it easier for customers to manage their cloud services. CSPs also provide additional services and support beyond what is available through AWS, such as migration assistance, security assessments, governance services, and ongoing monitoring and management. These services can help businesses optimize their cloud infrastructure and ensure that they are getting the most out of their investment in AWS.

Additionally, partnering with a CSP provides a more flexible billing model that allows customers to pay monthly for only the services they use, rather than committing to an annual contract. This can help businesses manage their costs more effectively and avoid unexpected expenses.

Overall, working with a CSP like Redcentric can provide businesses with a more streamlined and efficient experience when adopting cloud infrastructure. Through personalized support, a single point of contact, additional services, and flexible billing options, CSPs can help businesses optimize their cloud infrastructure and achieve their business goals.

4.4. Service Offerings & Benefits

AWS – Foundations

A customer's cloud modernisation journey typically starts here, with Redcentric's Public Cloud (AWS) Foundations. Foundations is suitable for all AWS use cases, can be unmanaged, co-managed, or fully managed, and gives customers prioritised access to Redcentric's project-based Adaptive Cloud Engineering teams:

- Provisioning Advice
- 24/7 Service Desk
- Self-Service Portals
- Escalated AWS Support

AWS – Operate

Operate empowers customers to focus on their business objectives instead of the day-to-day. It comes in two tiers, Operate provides baseline tooling, monitoring, and access to ACE certified cloud specialists for day-to-day operational support and management. Operate takes the everyday platform complexities from an IT team, to deliver standardised operations and incident response to ensure that the customer's AWS environment is:

- Getting Operational Excellence
- Securely Connected
- Monitored Platform

AWS – Operate+

Operate+ builds on Operate, adding optimisation capabilities to improve performance, automation, efficiency, and reliability with industry-leading tooling. Operate+ is best paired with the Govern service to ensure customers achieve the highest level of success with their investment to ensure that the customer's AWS environment is:

- Well-Architected
- Optimised & Efficient
- Resilient
- Organised & Standardised

AWS – Govern

Govern is a consultancy-led offering with fixed fees to support the planning, compliance, budgeting, deployment, operation, and success of an AWS environment. We provide an integrated audit and consulting approach for reviewing and advising organisations on their usage of the AWS platform to ensure that the customer's AWS environment has:

- Budget Controls & is Cost Optimised

- Policy Management
- Compliance Remediation Assistance
- Compliant Infrastructure

AWS – Modernise

Modernise is not a whole service offering but an add-on of customisable deliverables in the form of pre-purchased hours. This is the best way to accelerate your business's cloud journey to deliver complex cloud operations via Redcentric ACE experts. Whether you desire a deeper technical relationship to drive outcomes or need assistance handling your architecture's complexity, the ACE team can assist an organisation in finding the right solution to ensure an AWS environment is:

- Automated & Modernised
- Achieving the Lowest TCO
- Integrated with Customised Monitoring
- Supported for DevOps

4.5. AWS Advisory Services

For many businesses, the move to public or private cloud seems out of reach as they have neither the resources nor the expertise to define a successful cloud migration strategy. At Redcentric, our Consulting and Advisory Services team brings the world's best cloud experts together to help shape your business and deliver outcomes with a cloud solution built according to best-practice architecture design and processes.

We'll start with a thorough analysis to understand your needs and identify opportunities to help you excel. From assessment to ideation and true innovation, we work alongside your team, providing the guidelines, guardrails, and expertise you need to be successful.

Each advisory offering is based on industry-leading frameworks, extended with many years of Redcentric expertise to accelerate a customer's business objectives and success.

Cloud Readiness	Governance	Well-Architected
<ul style="list-style-type: none"> ✓ Workload Ideal Placement ✓ Workload Right Sizing ✓ Storage Right-sizing ✓ Platform/Workload Estimates ✓ Biggest Implication Recommendations ✓ Highlight High-level Risks 	<ul style="list-style-type: none"> ✓ Review Provisioned Resources, Monitoring, Optimisations & Tradeoffs ✓ Cost Reporting & Optimisations ✓ Compliance Assistance ✓ Resource Consistency ✓ Assisted Regulatory Compliance ✓ Security Governance ✓ Process Measurement ✓ Review Security & Compliance ✓ Review & Advise Policies ✓ Resource Consistency ✓ Deployment Acceleration Policies ✓ AWS discounts 	<p>Includes Everything In Cloud Readiness & Governance PLUS:</p> <ul style="list-style-type: none"> ✓ Performance Efficiency & Reliability ✓ Monitoring, Review, Selection & Trade-offs ✓ Foundations Review, Workloads Architecture, Change Management, & Failure Management ✓ Sustainability ✓ Region Selection, Alignment-on-demand, Software Architecture, Hardware, Services Process & Culture ✓ Operation Excellence ✓ Organisation, Prepare, Operate & Modernise
2-Day Engagement with up to a month of workload scanning if needed, usually depending on workload peak/troughs.	2-5 Day Engagement based on Cloud Adoption Framework, with a workshop at the end to go through the output and educate key stakeholders	Start with a free 4-hour workshop, then a 1-3 Week Engagement based on a Well-Architected Framework, with a workshop to agree objectives, then workshops to go through the output and educate key stakeholders

Cloud Readiness Assessment

For customers moving applications into the cloud, the Cloud Readiness Assessment's in-depth discovery and design service delivers a robust target architecture and adoption plan. This service is required when the environment exceeds 10 applications, 20 source machines, or five discreet workloads in scope. Redcentric solutions architects work with customers to define the scope and agree-upon a price for the project, or alternatively, the cost of this assessment can be deducted from any work, or services taken post completion.

Governance Assessment

One-off governance assessments help organisations to assess their current governance posture and identify future improvement needs to build or contribute to the governance roadmap. This service is consultancy led with a fixed price that can be offset by savings it brings. It will address security baselines, cost management, identity management, resource consistency, and deployment acceleration, in line with the policies recommended in AWS's Well Architected Framework.

Well-Architected Workshops

The AWS Well Architected Review by Redcentric helps take the guesswork out of making sure your existing solutions on AWS meet industry best practices for security, availability, and operational excellence.

The Well Architected Review starts with a free 4-hour workshop, which typically expands into a 1-3-week engagement depending on what is needed, this allows Redcentric ACE experts to quickly review a customer's environment to provide immediate guidance and create a list of opportunities for improvement. The engagement aligns with the 6 pillars of the AWS Well-Architected Framework (Cost Optimization, Operational Excellence, Performance Efficiency, Reliability, Sustainability and Security).

4.6. AWS Professional Services

Adaptive Cloud Engineering (ACE) Professional Services

Eliminate technical debt, fix flawed security, or bring disparate data together with our IT security professional services. When your technology environment is working for you, your company can focus on getting ahead rather than on what holds you back. Our experts design and build cloud solutions that move your business forward.

Using cloud-native approaches based on leading DevOps practices, we help you modernize your applications and data, build in the leading security solutions, and deploy everything on the right cloud infrastructure for maximum effectiveness. We've assembled a professional services team that brings you expertise for leading applications, data architectures and technologies, and security best practices – across every major cloud platform.

We make keeping up with rapidly changing cloud technologies our business, so you can get the most out of yours.

Technical additional services can be used for Transformative projects with fixed outcomes to specific T&M activities such as CI/DC Pipeline assistance which can carry additional monthly charges. In addition, set-up fees may also apply.

Build & Migrate	Re-Platform	Transform
<ul style="list-style-type: none">✓ Evaluate an existing asset and establish a migration plan to Rehost✓ Landingzones creation & standardization if needed✓ Lift and Shift workloads or Create New✓ Replicate the functionality of an asset into the organisational structure✓ Review the performance, cost, access, and operational capacity of an asset✓ Optimise asset based on review output✓ Ensure an asset is ready for ongoing operations✓ Roadmap possible improvements✓ Highlight high-level risks	<ul style="list-style-type: none">✓ Evaluate an existing asset and review possible Refactor or Rebuild options✓ Establish if a POC is needed✓ Model the performance, cost, access, and operational capacity of the change✓ Either POC or Deploy improved asset✓ Replicate the functionality of an asset into the Landing Zone infrastructure✓ Monitor and review the improved asset✓ Ensure an asset is ready for ongoing operations	<ul style="list-style-type: none">✓ Application Walkthrough: The customer to provide a guided walkthrough of their application components with the ACE teams✓ Explore dependencies, features & options for possible Re-Architect✓ Set Innovation Goals✓ Provide Modernisation solutions or options✓ Establish if a POC is needed✓ Innovation Phasing to minimise risk✓ Monitor and review the improved asset✓ Ensure an asset is ready for ongoing operations

Build & Migrate Projects

Redcentric AWS Migration Services provides a comprehensive consulting package allowing customers to leverage a team of experts across Infrastructure, Database, DevOps, Networking and Security.

Migrating workloads & production services to AWS can be challenging & costly if poorly executed. Although it's relatively easy to undertake a "lift & shift" migration to AWS this rarely delivers on transformation & ROI requirements. Ensuring a best practice deployment & appropriate governance controls is often overlooked as part of migration planning.

Our services follow the successful deployment of a baseline AWS Organisations structure. We assess migration workloads and move a cloud-native operating model to ensure a maximum return of a migration to AWS. Our typical approach focuses on move groups aligned to an application/service line while optimising along the way for maximum success.

Re-Platform Projects

If you're looking for quick wins with a migration solution that gets your workload onto the cloud, with minimal code changes, consider re-platforming. This involves porting your application's components to a new runtime platform where your application's features and functions stay the same, and you can take advantage of the cloud's inherent cost savings and scalability, with minimal effort. Plus, you can continue to derive value from your legacy solution.

Transformative Modernisation

Our AWS Modernisation Consulting package is for customers who wish to modernise an application using AWS native services without making a wholesale redevelopment to the application.

Migrating & modernising applications to leverage AWS native services requires several different skills & extensive experience. Understanding how to create best practice approaches & solutions for handling micro-services & replacing legacy components with AWS services will require the experience of a partner who has been through the process before & works closely with AWS to apply best practices.

5. Flexible ACE Migrations

Wherever you are in your cloud journey, whatever business outcomes you would like to solve, whichever workloads you would like to migrate, we'll meet you there and simplify and manage your path forward with our end-to-end cloud services.

Working alongside your team, we'll help you understand your options, identify, develop and deploy solutions that help you achieve smarter business outcomes, then migrate and manage your AWS cloud solutions so that you can focus on innovation and modernisation.

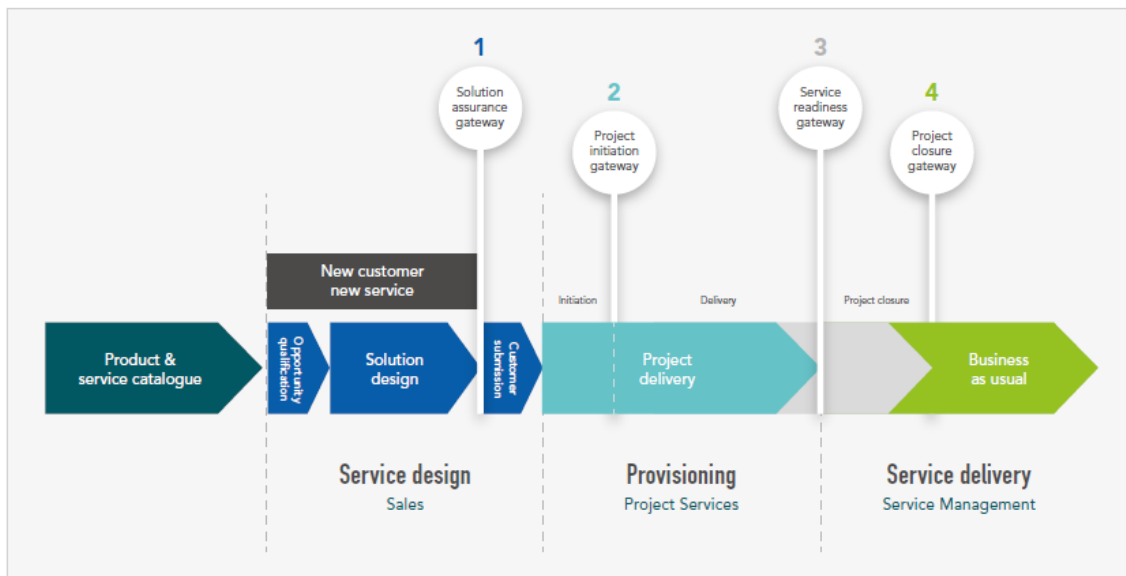
To launch AWS services successfully, service design, onboarding and transition will be required to prepare and test both the environment and the managed services processes. The Redcentric ACE team will undertake several workshops to discuss and confirm each element of the service, to ensure all parties are aware of roles and responsibilities in advance of service launch.

Service transition and onboarding covers areas such as ticket management setup, platform readiness with knowledge share, and finalising all ITIL practices. A test and acceptance criteria are captured and signed off, to allow for the AWS service to commence.

After service launch, Redcentric uses a formal service transition framework as the basis to carry out acceptance into service procedures, for new services landing into managed services. We typically engage at the initial stages of a project to ensure service operation adoption and readiness is planned and carried out correctly. This materializes as follows:

- To review designs, build and test artefacts to ensure supportability.

- Attend change review boards to gain early sight of changes by way of knowledge acquisition.
- To witness and validate designs and builds are delivered as proposed and intended.
- Complete operational into service documentation, training, and runbook enablement, which is required as part of the service hand-over.



5.1. Initial AWS Organisation Setup

If a customer is new to AWS, then Redcentric can help get a customer's cloud journey started with our AWS ACE Implementation Service. To facilitate a move to AWS, we can offer the following services to get started.

Initial setup and configuration of essential AWS Products to best practice standards, this includes:

- AWS Organisation Setup: creation of AWS accounts, configuration of AWS sub-accounts & setup of administrative accounts.
- Core Identity Configuration: creation of core identities to be used within the AWS Cloud Environment. New identities can be created entirely in cloud, or a hybrid environment can be configured with an on-premises Active Directory Domain Services using AD Connect.
- Best Practice Analysis

5.2. Migration Support

Post Migration, Redcentric can provide the appropriate services to get a customer's AWS Organisation to a state suitable to begin or modernise a customer's cloud journey.

The following services are available to assist post migration:

- Migration support is available for all environments*, including but not limited to:
 - Data migrations from on-premises servers, existing AWS accounts, or other cloud platforms
- Modernisation, upgrades, development support, pen testing, security reviews and services or optimisations via assessments.
- Integrations with other cloud platforms to support Hybrid & Multi-Cloud designs.

*Most migrations will require admin level access to the existing environment to facilitate, with read access to existing configurations as a minimum.

5.3. Service Transition and Early Life activities

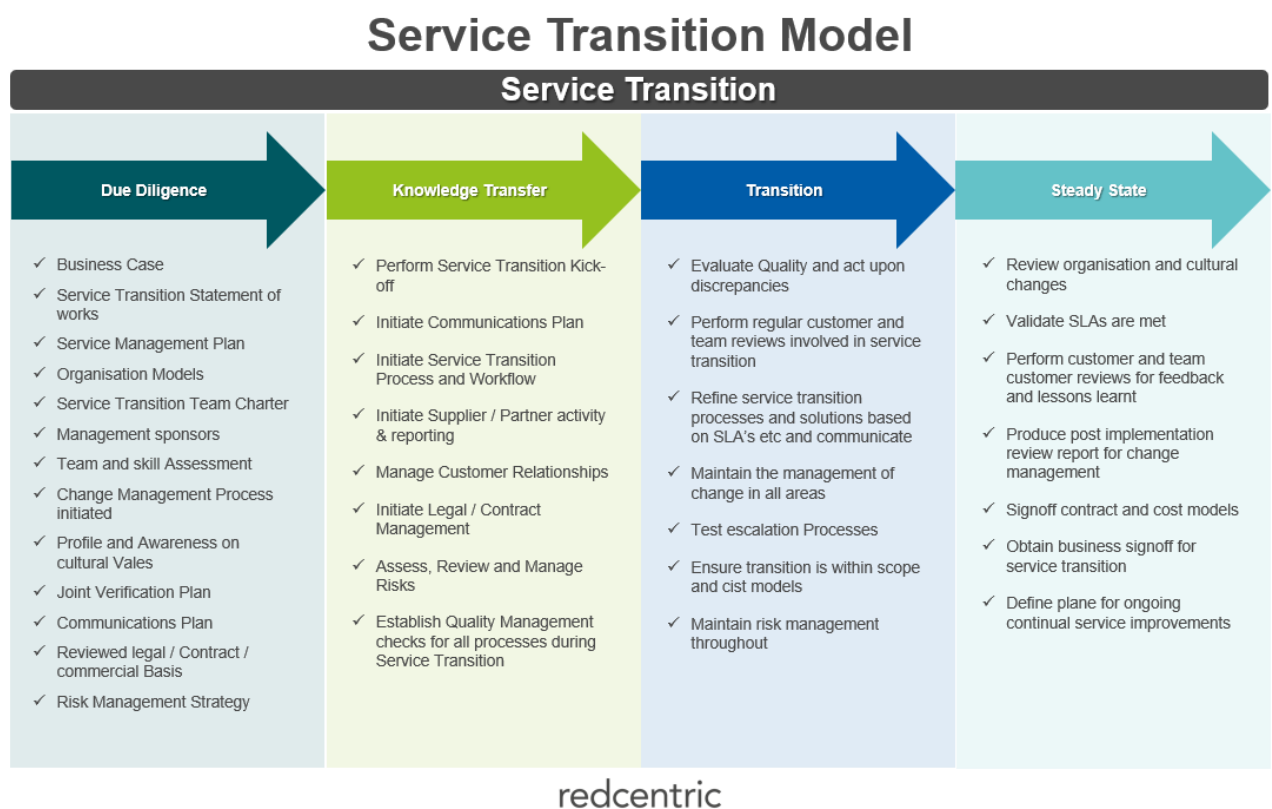
Should either Foundation, Govern, Operate, Operate+, or Modernise be onboarded, there are several key differences post migration before the offerings can be considered active.

During the Design phase, Service Onboarding will cover the following activities:

- An introductory meeting, run by the Redcentric Service Delivery Manager (SDM) allocated to the customer's account.
- Engagement with the Redcentric Service Management team to run through how the customer will be onboarded, and what service management functionality and processes will be applied, and what information will be needed to set up the various Redcentric systems, SMAX and My Services portal correctly.
- How service engagement will work, for example, will individual sites be logging issues/requests directly with Redcentric or will there be a centralised first line triage function within the customer's organisation.
- If there is a requirement to implement a B2B link between the Redcentric and the customer's ITSM systems, and how this will be implemented.
- Provision of collateral which will enable the customer to communicate the above processes internally.

The Redcentric Transition Programme Governance process provides a series of quality gateways from the perspective of operational support and service management, to facilitate a seamless transition of services from the customer's existing provider to Redcentric. The governance framework provides three quality gateways with standardised criteria against which the project is reviewed, before being approved to proceed to the next phase.

The illustration below shows the steps and actions that are followed in the service transition.



6. Associated Redcentric Services

Redcentric Managed AWS is built upon Amazon's platform, with the main goal to Modernise IT for organisations that want to focus on growth and not keeping the lights on. While not a requirement, Redcentric prides itself on being able to cover all business requirements end to end no matter the platform, thus this service compliments or can be complimented by the following:

- Managed Windows Server
- Managed Linux Server
- Managed Database
- Azure Virtual Desktop
- Citrix Virtual Desktops
- M365 Virtual Desktops
- Managed Recovery Services
- Network & Connectivity
- Business Voice & Collaboration
- Modern Workplace 365 (M365)
- Managed Azure
- HSCN Connectivity
- Managed Backup (Acronis / Veeam Based)
- Managed SIEM / Secure Operations Centre (SOC)

Advanced Monitoring

A number of additional advanced monitoring services are available that can improve and maintain user experience and compliance. Small examples of these services include:

- Custom tooling
- Synthetic monitoring of web application transactions & real-user monitoring
- Application performance monitoring (APM)
- Log management

Hybrid Connectivity and Integration

Redcentric provides hyperscale cloud connectivity services to facilitate hybrid and multi-cloud configurations, along with critical HCSN connectivity. Please request the Hyperscale Connect services service guide for additional information.

Managed SQL Server & Database

We will perform monitoring, support and health checks using a set of in-house developed monitoring and maintenance packs that we install on all Redcentric managed instances of Microsoft SQL instances.

Modern Workplace 365

The Modern Workplace 365 Service represents the future of work, where complexity and risk are minimised, and productivity and collaboration are maximised. This service extends beyond the traditional Managed M365 offering, encompassing a comprehensive modernisation service with digital workspaces and dedicated end-user support.

Small examples of these services include:

- Managed Entra ID

- M365 Backup
- Intune Management
- Device Management
- Application Support
- End User Support
- AVD Management
- IT Modernisation

The above services are only those relevant to Managed AWS and is not a complete list, for a complete list please see the Redcentric website.

7. Scope of Managed AWS

Managed AWS Services

The matrices below outline what is included along with who is considered primary for the Redcentric's Managed AWS services.

Scope Key:

- ✓ **Included**, as **Redcentric with primary responsibility** and customer with secondary should information or testing be needed, though if the requirement is complex, a chargeable professional project may need to be created.
- ✓ **Included**, except the **Customer is primarily responsible** with Redcentric providing basic support, configuration & reasonable assistance to the customer with analysis and resolution of issues, if the requirement is complex, a chargeable professional project may need to be created.
- + **Addon**, for common activities which are typically done as a project.
or
Complex – Is used to describe an activity that takes multiple days to complete and requires chargeable professional services.

7.1. Service Provisioning

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
AWS Escalation support <ul style="list-style-type: none"> 9x5 for Foundations 24x7 for Operate+ & above Escalated support to AWS engineers and access to proactive cloud enablement services.	✓				
Organisation and Account Provisioning	✓				
Service Desk <ul style="list-style-type: none"> 9x5 for Foundations 24x7 for Operate+ & above Access to the Redcentric ITSM platform and L1 Service Desk Analysts for first line fix or resolution.	✓	✓	✓		✓
Telephone / Remote Support All Support/Managed Services are delivered remotely unless on-site engineering is contracted separately.	✓	✓	✓		✓
Redcentric ACE Teams 9x5 Standard, 24x7 Available Access to Redcentric ACE Teams for L2-4 incidents, changes, requests, & resolutions for many of the deliverables stated in the scope.		✓	✓		✓

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Redcentric ACE Consultative Engagement 9x5 Only Either for proactive scheduled engagements, thought leadership or recommendation activities.				✓	
Organisational Structure Deployment & Standardisation Using existing templates, policies, and code to standardise and automate the deployment of new subscriptions		+	✓		+
Onsite support This is a bespoke, chargeable addition.					+

7.2. Identity Management

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
For all administrative user accounts.		✓	✓		+
To ensure admin-level security access is consistence across subscriptions and resources		✓	✓		+
Deployment of pre-defined templates or workshopped configurations		✓	✓		+
Discover and define processes to manage exceptions to the baselines needed for Entra ID.				✓	+
Auditing any accounts that access, service, develop or manage AWS resources.				✓	+

7.3. Best Practices and Architecture

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Design of AWS environment deployment based on analysis of each application and requirements					+
Of existing AWS Infrastructure					+
On-demand visual depictions of a customer's current AWS deployments					+

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Environment review conducted by Certified solution architects focused on delivering operational stability, security, and performance.					+
Including Day-to-Day Problem Reporting, Liaison, and Escalation.					+
Guidance on new public cloud technologies from AWS experts.					+

7.4. Cloud Management

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Resource Naming & Tagging Using either workshopped naming conventions or those pre-defined.		✓	✓		+
Storage Management Supports all AWS storage account types.		✓	✓		+
Management of AWS Network and Edge Services Such as gateways, firewalls, load balancers, and WAF's etc.		✓	✓		+
Private End-Point Management		✓	✓		+
Automated Power-Down Scheduling Advised but not required to achieve additional cost savings.			✓		+
Management of AWS Key Management System configuration The customer always owns all Keys/Certs.		✓	✓		+
AWS Backup Including the configurations of the backup policies dictated by the customer, along with recovery assistance within AWS.		✓	✓		+
Compute Performance Optimisations Based on customer requests or the output from the Redcentric ACE Governance team via the Govern Service.			✓		+

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Network Optimisation Based on customer requests or the output from the Redcentric ACE Governance team via the Govern Service.			✓		+
Workload Size Optimisations Based on customer requests or the output from the Redcentric ACE Governance team via the Govern Service.			✓		+
Storage Optimisations Based on customer requests or the output from the Redcentric ACE Governance team via the Govern Service.			✓		+
Ideal Workload Placement Recommendations Based on customer requests or the output from the Redcentric ACE Governance team via the Govern Service.			✓		+
Auto-scaling Advanced auto-scaling configuration, monitoring and alerting.			✓		+
Appliance Stand-Up Deployment of Pre-Defined Template		✓	✓		+
Appliance Management Dependent on the supportability of the OS and application the appliance runs.			✓		+
EKS Management Our EKS management service provides: <ul style="list-style-type: none"> Service deployment Version upgrades CI/DC pipeline config, support and change for infrastructure only Monitoring integration 					+
Infrastructure build-out services: Get infrastructure-as-code templates					+

7.5. Governance & Security

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Agree on budget thresholds and set alerts/actions should they be breached.				✓	+
A review of the optimisation tools and recommendations for controlling spend.				✓	+
AWS Config Advisor Review: Work through the advisories and agree actionable items.				✓	+
Recommend the ideal placement of workloads for cost and security.				✓	+
With the focus often on growth, auditing resource effective utilization can drive tangible savings.				✓	+
Workshopped reviews of policies, tagging, documentation and regular engagement, our ACE teams will drive consistency throughout a customer's infrastructure.				✓	+
To determine if the storage is an appropriate use of block, object, file, and database for data types, or is cost optimised across storage tiers, lifecycle and archiving methods.			✓	✓	+
Acceleration through centralisation, consistency and standardisation across templates (Transformation).					+
A standardized IT chargeback and showback enables organizations to understand and effectively allocate how various divisions, business units or cost centers are consuming IT services.				+	+
Patching Remediation of identified vulnerabilities (End-Point protection required).					+
Getting to 100% compliance can seem an impossible task as some requirements can be unattainable, the ACE team will work closely with the customer to build a roadmap, drive remediation, identify false positives and eliminate non-compliance.				✓	+

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Compliance monitoring against security standards using native functionality e.g. NIST, CIS, PCI, etc.				✓	+

7.6. Cloud Operations

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Our OS management service provides: VM & OS deployment, VM configuration, OS hardening, OS patching, network support & monitoring integration. See service requirements for supported OS's.					+
Modify schedule/maintenance windows or patch groups as requested.					+
Troubleshoot patching errors					+
Create custom pre- or post-scripts to apply before and after patching.					+
VM alignment to a defined AWS backup policy and update monitoring integration. Initial setup and Management of Disaster Recovery is an additional service.					+
Installation and configuration of agents along with ensuring policies are correctly applied.					+
Setup + Configure + basic management of initial installation, advanced management is an additional service as seen under optional managed database service.					+

7.7. Monitoring

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Default Monitors & Dashboards Template-driven dashboards deployed and configured.		✓	✓		+

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
<p>Custom Monitors & Dashboards</p> <p>Bespoke dashboards to fit all business infrastructure needs. Multiple monitoring solution options are available.</p>					+
<p>OS Monitoring</p> <p>Supported OS's only, see service requirements for details.</p>					+
<p>Application Monitoring</p> <p>Possible additional charges for application agents.</p>		+	+		+
<p>Agent Monitoring Configuration</p> <p>Configuration of Redcentric standard monitors for incident ticket creation.</p>		✓	✓		+
<p>Platform Availability Monitoring</p> <p>Setup dashboard and alerts.</p>		✓	✓		+
<p>Baseline Security Configuration Monitoring and Notification</p> <p>Alerts are configured for security baselines defined in workshops to notify of drift against objectives.</p>				✓	+
<p>Policy Adherence/Drift Alerting & Reporting Standard</p> <p>Alerts are configured for policy baselines defined in workshops to notify of drift against objectives.</p>				✓	+
<p>Policy Adherence/Drift Alerting & Reporting Bespoke</p> <p>Alerts are configured for alert/reporting baselines defined in workshops to notify of drift against objectives.</p>				✓	+
<p>Updates to and tuning of Cloud Monitoring</p> <p>On-demand changes to the configuration of Redcentric standard monitors.</p>		+	+	+	+

7.8. Reporting

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Template-driven reports configured and scheduled.		✓	✓	✓	+
Template-driven reports are configured and scheduled.					+
On-demand report of patch compliance detail.					+
Regular reports are provided based on standard templates or the custom output of the Govern service. (Scheduled)			✓	✓	+
Regular reports are provided based on standard templates or the custom output of the Govern service. (Scheduled)			✓	✓	+
(Based on the agreed schedule and dependent on the application and/or end-point protection software used).				✓	+
Regular reports are provided based on standard templates or the custom output of the Govern service. (Scheduled)			✓	✓	+
Regular reports are provided based on standard templates or the custom output of the Govern service. (Scheduled)			✓	✓	+
Based on initial workshop output and benchmarked against objectives. (Scheduled)				✓	+
Based on initial workshop output and benchmarked against objectives. (Scheduled)					+

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
Prioritized list of risk scenarios mapped to processes and technical controls. (Scheduled)					+
					+
				✓	+

7.9. Business Review Activities

Scope Inclusions	Foundations	Operate	Operate+	Govern	Modernise
A customer's service delivery manager reviews reporting that summarises their account usage details. Note - Included at monthly Redcentric service spend above £1,500		+	✓	✓	✓
A customer's account manager delivers a quarterly business review that details spending and operational actions of the prior three months and plans activities for the next quarter. Note - Included at monthly Redcentric service spend above £1,500		+	✓	✓	✓
				✓	
In-depth roadmap reviews for Redcentric offers and AWS products					+
				+	+

7.10. Combining Service Offers

Customers opt for a single service for a single Managed AWS account to any combination of all services for all Managed AWS accounts. It is recommended to take the same service set for AWS accounts that provide similar business benefit, though not required.

8. Core Competencies

The following table enumerates the core AWS competencies supported by Redcentric ACE Engineers. All AWS cloud services outside of those listed below are to be considered reasonable endeavours and may be subject to additional billable time (including training time, as applicable) to troubleshoot/support.

AWS Service	Service Type
Virtual Machines (EC2)	Compute
Auto-Scaling Groups	Compute
Batch	Compute
Reserved Instances (RI)	Compute
Elastic Kubernetes Service (EKS)	Compute
Lambda	Compute
SQL database	Data & storage
Amazon RDS	Data & storage
DynamoDB (NoSQL DB)	Data & storage
Amazon Redshift DB	Data & storage
Amazon EBS (Block Storage)	Data & storage
Amazon ElastiCache (Redis & Memcached)	Data & storage
Amazon Aurora DB	Data & storage
Amazon S3 (Object Storage)	Data & storage
Amazon FSx, EFS (file storage),	Data & storage
Virtual Network	Networking
Internet Gateway	Networking

AWS Service	Service Type
AWS Direct Connect	Networking
Amazon Elastic Load Balancing	Networking
VPN Gateway	Networking
Amazon Route53 DNS	Networking
Amazon Web Application Firewall	Security
AWS Shield Advanced	Security
AWS GuardDuty	Security
AWS Inspector	Security
AWS Cloudtrail	Security
Cloudfront CDN	Media & CDN
Amazon Simple Queuing Service	Application Services
Amazon Simple Workflow Service	Application Services
Amazon Simple Email Service	Application Services
Amazon Simple Notification Service	Application Services
Amazon EventBridge	Application Services
AWS Step Functions	Application Services
Amazon IAM	Identity & access management
Multi-Factor Authentication (MFA)	Identity & access management
AWS Directory Services	Identity & access management

AWS Service	Service Type
AWS Config	Management
Amazon Cloudwatch	Management
AWS Systems Manager	Management
Cloudformation	Management
AWS Policies	Management
Amazon Appstream	End User Compute
Amazon Workspaces	End User Compute
Storage Gateway	Migration
AWS Datasync	Migration
AWS Database Migration Service	Migration

9. Service Requirements

This table lists items that are required to effectively deliver the services described in this document.

Required Item	Description
Key Stake Holder Contact Details	Periodically update the list of the customer's engineers who will use Redcentric services.
User Training	Provide training to the customer's users, clients, and suppliers to follow Redcentric procedures to report incidents or make requests.
Customer Resources	Make staff available to work with Redcentric resources during the handling of an incident or request
Existing Documentation	Provide Redcentric with all documentation, information, and knowledge that it requests in relation to the cloud environments supported.
Patching Window	An agreed and defined re-occurring maintenance window for automated patch installation and remediation activities
Reboot Window	Reboots are permitted within the agreed maintenance windows
Internet	Outbound internet access for reporting and patching
Access Documentation	Provide Redcentric engineers with sufficient access, as defined by Redcentric to all cloud accounts supported.
Ticketing	All Priority 1 incidents are logged, and the client must follow up with a telephone call into support

9.1. Co-Management Requirements

This table lists items that are requested to effectively deliver a Co-Managed service for maximum success.

Required Item	Description
Teams Channel	Communication is the key to success for Co-Management; thus a Teams channel will be setup for smooth communication.
Service Delivery Manager	Normally only assigned based on the size of the customers environment but becomes a requirement for Co-Managed subscriptions which could need additional charges for small environments.

Required Item	Description
Agreed RACI	Depending on the granularity required for management responsibility, an agreed RACI will be required.
Change Tracking & Logging	Change tracking and logging will be required

9.2. AWS Account Management Requirements

As a part of the ACE Support for AWS offering, Redcentric will be required to perform actions in a customer's AWS environment as a trusted partner. Redcentric cannot fulfil our role as a customer's managed service provider without the correct level of access and permissions. Redcentric takes a customer's trust and security seriously and has integrated safeguards into our management service to avoid abuse of these services, leveraging Redcentric corporate identities (along with the built-in security features like MFA credentials, password rotation, etc.). If Redcentric is unable to secure the appropriate level of access required to deliver management services, Redcentric professionals will be unable to deliver managed services in an at-scale manner using automation services and consistent tool sets for the global team of engineers

9.3. Customer AWS Environment Access

AWS Managed & CSP Customer Resource Access Methods

Redcentric can deploy multiple ways to access and manage a Customer's AWS Organisation and accounts to best fit a customer's operational and compliance requirements. When Hybrid managed services are needed, multiple methods can be used depending on the platform being managed.

Access Method Options

Traditional access via a VPN between an AWS Virtual Private Gateway and firewall, that can be enhanced with enforced Bastion access and is best suited for non-CSP or on-site customers that need managed services.

AWS IAM is the most common and secure access method, allowing for continuous management of a customer's accounts and resources, while all actions are tracked via named users in the activity log.

Security Policies Enforced for Admin Access

- Multi-Factor Authentication.
- Assigned permissions to groups, using the principle of least privilege.
- Logging enabled to track access and actions.
- No access to customers data without prior permission.

Data Protection

Data Protection is treated as critical to Redcentric, though Data retention is always the customer's primary responsibility to determine what each policy should be. Redcentric ACE teams will work closely with the customer to protect their data and advise on best practices.

Different data types captured:

- Application monitoring data, which typically includes data around the performance and functionality of code.
- AWS resource monitoring data, which will include data around the operation of an AWS resource.
- Virtual machine and cloud services data, which captures system data and logging data on VMs.
- Application insight data, which relates to application performance monitoring (APM).
- IAWS AM reporting data, which collects information on user sign-in activities and system activities.
- Activity logs, which collects information on operations performed on resources in an AWS account.

- VPC flow logs, which will collect data on traffic flowing through a network.

Metrics and Logging

To seek improvement areas and evidence the rationale it is important that the team has access to a rich set of metrics and logs. The managed service encourages the use of the AWS native service such as Cloudtrail and Cloudwatch to provide shared information that both teams can use as a single source.

10. Service Support and Availability

10.1. Foundation Support

AWS Foundation Support is designed for customers who need minimal day to day support from Redcentric either because they are yet to deploy production services or have considerable experience and resources in house

10.2. Support Escalations

Regardless of whether purchasing AWS infrastructure directly or through a Redcentric Cloud Solution Provider (CSP) agreement, Redcentric serves as the sole point of contact for supporting customer's AWS environments. As a part of the Platform Essentials service, if AWS ever needs to be contacted for technical escalations, Redcentric will do so on customer's behalf by leveraging the AWS Business or Enterprise Support services subscribed to.

Escalations may occur for the following scenarios:

- An AWS service limit increase is required (e.g., number of storage snapshots).
- An issue that requires the involvement of a specific AWS product or engineering team to resolve.
- An issue where multiple customers are impacted (e.g., AWS service outages).
- AWS infrastructure SLA credit requests (when infrastructure is purchased through Redcentric CSP).

Priority	Target response time	Target resolution time	Level 1 escalation*	Level 2 escalation
Faults & Technical Query Acknowledgement	30 minutes	AWS Delivered	2 hours	3 hours
Remediation Actions Commence	2 hours	AWS Delivered	5 hours	5 hours

10.3. Service Desk and ACE Support Requests

For all services above Foundations, the target response and resolution time for the fully managed AWS service includes all the required, modernisation, operations, governance maintenance and reporting activities.

Priority	Target response time	Target resolution time	Level 1 escalation*	Level 2 escalation
Critical/High (P1)	30 minutes	4 hours	2 hours	3 hours
Medium (P2)	1 hour	8 hours	4 hours	6 hours
Low	2 hours	12 business hours	8 business hours	10 business Hours
RFI	2 business days	10 business days	8 business days	9 business days

10.4. Request Handling

Requests are typically from customers or are pre-agreed to request service changes. We completely remove the need for our customers to have an in-house administrator. The below table provides an overview of the typically included service requests. Please note any AWS changes which require authorized provisioning of resources will require delegated rights (e.g., storage increases)

10.5. Operate & Operate+ Examples (Platform/Network/OS)

Request	Included
AWS Service Configuration Change	✓
Change/ Add/ Move AWS Storage	✓
Perform AWS Backup	✓
Verify a backup operation	✓
App Gateway Rule Change/ Add/ Delete	✓
Amend AWS VPC Configuration	✓
AWS account Query / Resource Increase	✓
Reboot AWS VM (EC2)	✓
Amend Instance Sizes	✓

Note this is not a full list.

10.6. Change Enablement

10.6.1. Change Control Process

Changes to a customer's current services will follow the process outlined in the Redcentric Change Management policy.

At a high level, the process of change will follow the below flow:



Typically change requests are initiated from one of the following categories:

- Service Requests
- Incidents
- Problems

- Technology changes
- Business changes
- Customer changes
- Supplier changes

The proposed change will then enter an assessment phase to ensure the change has been fully tested and any impacts to service is understood. Once the assessment is complete the change will be submitted to the Redcentric Change Approval Board for approval. Once approved the change will be scheduled and, if required, communications sent to the agreed parties within the customer once the change is completed, further communications will be sent to advise all customer stake holders.

10.6.2. Normal Changes

The following response times apply to Standard changes. Ad Hoc Changes and Major Application Changes/Releases fall outside the scope of the service and will be managed per request.

Target Response Time	*Implementation Time
16 Redcentric business hours	40 Redcentric business hours

*The implementation time is measured from when the support team have received and validated the Request for Change.

10.6.3. Emergency Changes

The following response times apply to Standard changes. Ad Hoc Changes and Major Application Changes/Releases fall outside the scope of the service and will be managed per request.

Priority	No. Per Month
Emergency change	1

Emergency changes are described as unscheduled or unplanned changes. Typically, emergency changes are driven by immediate and urgent business requirements; for example, updates to site content to mitigate legal action.

The cap on emergency changes does not include changes implemented by Redcentric that form part of the resolution of a service outage or degradation.

10.6.4. Service Hours Definition

There are 2 levels of Redcentric service hours, defined as follows.

Service Hours Description	Definition
24x7x365	Available 24 hours a day, 7 days a week, 365 days a year.
Redcentric UK business hours (PBH)	09:00 am to 17:00 pm GMT / BST (as applicable) Monday to Friday excluding UK public holidays

10.6.5. Applicable Service Hours

Service Management Activity	Service Hours
Redcentric Service Desk	24x7x365
Support Request Management	Redcentric UK business hours
Incident Management (P1)	24x7x365
Incident Management (P2 & P3)	Redcentric UK business hours
Problem Management (RCA)	Redcentric UK business hours
Configuration Management	Redcentric UK business hours

The management of support requests (covering requests for information, ticket updates and request for change) will be provided within Redcentric business hours, to ensure the quality of the communication channels.

More specific aspects of service management, such as root cause analysis where the underlying cause of an incident is not yet identified – known as a problem – and the management of change and releases are also carried out within Redcentric business hours to ensure the rigorous and effective delivery of these service elements.

10.7. Service Levels

Target availability for the Redcentric services underpinning the Customer services.

Service	Target Service Level	Definitions
Redcentric Service Desk	99.90%	Service Desk availability to raise support requests for Customer.

*As all services involved in delivering this rely on the AWS platform and services to some extent, we are reliant on AWS to adhere to their own SLAs:

AWS Service	Service Levels
All AWS Platforms and Services	Service Level Agreements (SLA) for subscribed service(s)

Any issue that sits with AWS to resolve is not included in any Redcentric SLA calculations.

*Target figure relates to availability of the service platform and excludes outages related to single points of failure, scheduled downtime, or those service elements outside of the Redcentric scope of responsibility.

Platform/infrastructure availability is measured by Redcentric's chosen monitoring and event handling and Redcentric's reporting platform (POM). Redcentric does not include as standard the monitoring of end user perception of availability or performance, which can be affected by the service quality of the ISP or Customer LAN.

Service Availability target is defined as the percentage of time for which the service is available to the users.

Service Availability = $\frac{\text{Agreed Service Hours} - \text{Service Downtime Hours}}{\text{Agreed Service Hours}} \times 100 \%$

Note: All availability targets are to be calculated on a rolling 12-month basis.

Availability calculations will exclude outages where root cause is determined to be outside of the Platform components under Redcentric control.

11. Responsibilities and Accountabilities

11.1. High Level Redcentric Responsibilities

Redcentric will provide the following in connection with the AWS platform and managed by Redcentric:

- Creation and configuration of Organisation and Accounts on the customer's behalf if required.
- Provisioned access to required tools and portals.
- Migrating customer's data and services as defined in any SOW's.
- All deliverables stated in the scoping matrixes depending on the service level contracted to.
- Feature deployment as agreed-upon during design phases.
- Support tickets created and liaison with AWS support when required.

11.2. High Level Customer Responsibilities

The customer will:

- Maintain licensing for any software not provided by Redcentric.
- Adhere to the applicable AWS terms and conditions located at <https://aws.amazon.com/legal>.
- Maintain passwords in a secure manner.
- Respond to Redcentric requests in a timely fashion.

11.3. RACI Matrix

The following table outlines Redcentric and customer responsibilities using a RACI model.

- Responsible: Do the task
- Accountable: Approve the task
- Consulted: Input provided to the task
- Informed: Notified on task progress or completion

Task	Redcentric	Customer
Standard Activities		
Provide business and technical requirements	C, I	R, A
Create customer proposal, pricing, and contract documentation	R, A	C, I
Design review	R, A	C, I
Create Pre-Sales Solution & HLD	R, A	C, I
Final proposal to customer	R, A	C, I
Contract signature	C, I	R, A
Manage implementation activities	R, A	C, I
Build/provision the solution	R, A	C, I
Test and handover	R, A	C, I

Task	Redcentric	Customer
Notify the customer of any service-affecting issues or planned maintenance	R, A	C, I
Notify Redcentric of any planned activities that may impact service	A, C, I	R
Resolve incidents and problems	R, A	C, I
Raise service requests and changes	C, I	R, A
Implement service requests and changes	R, A	C, I
Co-Management		
Co-Managed customer created new resource	C, I	R, A
Changes made by the customer that cause issues or alerts, where we have not been made aware	A, C, I	R
Redcentric apply reasonable endeavours to resolve changes made by the customer that cause issues or alerts, where we have not been made aware	R	A, C, I
Acceptance of any additional charges because of changes made by the customer that cause issues or alerts, where we have not been made aware	C, I	R, A
Co-Managed customer request new resource onboarding for Redcentric management	C, I	R, A
Management of resources post onboarding process	R, A	C, I
Account Management & Tooling		
Provide named Account Manager (AM) resource	R, A	C, I
Standard account reporting	R, A	C, I
Identify opportunities for cost and performance optimization	R, A	C, I
Provide opinions and best practices around account architecture, security, and resiliency	R, A	C, I
Discovery		
Understand business objectives and current challenges	R, A	C, I
Schedule and conduct a deep-dive discovery session	R, A	C, I

Task	Redcentric	Customer
Understand systems SLAs, RTO and PPO requirements	R, A	C, I
Design & Architecture		
Define architecture options to be considered	R, A	C, I
Agree on high-level design (HLD) architecture	C, I	R, A
Generate high-level application and logical diagrams for proposed architecture(s)	R, A	C, I
Generate detailed infrastructure schematics for proposed architecture(s)	R, A	C, I
Create solution design document	R, A	C, I
Design for a high availability and security-first approach	R, A	C, I
Design for sizing, scalability, and performance	R, A	C, I
Governance		
Align with customer key stakeholders	R, A	C, I
Agree on the cadence schedule	C, I	R, A
Provide the budget details and methodology	C, I	R, A
Review the budget methodology	R, A	C, I
Run initial cost optimisation review	R, A	C, I
Review the initial governance best practice and configuration	R, A	C, I
Implement the initial budget and cost optimisation best practices and configuration	R, A	C, I
Agree proposed Budget Settings and Budget Alerts	C, I	R, A
Budget Setting and Budget Alerts	R, A	C, I
Budget Forecasting	R, A	C, I
Cost Analysis and Prediction	R, A	C, I
Cost Optimisation Recommendations	R, A	C, I
Ideal Workload Placement Recommendations	R, A	C, I

Task	Redcentric	Customer
Resource Utilization / Performance Reviews	R, A	C, I
Data Storage Location / Retention Reviews	R, A	C, I
Agree on proposed Recommendations and Remediations	C, I	R, A
Agree on Policy Recommendations	C, I	R, A
Terraform, Cloudformation, & Policy Definition Creation	R, A	C, I
Consultative Engagement to Engage Key Stakeholders to Drive Governance Forward	R, A	C, I
Customer key stakeholders to attend workshops for Compliance Score Remediation Assistance	C, I	R, A
Compliance Score Remediation Assistance	R, A	C, I
Compliance measurement for SLO/SLA purposes	R, A	C, I
Hardening Compliance	R, A	C, I
Monthly Spend reporting by usage/service	R, A	C, I
Infrastructure Implementation		
Deployment of AWS infrastructure using the Redcentric Cloudformation and Terraform template libraries	R, A	C, I
Configure IaaS components with EC2 extensions (monitoring, IAM roles, and start/stop schedules)	R, A	C, I
Deployment of images outside of Redcentric Operating Systems Spheres of Support	C, I	R, A
User acceptance testing (UAT) and sign-off environment deployment	C, I	R, A
Configure and test WAN connectivity for Direct Connect and site-to-site VPN (Redcentric data centres and managed AWS accounts)	R, A	C, I
Configure and test WAN connectivity for Direct Connect and site-to-site VPN (customer data centres and unmanaged AWS accounts)	C, I	R, A
Initial governance assistance through implementation of AWS tagging for Redcentric-managed deployments	R, A	C, I
Implementation of ongoing change management for AWS infrastructure components	R, A	C, I

Task	Redcentric	Customer
Network And Access Security Implementation		
Consult on identity access management (IAM) roles and polices	C, I	R, A
Define Network Security Groups and rules requirements	C, I	R, A
Implement Network Security Groups and rules	R, A	C, I
OS user management per Redcentric Spheres of Support	R, A	C, I
Anti-virus installation, configuration, and monitoring	R, A	C, I
Monitoring		
Deployment and management of Redcentric standard monitoring platform	R, A	C, I
Configuration of application performance monitoring (APM) services, like Logic Monitor, New Relic, AppDynamics, Datadog, etc.	C, I	R, A
Configuration of any custom OMS alerts	C, I	R, A
Ticketing/Alerting		
24x7x365 access to support for Redcentric standard monitoring services, including initial responses, escalations and troubleshooting of incidents within Redcentric response time SLA guarantees	R, A	C, I
Ongoing definition, management, and maintenance of Redcentric standard OMS monitoring platform, including the definition of alert triggers, thresholds and remediation instructions	R, A	C, I
Initial response, escalation and troubleshooting of custom alerts on AWS, including non-standard OMS alerts, APM alerts, etc.	C, I	R, A
Backup & Disaster Recovery		
Opt-in to AWS Backup Service	C, I	R, A
Creation and management of VM backup policies and schedules to Redcentric standards	R, A	C, I
Monitoring and remediation of backup failures on Redcentric standard backup service	R, A	C, I
Verification of validity of backup data and methodologies	C, I	R, A
Backup restoration testing	C, I	R, A

Task	Redcentric	Customer
Backup restoration request	R	A, C, I
Elastic Kubernetes Service (EKS)		
Design and deployment of EKS infrastructure, including configuration of EKS cluster, nodes, node pools, and AWS Elastic Container Registry (ECR)	R, A	C, I
Design and deployment of containers, load balancers, static IP addresses or any other service configured via Cloudfront or Terraform	C, I	R, A
Implementation of other Kubernetes packages (like Prometheus, Grafana, Helm, Linkerd, fluentd, Envoy, etc .)	C, I	R, A
Configuration of cross-region replicated AWS Container Registry	R, A	C, I
Build, automate, update, and deploy container images with AWS CDK and CDK8S	C, I	R, A
Monitoring and logging for EKS cluster and worker nodes	R, A	C, I
Monitoring and logging for containers, pods, and controllers	C, I	R, A
EKS cluster and worker nodes troubleshooting	R, A	C, I
Containers, pods, and controllers troubleshooting	C, I	R, A
Integration of EKS with private docker container registry	C, I	R, A
Integration of EKS into a CI/CD pipeline	C, I	R, A
Upgrade an EKS cluster or patch security/kernel updates to worker nodes in EKS	R, A	C, I
Patching		
Installation and configuration of automated OS-level patching via automatic updates within OS	R	A, C, I
Deployment, configuration, and management of any other patch management service	C, I	R, A

12. Business Continuity and Disaster Recovery

12.1. Business Continuity

Redcentric under its ISO22301:2019 Business Continuity certification, operates and maintains a robust Business Continuity Management System (BCMS). The BCMS scope includes;

- Data Centers
- Managed Services
- ICT technologies and systems
- Staff and business functions

and is externally assessed by the BSI annually to ensure continued effectiveness in line with BSI published standards.

Our Business Continuity Policy Plan (BCP) is fully supported by the Board and is designed to enable a return to normal operations in the shortest practical time, with minimum disruption. The primary objective is to restore and deliver continuity of key services in the event of a critical incident.

Our overall Business Continuity strategy is to provide resilience for all systems that support critical processes, by having data backed up to alternative Data Centers, or dual site services configured as active-active.

We use the same cloud backup service (Acronis BaaS) for our own IT and services as we do for our customers, ensuring fully secure, encrypted data is available off-site when needed. Departments and services are required to test backup and restore annually.

Testing

Our BCP is routinely tested annually, and as Redcentric is a provider of critical services to the NHS (Peering Exchange and Consumer Network Service Provider), is independently witnessed by a member of NHS England.

Disaster Recovery plans underpinning the BCP have been developed for each Department and Service and these are externally audited and tested annually.

Network Resilience

Our network has been designed and engineered to deliver highly available, stable connectivity to maintain business access to critical applications. To maximise resilience, multiple carriers provide the core connectivity and routing, and switching devices are used from market leaders Cisco Systems. The network design and build are geographically resilient providing a minimum of 99.99% availability (to resilient end points).

The Redcentric highly resilient, high-capacity core has connections to several carriers providing multiple options for our internal business operations and critical services, and customers wishing to access cloud services, applications, and data:

- Geographically resilient connectivity to multiple tier-1 Internet transit providers and Internet exchanges.
- Geographically resilient connectivity directly into the inner core of the HSCN network.
- Core network engineered to withstand multiple concurrent failures and to re-route around a failed transit path in under a second.

12.2. Disaster Recovery

AWS provide multiple Availability Zones in the London Region that are geographically discreet, AWS best practice is to architect for high availability across multiple availability zones so that the failure of any Zone does not impact the customer workload.

Disaster recovery can be executed in many ways depending upon the nature of the data and application architecture.

As an example, stateless systems can be rebuilt from templates, whilst stateful data sources will be recovered from backups. AWS allows automation of multiple steps by that recreating stateless machines or restoration.

Redcentric recommendation is that Infrastructure as Code is utilised to build and amend AWS resources as the IaC constructs can then be embedded as automated components of a comprehensive recovery plan.

13. Exit Plan

At the end of the contracted service period there are 3 exit options:

13.1. Transfer Ownership of AWS Account(s)

Where Redcentric own the commercial relationship with AWS, the AWS accounts can be transferred to customers or their chosen third-party subject completion of AWS process which includes Consent To Assignment forms. Customers will need to provide alternative payment methods in advance of transfer and should note that transfers can only be completed after AWS has completed billing and adjustments for the previous calendar month – typically from the third week of the calendar month.

Redcentric will remove all Redcentric supplied software agents, including anti-virus and software deployment tools, in advance of transfer. The customer will be issued with root credentials and then will be responsible for removing any identity and access and cross account permissions that enable Redcentric to manage the estate.

13.2. Workload Migration

Customers are permitted to transfer data, subject to prevailing AWS fees and Redcentric processing fees that are subject to our SFIA rate card. If a complex migration is required, Redcentric will agree the scope of a project with the customer and/or their chosen third-party and charged at SFIA rates.

This will always be followed by Cleardown as detailed in the following section.

13.3. Cleardown AWS Resources

Upon customer instruction, Redcentric will clear down AWS resources and delete the account. Customers will continue to be charged for usage whilst this clear down completes, whilst most resources will be removed immediately there are exceptions applied by AWS where resources are retained for up to 90 days before being deleted. As an example, AWS Key Management System Keys are retained as a security measure in case they should be lost.

14. Information assurance

Certifications

Redcentric are ISO 20000-1 certified, demonstrating that we adhere to ITSM (IT Service Management) best practice, and ITIL (Information Technology Infrastructure Library) provides advice on ITSM best practice.

ITIL v4 is at the heart of Redcentric's managed service operation and support. Redcentric believes that in order to deliver a high quality, professional service it is necessary to invest in training people, empowering them to be strong ambassadors of our service model.

Redcentric has provided managed services to the UK public and private sector for over 30 years. As a highly accredited business, we are proud of the standards and processes for which we are certified.

Our data centres and all supporting operations are fully UK Sovereign and are congruent with;

- The Government's Security Classification Policy ('Official-Sensitive')
- The Government's previous Protected Marking Scheme classification (BIL4 - Confidential)

Note – Redcentric can also support information and assets classified above the GSCP level of 'Official-Sensitive'.

ISO

- ISO 27001:2013 Information Security Certified
- ISO 9001:2015 Quality Management Certified
- ISO 22301:2019 Business Continuity Management
- ISO 14001:2015 Environmental Management System Certified
- ISO 20000-1: 2018 – IT Service Management System Certified

NHS standards

- Registered HSCN CNSP (Health and Social Care Network, Consumer Network Service Provider)
- DSPT (Data Security and Protection Toolkit) assessed as exceeding standards
- NHS Certified Commercial Aggregator
- NHS Business Partner
- Authorised to transmit, process and store Person Identifiable Data (PID)

- NHS England IGSoC Compliant Commercial Third Party (NACS code: YGMAP)
- NHS England accredited Service Provider (Network Access Agreement number: 0740).

HMG / other standards

- PCI-DSS Compliant for physical hosting and managed firewall services within our data centre locations
- Cyber Essentials Plus Certified
- Data Centres are externally certified to attest they have the necessary physical security measures to process HM Government 'Official-Sensitive' classified data
- Main data centres are certified as Police Assured Secure Facilities
- Full alignment with the Security Policy Framework
- All services are designed, built, implemented and supported using all relevant and appropriate NCSC GPGs, Cabinet Office and NHS England standards

Networks Connectivity

- The Public Internet via Private or Public IP VPN
- The HSCN Peering Exchange
- PSTN
- PSN (Public Sector Network) certified as one of the few DNSPs (Direct Network Service Provider)
- PSN Gateway Access for both PSN-Assured and PSN-Protected
- JANET (Joint Academic Network)

Further information with regards to the Redcentric assurance and governance framework can be found within the Redcentric customer security pack which consist of the following documents:

- Cloud Security Principles (aligned with the NCSC 14 principles)
- Security Management Plan
- Security Statement
- Accreditations and Mappings (lists all business accreditations and relevant controls and standards utilised for Redcentric G-Cloud services)
- Security Control Framework

Copies are available under NDA upon request.



Proactive

We think and
act quickly



Inspired

We create
excitement through
innovation

Trusted

We do what
we say we will

Collaborative

We work together
to deliver
a common goal

Transparent

We are open,
honest and fair





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