



# Cloud Migration

## G-Cloud 15 Service Definition

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### 1. Jisc Strategic Cloud Adoption Services

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Jisc can accelerate your strategic cloud adoption via a series of cloud professional services engagements, industry-leading public cloud infrastructure platforms and associated managed services.

Our Cloud Adoption Services cater for customers at various stages of cloud assessment, adoption and migration maturity; from the assistance of developing a business case and roadmaps, through to individual service design, migration and legacy off-boarding. We can assess your business, technical and service requirements, rationalise your infrastructure portfolio, develop your cloud strategy, roadmap, and end-state architecture, and manage your change program.

Each stage has a structured and well-defined engagement plan with associated inputs, tools, workflow and deliverables. Engagements are led by a dedicated and specialist cloud advisory services team that bring a diverse range of skills and experience across the commercial, technical and security domains.

Our Cloud Adoption Services can be procured as stand-alone engagements or as part of the following series:

- **Cloud Professional Services** Jisc's cloud Professional Services provide specialist technical consultancy to organisations using or planning to use cloud-based IT service delivery models. Jisc has a broad range of practical experience in relation to managing many aspects of cloud service design, migration and operation. We draw on this experience to offer organisations skilled, flexible and pragmatic resources to meet short-term business challenges and/or to contribute to, or lead, longer-term projects or cloud-centred IT transformation programmes.
- **Cloud Architectural Services** – The Jisc Cloud Architectural Service will support you in designing services to run effectively on public cloud infrastructure. These may be redesigns of existing (legacy) services that currently run on physical or virtualised infrastructure, or new services that will be developed specifically for AWS (Amazon Web Services) or Azure. It may also be determined that a hybrid (cloud and on-premises) or multi-cloud solution is the most appropriate approach. For projects that already include cloud architecture, the service pragmatically reviews and assess your current public cloud estate and associated operational processes against your business objectives from the perspectives of operations, security, reliability, performance, and cost optimisation. It then makes architectural and operational

recommendations with respect to cost-benefit, best practices, processes, implementation approaches and timescales.

- **Cloud Migration (this one)** – see the summary section below.

We can also assist you, if necessary, in gaining the government accreditation required to operate a service in accordance with its associated information assurance requirements or to meet a compliance regime, e.g., PSN.

Jisc has worked extensively with several leading UK government third sector and education organisations to assess, design, plan and implement significant cloud-centric, IT transformation projects. These have supported business change, cost reductions, improved productivity and new channels for focused service delivery or revenue generation.

## 2. Summary

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Jisc has considerable experience in managing the migration of customer IT services and workloads from existing hosting arrangements to its data centres, managed hosting, and cloud services. Our Cloud Migration service uses well-defined project management approaches such as Agile or PRINCE2 to assess, plan and oversee the implementation of your IT migration to a cloud service provider environment or between cloud service provider environments. In addition, we have designed an approach specifically for cloud migrations encompassing the flexibility of Agile with appropriate rigour and governance.

The service can be supplemented by several service options in relation to the technical design, implementation and support of cloud migrations, including IT consolidation which can be conducted during the migration or as a subsequent transformation phase.

### Cloud Migration Summary

| Process                                                                                                                     | Deliverables                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  <b>Discovery</b>                      | <ul style="list-style-type: none"><li>♦ Discovery Tool Configuration</li><li>♦ Generation of discovery report</li><li>♦ Creation of migration proposal</li></ul>                                                                            |
| 2  <b>Assessment and Design</b>          | <ul style="list-style-type: none"><li>♦ Workshops to collaborate on technical requirements and waves of migrations</li><li>♦ Generation of Migration plan report</li><li>♦ Creation of Azure Landing Zone, and Azure fundamentals</li></ul> |
| 3  <b>Migration</b>                      | <ul style="list-style-type: none"><li>♦ Setup replication services</li><li>♦ Test / Live migrate service</li><li>♦ Handover of service including low level design documentation</li></ul>                                                   |
| 4  <b>Optimisation and Modernisation</b> | <ul style="list-style-type: none"><li>♦ Assess workloads in Azure and ensure best fit</li><li>♦ Look for cost savings: Reserved Instances etc.</li></ul>                                                                                    |
| 5  <b>Ongoing Support and Management</b> | <ul style="list-style-type: none"><li>♦ If required Arc enable services not being migrated</li><li>♦ Ensure You / managed services have all information required to support</li></ul>                                                       |

## 2.1 Functional Overview

The Cloud Migration service is led by a Jisc Project Manager and is based on 5 planned phases, each with defined interfaces and deliverables, which control migration to a target cloud hosting service based on agreed acceptance criteria, it comprises:

### *2.1.1 Cloud Migration Discovery*

The initial phase involves a thorough evaluation of your current IT infrastructure, workloads, and business requirements. Jisc works with your organisation to understand existing systems, identify dependencies, and assess readiness for migration.

### *2.1.2 Cloud Migration Assessment and Design*

Based on the assessment, a detailed migration plan is developed. This includes selecting the appropriate Azure services, designing the target architecture, and defining migration strategies tailored to your organisational needs.

### *2.1.3 Cloud Migration*

Jisc facilitates the actual migration of data, and workloads to Azure. This stage covers everything from establishing a secure, scalable foundation in Microsoft Azure. Through initial test migrations and also the final cutover, ensuring minimal disruption to business operations.

### *2.1.4 Cloud Migration Optimisation and Modernisation*

After migration, Jisc supports the optimisation of your new Azure environment. This involves performance tuning, cost management, and the adoption of Azure-native services to improve efficiency and scalability.

### *2.1.5 Cloud Migration Ongoing Support and Management*

Post-migration, Jisc offers guidance to empower you to take ownership of your cloud infrastructure. Jisc also offers a comprehensive managed service. This includes proactive monitoring, routine maintenance, and expert support, ensuring your cloud environment remains secure, compliant, and optimised.

## 2.2 Non-functional Overview

The Cloud Migration service is centred on an experienced and well-resourced Jisc Project Manager working with the customer to establish, implement and control the delivery of a cloud migration plan. This will ensure the successful migration of a legacy hosting service to a target cloud hosting service or identify if a hybrid approach may be a better solution for some or all the services.

The Cloud Migration service provides:

- A structured project management framework for cloud migration, including well-defined approaches to technical, service and commercial migration.
- A Jisc Project Manager with experience in public sector cloud projects.
- A certified Cloud Solutions Architect and Cloud Engineers.
- Service flexibility and scalability, within a change management framework.

## 2.3 Information Assurance

Jisc has considerable experience in the migration of public sector customer IT services. Jisc will use, as applicable to the scope of service: appropriately accredited infrastructure, network connectivity, staff security clearance and processes to deliver the service to customer security requirements

## 2.4 Data Storage and Processing Location

Jisc will store and process any of its service-related data such as plans, records and reports to appropriate security standards.

Where we use public cloud platforms to deliver the Cloud Migration service, Jisc will use UK or European regions. All data will remain within the UK or European Economic Area, as required, unless the customer specifically requests otherwise.

## 3. Service Operation

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### 3.1.1 *Cloud Migration Discovery*

Cloud migration discovery phase is an essential initial phase in transitioning IT assets to the cloud, involving a thorough detection of existing infrastructure, applications, and data. The process includes identifying current workloads as well as evaluating any potential risks or challenges associated with the migration.

#### 3.1.1.1 Discovery: Approach

The cloud migration discovery phase, Jisc will engage with relevant customer technical, service, security and third-party provider staff to gather service knowledge and to establish a cooperative relationship around the migration. It will be conducted via several approaches, including:

- Remote meetings with key customer and third-party stakeholders in business, project, service, technical design, security and operations.
- Providing remote assistance for configuring discovery and migration tools.

#### 3.1.1.2 Discovery: Deliverables

The deliverables from the cloud migration discovery phase are:

- Cloud migration discovery report: a concise report outlining resources and their feasibility for migration, projected hosting cost estimations, possible challenges and additional considerations.

### 3.1.2 *Cloud Migration Assessment and Design*

The cloud migration assessment and design phase is aimed at gathering customer business requirements, stakeholder information and timescales; and documenting and assessing legacy hosting service and target cloud hosting service technical, service and commercial information.

#### 3.1.2.1 Assessment and Design: Approach

- Remote meetings with key customer and third-party stakeholders in business, project, service, technical design, security and operations.

#### 3.1.2.2 Assessment and Design: Business Requirement

Meetings with the customer business owner to establish:

- The high-level business requirements, overview of IT service to be migrated, key stakeholder contact information, key project timescales, dependencies and risks.
- Service migration budget and resourcing.
- Migration business cycles and downtime availability.
- Agreement of cloud migration acceptance criteria including testing and user acceptance requirements.

#### 3.1.2.3 Assessment and Design: Technical

Meetings with designated customer technical representatives, notably the customer design authority, to audit and assess the legacy hosting service IT solution, service and hosting arrangements, including:

- Technical solution architecture design: network topology, network access and bandwidth, infrastructure (compute, storage), software, tools, applications, data management and platform security.
- IT solution and service integration requirements and dependencies.

Technical solution operations: support and maintenance contracts, existing SLAs (Service Level Agreement) and operational processes, identification of any software license novation possibilities.

The target cloud hosting service IT solution, service and hosting arrangements, including:

- Target cloud service provider hosting environment, key contact points and interfaces.
- IT solution scope, interfaces and dependencies.
- Identification of target cloud hosting service environment 'landing zones' (technical and service), and specific IaaS (Infrastructure as a Service), Platform as a Service (PaaS) and/or SaaS (Software as a Service) requirements and proposed designs.
- The assessment of short- to medium-term server hosting facilities to support cloud migration.
- Data management and security requirements including Security Impact Level, IA and accreditation requirements, retention periods, access control, logging and audit requirements.
- Application requirements, proposed architecture, interfaces, dependencies and roadmap.
- Development, test, staging and production environment requirements including release management processes and responsibilities.
- Backup and disaster recovery requirements and recovery processes.
- Technical solution operations including support and maintenance contracts, SLAs (Service Level Agreement) and operational processes.
- Outline technical migration approach, dependencies and risks re application, data and service migration.

#### 3.1.2.4 Assessment and Design: Deliverables

The deliverables from the cloud migration assessment and design phase are:

- The production of a cloud migration assessment report: a concise business-focused report outlining the customer business requirements, migration budget, IT solution/service architecture overview, key stakeholder information; migration priorities, timescales and risks; and technical and user acceptance criteria.
- Cloud migration project brief: a high-level roadmap plan for the service migration incorporating all the high-level phases.
- The production of a shared risk register, which identifies prioritised risks and issues and agrees contingency and mitigation actions. Significant focus is placed where possible on the protection of customer business functions and on the continuity of service levels during the migration process in line with customer business cycles and downtime availability.
- A RACI matrix detailing Jisc and customer responsibilities.
- The customer agreement and sign-off of a baselined cloud migration plan.
- A proposal for the cloud migration implementation project, based on project managing the delivery of the cloud migration plan.

### 3.1.3 Cloud Migration

Following completion of the cloud migration discovery and project planning phases, the cloud migration implementation project can commence. This involves project managing the implementation and control of the cloud migration plan, including managing defined phases, underpinning stages and boundaries and controlling risks.

The cloud migration implementation project may be supplemented by several technical Jisc service options.

#### 3.1.3.1 Cloud Migration: Project Initiation Phase

The project initiation phase mobilises the budget, people, resources and project organisation to begin the cloud migration implementation project in line with the agreed Cloud Migration Plan. This includes interfacing to customer project and quality systems, setting up project control mechanisms, project files and collaboration environments.

#### 3.1.3.2 Cloud Migration: Technical Initiation Phase

The cloud migration technical phase covers the technical, service and commercial actions required to initiate the target cloud hosting service and to establish the technical infrastructure, tools and configurations required to support technical migration. It includes:

- Technical infrastructure setup: provisioning the required core target cloud hosting service provider IaaS (Infrastructure as a Service), PaaS, and SaaS (Software as a Service) resources; provisioning OS and enterprise management tools; establishing required network and secure access; provisioning backup and disaster recovery solutions as appropriate and establishing service integration partner system access.

#### 3.1.3.3 Cloud Migration: Target Cloud Service Migration Phase

Once the target cloud hosting service is initiated and the core technical infrastructure is setup the implementation of technical and service migration from the legacy hosting service to the target cloud hosting service can commence in line with the cloud migration plan. The cloud migration service will project manage this activity using an experienced Jisc Project Manager following a structured approach to project and risk control.

Key elements of the target cloud hosting service migration phase include:

- Target cloud hosting service configuration, in line with specific technical solution (data, platform, application and security) requirements.
- Technical migration: Implementation of the technical migration in line with customer design authority recommendations; using Jisc template approaches, as appropriate. This will migrate data, software and applications to the target technical 'landing zones' and will include the implementation of any agreed IT consolidation requirements undertaken as service options. This may include the migration and management of physical equipment if necessary.
- Service migration: Implementation of the service migration in line with customer design authority recommendations; using Jisc template approaches, as appropriate. This will migrate the service and support arrangements and service management/ITIL processes, as appropriate, to the new hosting contract, SLAs (Service Level Agreement), support providers and resolution teams.

#### 3.1.3.4 Cloud Migration: Target Cloud Service Integration Phase

Following migration of the core technical services to the target cloud hosting service provider, a system and service integration phase may be required in relation to other/third party systems to establish the full end-to-end customer solution. This may include integration with other cloud and non-cloud software and application services and providers.

If the migration does not include transformation to a radically different solution, it is likely that many of these service integration requirements and relationships will already be well understood and will have been captured in the cloud migration discovery phase.

#### 3.1.3.5 Cloud Migration: Target Cloud Service Test and Validation Phase

Following completion of all aspects of the technical migration, test and validation will commence. This will typically be conducted by customer technical, operations and business representatives, and will include:

- Technical unit and integration testing via documented scripts and against measurable acceptance criteria where possible, to allow for rational testing.
- Backup and recovery testing; disaster recovery testing as appropriate.
- User Acceptance Testing against cloud migration acceptance criteria.

Any itemised test failures will be analysed, corrective actions put in place and test scripts will be repeated until the tests are passed.

A target cloud hosting service test and validation report, detailing performance against specified cloud migration acceptance criteria will be produced as an output from the phase.

#### 3.1.3.6 Cloud Migration: Target Cloud Service Commissioning Phase

The target cloud hosting service commissioning phase follows successful test and validation to move the new target cloud hosting service into operational service. This will typically follow a customer's own acceptance into service process, or Jisc can supply a process template

### *3.1.4 Cloud Migration Optimisation and Modernisation*

Following the migration of resources to the cloud the journey does not end. To realise the full benefits of cloud computing, a focus on optimising and modernising workloads after migration is essential.

This involves reviewing resource configurations, identifying underutilised assets, and ensuring workloads are running as efficiently as possible. Reviewing the migrated resources to provide valuable insights into performance, security, and cost optimisation opportunities.

### *3.1.5 Cloud Migration Ongoing Support and Maintenance*

Cloud migration represents a significant milestone for any organisation seeking to modernise its IT infrastructure, enhance scalability, and drive innovation. However, transitioning to the cloud is not the final destination, ongoing support and maintenance are essential to ensure the sustained success of your cloud environment.

We believe in empowering your internal IT teams to take charge of cloud operations. Providing you with the tools and resource information to be able to do so. While organisations may choose to manage their cloud environment internally, others benefit from additional support through managed services. Our managed services offerings are designed to complement your team's capabilities, allowing you to focus on strategic initiatives while we handle routine or specialised operational tasks.

### *Cloud Migration Project Closure*

Following the successful completion of the cloud migration project, a post-implementation review will be held. The output will be a concise cloud migration post-implementation review report outlining how well the project performed against the cloud migration plan including the original planned cost, schedule and acceptance criteria. The project will then be closed, and the Cloud Migration service will terminate.

## **3.2 Service Management**

The service will be managed using agreed project management guidelines. This includes baselining a cloud migration plan, initiating and controlling the migration project stages and producing defined project deliverables until successful project closure. The service requires close collaboration with the customer and key stakeholders in relation to project definition, acceptance criteria definition, and change and risk management

### *3.2.1 Hours of Service*

The Cloud Migration service is provided during core hours of service, which are Monday to Friday 8am to 6pm, excluding English Public Holidays and the period between Christmas Day to New Year's Day inclusive

### *3.2.2 Project Control*

The Cloud Migration service can be regarded as several distinct projects each divided into stages, with acceptance criteria acting as boundary gates, which must be satisfied before progressing. Each stage will be defined in terms of work packages specifying the activity, subtasks, owner, authoriser, milestones and acceptance criteria.

Project control is maintained by the regular review and reporting of work package progress against milestones; capturing issues, taking mediating actions and escalating as required. The

Jisc Project Manager will, as required, update the cloud migration plan under a change control process and a risk log will be maintained.

Work packages will be closed on completion and acceptance criteria compliance as appropriate. The final work package(s) form the boundary to the next migration project stage and will typically require customer sign-off before progressing to a new stage.

The Jisc Project Manager will provide regular communication of project progress and risks via a weekly cloud migration project progress report and by other agreed communication mechanisms such as face-to-face progress meetings, conference calls, project board meetings and risk and issue reviews.

### *3.2.3 Project Reporting*

The Service will deliver a weekly Cloud Migration project progress report highlighting:

- Cloud migration service progress against the cloud migration plan.
- Current issues, risks and mitigation actions.
- Current spending against budget.

### *3.2.4 Risk Management*

The Jisc Project Manager will hold and maintain a risk log, which prioritises project risks and identifies mitigating actions, owners and timescales. Risks will be regularly reviewed, reported and escalated to the customer following an agreed process.

### *3.2.5 Change Management*

Major business, technical or service change affecting the baseline cloud migration plan will typically be reviewed by a change project board, which includes the Jisc Project Manager. The change project board will agree the change scope, planning, implementation and cost impact.

Significant customer changes impacting the Cloud Migration service will follow an agreed request for change process to Jisc. Changes will be logged and referenced as part of a project configuration control approach, which maintains service integrity and control.

### *3.2.6 Cloud Migration Service Deliverables*

The Cloud Migration service will produce the following deliverables as key milestones within the project lifecycle:

- Cloud migration discovery report: a concise report outlining resources and their feasibility for migration, projected hosting cost estimations, possible challenges and additional considerations.
- Cloud migration project brief: A high-level roadmap plan for the service migration, incorporating all the high-level phases.
- Cloud migration plan: the baselined and costed detailed migration plan, which is subject to customer agreement and sign-off prior to project initiation.
- Cloud migration project progress report: a weekly report covering progress, issues, risks and mitigation actions.
- Target cloud hosting service test and validation report: a report on the compliance of the migrated Target cloud hosting service solution against acceptance criteria.

- Cloud migration post-implementation review report: a concise report highlighting how the project performed against its planned cost, schedule and acceptance criteria.

### 3.3 Service Levels

#### 3.3.1 Cloud Migration Deliverable Milestones

| Project Deliverable                                     | Deliverable Due Date                                                                                                |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Cloud Migration Discovery Report                        | Two working weeks after the completion of the Cloud Migration Discovery Phase                                       |
| Cloud Migration Project Brief                           | Two working weeks after the completion of the Cloud Migration Discovery Phase                                       |
| Cloud Migration Plan                                    | Baselined plan produced one working week after the completion of the Cloud Migration Project Planning Phase         |
| Cloud Migration Project Progress Report                 | Weekly, delivered by end of each working week, beginning at the end of the Cloud Migration Project Initiation Phase |
| Target cloud hosting service Test and Validation Report | One working week after completion of Target cloud hosting service Test and Validation Phase                         |
| Cloud Migration Post-Implementation Review Report       | Two working weeks after completion of Target cloud hosting service Commissioning Phase                              |

### 3.4 Service Pricing and Invoicing

The Cloud Migration service can be procured in two distinct phases: cloud migration setup, (see section 2) and the cloud migration implementation project, (see section 3).

The cloud migration setup phase will be priced via a Jisc pre-sales consultancy based on the size and the scope of the migration requirement. The output of the cloud migration setup will include a baselined cloud migration plan, incorporating a proposal for the subsequent cloud migration implementation project. The customer may decline this proposal in which case the Cloud Migration service will terminate or accept it in which case the cloud migration implementation project will commence.

### 3.5 Training and Trial Service

The Cloud Migration service does not provide any customer training or trials, although a Proof of Concept with a small number of applications may be agreed within the scope of work.

### 3.6 Service Credits

The Cloud Migration service does not issue service credits.

### 3.7 Service Termination and Off-boarding

Customers may terminate the Cloud Migration service in line with the relevant Jisc terms and conditions.

On completion of the Cloud Migration service, Jisc will:

- Provide the customer with copies of all project deliverables and reports.
- Cease its access to any project or collaboration tools or workspaces.
- Delete and cleanse any customer-related data or information held by Jisc or on Jisc infrastructure to required security standards.

### 3.8 Service Constraints

The Cloud Migration service has the following limitations and exclusions:

- The service is a one-off migration service and does not include support for on-going transformation activities on the target cloud hosting service platform.
- The scope of the Cloud Migration implementation project will be baselined and agreed in the Cloud Migration plan prior to project initiation. Any subsequent meaningful change in requirements will be subject to a request for change, which will be assessed by Jisc and may incur further cost.
- The service excludes visits to customer sites, including the attendance of project reviews. Attendance will be subject to prior agreement with any expenses incurred charged additionally.

### 3.9 Customer Responsibilities

The customer has the following responsibilities in relation to the service:

- The customer will provide Jisc with access to – and participation of customer business and technical stakeholders for Jisc to conduct the discovery work in accordance with mutually agreed timelines.
- The customer will provide Jisc with contacts and technical information in relation to the legacy hosting service, the target cloud hosting service and service integration partners, for Jisc to conduct the cloud migration discovery phase.
- The customer will authorise a baseline cloud service migration plan and an Jisc cloud service migration implementation project proposal prior to cloud migration project initiation.
- The customer will agree cloud migration acceptance criteria with Jisc in relation to all key project stages and target cloud hosting service test and validation.
- The customer will provide on-going input to the Jisc Project Manager in relation to changes and risks.
- The customer will follow designated procedures for logging cloud migration requests for change.

## 4. Service Options

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The Cloud Migration service may be enhanced by the following service option, aimed at providing value-added services to customers migrating to a new cloud platform.

### 4.1 Data Extraction

Jisc can provide a service for extracting and processing specified customer data located on a legacy hosting service and supplying it in bulk on storage media to a specified target cloud destination. This can be conducted on a periodic basis or as a 'one-off' as part of a cloud migration.