Signatories and Versioning

Operational Level Agreement for the technologies and systems supporting the Notable Computational notebooks service.

This agreement is effective from January 2018.

This agreement remains valid until superseded by a revised agreement mutually endorsed by the signatories below. Minor changes may be recorded on the form at the end of the agreement, providing they are mutually endorsed by all parties through change control procedure, with versioning updated.

**Signatories**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Name** | **Position and Unit** | **Date** | **Signature** |
| OLA Owner | Anne-Marie Scott | Deputy Director of Learning, Teaching and Web Division |  |  |
| Service Owner | James Reid | Workgroup Leader and Business Development Manager, ED*i*NA |  |  |
| Business Owner | Victoria Dishon | IT Liaison Officer, College of Science and Engineering |  |  |
| Signatory | James Slack | eLearning Officer, IS LTW DLAM |  |  |

**Authoring and versions**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Section Updated** | **Date** | **Version Number** |
| Pat Fleury & James Slack | All | 19/12/17 | 1.0 |

Operational Level Agreement (OLA)

An **OLA** is a document that provides a **record of agreed roles and responsibilities** explaining who and what must be done by various internal organisation partners in providing a service to our customers and users. The agreed activities included in the document form an agreement between the internal partners and the service owner. The audience for this document is internal, and should be of no concern to end users or customers.

The OLA may need to be underpinned by contracts with external organisations and service partners, normally known as 'suppliers'. These contracts are also commonly referred to as **UPC's**(Under-Pinning Contract). The OLA should specify where a UPC is required.

Once the UPC's and OLA/s for a service have been agreed, this normally forms the basis for knowing the scope and parameters of the service we aim to offer to customers and users. This customer and user oriented offering is documented in an SLA (Service level Agreement).

Service Description

This OLA refers to the Noteable service used to provide access to Jupyter notebooks for teaching and research purposes.

The service is an implementation of Jupyterhub hosted on Openstack and developed and maintained by EDiNA.

* The Business Owner of the service is Victoria Dishon (User Services Division)
* The Service Owner of the service is James Reid (EDiNA)
* This Service is a Priority 3 service

Scope of the Agreement

This document specifies the partners involved in provision of the service and clarifies their responsibilities in delivering the service. Key IS partners include:

* IS Helpline - Responsible for first line technical support of the service.
* IS Digital Learning Applications & Media (DLAM) – Responsible for managing user expectations of service pilot. Responsible for gathering and analysing feedback and feature request information. Also responsible for cataloguing issue reporting information.
* EDiNA - Responsible for the configuration and maintenance of the system and related infrastructure/integrations. Also responsible for further development of system features.

## Training

Basic training for accessing and using the system will be provided by LTW DLAM via relevant documentation. Training in relation to specific coding languages will not be provided within the scope of the service but users can be directed to relevant training repositories and good practice examples will be circulated by LTW DLAM.

## Service Support

Service support will be broken down as below:

* IS Helpline: first line support and triage of calls which will be passed to LTW DLAM
* IS LTW DLAM: collect user feedback including feature requests and bug reports and filter these to then pass on legitimate requests or issues to EDiNA
* EDiNA: Resolve technical issues with system including integration with Learn and also look to include new features within the service.

In general this service uses the normal layered support model with IS Helpline providing the first point of contact for users, and follows the normal Helpline hours of support availability.

Incident and Problem Management

This OLA will be re-negotiated typically when:

* The end date (where specified) of the agreement is reached (Renegotiation will commence in adequate time for the OLA to continue to run uninterrupted, if this is agreed by both parties).
* Changes to the organisation, technologies, or strategy, significant enough to impact on the delivery of the OLA.
* Continuous or serious breaches (it is not usual for a single breach to be sufficient to trigger a re-negotiation).

There are 2 levels of change that can be made to this OLA:

**Minor Change:**  
Small points of clarification, or updates to terminology, team names etc that do not materially change the OLA in terms of obligations and charges. No re-negotiation is required in these cases.

The service owner can be the focal point in authoring changes either unilaterally of via emailed suggestions.

**Major Change:**  
Any change that materially affects the OLA, especially with regards to roles, responsibilities and recurrent charges should be drafted and signed off by party signatories.

The service owner should act as the focal point for the initiation of major change. This may have come about due to user demand, changing costs, resources, or upgrade requirements.  
The process/responsibility change should be documented and requires written sign off by all signatory parties.

Any OLA change should be communicated to all those units and partners involved in service provision and support, with links to the golden copy of the OLA being provided.

**Notification of cessation**  
Note that where an agreement is being revoked, there may be commitment to Software, licensed for a specific period. In this case the party revoking the agreement will be liable for the costs of software/licences becoming redundant, if it cannot be re-allocate. In the event of the agreement being revoked, this should be communicated to the service owner at least 3 months in advance, for onward communication to all other stakeholders. Any signatory is entitled to provide notice to revoke their involvement in the OLA.

Service Desk

The Service Desk (IS Helpline) will be responsible for day to day service incident support and standard (known/documented) changes, initial recording and assignment of calls. The Service Desk will be responsible for:

* Receiving incidents and first line customer liaison, typically ensuring local computing officers or users have done adequate initial checks and provided appropriate details of the issue.
* Recording, classifying and tracking incidents and complaints
* Keeping customers informed of progress
* Initial assessment of requests, incidents and complaints, trying to resolve them where possible (using known errors), and passing them on where not. This critically requires adequate information gathering in a structured yet friendly manner. A primary objective is to enable minimal disruption to the customers/business, applying 'work-arounds' where necessary and applying priority, based on urgency and impact to business.
* Liaison with second and third line supportincluding attendance at monthly service meetings.
* Recording and recommending service improvements, including contributing to known errors/wishlists.
* Identifying repeating incidents (caused by Problems)
* Highlighting customer training and educational needs
* Service alert publishing for an end user audience
* Involvement in sign off of change and release
* Implementing authorised RFC's E.g. user account admin changes
* User account admin and team admin permissions management and recording
* The Service Desk will capture data relating to service incident trends and associated KPI's.

Incident and Problem Management

The following table contents can be amended to detail specific agreements and tasks necessary to deliver individual services.

|  |  |
| --- | --- |
| 1st Line Incident and Problem | User Services Division - **IS Helpline** - as per Service Desk Responsibilities. |
| 2nd / 3rd Line Incident and Problem | **IS LTW DLAM**   * Receiving and resolving incidents where the cause is determined to be user awareness or where the user is seeking advice on recommended usage * Highlighting customer training and educational needs * Recording and recommending service improvements to service owners, including maintenance of wishlist / known error pages * Involvement in sign off of change and release * Liaison with second and third line support and involvement in major problem reviews * Regular meetings with support partners in EDiNA * Involvement in incident/problem prioritisation with service owners * Leading Learn user forum * Understanding and communicating user and customer service enhancement needs * Escalations relating to effectiveness of incident and problem management process * Maintenance of wishlist / known error pages |
| 4th Line (Technical & Infrastructure) Incident and Problem | **EDiNA**   * Manage infrastructure logs * Manage and escalate operational capacity to service owner * Manage and escalate operational performance to service owner * Manage and escalate operational security risks/resolution to service owner * Problem management and trend analysis, with responsibility for effective use of existing problem management resources, and infrastructure / Operating Systems / Data storage / SAN etc * Highlight requirements for annual capital funding bids * Desktop CAB representation * Technology licence management * Firewall and security certificate management |
| Facilities Management(Technical & Infrastructure) Incident and Problem | **EDiNA** are responsible for facilities management of the Linux environments in which the service infrastructure operates. |
| Networks (Technical & Infrastructure) Incident and Problem  ITI Network | **ITI Networks** are responsible for all network provision and performance. |

Change Management

(info)All outages incurred as a result of a change/release procedure are recorded and communicated via the IS Service Alerts process. <http://reports.is.ed.ac.uk/alerts/index.cfm?fuseaction=disp_adm>

Change management within a project is handled by the normal process using business requirements capture and sign off reviews with business owners and service owners. An additional process is also used as part of annual project planning to make an estimate of service impact, allowing service budgets to be increased or decreased as a result of specific changes.

Change management within service is handled using a UniDesk Incident or Problem record, where decisions and actions about the change are recorded. For service enhancement changes, the key responsibilities are as follows:

**IS LTW DLAM**

* Provide cost estimates for making requested change.
* Assess requested change in terms of impact on end user training materials / training programmes.
* Assess requested change in terms of impact on end users.
* Assess requested change in terms of usability/quality.
* Assess requested change in terms of cost/benefit

**EDiNA**

* Assess requested change in terms of impact on system configuration.
* Assess requested change in terms of usability/quality
* Assess requested change in terms of impact on system infrastructure / support costs.
* Provide cost estimates for making requested change.
* Prioritise change alongside other service work.

**IS User Services - Helpline**

* Assess requested change in term of impact on front line support.
* Assess requested change in terms of impact on Helpline training / knowledgebase materials.

If all parties are in agreement that the change should be made, this is recorded in UniDesk and delivery is then managed via monthly prioritised schedules of service work.

Release Management

Release management within a project will be handled via the normal process using user acceptance testing, deployment checklists, acceptance sign-off reviews and deployment sign-off reviews within the project team.

Release management within service is handled using a UniDesk Incident or Problem record, where decisions and actions about the release are recorded. For service enhancement changes, the key responsibilities are as follows:

**IS LTW DLAM**

* Perform user acceptance testing of changes.
* Ensure all service documentation is updated as required.
  + Configuration changes are recorded on the wiki.
* Communicate the change and any service alerts to end users.

**EDiNA**

* Deploy changes to live environments, ensuring all change control records are updated.
* Raise any required service alerts to accompany the work.
* Ensure all service documentation is updated as required.

Configuration Management and Documentation

**IS LTW DLAM**

* Provision of end user documentation and tutor-led training courses
* Provision of knowledgebase documentation to support

**EDiNA**

* Maintain system configuration item data to level of detail required, and will document and own the Learn service configuration.

Availability Management

**IS LTW DLAM** and **EDiNA** are responsible for availability management.

**Noteable** is a low priority service accessible primarily via Learn which is a High Priority Service, this service should have 99.9% availability excluding unplanned downtime. High priority availability is published via the IS website: http://www.ed.ac.uk/schools-departments/information-services/services/status-alerts

Capacity Management

**EDiNA are** responsible for capacity management.

* EDiNA will use appropriate server monitoring practices to allow reporting on end-user usage on a quarterly basis
* Appropriate usage figures will be reported to indicate when we are approaching capacity, including reporting on file system usage, stating usage and capacity for the database and content file storage
* A monthly review meeting with EDiNA and DLAM will be scheduled to track and monitor usage and capacity
* An annual capacity review in early summer of each year will also be carried out to determine readiness for start of the next academic year

Service Continuity Management

**EDiNA** are responsible for resilient multi site infrastructure failover, invoking recovery, and running periodic failover tests.

Service Level Management

**IS Applications Technology Enhanced Learning Services** are responsible for service level management:

* Internal service communciations
* Oversight of system wide Change Management process and agenda
* Priorities for operational level change and RFC proposals
* Finances/resources/costs
* Ownership of OLA
* Audit planning
* Service strategy, upgrade and improvement plans (programme laid out in consultation with USD Technology Enhanced Learning Services)
* Service Continuity requirements
* Service Availability requirements
* Service Capacity requirements and monitoring/reporting
* Publishing service progress reports
* Responsibility for maintaining internal administrative and operational documentation. This should be located in the appropriate section of Insite Tech Collaboration: <https://www.wiki.ed.ac.uk/display/insite/Tech+Collaboration>

Financial Management

**EDiNA** has responsibility for service financial budgets, invoices, licensing etc.

OLA Change procedure

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Glossary

**KPI** - Key performance Indication, refers to standard measurements, benchmarks and targets that can be recorded to show specifically that a service has achieved or made progress towards a pre-defined standard/target  or not.  
**Customers**, in the context of ITIL, refers to a representative of service users, normally a senior manager who had agreed to make the service available to their users.  
**Users**, in the context of ITIL, refers to the individual end users who make use of the service.  
**FAQ:** Frequently Asked Question  
**Work-arounds** are measures taken to get the users working again as quickly as possible, however this may for example be by providing an alternate access, recognising that the underlying problem is not resolved.  
\*Add as required