



# ***Electronic Research Notebook Service Level Agreement***

## Document

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0.2	26/11/2021	James Wilson	First draft
0.3	29/11/2021	James Wilson	Simple edits made on behalf of RSpace
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## Template

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## Contents

1.	<b>Introductions</b> .....	<b>3</b>
	Purpose of Agreement .....	3
	Scope .....	3
2.	<b>Service Descriptions and Owners</b> .....	<b>3</b>
3.	<b>Roles &amp; Responsibilities</b> .....	<b>4</b>
	Domain Lead (DL) and Service Portfolio Owner (SPO) .....	4
	Business Service Owner.....	4
	Service Owner (SO).....	4
	Service Operations Managers (SOM) .....	4
	Product Owner (PO) .....	4
4.	<b>Service Availability</b> .....	<b>4</b>
	Standard .....	4
	Targets .....	4
	Exceptions .....	4
5.	<b>Support Availability</b> .....	<b>5</b>
	RSpace .....	5
	ARC Research Data Team .....	5
	Extended Support Scheme (ESS) .....	5
6.	<b>Service Levels</b> .....	<b>6</b>
	Definitions .....	6
	Standard Service Levels.....	6
7.	<b>Third Party Support</b> .....	<b>7</b>
8.	<b>Critical periods</b> .....	<b>7</b>
9.	<b>Product Improvement &amp; Delivery</b> .....	<b>7</b>
10.	<b>Escalation process</b> .....	<b>8</b>
11.	<b>Business Continuity</b> .....	<b>8</b>
	Outage scenarios .....	8
	Scenario 1. Outage with no corruption of live data .....	8
	Scenario 2. Outage with corruption of live data .....	8
	Scenario 3. Outage with corruption of live data and backup snapshots .....	8
12.	<b>KPIs – Availability and Reliability</b> .....	<b>9</b>
	Key Performance Indicators and Target Availability and Service Levels.....	9
13.	<b>Service Report</b> .....	<b>9</b>
	Service Report .....	9
14.	<b>Appendix A – RSpace Service Support Terms</b> .....	<b>10</b>
	<b>Response and Resolution Times</b> .....	<b>10</b>

# 1. Introductions

## Purpose of Agreement

This SLA describes the following attributes of the service, where appropriate and agreed:

- Description of the Service and the scope – what is covered and what is not
- Responsibilities of the service provider and customer
- Agreed Service Hours and Business Hours
- Availability Targets
- Reliability Targets
- Support hours and arrangements
- IT Service Continuity provision and service levels (referring to a separate Service Continuity SLA)
- Agreed volumes, transaction rates, resources, response times, batch turnaround times
- Agreed volume of change
- Charging (where appropriate)
- Performance incentives (where appropriate)
- Management Information
- Service Review and Reporting arrangements and procedures

## Scope

The scope of this document is for the technical support of the Electronic Research Notebook Service provided to UCL staff and Students by ARC.

## 2. Service Descriptions and Owners

The descriptions below are taken from the ARC Service Catalogue. The latest version can be found on the ARCintranet at [LINK](#)

Service Name	Service Components	Service Description	Business Service Owner (BSO)	Service Owner	Service Operations Manager
Electronic Research Notebook	Electronic Research Notebook Service	The ERN service provides a means to edit and manage notes and data relating to research. It is intended not only as an alternative to traditional paper lab notebooks, but as a wide-ranging solution for researchers who wish to gather their notes and related files in a single system where they can collaborate and selectively share their work with others in their team.	TBC	James A J Wilson	Alastair Smith

### 3. Roles & Responsibilities

#### Domain Lead (DL) and Service Portfolio Owner (SPO)

The roles of Domain Lead and Service Portfolio Owner are pretty much one and the same in UCL's Information Services Division (ISD) and ARC. It's a senior, strategic role with financial responsibilities and for each domain there is a functional governance group that considers project proposals in that functional domain. The functional governance group is responsible for prioritising submitted proposals and for determining which of these are included in the portfolio. There are six domains covered by ISD and ARC.

#### Business Service Owner

The Business Service Owner (BSO) is the senior customer of the service. As far as possible, they are responsible for representing the customer/user community. They are therefore usually from outside ISD/ARC. The BSO is the third point of escalation.

#### Service Owner (SO)

Each service has one Service Owner (SO) who has overall accountability for the provision of the service to its users. The SO is your second point of escalation.

#### Service Operations Managers (SOM)

Each service has a Service Operations Manager (SOM) who is accountable for the day to day operation of the service and this responsibility covers all aspects which contribute to the successful delivery of the service (as defined in the roles). Some services may have more than one SOM where there are multiple versions of the service but there will always be a lead SOM. There will also be at least one **deputy SOM** to provide cover in the SOM's absence. The SOM is the first point of escalation.

#### Product Owner (PO)

The Product Owner is responsible for the strategic development and improvement of the product(s) that underpin the service. They are usually from the business as they are accountable for aligning the features of the product(s) with the needs of the business.

### 4. Service Availability

#### Standard

All services within this scope are planned to be available 24x7, details of planned maintenance exceptions are documented below. Other additional outages for upgrades and maintenance will be advertised in advance, please see ISD Service News <https://www.ucl.ac.uk/isd/news>

#### Targets

The availability target of all services hosted by ISD/ARC within this scope is 95%.

#### Exceptions


Agreed periods of downtime for maintenance are within the availability targets. See section on Business Continuity below for planned outages for server patching and backups.

Service Name	Availability Target	Expected maintenance windows
Electronic Research Notebook	RSpace server uptime > 99.9%	"scheduled for low or zero traffic times"

## 5. Support Availability

### RSpace

Technical support for the UCL Electronic Research Notebook is provided by RSpace. An RSpace service case is any communication to ResearchSpace from a customer, local RSpace administrator, or end user who requests assistance with a specific issue, problem, or usage scenario. This may include bug reports, simple usage questions, requests for enhancements, notification of any kind or service interruption that might indicate a problem with the server, or indeed any technical issue.

We recommend the UCL staff and students using the RSpace online chat channel, which is available 9am-10pm Mon-Fri to logged-in users via the  button in the bottom-right of the screen. Questions directed to the online chat channel are likely to be picked up and dealt with more promptly than enquiries sent to the RSpace support email address, which is [support@researchspace.com](mailto:support@researchspace.com).

RSpace user support hours are 9am-10pm, Monday to Friday.

### ARC Research Data Team

The ARC Research Data team are available 09:00 – 17:00 Monday through Friday to provide support for queries and service requests relating to user accounts, service policies, UCL-originating suggestions for improvements, or other enquiries not related to technical or functional support.

Support should be requested via the following methods for the various services:

Service Name	1 <sup>st</sup> Line Contact Details	2 <sup>nd</sup> line Queue Name	3 <sup>rd</sup> Line Queue Name
Electronic Research Notebook (technical enquiries)	In-app chat channel. OR <a href="mailto:support@researchspace.com">support@researchspace.com</a>	<a href="mailto:support@researchspace.com">support@researchspace.com</a>	<a href="mailto:support@researchspace.com">support@researchspace.com</a>
Electronic Research Notebook (service-related enquiries)	<a href="mailto:ern-support@ucl.ac.uk">ern-support@ucl.ac.uk</a>	<a href="mailto:ern-support@ucl.ac.uk">ern-support@ucl.ac.uk</a>	<a href="mailto:ern-support@ucl.ac.uk">ern-support@ucl.ac.uk</a>

### Extended Support Scheme (ESS)

The Extended Support Scheme does not cover the Electronic Research Notebook Service

## 6. Service Levels

### Definitions

#### P1 – Critical

Service unavailable or unusable

The entire system or service is not available or unusable.

#### P2 – High

Major functionality issue

Major functionality is disrupted and prevents normal work (poor performance). No workaround available.

#### P3 – Medium

Minor functionality issue

Functionality loss interferes with normal completion of work. Workaround is available.

#### P4 – Low

Non urgent issue

No real impact on day to day work, but needs to be addressed.

### Standard Service Levels

*n.b. The ARC Research Data team work to the following service level. Most availability and functionality enquiries for the ERN will in practice be handled by RSpace, however.*

Priority Level	Urgency Response	Target Response (With in core hours)	Target Resolution (Within core hours)
P1 (Critical)	Immediate, sustained effort using all necessary and available resources until service is restored.	Immediate response, action within <b>30 minutes</b> .	<b>4 Business Hours</b> (0.5 Working Day)
P2 (High)	Immediate response to assess the situation, staff may be interrupted and taken away from low or medium priority jobs.	Immediate response, action within <b>1hour</b> .	<b>8 Business Hours</b> (1Working Day)
P3 (Medium)	Response using standard procedures and operating within the normal frameworks as time allows.	Immediate electronic notification. Allocation for investigation within <b>4 business hours</b> .	<b>16 Business Hours</b> (2 Working Days)
P4 (Low)	Response using standard procedures and operating within the normal frameworks as time allows.	Immediate electronic notification. Allocation for investigation <b>2 working days. (16 Hours)</b>	<b>40 Business Hours</b> (5 Working Days)

## 7. Third Party Support

Third party support is invoked by the Service user, Service Owner, SOM, or ARC Research Data team, and managed by the Service Owner or SOM.

Level	Description	Response Target	Resolution Target	Notes
1	Category A - Support requests that can be resolved entirely by the support team without escalation to the engineering	1 day during business hours (9am-5pm)	48 hours	
2	Category B - Non-time-sensitive support requests that require escalation to the engineering team, via creation of an engineering issue ticket, but which does not require immediate attention	1 day during business hours (9am-5pm)	Variable depending on urgency. 2 days for single feature patch	
3	Category C - Time-sensitive support requests that require escalation to the engineering team, via creation of an engineering issue ticket, and which require immediate attention	<1 hour during business hours (9am-5pm); As soon as possible outside of business hours	4 hours	Please include the term "CRITICAL" or "EMERGENCY" in the subject header of your request. Emergency situations include the complete failure of the system rendering user login impossible or other situations that make it impossible for users to access their data. In the event of an emergency ResearchSpace will contact the customer or send an initial response regarding the emergency call within one hour

## 8. Critical periods

No specific critical periods have been identified for the Electronic Research Notebook service.

## 9. Product Improvement & Delivery

The product(s) that underpin the Electronic Research Notebook Service will be developed and improved by the ARC Research Data Product Team and by RSpace.

The ARC Research Data Product Team will develop and improve integrations with other UCL platforms and services, whilst RSpace will develop and improve product functionality, interfaces, and integrations with other 3<sup>rd</sup>-party software products and platforms.

Service Component	Development team	Release Cadence
Electronic Research	ARC Research Data team	Termly planning Two-week sprints

Notebook Service		Monthly feature release
RSpace	RSpace	Under normal circumstances: Four to five-week sprints and release schedule

## 10. Escalation process

If you are unhappy with the support you have received, you should contact the Service Owner. The SO will report into the ARC Director.

If you are unhappy with product development direction or progress, you should contact the Product Owner. The PO reports into the Director of ARC.

## 11. Business Continuity

In the event of a loss of service, ARC or RSpace will ensure that your service is recovered quickly and without significant data loss. This is measured by Recovery Time Objective (RTO) and Recovery Point Objective (RPO).

RTO = how long will it take to restore service

RPO = how much data loss will be incurred

### Outage scenarios

Outage and recovery times will vary depending on the extent of the outage and volume of data to be recovered.

Please be aware that all customers run in segregated environments - an outage affecting or caused by one customer will not affect other customers.

#### Scenario 1. Outage with no corruption of live data

This scenario can arise due to operational issues with RSpace scaling / resource usage, and also if an AWS EC2 server instance fails at the infrastructural level. This would result of a temporary loss of access to RSpace, but not a permanent loss of persisted data. Only unsaved changes would be lost. Since RSpace typically autosaves every 20 seconds or so while a user is editing a document, this is the scope of the loss. Once RSpace is running again, all data will be accessible again.

#### Scenario 2. Outage with corruption of live data

This scenario can arise due to a corruption or loss of the live data storage volumes. This would require a recovery from backup volumes. RSpace maintains snapshot backups for 12, 24 and 48 hours, and 1, 2 and 3 weeks. The worst case is 12 hours loss (if a volume was corrupted during or immediately before a backup); the average expected loss would be 6 hours ( the mid-point between snapshots). The recovery time from snapshots is fast - a few minutes to become available from launch.

#### Scenario 3. Outage with corruption of live data and backup snapshots

This scenario could arise if the backups and live storage failed or became irrecoverable. This would require a recovery from a separate backup mechanism of data stored in AWS S3 buckets. S3 is an ideal medium for



backup due to its exceptional durability of data at scale. In this scenario, the average data loss would be similar to that of Scenario 2 - a mean of 6 hours loss. However, the recovery time will be longer depending on the volume of data to be recovered from backup. Database recovery would typically be less than hour; recovery of files from S3 to live storage would proceed incrementally. The current rate of recovery observed during our testing is approx. 200-300Gb per hour of files.

## 12. KPIs – Availability and Reliability

### Key Performance Indicators and Target Availability and Service Levels

- Number of Incidents and Service Requests created
- Number of Incidents and Service Requests closed
- Number of open incidents and service requests by age
- Customer satisfaction scores from RemedyForce feedback
- Response Times
- System Outages (uptime)

## 13. Service Report

### Service Report

Service Reports will be provided monthly to cover:

- Performance against KPIs
- Performance against other measurable items (non-standard requests, SIPs, Work Packages)
- Major Incidents and Outage commentary (service health review is an indication of service health maturity)

## 14. Appendix A – RSpace Service Support Terms

RSpace provides a single service level that of support for all users that includes all necessary live help desk support, technical support, hosting environment support and timely provision of updates and patches. Incoming issues are divided into three categories:

- A) Support requests that can be resolved entirely by the support team without escalation to the engineering team. These may include both minor or major problems.
- B) Non-time-sensitive support requests that require escalation to the engineering team but which does not require immediate attention. These may include feature requests, cosmetic errors, and similar matters.
- C) Time-sensitive support requests that require escalation to the engineering team and which require immediate attention. These issues are flagged as urgent in our issue manager database, and this flag automatically triggers notifications to the on-duty engineers. Inability to access the system or problems that significantly prevent core functionality are considered Critical and resolution of critical customer issues are prioritized above all other staff responsibilities.

ResearchSpace responses may take the form of:

- Simple written or verbal instructions to be executed by the end user or local RSpace administrator.
- Requests for additional information, screenshots, use-case descriptions, or content files that will help ResearchSpace to replicate the problem.
- Arrangements for a free or billable user training session, the details of which will be negotiated between ResearchSpace and the customer.
- Remote connection to the customer's RSpace system by a ResearchSpace technician to examine, reconfigure or repair the customer RSpace system.
- The installation of software updates or patches with the cooperation of the local RSpace administrator.
- Initiation of a request for ResearchSpace professional services to provide customization, new features, consultations or other paid services.
- A request to schedule a conference call between ResearchSpace and the customer.
- For customers with an onsite installation of RSpace, an onsite visit to examine and adjust or configure the customer's RSpace system may be necessary.
- ResearchSpace may need to transfer or restore data to or from the RSpace server with full co-operation of the site administrator. For on-premise deployments, routine customer data backup and protection is the sole responsibility of the customer and Research Space cannot accept any responsibility for lost data. However, ResearchSpace will make good faith efforts to move, restore or transfer data as part of its service procedures with the permission of the local RSpace administrator and explicit waiver of responsibility for the loss of any data.

Some service cases will require action by the customer such as the transmission of log files, accurate description of usage, and/or connection to a Webex (or similar) session. The customer should provide requested materials and information as quickly as possible and arrive promptly for scheduled Webex sessions or conference calls.

### Response and Resolution Times

Expected response and resolution times differ according to the categorization of the issue upon receipt. The categories are:

- A) Support requests that can be resolved entirely by the support team without escalation to the engineering. Response and resolution times for this type of issue are highly variable depending on the severity of the problem, and whether or not the resolution is likely to involve a simple written answer to a question vs. the scheduling of a live webcast training or troubleshooting session with the reporting user.

RESPONSE:

Standard minor service inquiries receive an initial response within one business day during normal business hours. Approximately 80% of all requests receive a response within 3 hours.

RESOLUTION:

Minor, non-critical issues that do not require creation of new code, installation of new software, connection via Webex, or additional customer actions such as transmission of log files will typically be resolved within 24-48 hours. Approximately 80% of all minor calls are resolved during the same business day.

B) Non-time-sensitive support requests that require escalation to the engineering team, via creation of an engineering issue ticket, but which does not require immediate attention.

RESPONSE:

The target time for responses for this type of issue would be between an hour and a day during normal business hours, and as soon as possible outside business hours.

RESOLUTION:

The fix time would depend on the severity of the issue and the need to release a solution as a single feature patch which might take 1-2 days vs. lower priority cosmetic features that we would include in the next scheduled release. Scheduled releases are delivered approximately every 1 to 2 months.

C) Time-sensitive support requests that require escalation to the engineering team, via creation of an engineering issue ticket, and which require immediate attention. These issues are flagged as urgent in our issue manager database, and this flag automatically triggers notifications to the on-duty engineers. Resolution of critical customer issues is prioritized above all other staff responsibilities

RESPONSE:

The target response time for these issues is always less than an hour during normal business hours, and as soon as possible outside business hours.

RESOLUTION:

Fix time would be 1 – 4 hours depending on the nature and severity of the issue.

Emergency service calls for critical problems must be clearly identified as such, and will receive the highest priority. Please include the term "CRITICAL" or "EMERGENCY" in the subject header of your request.

Emergency situations include the complete failure of the system rendering user login impossible or other situations that make it impossible for users to access their data. In the event of an emergency ResearchSpace will contact the customer or send an initial response regarding the emergency call within one hour

Customers with an onsite installation may wish to enable instant emergency access to your RSpace server to minimize emergency response time, in which case ResearchSpace will need SSH access at all times. If you do NOT want us to perform this service, please let us know. Be aware that disallowing permanent SSH access means that a customer technical representative may need to be available outside of the customer's standard business hours to grant a ResearchSpace technician access to the RSpace server.

Some service cases will require action by the customer such as the transmission of log files, accurate description of usage, and/or connection to a Webex (or similar) session. The customer should provide requested materials and information as quickly as possible and arrive promptly for scheduled Webex sessions or conference calls.

If the issue cannot be resolved quickly, ResearchSpace will keep the customer informed as to whether or not the issue is likely to be resolved by simple usage instructions, a Webex session, a minor software patch, or a suggested workaround.

If ResearchSpace cannot replicate the issue, ResearchSpace may request permission to install additional diagnostic tools on the customer's network or ResearchSpace may request permission to perform diagnostic tests on the customer's hardware. Intermittent issues can be especially difficult to diagnose and may require that customers gather accurate and timely information about usage. Failure to do so will extend the time it will take ResearchSpace to resolve the issue.

Where immediate resolution is not possible ResearchSpace will attempt to offer workaround workflow solutions.

ResearchSpace will respond to any reasonable number of requests for assistance from customers, but in cases where customers appear to be making excessive numbers of requests, or if users are making frivolous requests for assistance with issues outside the scope of our service, ResearchSpace reserves the right to negotiate a resolution through the use of a single designated customer representative, assigning a request quota, or other means agreeable to both parties.

Service cases are considered closed when:

- The issue has been resolved and a confirming communication has been received from the customer.
- Ten business days have elapsed and there has been no further follow-up from the customer and no response to ResearchSpace emails. ResearchSpace assumes the case is resolved. Cases presumed to be resolved can be re-opened, if needed.
- The issue cannot currently be resolved. ResearchSpace has suggested workaround workflow solutions.
- The case requires no attention from the support team and has been transferred to the relevant ResearchSpace consultant. This might occur if the request is for billable professional services not related to technical support or maintenance.