<Service>

Technical Architecture

Version 1.0

dd/mm/yyyy

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Version control

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Version | Author | Sections | Amendments |
|  | 1.0 |  | All | Initial draft. |

Some keyboard shortcuts have been added to this document: Alt-P changes to paragraph style; Alt-N changes to normal style; Alt-R changes to preformatted style; Alt-C changes to code character format, use Ctrl-Spacebar to clear; Alt-1, Alt-2 and Alt-3 create headings; Alt-B creates a bulleted list and Alt-0 (zero) creates a numbered list. You can also create appendices using the Shift-Alt-1, Shift-Alt-2 and Shift-Alt-3 shortcuts.

When you insert new tables they may appear too big because of the formatting of the default paragraph style. To fix this issue, select all rows and change to normal style (Alt-N). You can change the heading style of a table by placing the cursor anywhere inside it, selecting the Design tab and clicking one of the first three table designs.

To update the table of contents and any cross-references, hit ctrl-A to select all then F9, choose ‘update entire table’ and click OK. You might also want to select ‘update fields before printing’ under File > Options > Display > Printing Options.

# Project planning

Create a subsection for each project that makes changes to this service, keeping the subsections in reverse chronological order (newest projects first).

## <Project code> <project name>

### Stakeholders

|  |  |  |
| --- | --- | --- |
| Role | Unit | Name |
| Technical Architect  | Development Technology |  |
| Peer Reviewer | Development Technology |  |
| Project Manager | Project Services |  |
| Production Representative | Production Management |  |
| ITI Representative | IT Infrastructure |  |

### Key deliverables

Outline the key technical achievements that this project will deliver along with the business benefit that each deliverable will realise.

|  |  |
| --- | --- |
| Deliverable | Business benefit |
|  |  |
|  |  |

### Technical commitments

Add a justification below if any of these commitments are not being met by the project.

|  |  |  |
| --- | --- | --- |
| Commitment | Y/N | Justification (if not) |
| Will the project conduct a load test? |  |  |
| Will the project conduct a DR test? |  |  |
| Has a service restart been tested? |  |  |

### Summary of technical changes

Describe the changes this project will make to the infrastructure, including any new servers, new users, new configuration etc.

### Estimated costs

Costs should cover five years of service life, including capital costs and annual recurrent costs.

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Development | Test | Live |
| e.g. hardware | £ | £ | £ |
| e.g. disk on SAN | £ | £ | £ |
| e.g. backup | £ | £ | £ |
| e.g. licences | £ | £ | £ |
| e.g. maintenance | £ | £ | £ |
| e.g. support | £ | £ | £ |

|  |  |  |  |
| --- | --- | --- | --- |
| Subtotals | £ | £ | £ |
| Total | £ |

# Service design

## Service description

Describe the architecture and purpose of this service, highlighting specific design or technological features. Include diagrams where appropriate.

### Key technologies

List the technologies being used by this service and indicate whether they are new to IS Applications Division.

|  |  |  |
| --- | --- | --- |
| Technology | Version | New or existing |
|  |  |  |
|  |  |  |

### Technical diagrams

Provide diagrams of infrastructure used by this service, showing relationships between servers, tiers, networks and sites for each environment. Where possible, highlight the flow of data between components.

## Resilience measures

Describe any resilience measures being used including application load balancing and database resilience techniques.

## Disaster recovery category

All services are category 3 unless business requirements demand higher levels. The category must be determined by the project team. Information on DR categories can be found on InSite (https://www.wiki.ed.ac.uk/x/bVZoCg).

|  |  |
| --- | --- |
| Application | Category |
|  | 3 |

## Backup policy

Detail any variance from the currently agreed backup policy.

|  |  |
| --- | --- |
| Component | Variance from backup policy |
| Operating System  | None (standard backup) |
| Database | None (standard backup) |
| File system | None (standard backup) |
| Other | None (standard backup) |

## Security issues

Describe any issues relating to security that will be considered including any risks that must be understood and accepted.

## Authentication and authorisation

Describe the authentication and authorisation methods being used by the service.

## External access

Detail any access requirements to IT infrastructure for external partners.

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Contact details | Access method | Description of need |
| e.g. named person | e.g. telephone number, email etc. | e.g. terminal, RDP, file system etc. |  |

## Interfaces and dependencies

Describe any system interfaces to other corporate services and define their criticality, i.e. what would happen in the event of the interface becoming unavailable.

## Exceptions and other issues

Use this section to detail any issues that have not already been covered.

# Service specification

## URLs, certificates and channels

### Development

|  |  |
| --- | --- |
| Application | URL |
|  |  |
|  |  |

### Test

|  |  |
| --- | --- |
| Application | URL |
|  |  |
|  |  |

### Live

|  |  |
| --- | --- |
| Application | URL |
|  |  |
|  |  |

### Certificates

|  |  |  |  |
| --- | --- | --- | --- |
| Certificate CN | CA | Server | Location |
|  |  |  |  |
|  |  |  |  |

###  MyED channels

|  |  |  |
| --- | --- | --- |
| Channel name | Type | Description |
|  |  |  |
|  |  |  |

## Servers

### Application servers

|  |  |  |  |
| --- | --- | --- | --- |
|  | Development | Test | Live |
| Servers |  |  |  |
| Physical / Virtual |  |  |  |
| Shared / Dedicated |  |  |  |
| CPU cores |  |  |  |
| Memory |  |  |  |
| OS |  |  |  |
| Software and versions |  |  |  |
| Dependencies | e.g. SMTP, Cosign |  |  |

### Database servers

|  |  |  |  |
| --- | --- | --- | --- |
|  | Development | Test | Live |
| Server |  |  |  |
| Physical / Virtual |  |  |  |
| Shared / Dedicated |  |  |  |
| CPU cores |  |  |  |
| Memory |  |  |  |
| OS |  |  |  |
| Instance |  |  |  |
| Database version |  |  |  |
| Dependencies | e.g. Java, packages |  |  |

### File systems

|  |  |  |  |
| --- | --- | --- | --- |
| Server names | Volume | Size | Purpose |
|  | e.g. F: | e.g. 50MB | e.g. logging |
|  |  |  |  |

### File shares

|  |  |  |
| --- | --- | --- |
| Server names | Shared path | Share name |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| Share name | Users / groups | Permissions |
|  |  |  |
|  |  |  |

## Users, roles and groups

### Unix

|  |  |  |
| --- | --- | --- |
| Username | Home directory | Description |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| Group | Members | Description |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| Application Directory | Owner | Description |
|  |  |  |
|  |  |  |

### Windows

|  |  |
| --- | --- |
| Username | Description |
|  |  |
|  |  |

|  |  |  |
| --- | --- | --- |
| Group Name | Members | Description |
|  |  |  |
|  |  |  |

### Oracle

|  |  |  |  |
| --- | --- | --- | --- |
| Instance | Username | Roles | Description |
|  |  |  |  |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Instance | OPS$ username | Roles | Description |
|  |  |  |  |
|  |  |  |  |

|  |  |  |
| --- | --- | --- |
| Instance | Database role | Description |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| Instance | Schema | Tablespace |
|  |  |  |
|  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Instance | DB link name | Owner | Source instance | Source user |
|  |  |  |  |  |

### SQL Server

|  |  |
| --- | --- |
| Database | Description |
|  |  |
|  |  |

|  |  |
| --- | --- |
| Login | Description |
|  |  |
|  |  |

|  |  |  |
| --- | --- | --- |
| Database User | Database | Mapped roles |
|  |  |  |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| Linked server | Source database | Source user |
|  |  |  |
|  |  |  |

## Data sources

Sections for ColdFusion and Java are provided below. Add sections for the connection technology the service is using and remove any sections that do not apply.

### ColdFusion

|  |  |  |  |
| --- | --- | --- | --- |
| Data source name | e.g. application |  |  |
| CF instance |  |  |  |
| Username |  |  |  |
| Database |  |  |  |
| Additional settings |  |  |  |

### Java

|  |  |  |  |
| --- | --- | --- | --- |
| Connection name | e.g. application |  |  |
| Username |  |  |  |
| Database |  |  |  |
| Additional settings |  |  |  |

## Firewall configuration

### Drum firewall

|  |  |  |  |
| --- | --- | --- | --- |
| Source | Destination | Port | Protocol |
|  |  |  |  |
|  |  |  |  |

### Central firewall

|  |  |  |  |
| --- | --- | --- | --- |
| Source | Destination | Port | Protocol |
|  |  |  |  |
|  |  |  |  |

### Windows firewall

|  |  |  |  |
| --- | --- | --- | --- |
| Source | Destination | Port | Protocol |
|  |  |  |  |
|  |  |  |  |

## Scheduled tasks

### Unix cron jobs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Server | Account | Script name | Schedule | Description |
|  |  |  |  |  |
|  |  |  |  |  |

### Windows scheduled tasks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Server | Run as | Task name | Schedule | Description |
|  |  |  |  |  |
|  |  |  |  |  |

### Oracle DBMS jobs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Instance | Owner | Job name | Schedule | Description |
|  |  |  |  |  |
|  |  |  |  |  |

### SQL Server jobs

|  |  |  |  |
| --- | --- | --- | --- |
| Server | Job name | Schedule | Description |
|  |  |  |  |
|  |  |  |  |

## Software licences

If new licences are required at any point, remember to add the costs to the estimated costs section for the project in section 1.

|  |  |  |  |
| --- | --- | --- | --- |
| Software | Supplier | Requirements | Expires |
|  |  |  |  |
|  |  |  |  |

# Service operation

## Support contacts

List a technical support contact for any vendors along with instructions on how they should be engaged.

|  |  |  |
| --- | --- | --- |
| Vendor | Contact details | Required information |
|  |  | e.g. customer ID |

## Startup and shutdown steps

Document the steps that must be taken to shut down and start up the service.

### Shut down

### Start up

## Log files

Describe any log files below, including the location and purpose of each file.

## Configuration files

Describe any configuration files below, including the location and purpose of each file.

## Patching

Describe how patches are applied to the service, when patches are released, where they can be downloaded from and any other pertinent details.

# Common procedures

Describe any common administrative procedures that are associated with this server (e.g. creating new users, changing access rights etc).

## e.g. Create a new user

# Disaster recovery plan

Describe the steps that must be taken to recover the service in the event of a site loss.