DRAFT - ICT Project Guidance

Education Sector – Basic Context Information

Version:

0.1

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## Description

This document summarises key information about the New Zealand Education Sector.

## Synopsis

New Zealand is a small country, with approximately 1/8th of its population in compulsory education.

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## Introduction

BOSSCARD/ RAID: Background [], Objective, Options, Scope[In/Out], Stakeholders [Users], Constraints, Assumptions, Risks, Dependencies, Decisions, Deliverables.

|  |  |  |
| --- | --- | --- |
| Category | Description | Value |
| Minimum Users: | Estimated number of potential users  800,000 learners, 55,000 teachers | 855,000 |
| Minimum new Users/year | New (and therefore leaving) students | 62,000 |
| Minimum Users requiring IdP changes | Changing school/year | 110,000 |
| Minimum User Groups: | Sector groups and organisations:  2500 schools,  5000 ECE providers,  4000 home schools,  600 Tertiary organisations  850  playgroups  Unknown number of sports, learning, etc. groups (1000): | 14,000 |

|  |  |  |
| --- | --- | --- |
| Minimum Media Resources | Estimated number of individually managed media resources:  5,000 documents  17 drafts spread over  3 published versioned | 100,000 |
| Minimum Storage (Gb): | Assuming  100,000 Resources, x 10 versions, x 0.25Mb  2.5Mb of media x 100,000 Resources | Max 375 Gb |
| Minimum Concurrent Capacity: | Method 1:  10% of Max Users online,  10% being concurrent over 25 seconds | 8,000/4=2000 users |
| Method 2:  121,000 users/year,  10% being concurrent over 25 seconds:  NCEA 1: 140,000  NECA 2: 88,0000  NCEA 3: 33,000 | 12,000/4 = 3000 users |
| Method 3:  55,000 teachers, 10% being concurrent over 25 seconds: | 5,500/4 = 1375 users |
| Throughput: | Surge Average Concurrent Requests/sec | 3000 requests per sec. |
| Response Time: | Peak  Concurrent Requests/sec | 12000 requests per sec. |
|  | Average *Completed* Response Time | <500ms |
| Max *Completed* Response Time |  | 2 secs |
| Maximum Tolerable Downtime (MTD) | Assuming part of a lunch break. | 20 minutes |
| Minimum Downtime per fortnight | 99.9% | 20 minutes per fortnight. |
| Disaster Recovery Times (mins) | Recovery Point Objective (RPO) | 15 mins |
|  | Recovery Point in Time (RPT) | 60 mins |
| Vendor Support Response Times (mins) | P1 |  |
| P2 |  |
| P3 |  |
| Integration Systems | Hosting | Organisation Cloud Accounts |
| Identity | (I)Commodity Cloud based Identity Providers (IdPs)  (I)Cloud based Organisation specific IdPs  (I)Organisation specific Identity Provider (ESL) |
| Reporting | (I/O)Reporting Database |
| Data | (O) Data warehouse |
| Other | (I/O) Te Rito (via APIs)  (O) Student Management System (SMS)  (I/O) Learning Management System (LMS) |
| Integration Methods: | Protocols |  |
| Identity | OIDC, OAuth, SAML |
| Education specific | cmi5, xAPI, SCORM |
| Standards | JSON, REST, OpenAPI, ODATA, |
| Tech Preferences: | Host Environment | Cloud. Azure preferably |
| Database/Store | SQL Server preferably |
| OS | Windows preferably |
| Service Framework | .NET Core preferably |
| Service Language Type | Compiled |
| Service Language Framework | .NET Core |
| Service Language | C# |
| Service Client Framework | Vue.js preferably |
| Service Client Language | Typescript preferably |
| Accepted Hash Algorithms | SHA-3 |  |
| Accepted Encryption Protocols | TLS 3+ |  |
| Max Length of Certificates | 90 days |  |
| Data Classification | IN CONFIDENCE | The system is intended to hold UNCLASSIFIED resources, but the volume of users demands that the information be treated as IN CONFIDENCE. |
| Systems that may be replaced |  | CoL Tool |
| Backups | Full | Every 24 hours |
| Incremental | Every 15 minutes |
| Duration kept | 31 days |

Appendices

Appendix A - Document Information

### Images

[Figure 1: TODO Image 2](#_Toc144995112)

### Tables

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### References

**There are no sources in the current document.**

### Review Distribution

The document was distributed for review as below:

|  |  |
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| Identity | Notes |
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### Audience

The document is technical in nature, but parts are expected to be read and/or validated by a non-technical audience.

### Structure

Where possible, the document structure is guided by either ISO-\* standards or best practice.

### Diagrams

Diagrams are developed for a wide audience. Unless specifically for a technical audience, where the use of industry standard diagram types (ArchiMate, UML, C4), is appropriate, diagrams are developed as simple “box & line” monochrome diagrams.

### Terms

Refer to the project’s Glossary.

##### IT

: acronym for Information, using Technology to automate and facilitate its management.

##### ICT

: acronym for Information & Communication Technology, the domain of defining Information elements and using technology to automate their communication between entities. IT is a subset of ICT.