



Australian Government  
Department of Employment  
and Workplace Relations

# High-Level Design (HLD)

## PRISMS Modernisation HLD

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The document must be attributed as the high-level design.

s 22(1)

## Contents

<b>About this Document</b> .....	<b>5</b>
<b>Revision History</b> .....	<b>6</b>
<b>Related Documents</b> .....	<b>6</b>
<b>Definitions</b> .....	<b>7</b>
<b>Stakeholder Consultation</b> .....	<b>9</b>
<b>Introduction</b> .....	<b>9</b>
Overview & Background .....	10
Dependencies.....	10
Assumptions.....	11
Constraints .....	12
Risks & Mitigations.....	13
Scope.....	13
In-Scope .....	13
Out-of-Scope.....	13
Stakeholders .....	14
<b>Business Context</b> .....	<b>15</b>
Objectives.....	15
Priorities and Outcomes .....	15
Strategic Alignment.....	16
Users .....	17
High-Level Requirements.....	18
Business Process .....	18
Products & Services .....	20
Information Security .....	20
Information Assets.....	20
System Classification.....	21
Business Capability Map .....	21
<b>Solution Context</b> .....	<b>22</b>
Overview .....	22
Provider View.....	22

Vendor View.....	24
System considerations and design impacts .....	25
Key design decisions .....	26
Architecture patterns.....	27
Architecture principle alignment .....	28
Platforms & Capabilities.....	30
Components.....	31
Application – API service layer .....	31
API Gateway & Developer Portal .....	36
Identity Model .....	40
Data.....	40
Integration .....	42
Infrastructure .....	42
Network .....	43
Security .....	43
<b>Operations.....</b>	<b>46</b>
System Class & Availability.....	46
Backup & Recovery .....	46
Logging & Monitoring .....	46
Application / technology decommissioning requirements.....	46
Support.....	46
<b>Development / Hosting Approach.....</b>	<b>47</b>
Environments.....	47
<b>Appendices .....</b>	<b>50</b>

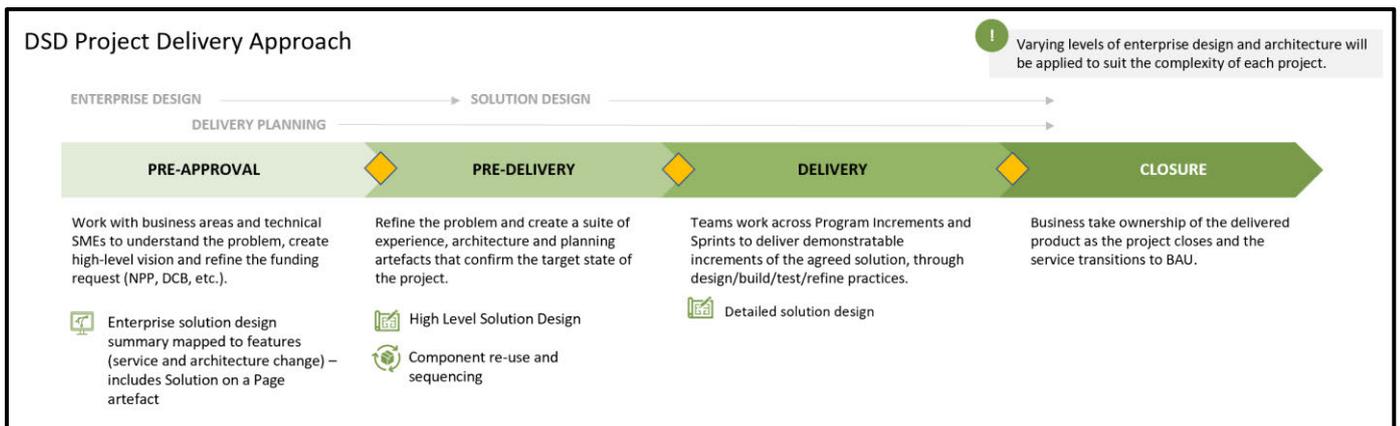
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## About this Document

The High-Level Design (HLD) is to describe just enough upfront design to set the right foundations by identifying the platforms, patterns, and technology to support agreed business needs. The aim is to identify components of the solution at conceptual level and establish a logical level connection to platforms, technologies, patterns, and services to deliver required business outcomes.

A High-Level Design document is developed in consultation within a Solution Team that reflects the outcomes of a project. The document may reference to other HLDs that represent a base platform or system that is underlying to this solution. The author may defer some sections of this document if there is a risk of duplication and repetition to another existing HLD – where there is reference to another document, the author will specify and link the relevant information.

The HLD needs to be accepted by the Project/Program Solution Team before going through governance process for endorsement and/or approval by Design Architecture Forum (DAF) and Architecture Review Board (ARB). The HLD is part of DSD Project Delivery approach and is a required artefact to progress from Pre-Delivery into Delivery stage of a project.



## Revision History

Version	Date	Author (s)	Comments
V1	22/02/2024	s 22(1)	First version of the HLD document is created.
V1.1	05/02/2024		Comments validation and incorporation regarding the scope change.
V1.1 FINAL	29/07/2024		Removed PRISMS target state and finalise content for DAF

## Related Documents

Table 1: References

Ref ID	Title	Location
REF01	The ESOS legislative framework (web site at the Department of Education)	<a href="#">The ESOS legislative framework</a>
REF02	Education Services for Overseas Students Regulations 2019	<a href="#">Education Services for Overseas Students Regulations 2019</a>
REF03	Education Services for Overseas Students Act 2000	<a href="#">Education Services for Overseas Students Act 2000</a>
REF04	DEWR internal web site October 2021	<a href="#">News - The Provider Registration and International Student Management System — is 20 years old this October!</a>
REF05	DoE web site – International Education Data and Research	<a href="#">International Education Data and Research - Department of Education, Australian Government</a>
REF06	PRISMS current state architecture review	<a href="#">PRISMS CurrentState Architecture v02.docx</a>
REF07	NPP Funding Proposal NPP-2122-IEDPH1 - DSD-Modern Collect. Internat. Edu Data	NPP document for the project: Modern Collection of International Education Data (PRISMS)
REF08	DB discovery folder: PRISMS database discovery work as part of the modernisation project	<a href="#">PRISMS database discovery</a>  <a href="#">Database Discovery Summary.docx</a>
REF09	PRISMS and LTPS dependency discovery	<a href="#">Discovery of LTPS &amp; PRISMS dependencies.docx</a>
REF10	PRISMSMain database discovery – users and dependencies	<a href="#">PRISMSMain database usage dependencies.xlsx</a>
REF11	ESOS Online Training discovery	<a href="#">Discovery of PRISMS dependencies for ESOSOnline Training.docx</a>
REF12	Govlink (previously Fedlink)	<a href="#">Govlink</a>
REF13	High Level Requirements	<a href="#">PRISMS Modernisation Project HI R - V0.4 (latest).docx</a>

s 47E(d)

REF18	PRISMS Modernisation Project Management Plan	<a href="#">PRISMS Modernisation Project Management Plan v1.0.docx</a>
REF19	Minute to the exec on key PRISMS decisions	<a href="#">Minute - PRISMS Platform Agreement.docx</a> Input to this minute: REF20
REF20	Decision Paper on Key PRISMS decisions	<a href="#">Decision Paper - PRISMS Modernisation Platform Decisions.docx</a>

Ref ID	Title	Location
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## Definitions

Term / Acronym	Expanded form/	Definition
AMS	Admission Management Systems	Software used by providers to manage student admissions, course attendance etc. Also see SMS.
API	Application Programming Interface	A way for two different applications or distributed systems to request actions and exchange information.
CoE	Confirmation of Enrolment	<p>System record created when a student is enrolled into a course offered by a provider. The CoE is sent to DoHA after its' status is changed to approved by a CoE provider administrator.</p> <p>Providers must maintain the CoE status of students enrolled in their courses for the duration of that student's enrolment.</p> <p>The CoE created in PRISMS constitutes the evidence required by DoHA to issue a student Visa. The CoE records information about the student, the provider, agent (if applicable), along with the course and duration of study in which the student has enrolled.</p>
CRICOS	Commonwealth Register of Institutions and Courses for Overseas Students	<p>CRICOS is the register prescribed under section 14A of the ESOS Act. CRICOS codes are created for registered Providers and their courses. The CRICOS codes must be displayed on the Provider's web site.</p> <p>Only CRICOS registered Providers can enrol and deliver courses to students in Australia on a student visa.</p> <p><a href="#">Registration on CRICOS</a></p>
CRICOS Provider Code		<p>Unique code identifying a certified Provider under ESOS legislation. The Provider Code is created when an ESOS Agency successfully 'Registers' a Provider. A Provider must Register with at least 1 course.</p> <p>A CRICOS code is only provided once a Provider has paid registration fees and completed training. Once registered, there are ongoing obligations with Provider must meet under the ESOS Act, including the publishing of their Provider code on their web site.</p>
DE	Department of Education	
DHA	Department of Home Affairs	DHA manages the Visa grant and update process for international students. PRISMS sends Visa grant or update requests to the DHA. The DHA also return Visa grant update statuses to PRISMS.

Term / Acronym	Expanded form/	Definition
ESOS Act	Education Services for Overseas Students Act 2000	Act that establishes the legal framework for the quality assurance of education and training institutions (Providers) offering courses to international students (students studying in Australia on student visas).
OLTP	Online Transactional Processing [database]	Databases used for running applications. Designed for a larger proportion of updates compared to analytical databases. Operations are design to support concurrent and atomic application transactions.
PIA	Privacy Impact Assessment	Identifies the impact that the project might have on the privacy of individuals and sets out recommendations for managing, minimising or eliminating that impact.  See <a href="#">DEWR - Privacy Impact Assessment Policy</a>
PRISMS	Provider Registration and International Student Management System	System released in 2001 to support the implementation and administration of the ESOS Act.  PRISMS creates and manages CRICOS codes and international student enrolments, manages workflows for the registration of Providers by their respective ESOS Agency and communicates with DoHA for the issuing of Visas.  Refs: <a href="#">PRISMS FAQs</a>
Provider	Education Provider	An educational institution that is providing education courses for Students governed by the ESOS Act.
PTA	Privacy Threshold Assessment	Initial assessment to determine whether a Privacy Impact Assessment is required. It assesses the nature of data stored and manipulated by the system.
SMS	Student Management System	Software used by providers for managing students, courses and grades. See AMS.
Student		From the ESOS Act view, an overseas student that is studying an approved course in Australia on a student visa.
SCV	Student Course Variation	Under the ESOS Act (REF02) and the National Code of Practice (REF07), providers must advise DoHA via PRISMS of any change to an accepted student's enrolment. These changes are submitted using student course variations. See <a href="#">PRISMS FAQs - Notifying changes to student enrolments</a> .  Only the CoE Administrator role can create SCVs.
Vendor	3 <sup>rd</sup> party software vendor	Develops SMS or AMS for education providers. Not, some providers develop their own software solution.

## Stakeholder Consultation

Table 2: Stakeholders

Stakeholder Name	Team / Area Representation
s 22(1)	Director (International Quality Branch – ESOS Systems and Support)
	DP&ES Maturity Uplift & International Systems
	Data Platforms and Education Systems – International Team
	DSD Architecture Peer Review
	DSD Dependency Teams <ul style="list-style-type: none"> <li>• DSD Cyber Security</li> <li>• DSD Digital Delivery Capability</li> </ul>
	TSD Dependency Teams <ul style="list-style-type: none"> <li>• TSD Business Management team</li> <li>• TSD NPP projects</li> <li>• TSD Cyber Security</li> <li>• TSD Architecture (Craig Bornholm)</li> <li>• TSD DBA Team</li> </ul>
	Software Developer
	Developer

## Introduction

The objective of the ‘Modern Collection of International Education Data (PRISMS)’ project is to streamline the collection of data used by Providers when using the PRISMS system to comply with their legislative requirements.

At present, Providers that use a Student Management System (SMS) or Admission Management System (AMS), must duplicate (literally copy and paste) information from their SMS/AMS into PRISMS to register a student.

The objective of this project is to create APIs that will allow the transfer of information from an AMS/SMS into PRISMS without the user needing to manually copy or duplicate that data. These APIs will increase the efficiency of Providers using PRISMS and reduce human error benefiting the sector.

This design is an output of the 'Modern Collection of International Education Data (PRISMS)' project. The purpose of the design is to document decisions with associated reasoning, and in so doing help steer the project to deliver its outcomes in a timely, structured and risk managed fashion.

## Overview & Background

The international education market is a key sector for the Australian economy. It is Australia's fourth largest export sector and worth some \$37.3 billion in the 2019-2020 financial year (ABS cat 5368.0).

The Education Services for Overseas Students Act 2000 (ESOS Act) establishes the legal framework for the quality assurance of education and training institutions (Providers) offering courses to international students (students studying in Australia on student visas) (REF01).

A key part of the ESOS Act in section 109 is the use of a computer system established by the Secretary that can be used for the 'purpose of receiving and storing information about accepted students and former accepted students' (REF03, page 117).

The Provider Registration and International Student Management System (PRISMS) was established s 47E(d) for this purpose (REF04). Some of its key functions include:

- Use by ESOS Agencies to register Providers and their certified courses.
- Use by Providers and their Agents for the registration of Students planning to undertake a registered course. Provides also make any changes to a Students' study program that may affect their visa, study periods or courses undertaken.
- Notification to the Department of Home Affairs (DHA) of a Student registration. This notification is the used by DHA to assess the granting of a visa to the student. This notification exchange uses an identifier called a Confirmation of Enrolment (CoE).

## Dependencies

**Table 3: Project Dependencies**

Name of related work or project	Impact	Impacted Area
TPS-PRISMS Database segregation work	Other applications have database dependency with PRISMS database. Work will look at it will reducing direct dependency. Depending upon the solution, it may have negligible to high impact.  Schedule: TBC  Impact: Low - High	Application: ESOS Training, Tuition Protection Service (TPS), Levies Tuition Protection Service (LTPS)

Name of related work or project	Impact	Impacted Area
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<p>PRISMS Help Desk case management system implementation</p>	<p>PRISMS Help desk is planning to transition from manual processes to implementation of an online case management system</p> <p>Schedule: TBC</p> <p>Impact: Medium</p>	<p>Some duplication of effort to establish the PRISMS API Helpdesk support may occur, if the API helpdesk is established before the PRISMS Helpdesk has transitioned to the new online solution. Analysis is needed to identify whether the PRISMS API Helpdesk may have any additional requirements to those identified for the PRISMS helpdesk – for example if staff in DEWR may need external access.</p>
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## Assumptions

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- Connectivity required between environments s 47E(d)
- Not all providers will use the new API service layer.
- Most large providers will use the API service layer.
- Government policy priorities relating to the existing PRISMS application will remain consistent throughout the project.

## Constraints

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- Data and processes available through the PRISMS API service must remain consistent with the existing PRISMS application.
- The solution must adhere to the whole of Australian Government (WoG) Digital Transformation Strategy and vision.
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- Stakeholder consultation may delay or complicate the delivery if suitable approaches cannot be agreed upon.

## Risks & Mitigations

- s 47E(d)
- Provider uptake of APIs during the testing and development phases of the project.
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## Scope

### In-Scope

- Requirements to deliver the project outcomes are accurate and applicable with business and external stakeholders.
- Assessment of the current PRISMS architecture to reverse engineer current business logic. See separate documents.
- Analysis, design, development, and delivery of the required technical infrastructure to deliver a PRISMS API service.
- Software Development life cycle and release cadences with the new APIs.
- Environments required to deliver the project outcomes – including the new staging environment.
- Gateway and other changes required to delivery project outcomes.
- Methodology for determining API definitions.
- Identification of patterns that may be useful for follow-on projects.
- Note of any discovered architectural debt or debt introduced with the project.
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- Key decisions required to achieve the project outcomes and time frame.
- APIs outside those required for Providers.
- Initial assistance to vendors to consume the APIs in staging.

### Out-of-Scope

- Ongoing support and maintenance.
  - Other support services such as help desks, detailed onboarding specifications and documentation.
- Definitions of APIs post the August 2023 release.
- Any design or strategy for re-architecting PRISMS and its components.

- Suggestions may be made for an end state, but a follow-on project should address the re-architecture and platforming of PRISMS.
- De-commissioning of the existing PRISMS application.
- Changes to the authentication and authorisation model for current PRISMS systems and users.
- Inclusion in the API of any PRISMS functions that are highly complex, low value or not directly related to managing and reporting international student enrolments.
- Changes to PRISMS interactions with the Department of Home Affairs system and/or changes to the Department of Home Affairs systems.
- Implementation of any legislative changes.

## Stakeholders

Refer Table 2.

## Business Context

### Objectives

To streamline the collection of data used by Providers when using the PRISMS system, APIs will need to be developed. This new capability will enable a Providers' SMS/AMS to directly exchange information and transactions with PRISMS. Users will no longer have to duplicate data entry with its inherent human error.

A careful selection in consultation with Providers was made, as to which operations or business processes caused the largest cost to providers when interacting with PRISMS. These were evaluated against the benefits to be realised in Table 4.

Based on this analysis, it was decided by business that the following two key business operations should be fulfilled:

- Confirmation of Enrolments (CoE)
- Student Course Variations (SCV)

### Priorities and Outcomes

Education providers currently enter student related data into their SMS and separately enter the same data in PRISMS to generate CoEs for student visa application. This creates a significant regulatory burden as there is duplication to manually enter the data. SCVs can similarly require significant data entry.

An advanced application programming interface (API) will be developed, allowing the education providers' SMS to interact directly, via a system-to-system link, with PRISMS. The API would enable data to be entered only once into providers' SMS systems and be directly submitted to PRISMS.

To enable software vendors to develop and testing their software solutions, a new environment will be created for this purpose - staging.

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In summary the following outcomes are required:

- New APIs for CoE creation and SCV.
- API Gateway for managing the publication of APIs.
- API Developer portal to provides information and assistance to vendors on how to consume the APIs in

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- Processes for onboarding and offboarding vendors to develop and test their APIs in staging. Associated artefacts for onboarding and support will need to be created, and the establishment of artefacts /offboarding
- Processes for Provider onboarding and offboarding in production, s 47E(d)  
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## Strategic Alignment

The initial benefits that this project will deliver are outlined below in the Table 4. After implementation, the outcomes will be assessed to determine if they are on track to be realised or require review.

**Table 4: Project benefits and outcomes**

Benefit /Outcome ID	Benefit	Method and Timing of Assessment
BO.1	Reduced administrative overheads for education providers and improved productivity.	Calculate based on PRISMS data; Annually
BO.2	Minimised transcription errors.	Measure % of errors in PRISMS for student related data.
BO.3	Increased timeliness of data transferred to PRISMS.	To be calculated based on PRISMS data; Monthly
BO.4	Improved PRISMS reports for student enrolment and changes.	Internal survey on timeliness of PRISMS reports; Monthly.
BO.5	Savings for the international education sector at an estimated \$10 million in regulatory compliance costs each year.	To be calculated based on PRISMS data and Dep of Finance assumptions; Annually
BO.6	Provide competitive advantage to Australia International Education sector, through user friendly, pre-populated application interface.	Conduct user survey to identify if benefit is realised; Annually
BO.7	Increased customer satisfaction (Education Providers and Agents)	Conduct user survey to identify if benefit is realised; Annually

The following tangible outputs are expected to be produced to support the outcomes in Table 4 above.

ID	Output
OP.1	PRISMS API service production environment
OP.2	PRISMS API service helpdesk support processes
OP.3	PRISMS API Service training/workshops/webinars

OP.4	PRISMS API service user communication material
OP.5	PRISMS API service staging environment/s
OP.6	PRISMS API service technical documentation
OP.7	PRISMS API development and test environments
OP.8	PRISMS API service analytics capability
OP.9	Documented business as usual (BAU) arrangements aligned to MoU arrangements

## Users

User	Overview	Components Accessed
PRISMS Administration staff	s 47E(d)	PRISMS administrator interface in staging and production.
Education Providers (Providers)	Production environments only: Will be the primary users of their SMS and AMS this software will access the PRISMS APIs.	Provider users will indirectly access the PRISMS APIs in production from their SMS or AMS. s 47E(d)
Software Vendors (Vendors)	Staging environments only: Software vendors will need to access the staging environment to develop and test their software.  Primary users will be developers.	s 47E(d)
Education provider & agents	May access the Providers' SMS / AMS application.  <b>Note:</b> <ul style="list-style-type: none"> <li>At this stage Agents will not have the appropriate level of permissions to submit CoEs or SCVs.</li> <li>Only Provider users with the "COE Administrator" will be able create COEs and SCVs.</li> </ul>	May access the PRISMS APIs indirectly via the providers' SMS or AMS software application.

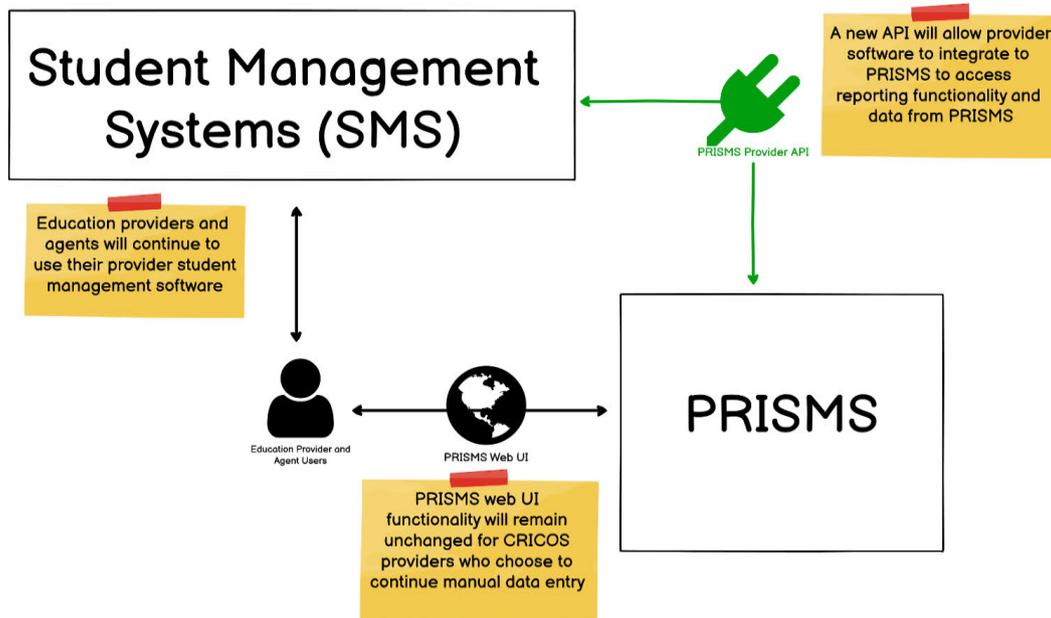
## High-Level Requirements

Refer REF13 - [PRISMS Modernisation Project HLR - V0.4 \(latest\).docx](#)

## Business Process

The project will create APIs that allow 3<sup>rd</sup> party software applications to perform key functions such as Create and Vary Student enrolment information. Current functionality must also remain through the PRISM UI for providers that do not wish to consume the APIs and for functionality not covered by the APIs.

**Figure 1: Provider users and SMS integration with PRISMS**



As outlined in the Objectives, two key business operations were selected to base the new APIs around. These are:

- COE create – the process of enrolling a new student into a Provider’s course and issuing the visa request to DHA. This process is illustrated in Figure 2.
- SCV – the process of varying an enrolment for a student after a COE has been created. This process has more business rules associated with it as a student could be moving to a different provider. This is illustrated in Figure 3

Figure 2: CoE create business process (red indicates process changed with APIs)

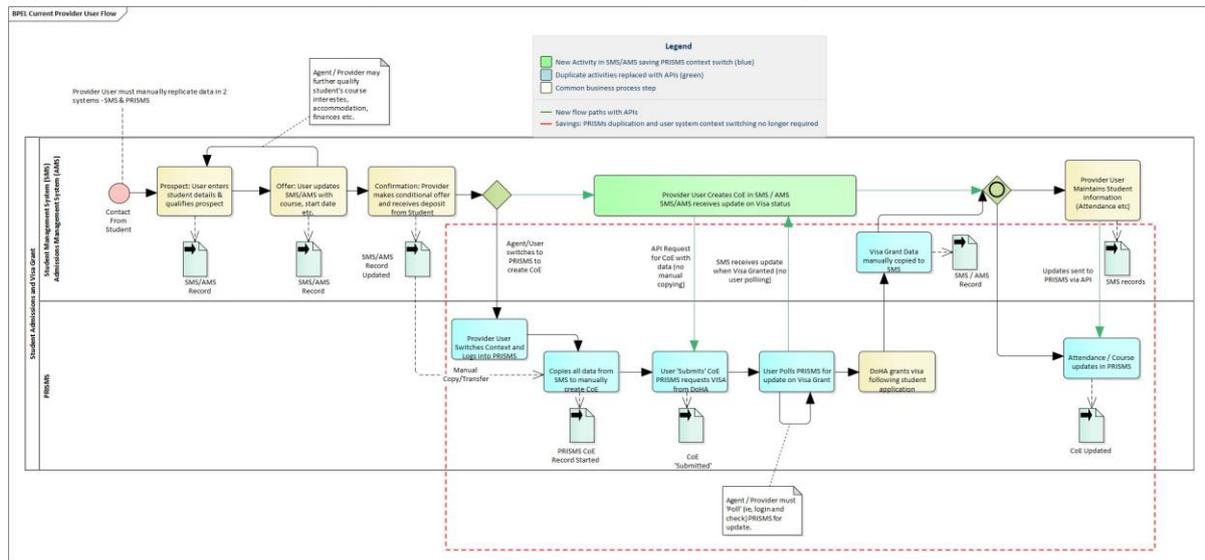
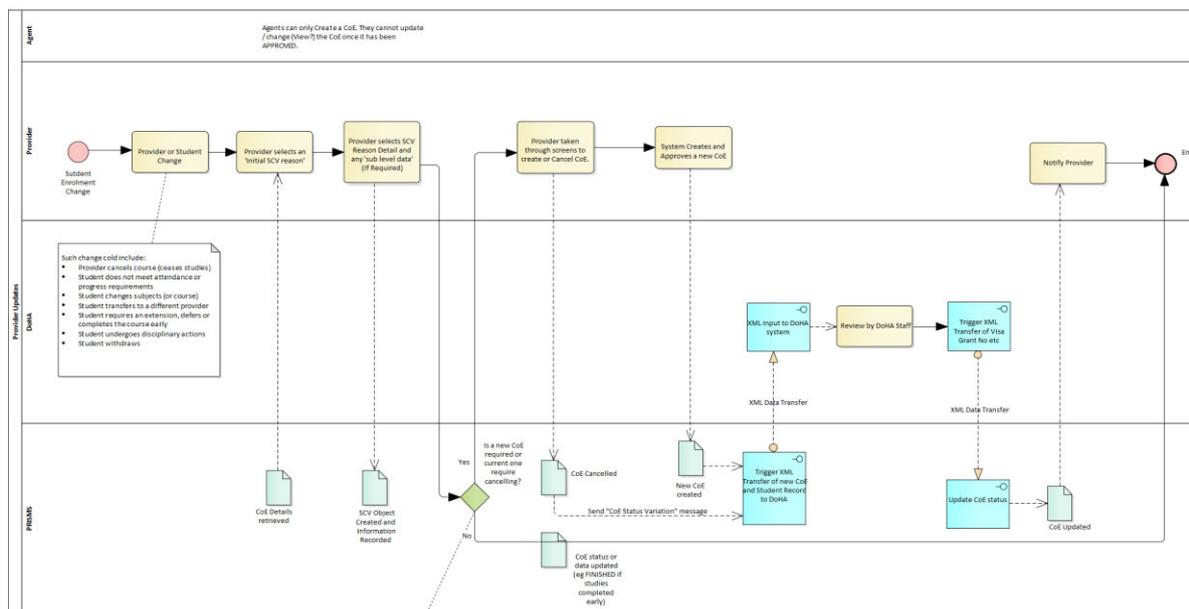


Figure 3: SCV business process



## Products & Services

**Table 5: Products and Services**

Product(s)	Services
APIs	<p>There are 4 types of APIs to be developed:</p> <ol style="list-style-type: none"> <li>1. CoE creation.</li> <li>2. SCV.</li> <li>3. Reference APIs to ensure common data fields are referenced consistently between the SMS/AMS and PRISMS</li> <li>4. Data pulls for relevant provider information maintained in PRISMS required for COE create and SCV.</li> </ol>
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Staging	A new environment created for Vendors to develop and validate their software.

## Information Security

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## Business Capability Map

The key objective of the project is to deliver fit-for-purpose APIs for providers. To achieve this, the following capabilities have been established.

Capability Ref	Description	Benefits
CP01	APIs and associated Identity model	B1 – B7
CP02	Governance of access to APIs – onboarding and offboarding of vendors and providers.	B7
CP03	<p>Establish a Staging environment for vendors to manage quality and timeliness of their software solutions to providers &amp; support for vendors in this environment.</p> <p><b>Note:</b> All benefits are dependent upon the uptake of the new APIs by vendors. If vendors do not develop support for the APIs in their solutions, providers will not be able to utilise them.</p>	B1-B7

## Solution Context

### Overview

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Figure 4 above provides a conceptual product view of the solution from the providers' perspective.

Of note on components:

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Of note on flows:

d) (1) existing PRISMS UI flows will not be modified.

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## Vendor View

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Figure 5 above provides a conceptual product view of the solution from the providers' perspective.

Of key note on components:

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Of note on flows:  
s 47E(d)

## System considerations and design impacts

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- Historical a self-contained system
  - Up until this point, all PRISMS functionality, data management and releases have been full under the control of the department. Reference values for example that were adjustable in the administrator interface were immediately used by the PRISM web interface. With the development of APIs, there is de-coupling of what was reference data managed by PRISMS and the synchronising of changes with external software. If this is not managed carefully, breaking changes may be introduced.

## Key design decisions

Table 7: Key design decisions

Ref No#	Decision	Impact	Recorded discussion/approval
DD01	Current servers and environments remain in-situ (ie in their current location) leaving their respective application code and Databases in-place	De-coupling Data, Applications (eg, TPS and LTPS) and Databases is not within the project scope and budget.	Approved REF19 Also note REF20
s 47E(d)			
DD04	Project will develop a new Service Layer for external parties to consume via the API Gateway in DD03	A new API layer will be built using s 47E(d) on this platform with other projects such as s 47E(d) s 47E(d)	Approved REF19 & REF20
DD05	New Service Layer API capability in (DD04) will be in s 47E(d)	Aligns to current and proven DB access patterns and paths in all current environments. Latency, single points of failure, security model, redundancy, network paths are all tested and understood.	Approved REF19 & REF20
DD06	The project will create a new onboarding and testing environment for vendors called Staging.	This environment is self-contained and will have its own database. External connectivity for vendor software is a new requirement in PRISMS and so this new environment is required to fulfil this requirement.	Approved REF19 & REF20

Ref No#	Decision	Impact	Recorded discussion/approval
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DD11	The project will leverage the departments' automated testing framework.	Automated testing integrated with the CI/CD pipelines will greatly improve the efficiency of the development life cycle.	REF20

### Architecture patterns

The project will be using the following patterns. Also refer to REF19 & REF20:  
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## Architecture principle alignment

**Table 8: Architecture principle alignment**

Architectural Principles	Description	Alignment
Customer Focused	We let customer feedback and insights drive delivery, ensuring a customer focussed outcome.	The program is taking a user-centric design approach by engaging system stakeholders early in the process from both a business requirements and specification perspective and a user experience perspective. A Vendor reference group has been established to provide timely and appropriate feedback during the development and beta testing phases of APIs.
Speed to Value	We deliver value quicker by reducing size and risk of changes and releasing more frequently.	A hybrid approach of Agile practices and project management is used to combine the best of planning and delivery. This ensures the project is broken into correctly sized and sequenced deliverables that suit agile delivery methodologies. These agile methodologies then allow greater feedback loops during the development phases.
Data Driven	We treat data as an asset and to deliver modern and personalised experiences.	<i>Data definitions and structure will be key to the successful delivery of APIs. Specifications for each API will list the data, their corresponding types and meaning that will be accepted and returned by the APIs.</i>
Aligned, Governed & Modern	Leveraging modern mindsets to assure alignment to DEWR delivery strategies through practical governance.	<i>Project progression will require approval through various governance boards – both on the project and technical sides. Proven technology patterns will be leveraged to align to DSD’s Digital Business. Any new patterns that are required will follow appropriate governance structures for review and formal decision making.</i>
Platforms & Reuse	We promote platform, pattern based architecture and WofG services to drive reuse and consistency.	Government policies from the DTA and other OGAs are incorporated in DSD’s digital strategy. Where appropriate, WofG solutions such as the SDO will be utilised. Within DSD, existing patterns will be utilised at both a platform and component level. <b>s 47E(d)</b> <b>s 47E(d)</b>

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Accessible	We deliver accessible services regardless of location, device or capability.	<i>Government services must align to the Data and Digital Government Strategy. Legally, the department is required to “ensure our service is usable an accessible to people with disabilities.”</i>  <i>Note, this is an API only project, no user interfaces are required.</i>
Secure by Design	We deliver services that have robust security embedded from inception.	s 47E(d)
Leverage Cloud Tools	We achieve speed, innovation and business agility by choosing cloud tools.	s 47E(d)  CI/CD pipelines and other tooling such as automated testing for the development and release process will also utilise cloud services.
Reliable Engineering	We deliver digital services that available, scalable and performant.	s 47E(d)

## Platforms & Capabilities

Table 9 below provides a high-level view of various platforms, capabilities, key components, technologies, products, services and patterns this solution depends on:

**Table 9: Platforms and capabilities**

Platform Name	Capability	Key Components (Technologies, Products, Services)	Patterns	Comments
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s 47E(d)

Figure 4 is a conceptual production view of the key changes to the PRISMS platform. These changes will be brought through 3 new capabilities. The capabilities these components provide is shown in key capabilities that are being added to PRISMS to meeting the business needs are:

New PRISMS capability	Description
-----------------------	-------------

s 47E(d)

New PRISMS capability	Description
APIs	<p>s 47E(d) API logic layer will be created.</p> <p>NOTE:</p> <ul style="list-style-type: none"> <li>Unfortunately, this will require a duplication of business logic with the current PRISMS Web UI layer. The current Web UI layer is tightly coupled and does not have a business logical layer to interface with.</li> </ul>
API Management	s 47E(d)

## Components

Figure 4 illustrates the key components that will be added to PRISMS to support APIs:

1. API Gateway
2. API Developer portal
3. PRISMS API
4. s 47E(d)

## Application – API service layer

The objective of the project is to create APIs for SMS / AMS software to consume, increasing the productivity of providers by reducing manual entry with its attendant inefficiencies and errors.

PRISMS current state is shown in Figure 6. Unfortunately, the current web user interface and associated systems are tightly coupled. There is therefore, no existing business logic interface layer that the new APIs can draw upon to implement the CoE, SCV, Reference and Data Pull APIs.

**Figure 6: PRISMS Current state**  
s 47E(d)

A new API service layer will therefore need to be created. s 47E(d)

**Figure 7: PRISMS interim state - API service layer**  
s 47E(d)

**API Model:** The APIs for Providers have the following characteristics. Note, some of the criteria are expected criteria. In the initial implementation, the architecture and requirements have been kept to a minimum for the initial release:

s 47E(d)

- Will require some form of gateway or reverse proxy to:
  - Load balance.
  - Provide redundancy.
  - Allow for traffic restrictions – for example rate limits and throttling.
  - Layer of security
  - Server re-direction based on URL path and DNS names.

- Will require auditing and reporting on usage.
- Enable certificate validation and termination for TLS connections.
- Can be configurable by code – for example when a new API is released or a new API definition is created.

s 47E(d)

**Figure 8: API model conceptual layers**  
s 47E(d)

## API Gateway & Developer Portal

s 47E(d)

s 47E(d)

s 47E(d)

s 47E(d)

s 47E(d)

## Identity Model

Please refer to the PRISMS Identity design: REF21.

## Data

There are no changes to the current PRISMS databases. s 47E(d)

s 47E(d)

Requires a Privacy Threshold Assessment  
Refer Information Security.

## Integration

s 47E(d)

API Gateway & Developer Portal.

## Infrastructure

Please refer to Figure 15

s 47E(d)

## Network

Refer Figure 15

## Security

s 47E(d)

s 47E(d)

s 47E(d)

## Operations

### System Class & Availability

System Class as per below DESE system availability framework: **Class <1, 2, 3, 4>**

Category	Class 1	Class 2	Class 3	Class 4
Availability Profile	Continuous	High	Fault Tolerant	Low
Business Profile	Critical	High	Medium	Low
	27X7 Support	27X7 Support	12X5 Support	8X5 Support
	Priority 1	Priority 2	Priority 3	Priority 4
Architecture	Active - Active	Active - Standby	Active – Failover	Single Site
Availability Outage/Month	99.99% uptime 260sec down	99.90 Uptime 45min down	98.50% Uptime 11hr down	95% Uptime 36hr down
Recoverability	3hrs RTO	12hrs RTO	72 hrs RTO	3 weeks RTO
	<5mins RPO	<2hrs RPO	<8 hrs RPO	Best Efforts RPO

s 47E(d)

### Application / technology decommissioning requirements

N/A – nothing is being decommissioned as a result of this project.

### Support

Current PRISMS BAU support is managed by the Maturity Uplift and International Systems section. This team has been involved in the development of the new capabilities as part of the modernisation project. They will be responsible for the ongoing maintenance of PRISMS after the project has been completed.

## Development / Hosting Approach

### Environments

The project will require the following environments.

s 47E(d)

s 47E(d)

s 47E(d)

## Appendices

s 47E(d)

s 47E(d)

## Proof of Concept outcomes

s 47E(d)







API000.01A

s 22(1) [commented 17 Sept 2024](#)  

Hi <sup>s 22(1)</sup> Looks

good to me. Closing user story

**API000.01b**

s 22(1) commented 17 Sept 2024

Hi s 22(1) Looks good to me, closing user story



**API000.02.01**

s 22(1)

commented 25 Oct 2023



Thanks | s 22(1)

Spec and data section 5.6 look good for me - closing user story

s 22(1)

cc:

---

API000.03

FEATURE 383757

383757 Fee Validation

s 22(1) 3 Comments Beta x +

State ● Closed

Reason 🏠 Moved out of state Comm 📄 Iteration: DSD Portfolio\FY 2022-23\Program Increment 15

**State Graph**

The state graph shows a sequence of transitions for 's 22(1)'. It starts as 'New' (14 Mar 2023), moves to 'Approved' (17 Mar 2023), then back to 'New' (17 Mar 2023), then to 'Approved' (20 Mar 2023), then to 'Committed' (21 Mar 2023), and finally to 'Closed' (6 July 2023). Transitions are labeled with 'Moved to state Approved' and 'Moved out of state Approved/Committed'.

**History**

Older

- s 22(1) changed Initiative to Modern Collection of International Edu Data (PRISMS) 12/10/2023
- s 22(1) changed State from ● Committed to ● Closed and made field changes ● 06/07/2023

**s 22(1)**

changed State from ● Committed to ● Closed and made field changes

State	<span>●</span> Closed <span>●</span> Committed
Reason	<span>🏠</span> Moved out of state Committed <span>🏠</span> Moved-out-of-state-Approved

### API000.04

FEATURE 381759  
383759 Overseas Student Health Cover (OSHC) Validation  
s 22(1) 3 Comments

State: Closed  
Reason: Moved out of state Comm  
Iteration: DSD Portfolio FY 2022-23 Program Increment 15

**State Graph**

```
graph LR; S22(1) -- New --> S22(1); S22(1) -- Moved to state Approved --> S22(1); S22(1) -- Approved --> S22(1); S22(1) -- Moved out of state Approved --> S22(1); S22(1) -- New --> S22(1); S22(1) -- Moved to state Committed --> S22(1); S22(1) -- Committed --> S22(1); S22(1) -- Moved out of state Committed --> S22(1); S22(1) -- Closed --> S22(1);
```

**History**

Older	State	Reason	Board Column	Closed By	Date
S	changed Initiative to Modern Collection of International Edu Data (PRISMS)				12/10/2023
s 22(1)	added a comment				23/06/2023
s 22(1)	changed State from Committed to Closed and made field changes	Moved out of state Committed	Closed		23/06/2023
s 22(1)	added a comment				

State: Closed, Committed  
Reason: Moved out of state Committed, Moved to state Committed  
Board Column: Closed, Current PI Delivery  
Closed By: s 22(1)

API000.05

s 22(1)

commented 30 July 2024

s 22(1)

Yes,

looked good based on demo. Closing story

s 22(1)

commented 12 July 2023

s 22(1)

Looks good, happy to close

**API000.06**

s 22(1)

commented 18 June 2024

Thanks <sup>s 22(1)</sup>  
user story

looks good - closing

**API000.07**

s 22(1)

[commented 3 July 2023](#)

Thanks s 22(1)

Happy to close this against v0.2 of the spec

As discussed, we'll raise another user story to open up validation rules for most agent search fields to allow ASCII printable and extended ASCII characters

cc: s 22(1)

s 22(1)

[commented 4 July 2023](#)

s 22(1)  
Thank:

Happy to close this as built and tested per section 6.1.4 of the Validate Agent Details v0.2 spec

As an FYI, we will be creating a new user story to have the agent identification algorithm updated

API000.08

s 22(1)

commented 9 Aug 2023

s 22(1)

Specification looks good.

Closing user story

**API000.10**

s 22(1)

commented 1 July 2024

Closing as this work has been completed

# API000.11

USER STORY 550797  
550797 Enable get CoF for cancelled/expired CoF - Analysis - Test

## s 22(1)

3 Comments Add Tag

State: Closed  
Reason: Acceptance tests pass  
Regulation: DID Portfolio\FY 2023-24\Program Increment 20\print 20.1

### State Graph

```
graph LR; s22_1((s 22(1))) -- New --> s22_2((s 22(1))); s22_2 -- Implementation started --> s22_3((s 22(1))); s22_3 -- Acceptance tests pass --> s22_4((s 22(1)));
```

History

- Older
- s 22(1) changed State from Active to Closed and made field changes 28/05/2024
- s 22(1) added a comment 28/05/2024
- s 22(1) added a comment 06/05/2024
- s 22(1) added Child link 01/02/2024
- s 22(1) assigned s 22(1) made field changes and added a comment

Summary for s 22(1):

- State: Closed (Active)
- Reason: Acceptance tests pass (Implementation started)
- Board Column: Closed (In Delivery)
- Resolved By: s 22(1)
- Closed By:

## API000.12

The screenshot displays a Jira user story page for 'API000.12'. At the top, the user story is identified as '434035 Student contact and address Input Validation - Build and Test (V0.4)'. The story ID 's 22(1)' is prominently shown, along with '3 Comments' and an 'Add Tag' option. The current state is 'Closed', with a reason of 'Acceptance tests pass'. The story is associated with the 'DSD Portfolio\FY 2023-24\Program Increment 16\Sprint 16.2'.

The 'State Graph' section illustrates the story's progression through various states: 'New' (17 Jul 2023), 'New' (17 Jul 2023), 'Active' (20 Jul 2023), 'Resolved' (2 Aug 2023), and 'Closed' (14 Aug 2023). Each state transition is accompanied by a brief description of the change.

The 'History' section provides a detailed log of changes to the story. Key entries include: 'changed Stack Rank to 1999989103' (15/09/2022), 'changed Stack Rank to 1999989933' (21/08/2022), and 'changed State from Resolved to Closed and made field changes' (14/08/2022). Other entries show comments being added on 02/08/2022.

On the right side, a summary of the story's current state is provided, including the state 'Closed', the reason 'Acceptance tests pass', and the board column 'Closed'. The 'Closed By' field is also visible, showing the user 's 22(1)'.

### API000.13

The screenshot displays a Jira user story page for 'API000.13'. At the top, the story key is '435254' and the title is 'Get CoE Details Endpoint - Message Validation and Response - Build and Test (V0.1)'. The story is currently in the 'Closed' state. Below the title, there is a 'State Graph' showing a sequence of state transitions: 'New' (20 July 2023) to 'Active' (10 July 2023) to 'Resolved' (16 Aug 2023) to 'Closed' (2 Oct 2024). The 'Reason' for the final transition is 'Acceptance tests pass'. The 'Board Column' is 'Closed', and the 'Closed By' is 's 22(1)'. A 'History' section lists several actions: 'changed State from Resolved to Closed and made field changes' (02/12/2024), 'deleted Child link' (24/10/2024), 'added a comment' (16/08/2023), and 'changed State from Active to Resolved assigned and made field changes' (16/08/2023). A right-hand sidebar shows a summary of the story's state and reason.

**API000.16**

s 22(1)

commented 30 July 2024

s 22(1)

yes,

looked good based on demo. Closing story

**API000.17**

s 22(1)

[commented 3 May 2024](#)

Hi s 22(1)

cc: s 22(1)

Yes, happy that welfare letters being retrievable for cancelled and expired CoEs. I'll close this user story on this basis.

As discussed, the welfare letters generated through API are slightly different to those generated in the UI, similar to the CoE certificate issue.

s 22(1)

Are we able to get the API welfare letter aligned similarly?

Thanks

API000.18

TORY 503449

Provider Agents API - Build and Test

s 22(1) 10 Comments 184 x +

● Closed s 22(1)

🔒 Acceptance tests pass Iteration DSD Portfolio\FY 2023-24\Program Increment 18\Sprint 18.5

ph

s 22(1) → New → Code complete and unit tests pass → Resolved → Acceptance tests pass → Closed

15 Jan 2024 23 Jan 2024

s 22(1) changed Stack Rank to 1999987600 24/01/2024

S changed State from Resolved to Closed and made field changes 23/01/2024

s 22(1) added a comment 22/01/2024

s 22(1) deleted a comment 22/01/2024

s 22(1) added a comment 22/01/2024

s 22(1) changed State from Resolved to Closed and made field changes

State ● Closed ● Resolved

Reason Acceptance tests pass Code complete and unit tests pass

Board Column Closed Resolved

Closed By s 22(1)

**API000.18A**

s 22(1)

commented 16 Apr 2024

Thanks s 22(1)  
s 22(1) - changes look good to me



API000.19

s 22(1)

commented 18 June 2024

s 22(1)

Yes, agreed

this feature is complete. Closing accordingly

**API000.20**

s 22(1)

commented 18 June 2024

s 22(1)

Yes, agreed this feature is complete. Closing accordingly



API000.20A

s 22(1)

commented 19 Jan 2024

Hi s 22(1) looks good based on spec - are you happy for me to close the user story on this basis?

Thanks

USER STORY 504201  
504201 Provider Locations Details - Build and Test  
s 22(1) 4 Comments 18.4 x +

State ● Closed s 22(1)

Reason ● Acceptance tests pass Iteration DSD Portfolio\FY 2023-24\Program Increment 18\Sprint 18.4

**State Graph**

New → ● New s 22(1) → ● Implementation started → ● Active s 22(1) → ● Code complete and unit tests pass → ● Resolved s 22(1) → ● Acceptance tests pass → ● Closed s 22(1)

**History**

- s 22(1) changed State from ● Resolved to ● Closed and made field changes 24/01/2024
- s 22(1) changed State from ● Resolved to ● Closed and made field changes 19/01/2024
- s 22(1) added a comment 19/01/2024
- s 22(1) changed State from ● Active to ● Resolved, assigned S and made field changes 16/01/2024
- s 22(1) changed State from ● New to ● Active and made field changes 12/01/2024
- s 22(1) added Tested By link

State ● Closed ● Resolved

Reason ● Acceptance tests pass ● Code complete and unit tests pass

Board Column ● Closed ● Resolved

Closed By s 22(1)

**API000.20B**

s 22(1)

commented 18 June 2024

s 22(1)

Yes, agreed

this feature is complete. Closing accordingly

**API000.21**

s 22(1)

commented 1 May 2024

Thanks <sup>s 22(1)</sup>

Looks good to me

Closing the story

s 22(1)

CC

**API000.22**

s 22(1)

[commented 17 Jan 2024](#)

s 22(1)

Thanks looks good!

---

s 22(1)

[commented 15 Jan 2024 \(edited\)](#)

Hi s 22(1) we have done the changes and confirmed the same. Can you kindly mark this as 'Closed' once happy. Thank you.  
CC: s 22(1)

**API000.23**

s 22(1)

commented 14 Aug 2023

s 22(1)

Closing, with

comments on COE00011 and CoE00021

**API000.34**

s 22(1)

commented 17 Sept 2024

s 22(1)

Thanks

s 22(1)

---

As discussed, happy for this to go into Staging, noting the couple of items for SCV creation we will want to address (post Staging release)

**API045**

s 22(1)

commented 17 May 2024

Thanks <sup>s 22(1)</sup>

Thanks for the demo, looks great. Closing user story

**API052**

s 22(1)

commented 21 Nov 2022

Implemented the above test cases to the automation suite. Marking as Closed.

---

s 22(1)

commented 10 Nov 2022



Thanks s 22(1)

looks good to me!

---

s 22(1)

commented 9 Nov 2022 (edited)

s 22(1)

I Would like to work on the above US in the sprint 12.5, Please have a look and advise?

API053

## 2. Version History

Version	Date	Created by	Comments
0.1	01/08/2024	s 22(1)	Initial version
0.2	14/08/2024		Updated to provide only a limited listing of SCV details attached to a single CoE.
	11/10/2024		Reviewed

API031

s 22(1)

[commented 10 July 2024](#)

s 22(1)

closed as there are no pending work

---

s 22(1)

[commented 9 Apr 2024](#)

Hi s 22(1) Thanks for attending today's demo for the story, as per discussion, can you please put your notes and take next steps. Thanks

CC: s 22(1)

s 22(1)



API033

s 22(1)

commented 17 Sept 2024



Thanks <sup>s 22(1)</sup> As discussed, happy for this to go into Staging, noting the couple of items for SCV creation we will want to address (post Staging release)

API034

s 22(1)

commented 17 Sept 2024

Thanks <sup>s 22(1)</sup>  
s 22(1)

As discussed, happy for this to go into Staging, noting the couple of items for SCV creation we will want to address (post Staging release)

API037

s 22(1)

commented 17 Sept 2024

Thanks s 22(1)  
want to address (post Staging release)

As discussed, happy for this to go into Staging, noting the couple of items for SCV creation we will