

NATIONAL STUDENT INDEX

The Guide To Integrating With the National Student
Index

*Specifications document for ECE Student Management
System and the ELI Service Portal integrating with the
National Student Index*

March 2019 v1.41

National Student Index

c/- Ministry of Education Service Desk

Ministry of Education

P O Box 1666

Wellington

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1 Document Purpose

This document is to be used in conjunction with the 'National Student Index – The Guide to Integrating with the National Student Index (aka GINS document v6.0+) for ECE SMS vendors and the ELI Service Portal.

This document contains all the ECE business requirements for passing data from the SMS and ELI Service Portal to the National Student Index (NSI).

The use of the term 'student' in this document includes children in early childhood education (e.g. NSI holds student identification data).

1.1 Intended Audience

This document is intended for the following audience:

- ECE SMS vendors
- FRONDE development team
- Internal Ministry stakeholders
 - ELI Project Team
 - MoE Service Desk and Resourcing Contact Centre (NSI 1st Level Support)
 - NSI BAU Support (NSI 2nd Level Support)

1.2 Contacts

Matters relating to the scope and nature of the ECE SMS interfaces with NSI or requests for technical support in integrating with the NSI system should be made to:

Education Service Desk: phone 0800 422 599 - option 4
or email service.desk@education.govt.nz

1.3 Document Revision History

This section records any major updates applied to this document. Specifically, it lists the document version number and date and describes the changes.

Date	Revision	Sections Changed	Description of Changes
19/12/2017	1.2	Various	1) Removal of information relating to XML interface: <ul style="list-style-type: none"> • The term and definition of XML • XML Function Requirements • Appendix C: Optional XSD Validation • Appendix D: Example XML Login Method

Date	Revision	Sections Changed	Description of Changes
			<p>2) Update general requirements:</p> <ul style="list-style-type: none"> • GR02, SR01 & SR09 – Revise requirement to incorporate the changes on allocation of NSN during enrolment process. Reference to ELI Data Collection Specification, Section 10.5 Allocation of NSN • GR06 & SR05 – Search, create or update request to NSI is restricted to students less than 8 years old • GR08 & GR09 – Addition of supporting information for vendors • GR12 – Wording changes to requirement description • SR12 - Add note to specify that searching NSI by NSN is not allowed • AR03 & AR06 – Addition of requirement description to specify that new NSI record will not be created while: <ul style="list-style-type: none"> i) Student’s identification is unsighted, or ii) Search in NSI returns a definite match

Date	Revision	Sections Changed	Description of Changes
01/02/2019	1.3	Various	1) Addition of information relating to Te Kura: <ul style="list-style-type: none"> • GR06 & SR05 an exception for Te Kura is made for search, create or update request. • GR13 & GR17 a limitation is applied for Te Kura for search, create or update request. (Author RS)
20/02/2019	1.4	Various	<ul style="list-style-type: none"> • Updated all references to 'ESAA' to refer to 'ESL' • Split out GR06 to GR06A and GR06B (Author AB)
27/03/2019	1.41	Various	<ul style="list-style-type: none"> • Moved Terminology section to end of document • Added Given name 2 and Given name 3 to SR12 (Author AB)

2 Scope

2.1 In Scope

The following items are covered within this document

- Assumptions, constraints, dependencies
- Functional business requirements

The scope of this interface specification covers the following NSI functionality:

- Login
- Logout
- Search
- Add
- Update

2.2 Out Of Scope

The following items are out of scope for this document:

- Instructions for service users on the use of the:
 - SMS
 - NSI
 - ELI Service Portal

3 Assumptions, Constraints, Dependencies

The following assumptions and constraints have been made in regards to the listed business and data requirements.

3.1 Assumptions

No.	Assumption
AS01	The field 'Identification Sighted' already exists within the SMS as part of the NSN bulk allocation changes.

3.2 Constraints

No.	Constraints
CS01	A SMS that does not require an individual user to login, must have an individual ESL user id set up in order for them to send/receive data to/from the NSI.
CS02	A SMS that does require an individual user to login, and the SMS has security which meets MoE standards, may have a machine ESL user id set up, which does not require the individual users to have an ESL user id.
CS03	The ESP will have a machine ESL userid set up in order for users to send/receive data to/from the NSI.
CS04	A user, when enrolling students and accessing the NSI on behalf of a service, must be an authorised user or logged into the SMS or ESP as a user of that service.
CS06	The design of ELI ESP means an enrolment record will not exist before the user is required to Search the NSI. The enrolment process in ESP will commence once a NSI is searched and an NSN found or created in NSI.

4 General Requirements

The follow requirements apply to both SMS and ELI Service Portal. They must be implemented to ensure successful data integrity of the NSI and successful integration with the NSI.

ID	SMS and ELI Service Portal Requirements
GR01	The following fields must be mandatory when enrolling a student in a SMS or ESP: <ul style="list-style-type: none"> • Name (forename1, surname) • Date of birth • Gender
GR02	A record must be created in the SMS before any request to the NSI can be sent. See ELI Data Collection Specification, Section 10.5 Allocation of NSN, for more details/restrictions on assigning NSNs during the enrolment process.

ID	SMS and ELI Service Portal Requirements
GR03	<p>The field 'Identification Sighted' must be selectable by the user. The values for this field are as follows:</p> <ul style="list-style-type: none"> • NZ Birth Certificate • NZ Passport • Australian Birth Certificate • Australian Passport • Foreign Birth Certificate • Foreign Passport • Other • NZ Citizenship Certificate • Certificate of Naturalisation (Cook Island, Niue, Tokelau) • Certificate of Registration (Cook Island, Niue, Tokelau) • Letter of Confirmation (Cook Island, Niue, Tokelau) • Unsighted
GR04	A user accessing the ESP user must have a valid ESL login and password.
GR05	<p>A user accessing the NSI through a SMS or ESP must have a valid ESL userid and password either:</p> <ul style="list-style-type: none"> • individual userid and password or • machine userid and password <p>See constraints (CS01 and CSO2).</p>
GR06A	For Te Kura only - A search, create or update request to the NSI can only be completed on students who have a service type of ECE learner.
GR06B	All other ECE services - A search, create or update request to the NSI can only be completed on students less than 8 years of age.
GR08	The NSN field within the SMS and ESP cannot be edited. It can only be updated by selecting the NSN from the NSI Search Results. (i.e. allocating a new NSN to student)
GR09	The service user must be able to select a new NSN in order to update the NSN field within the SMS or ESP(i.e. incorrect NSN was previously allocated to student)
GR12	Where a student has a single official name the name must be passed to NSI as the FamilyName and the tilde character (~) must be passed as the Given1Name.
GR13	For Te Kura – a search, create or update request to the NSI can only be completed on students who are marked as an ECE learner.

5 REST Function Requirements

The following sections specify the ECE business requirements for each function available for the REST interface.

5.1 Search Input & Results Requirements

The following business requirements must be implemented by ECE SMS Vendors that are interfacing with the NSI system through the REST Interface. The REST Search specification can be found in the GINS v6.0 document, section 5.7.2.

ID	SMS and ESP Requirements
SR01	The 'Search NSI' option must only be available for students enrolled within the SMS or ESP. Refer to the details of ELI Data Collection Specification, Section 10.5 Allocation of NSN, for more details/restrictions on assigning NSNs during the enrolment process.
SR12	A Search to the NSI must be by: <ul style="list-style-type: none"> • Official name (Family name, Given name 1, Given name 2, Given name 3) and • Birth date (Searching NSI by student's NSN is not allowed)
SR05	For all ECE services except Te Kura – NSI Search Results records with a date of birth greater than 8 years old must not be displayed to the user.
SR06	A user must be able to select a NSI record from the returned Search Results.
SR13	When a record is selected: <ul style="list-style-type: none"> • NSN must be saved to the student's SMS or ESP record (mandatory). • names, birth date and gender may be saved into the SMS or ESP (this is optional)
SR14	A user must be presented with an error if trying to select an NSN with a record status of "Inactive": <ul style="list-style-type: none"> • The selected NSN record cannot be used. Please contact the Ministry on 0800 ECE ECE (0800 323 323).
SR09	A user must be able to continue processing the SMS or ESP record without selecting an NSN. Refer to the details of ELI Data Collection Specification, Section 10.5 Allocation of NSN, for more details/restrictions on assigning NSNs during the enrolment process.

ID	SMS and ESP Requirements
SR15	<p>The following Search Results data must be displayed to the user (if values are present):</p> <ul style="list-style-type: none"> • NSN (NSN or National Student Number) • FamilyName (Surname) • Given1Name (First given name) • Given2Name (Second given name) • Given3Name (Third given name) • BirthDate (birth date) • NameBirthDateVerification (name/birth date verification) • Gender (gender) • CreatedDate (date NSN created) • MatchScore (search ranking) • MatchIndicator: <ul style="list-style-type: none"> ○ A user can select an NSI record where the MatchIndicator = 0 ○ A user cannot select an NSI record where the MatchIndicator = 2 <p>(note: you may wish to label the name fields as they appear in the SMS)</p>
SR16	<p>The following Search Results data must not be displayed to the user:</p> <ul style="list-style-type: none"> • CreatedByUserId (NSN created by user) • CreatedByProviderCode (NSN created by service code) • NameBirthDateVerifiedBy (name/birth date verified by) • NameBirthDateVerifiedDate (name/birth date verified date) • NameBirthDateVerificationConfirmedByMoe (name/birth date verification confirmed by MoE) • PreferredName (preferred name indicator) • ResidentialStatus (residential status) • ResidentialStatusVerification (residential status verification) • ResidentialStatusVerifiedBy (residential status verified by) • ResidentialStatusVerifiedDate (residential status verified date) • ResidentialStatusVerificationConfirmedByMoe (residential status verification confirmed by MoE) • RecordStatus (Status of NSI record) • RecordStatusReason (record status description) • DeathDate (date of death)
SR17	<p>For Te Kura – NSI search results must only display children who are marked as an ECE learner (i.e. the search must not bring back children who are school students).</p>

5.2 Add Input & Results Requirements

The following business requirements must be implemented by ECE SMS Vendors that are interfacing with the NSI system through the REST Interface. The REST Add specifications can be found in the GINS v6.0 document, section 5.7.3.

ID	SMS and ESP Requirements
AR01	The 'Add' option must only be available after a Search has been completed on the NSI.
AR02	<p>The Identification Sighted values will map to the NSI Name and Birth date verification values as follows:</p> <ul style="list-style-type: none"> • NZ Birth Certificate = B (Birth Cert) • NZ Passport = P (Passport) • Australian Birth Certificate = B (Birth Cert) • Australian Passport = P (Passport) • Foreign Birth Certificate = B (Birth Certificate) • Foreign Passport = P (Passport) • Other = O (Other) • NZ Citizenship Certificate = O (Other) • Certificate of Naturalisation = O (Other) • Certificate of Registration = O (Other) • Letter of Confirmation = O (Other)
AR03	<p>If the Identification Sighted value of 'Unsighted' is selected, the following message will be displayed to the user and a new NSI record will not be created:</p> <ul style="list-style-type: none"> • A verified NSN cannot be created if you have not sighted an official identification document. Please contact the Ministry on 0800 ECE ECE and request an unverified NSN be created.
AR04	No Alternative Name data will be passed from the SMS or ESP to the NSI.
AR05	<p>When matching results are returned from the NSI and contain an override code the Add Request must be confirmed (resubmitted), by user, to the NSI along with the override code.</p> <p>Confirmation message to be displayed to user:</p> <ul style="list-style-type: none"> • Are you sure you wish to create a new National Student Number?
AR06	<p>When a Definite match is returned to the user (NSI Error #921), the following message will be displayed to the users and a new NSI record will not be created:</p> <ul style="list-style-type: none"> • An exact match has been found for this record. If this is not the record you want, please contact the Ministry on 0800 ECE ECE (0800 323 323) to create a new NSN.

5.3 Update Input Requirements

The following business requirements must be implemented by ECE SMS Vendors that are interfacing with the NSI system through the REST Interface. The REST Modify specification can be found in the GINS v6.0 document, section 5.7.4.

ID	SMS and ESP Requirements
UP01	<p>When any of the following SMS or ESP data is updated then the NSI must be updated:</p> <ul style="list-style-type: none"> • Official name fields • Date of birth • Gender • Identification sighted
UP02	<p>When 'Identification Sighted' is updated then mapping rules will apply as per:</p> <ul style="list-style-type: none"> • AR02 for Name and Birth date Verification values
UP04	<p>When a record is verified in NSI and any of the fields are updated in the SMS or ESP, the NSI system will not accept the update request and return an error. The update can be saved in the SMS system, but will not be updated on the NSI system. The following message will be displayed to the user if they are attempting to update a verified NSI record: (NSI Error #034)</p> <ul style="list-style-type: none"> • This record contains name and birth date information that can only be updated by the Ministry. To verify this NSN update, please contact the Ministry on 0800 ECE ECE (0800 323 323).
UP05	<p>The following message will be displayed to the users when attempting to update the Birth date and Name details of a student record: (NSI Error #934)</p> <ul style="list-style-type: none"> • The name AND birth date details of this student cannot be updated. Please contact the Ministry on 0800 ECE ECE (0800 323 323).
UP06	<p>The following message will be displayed to the users when attempting to update the details of a student record that is part of a merge request awaiting processing: (NSI Error #938)</p> <ul style="list-style-type: none"> • The NSN record for this student cannot be updated as it is part of an active merge request. Please contact the Ministry on 0800 ECE ECE (0800 323 323) if you require further information.
UP07	<p>The following message will be displayed to the users when attempting to update a student's birth date that violates the NSI business rule (NSI Error#957)</p> <ul style="list-style-type: none"> • The birth date of this student cannot be updated. Please contact the Ministry on 0800 ECE ECE (0800 323 323).

6 Terminology

Table 1 defines the following terms used within this document.

Term	Definition
BDM	<p>Births Data Match</p> <p>Births Data Match file provided by Department of Internal Affairs (DIA) for the purpose of verifying student information on the NSI</p>
DIA	<p>The Department of Internal Affairs</p> <p>The New Zealand government department that works to:</p> <ul style="list-style-type: none"> • safeguard and strengthen communities • support executive and local government • provide New Zealanders with records of personal identity • ensure gaming is fair, legal and honest.
ECE	<p>Early Childhood Education</p>
ESP	<p>ELI Service Portal</p> <p>Web interface available to ECE services and providers who do not have an SMS.</p> <p>Allows the recording of specific events occurring in the ECE services and their automated transmission to the Ministry of Education.</p>
ESL	<p>Education Sector Logon</p> <p>The ESL application is the security front door to the Ministry's applications such as NSI. The ESL application contains user information on access roles and privileges.</p>
ESL user id	<p>There are two types of ESL user ids:</p> <ul style="list-style-type: none"> • Individual – which requires a user to enter their user id and password • Service to service – a machine account is established in ESL which lets the machines talk to each other (e.g. SMS and NSI) without the user having to enter a user id and password.
HTTPS	<p>Secure Hypertext transfer protocol</p> <p>HTTPS is a Web protocol developed by Netscape and built into its browser that encrypts and decrypts user page requests as well as the pages that are returned by the Web server. HTTPS is really just the use of Transport Layer Security (TLS) as a sublayer under its regular HTTP application layering. (HTTPS uses port 443 instead of HTTP port 80 in its interactions with the lower layer, TCP/IP.) SSL uses a 40-bit key size for the RC4 stream encryption algorithm, which is considered an adequate degree of encryption for commercial exchange.</p>

Term	Definition
MoE	<p>Ministry of Education</p> <p>The MoE is the Government’s lead advisor on the education system, shaping direction for education agencies and providers and contributing to the government’s goals of economic transformation, national identity, and families, young and old and sustainable development.</p>
NSI	<p>National Student Index</p> <p>A master data register that is used to allocate and store a unique identifier for all students enrolled in ECE, compulsory and post compulsory education in New Zealand.</p>
NSN	<p>National Student Number</p> <p>The unique identifier for learners maintained in the NSI system.</p>
Official identification document	<p>Acceptable forms identifying name and date of birth of a student, within the SMS and ELI Service Portal are:</p> <ul style="list-style-type: none"> • NZ Birth Certificate • NZ Passport • Australian Birth Certificate • Australian Passport • Foreign Birth Certificate • Foreign Passport • Other (with secondary list) <ul style="list-style-type: none"> ○ NZ Citizenship Certificate ○ Certificate of Naturalisation (Cook Island, Niue, Tokelau) ○ Certificate of Registration (Cook Island, Niue, Tokelau) ○ Letter of Confirmation (Cook Island, Niue, Tokelau)
REST	<p>REpresentational State Transfer</p> <p>REpresentation State Transfer is a common standard for online interfaces. It uses a definition of a resource (e.g. a student), and allows a range of actions for it.</p>
Service user	<p>An individual user of a service providing early childhood education.</p>
ECE Service number	<p>A Ministry assigned 4 - 6 character alphanumeric unique identifier for each ECE service.</p>
Student	<p>The use of the term ‘student’ in this document includes children in early childhood education (e.g. NSI holds student identification data).</p>

Term	Definition
SMS	<p>Student Management System</p> <p>A system maintained and held by education services/organisations to maintain learner information.</p>
URL	<p>Uniform Resource Locator</p> <p>A URL is the address of a file (resource) accessible on the Internet. The type of resource depends on the Internet application protocol. Using the World Wide Web's secure protocol, the Secure Hypertext Transfer Protocol (HTTPS), the resource can be an HTML page (like the one you're reading), an image file, a program such as a common gateway interface application or Java applet, or any other file supported by HTTPS. The URL contains the name of the protocol required to access the resource, a domain name that identifies a specific computer on the Internet, and a hierarchical description of a file location on the computer.</p>
UTF-8	<p>Unicode transformation format 8-bit encoding form</p> <p>UTF-8 is the Unicode Transformation Format that serializes a Unicode scalar value (code point) as a sequence of one to four bytes.</p>