

# NIAS NSIP Integration As a Service

NAPLAN Student Registration Data Validation

NAPLAN Results Reporting Data — NAPRR

Installation and User Guide v15



# **Version history**

Version	Date	Notes
V01	4/07/2017	Initial release
V02	10/07/2017	Added Mac user install information
V03	15/08/2017	Added graphql information
V04	09/10/2017	Added v0.99 updates
V05	27/02/2018	Minor updates
V06	17/07/2018	Added Results Reporting Validation/QA reports
V07	07/08/2018	Added updates to NAPVAL validation
V08	29/08/2018	Added Results Reporting Validation reports
V09	11/09/2018	Added Results Reporting Validation reports
V10	04/12/2019	Added to System reports, updates to saving queries
V11	26/02/2019	Added to System reports, updates to acceptable characters in
		napval.toml file
V12	12/03/2019	Updated redaction
V13	02/05/2019	Updated redaction
V14	06/03/2020	Updated redaction
V15	03/12/2020	Updated redaction
V16	14/04/2020	Splitter functionality, removed GraphQL interface



# Contents

Section 1 – NSIP Integration As a Service (NIAS)	3
1.1 What is NIAS?	3
1.2 Installation	6
1.3 Updating & Removing NIAS Tools	7
1.4 Conditions of Data Download	7
Section 2 – Validating NAPLAN Student Registration D	ata Using NAPVAL8
2.1 Running the Validation	8
2.2 NIAS Components	15
2.3 NIAS Validation Schemas	17
2.4 Conversion of CSV to XML	18
Section 3 – Using NAPRRQL	20
3.1 NAPRRQL Sample data	20
3.2 Loading data files and generating reports	25
3.3 Report Functionality	26
Section 4 – Audit facility NAPLAN Registration	31
4.1 Using the audit facility and generating Mism	natches report31
Section 5 – NAPLAN Results Reporting Validation and	QA Reports32
5.1 Generating Results Validation reports	32
5.2 QA Reports	32
5.3 System Reports	38
5.4 Split Reports	44
5.5 Item Printing	45
5.6 XML	47
5.7 DAC/PNP codes	48
5.8 Reports available via NAPRRQL user interface	49
Section 6 Support	50
6.1 Support	50

# **Section 1 - NSIP Integration As a Service (NIAS)**

# 1.1 What is NIAS?

NIAS is a suite of open-source components designed to enable as many different users as possible to quickly and easily solve issues of system integration using the Australian SIF Data Model for



education. While NIAS includes generic functionality for system integration around SIF, the use of NIAS documented here is for the processing of data around NAPLAN.

The components in the current release perform the following functions:

- Validation of Student Registration data for NAPLAN
- Reporting of NAPLAN Results and Reporting data
- Facility for user generated queries on Results and Reporting data using GraphQL
- Audit validation between Student Registration data and Results and Reporting data
- Generation of writing extracts for marking under NAPLAN

These tools are provided for the use of Test Administration Authorities (TAA) and jurisdictions responsible for the upload of NAPLAN Online student registration data to the National Assessment Platform, and the download and processing of NAPLAN results and reporting datasets from the Platform.

The writing extracts functionality is documented separately in the NIAS Writing Extract User Guide.

### **NIAS Data Validation (NAPVAL)**

The data validation tool allows student registration data files in either .csv or .xml format to be validated to check data format, that mandatory fields in the files are populated, and that the fields are valid against the Registration Data Set specifications.

NAPVAL will also convert .csy files to .xml SIF format once the user is satisfied with the validation.

The user loads the student registration file into the interface, and the validation tool will produce a report of any errors or warnings found, which can be viewed on screen or downloaded. Once the file is validated, users can be confident in uploading the file to the National Assessment Platform for student registration.

#### NAPLAN Results and Reporting (NAPRRQL)

NAPRRQL is a package allowing reporting and browsing of NAPLAN results and reporting data files, for a particular state, sector or schools, provided as a SIF .xml file from the National Assessment Platform.

The user loads the results and reporting file, and NAPRRQL will produce a number of reports for a selected school which can be viewed on screen. The reports interface allow drill down of row data, as well as generation of .csv reports. The package can also be used on the command line to generate .csv files for each schools included and for the entire file.

A number of other QA and validation tools can be run using NAPRRQL. The use of these is described in detail further in this document. The table below provides a summary of what is available.

NIAS Validation Tool	Purpose	Refer to
Naprrql.exe – ingest	Ingests results and reporting data. Overwrites existing data. A prerequisite to all other functions; however, the other	Section 3



	functions will reingest the data by default.	
Naprrql.exe –qa	Generates csv files for validation and checking, in addition to the files generated in <b>report</b> . Recommend this is run before other tools for checking prior to generating reports.	Section 5.2
Naprrql.exe – report	Generates reports in csv format.	Section 3, 5.3, 5.4
Naprrql.exe –itemprint	Generates csv file reporting item results for each student against items.	Section 5.5
Naprrql.exe –xml	Re-extracts redacted xml from Results and reporting dataset	Section 5.6
Naprrql.exe -pnpadd	Adds DAC codes. Normally not needed, unless DAC codes in the RRD need to be repaired.	Section 5.7
Naprrql.exe - writingextract	Extract all writing scripts for marking.	See NIAS Writing Extract User Guide in nap-writing-print folder

# **Audit Differences (NAPCOMP)**

NAPCOMP allows comparison between a NAPLAN Student Registration file (in csv format) and a corresponding Results and Reporting data file received for the same cohort.

The user loads both files into various folders and the executable produces a .txt file which calls out differences where students appear in only one file and not the other. For example, a student may be in the registration data file, but not the results and reporting dataset or vice versa.

None of these components have dependencies and can be run independently at any time.

Please note that instructions and screenshots included in this document are created using sample data which may not reflect realistic scores or results.



#### 1.2 Installation

Installation of the NIAS tool loads all of the components as described on previous pages.

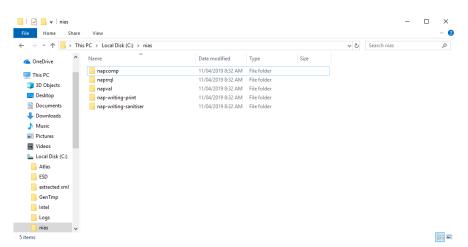
#### **Pre-requisites**

NIAS can be installed on Windows (64-bit), Linux (64-bit), or Macintosh. For the Windows installation you will need a Windows PC with the latest version of either Google Chrome or Mozilla Firefox installed. The Macintosh version works on Chrome, Firefox and Safari.

The NIAS toolset takes up approximately 100MB in hard disk space. You will also need enough hard disk space available to store a copy of the RRD file, and all the reports it generates.

# **Installing files**

- Click on the following URL, or enter it in your browser: <u>https://github.com/nsip/nias2/releases</u>
- 2. Click on the relevant installation file to download the NIAS tools.
- 3. Extract the contents of the go-nias.zip file to a suitable high-level folder e.g.: C:\NIAS



**Note:** Don't nest the folder structure too deeply in Windows; this can have an impact on permissible file name length.

The installation loads 5 folders.

- Napval enables validation of .csv or .xml files prior to loading into the NAPLAN Online Student Registration Management system
- Naprrql converts results and reporting dataset into a number of NAPLAN school reports, provides tools for querying results and reporting data, and also contains an audit function
- Napcomp—contains an audit function allowing comparison of a NAPLAN Student Registration Data file against a NAPLAN Results and Reporting file.
- Nap-writing-print and nap-writing-sanitiser. These files are further discussed in the NIAS
  Writing Extract User Guide.



Also included in the installation are sample files with which to run the NAPLAN Validation and the NAPLAN Results and Reporting tool. These are further discussed in the NAPVAL and NAPRRQL section of this document.

# 1.3 Updating & Removing NIAS Tools

The tools can be updated by deleting existing folders and downloading a newer version from <a href="https://github.com/nsip/nias2/releases">https://github.com/nsip/nias2/releases</a> (Subscribe to this link to be notified of updates to the NIAS tools.)

#### 1.4 Conditions of Data Download

Education Services Australia Limited (ESA):

- complies with the Privacy Act 1988 (Cth) to maintain the privacy of personal information contained within each data extract or report including School Student Summary Report (SSSR) and Individual Student Report (ISR) (Data) while it is stored on the Assessment platform;
- is unable to control the use of the Data once it has been downloaded from the Assessment platform.

In order to maintain the privacy of the Data after you have downloaded it, prior to accessing and downloading the Data, you confirm and agree that:

- you are authorised to access and download the Data;
- your organisation has privacy and security controls in place in order to protect the privacy and security of the Data; and
- you will take all reasonable steps to ensure that the Data will not be misused, interfered with, lost, modified or disclosed to unauthorised personnel.

If you do not agree to the above conditions, you must not access and/or download the Data.



# Section 2 - Validating NAPLAN Student Registration Data Using NAPVAL

Prior to commencing it is assumed that you have a NAPLAN Student Registration data file in the structure contained in the Student Registration Data Specifications v2.0. The file can be .csv or .xml format. Data files in .csv format can be converted to .xml using this tool.

The main changes to the validation process from earlier versions of NIAS (in accordance with updates to the Student Registration Data Specifications) are:

- Address Fields are no longer required for the platform, so NIAS will report an error if any address fields are populated.
  - The validation will report an error for fields that are defined in SIF but are out of scope of the Registration data set, which now includes addresses.
  - NIAS is intended for XML conversion as an output for the platform, so extra fields
    not defined in the CSV will not get converted to XML and therefore not uploaded to
    the platform.
- Visa codes have been updated

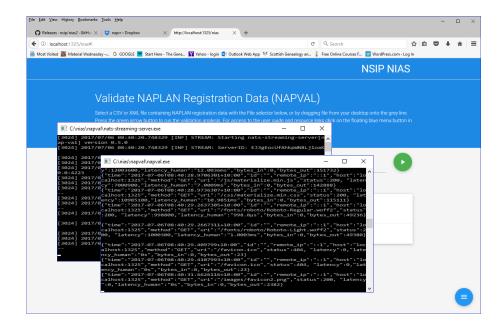
Please refer to v2.0 of the specifications for more detail. A copy is available at <a href="https://github.com/nsip/registration-data-set">https://github.com/nsip/registration-data-set</a>

# 2.1 Running the Validation

- On Windows: To run the validation, navigate to the napval subfolder and double-click on gonapval.bat. This launches the various components and services of NIAS. On Macintosh and Linux: start gonapval.sh from the command line.
- 2. On launch in Windows, gonapval.bat opens a separate command prompt/terminal window for each of the NAPVAL key executables (napval.exe and nats-streaming-server.exe) and launches the NAPVAL web UI using your default web browser (Google Chrome and Mozilla Firefox are supported currently). On Macintosh and Linux, the other executables are launched in the same terminal window; you will need to access the browser to launch NAPVAL yourself, entering the address localhost:1325.

**Note:** If your default web browser is set to IE or another unsupported browser, the UI may not function correctly.



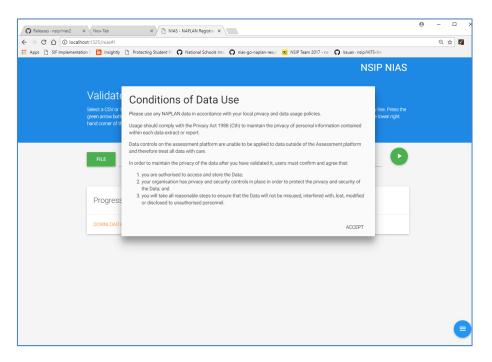


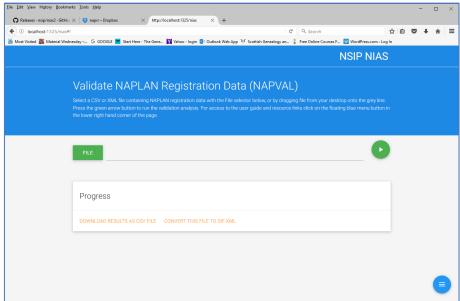
Important: These windows can be minimised but should not be closed whilst running NAPVAL.

Closing these windows terminates that component of the NAPVAL validation tool.



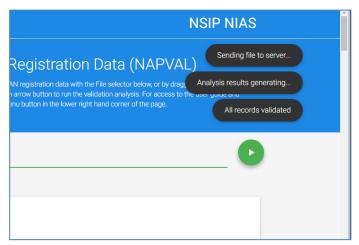
3. The NAPVAL Web UI is displayed. Users are asked to confirm privacy policy on first run – click ACCEPT to continue.



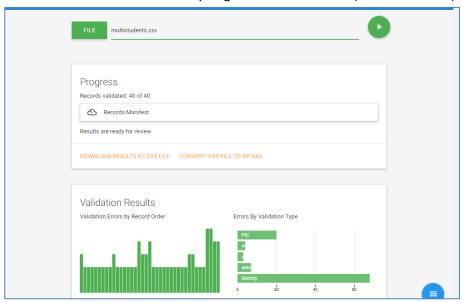


- 4. Select File and choose a file to be validated from the selection box and click Open, or drop the file in the input location. A sample file, students.csv, is included with the software distribution in the NAPVAL folder. NAPVAL validates files that are either CSV or XML file formats.
- 5. Click on the play button to commence validation.
- 6. Progress of the validation is displayed on screen. Do not click on the "Download Results as CSV File" link until all records are validated.

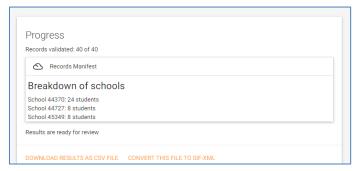




- 7. NAPVAL performs an initial validation, then lists a summary of the first 100 validation issues on screen.
- 8. Once file processing is complete, a list of detailed validation results is displayed on screen, broken up into three areas:
  - Validation errors by record order (graph on left)
  - Errors by validation type (graph on right)
  - Error details table Errors ordered by original file line number (table at bottom)



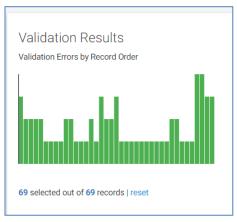
9. There is also a Records Manifest which when expanded will display the breakdown of students records per school. You can use the Manifest to confirm that the uploaded file contains the expected data.



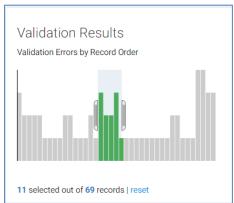


- 10. To view more detail on the validation errors, use one of the following controls:
  - Validation errors by record order (graph on left) or
  - Errors by validation type (graph on right)

# 10.1 Validation errors by record order



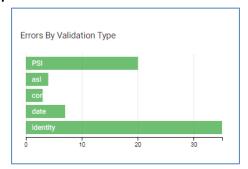
- This control allows a user the ability to narrow down the validation errors reported based on the record order.
- Move the mouse cursor over the column graph a + symbol will appear. Drag this
  to select a section of the file (selected areas are green). Selecting a section will alter
  the errors by validation type data displayed and the details below in the errors
  ordered by original file line number table.
- As you move the selection window, the system updates the selection of errors displayed based on your selection.



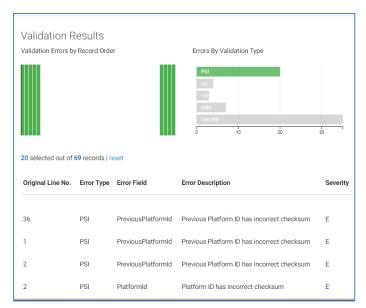
• To remove any filter on the errors reported, click on reset.



# 10.2 Errors by validation type



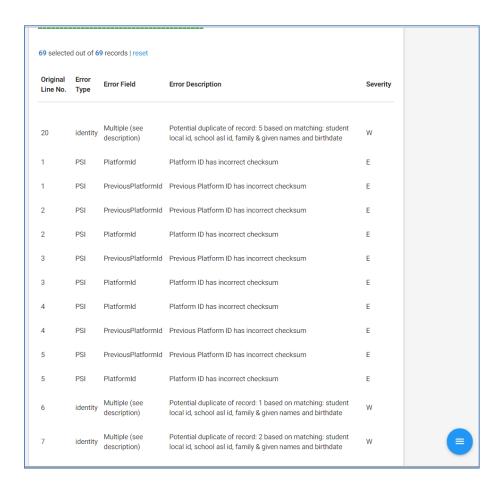
- This validation control allows the user to focus on a particular validation type (or types) by selecting the appropriate bar/s.
- For example, selecting PSI displays only the PSI related errors in the detail table and record order graphs.



• You can select more than one validation type to combine results (highlighted in green) by clicking on multiple bars in the graph.



#### 10.3 Error details table - Errors ordered by original file line number



- The Error details table displays validation errors detected in the imported file (you can filter it using the control graphs mentioned above).
- The table describes the original record number, the type (ASL, content, identity), the field where the error was detected, the error description, and the error severity (Warning or Error).
- 11. To export the produced error report, select Download Results as CSV File. You will be able to open or save the file as appropriate. Error reports use the naming convention of OriginalFileName\_error\_report.csv.
- 12. After you have reviewed and corrected errors in the source files, you can re-load a new version of the file for review. It is recommended that you refresh the browser if the NAPVAL validation screen is still active. Go back to File, select the revised file, then repeat the file upload steps as detailed above.
- 13. To end NAPVAL processing:
  - On Windows, run **stopnapval.bat** (which will close each terminal window) and close the web browser, or
  - Close each of the terminal windows by clicking the **x** in the top right corner of each window and close the web browser.
  - On Macintosh and Linux, run stopnapval.sh and close the web browser.



# 2.2 NIAS Components

NIAS contains a number of validation tools. These validation services can be accessed by setting variables in the napval.toml configuration file. When you open this file in a text editor, it should look something like this:

```
# Baseline year for DOB checks
TestYear = "2016"

# Validations to invoke
# ValidationRoute = ["schema", "local", "id", "dob", "asl"]
ValidationRoute = ["schema", "id", "dob", "asl"]

# Data match fields for matching across schools
StudentMatch = ["FamilyName", "GivenName", "BirthDate"]

# Legal characters for names. NOTE: this is the input to a regular expression; if hyphens are permitted, leave - as the final character LegalNameChars = "A-Za-z '-"

# Webserver port
WebServerPort = "1325"

# Number of validation engines
PoolSize = 4
```

# **Configurable variables**

NIAS validation variable	Notes
TestYear	Sets the test year during which assessment is running. Used to ensure that students' birth dates align with their test levels.
ValidationRoute	Sets the validations to apply – see table below for details. Currently validations are not order-dependent.
StudentMatch	Fields of the student record to be used for data matching of records between schools during the <i>id</i> check.
LegalNameChars	Sets the legal characters for names. NOTE: this is the input to a regular expression; if hyphens are permitted, leave - as the final character LegalNameChars = "A-Za-z '-" Any instances of backslashes must be doubled, since



	backslashes are a special character in regular expressions: \\
WebServerPort	Sets the web server port. You can edit this if the default conflicts with another service.
NATSPort	Sets the port for the NATS streaming service (used as the bus for messages in the microservice architecture of the software). You can edit this if the default conflicts with another service.

# Validation route values

NIAS validation variable	Notes
asl	Checks that ASL values are correct. Each release of NIAS updates the ASL values to the latest available copy from the Australian Schools List website, <a href="https://asl.acara.edu.au">https://asl.acara.edu.au</a> . (Note: ASL values can be updated by modifying values contained within the asl_schools.csv file contained within the napval\schoolslist folder)
schema	Applies the NAPLAN registration data set validations defined in schemas/core.json.
schema2	Applies dependency validation on NAPLAN registration data set, as defined in schemas/core_parent2.json: ensuring that if one parent 2 value is provided, all of them are provided.
dob	Apply date of birth validation according to the setting of TestYear.
Id	Apply id validation: confirm that every student has a unique Localld per school, a unique PSI per school, and a unique Localld, Family Name, Given Name, and Birth Date per school. (The fields used for the



	id check can be changed in
	configuration). Any collisions
	within a school are reported. It
	also detects any students with
	the same StudentMatch fields
	between schools.
psi	Apply PSI validation: verifies
	the check letter for each
	Platform Student Identifier in
	the file.
numericvalue	Validates all the numbers with
	value constraints in the file:
	currently this only applies to
	the FTE value, which the service
	confirms is a decimal number
	between 0 and 1.
namevalid	Validates student names to
namevana	confirm that they do not
	contain extraneous characters,
	which may be rejected by the
	Assessment Platform. The legal
	characters for student names
	are set in the LegalNameChars
	configuration parameter,
	described above.
local	Applies any validations you
local	have set in schemas/local.json.
	By default this file is not
	processed, and the default
	local.json file shipped with nias
	performs no validation. If you
	wish to use local validation,
	rename your local validation
	file to local.json (more details
	below).

#### 2.3 NIAS Validation Schemas

Validation schemas (in JSON format) are used by NIAS to validate that the input files contain the required mandatory fields and contain valid values. NIAS comes with two validation schemas located in the **schemas** folder and an optional third local validation:

- Core (core.json) This is the validation schema based on the approved registration data set. It
  provides the core validation for mandatory/optional fields and valid values. Core validation is
  always applied when validating file contents. Do not modify this file.
- 2. Core, Parent 2 (core\_parent2.json) This is the validation schema expressing the dependencies between Parent 2 demographic values in registration data: If one such field is present, all of them need to be present. **Do not modify this file.**
- 3. Local (*local.json*)- This is an optional extra layer of validation which can be applied in addition to the core validation. You can edit this file to include local validations as required.



#### local.json

The file local.json can supply an optional extra layer of validation in addition to the validation found in core.json. Typical examples of where extra local validation may be useful include:

- 1. Making additional fields mandatory (for example a jurisdiction wide identifier)
- 2. Modifying allowed values (for example removing year level 0)
- 3. Modifying min/max lengths (for example all jurisdiction identifiers must be 9 characters in length)

The file local.json contains examples of possible local validations which users may seek to implement including a max length of 10 for home group, max length of 36 for jurisdiction id, and an absolute length of 8 for TAAld. It also lists TAAld, JurisdictionId and HomeGroup as mandatory fields.

A suitable JSON or text editor is recommended.

# **Enabling local schemas**

NIAS users may seek to apply one or more localised schemas (for example SouthAustralia.json, SACatholics.json, SAIndependents.json).

To enable your own additional validation schema:

- 1. In the napval\schemas folder, rename local.json to defaultlocal.json
- 2. Rename your local validation file to local.json
- 3. Place it in the **schemas** folder
- 4. In the napval.toml file, uncomment the ValidationRoute with "local" included in the variable arguments, and comment out the default ValidationRoute.
- 5. Restart NAPVAL and validate your file/s.

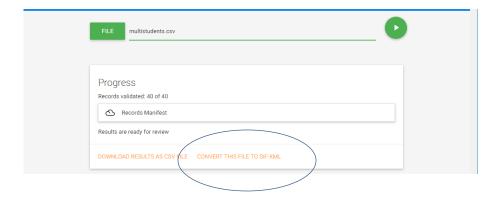
Alternatively, you can implement your own validations by directly editing the default local.json file.

# 2.4 Conversion of CSV to XML

Once you are happy with the level of validation, you can convert CSV files to SIF XML format.

- 1. In the NAPVAL tool select File.
- 2. Choose the relevant CSV file (this file would typically be the file that has been worked on and validated as required). Select Open.
- 3. Click the 'Convert this file to XML' link,
- 4. Save the XML file to an appropriate location. The file will have the same filename as the CSV file but with an XML file extension.
- 5. You can convert files as many times as you require.







# Section 3 - Using NAPRRQL

NAPRRQL comes with two full results reporting dataset sample extracts, one for 10 schools and 250 students (10schools.xml.zip), and one for 100 schools and 5000 students (100schools.xml.zip), which are ingested on first running the application. In order to run your own data received from the National Assessment Platform, substitute these files with your own zipped XML file; NAPRRQL will read any file suffixed .xml.zip in the \in folder. Please ensure that your own zipped XML file is not password-protected; you may need to unzip the password-protected file received from the national assessment platform, and re-zip it without a password.

When the application is run, data is streamed from the data file in the \in folder and processed onto the reporting sub-system. Report generators are then run to produce .csv extracts of the data in the \out folder. This contains aggregate reports at the top level for all report types (score summaries, domain scores, participation and code-frame).

By default, the reports are generated from the input RRD file with no grouping/break down. Optionally, NAPRRQL can also break down reports by school (named by ACARA Id), year level, domain, or any combination of the three. However this only applies to reports that can be meaningfully broken down in this way. Reports which do not break down in this way are ignored; that applies to the codeframe report, for example (systemCodeframe.csv), since it is not specific to a school, year level, or domain.

# 3.1 NAPRRQL Sample data

- 1. To run NAPRRQL and populate it from the sample file, navigate to the command prompt and to the naprrql folder (eg. C:\nias\naprrql).
- 2. Run naprrql.exe -ingest on Windows, naprrql --ingest on Linux and Macintosh. This launches the various components and services of NAPRRQL and begins processing of any data files in the \in folder.
- 3. The application ingests the data in readiness for generating reports in future steps.

4. Once the ingest is complete, to generate NAPLAN Results Reports in .csv format, run naprrql.exe -report on Windows, naprrql --report on Linux and Macintosh. This step will generate an out folder, which will contain a sub folder for system-reports. If you have enabled and configured the report splitter, this step will then generate an out\_split folder. (This functionality is disabled by default) The out\_split folder will also contain a sub folder for system-reports, but that folder will contain sub folders of its own, broken down by school, year



level, and/or domain. The reports generated in the out and out\_split folders are detailed in sections 5.3 and 5.4 of this document.

```
Command Prompt

2018/07/17/15:48:55 School report file writing.../out/school_reports/21209/schoolParticipation.csv

2018/07/17/15:48:55 School report file writing.../out/school_reports/21209/schoolParticipation.csv

2018/07/17/15:48:55 School report file writing.../out/school_reports/21209/srbrinting.csv

2018/07/17/15:48:55 School report file writing.../out/school_reports/212309/srbrinting.csv

2018/07/17/15:48:55 School report file writing.../out/school_reports/212309/schoolParticipation.csv

2018/07/17/15:48:55 School report file writing.../out/school_reports/212309/schoolDamainScores.csv

2018/07/17/15:48:55 School report file writing.../out/school_reports/21231/schoolParticipation.csv

2018/07/17/15:48:55 School report file writing.../out/school_reports/21231/schoolDamainScores.csv

2018/07/17/15:41:05 System report file writing.../out/system.reports/21231/schoolDamainScores.csv

2018/07/17/15:41:16 System report file writing.../out/system.reports/21231/schoolDamainScores.csv

2018/07/17/15:41:16 System report file writing.../out/system.reports/pitemParticipation.csv

2018/07/17/15:41:16 System report file writing.../out/system.reports/pitemParticipation.csv

2018/07/17/15:41:15 System report file writing.../out/system.reports/pitemParticipation.csv

20
```

5. These reports are available as csv files by viewing them in the **out** folder (and the **out\_split** folder, if enabled). Alternatively, they can be viewed using a web interface. Once the report generation is complete, to run the web interface, (still at the command prompt) run **naprrql.exe** on Windows, **naprrql** on Linux and Macintosh.

```
Select Command Prompt - naprqLexe

2017/08/15 12:13:51 reports generated...
2017/08/15 12:13:51 Closing datastore...
2017/08/15 12:13:51 Datastore closed.

C:\NIAS\naprrql>naprrql.exe

Browse to follwing locations:
    http://localhost:1329/ui

for qa report user interface
    http://localhost:1329/sifql

for data explorer

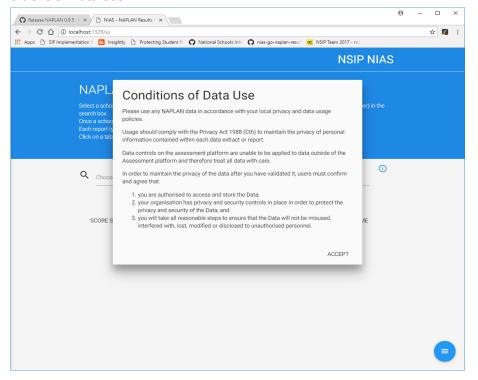
B http server started on :1329
```

Important: The window can be minimised but should not be closed whilst running NAPRRQL. Closing the window terminates that component of the NAPRRQL reporting tool.

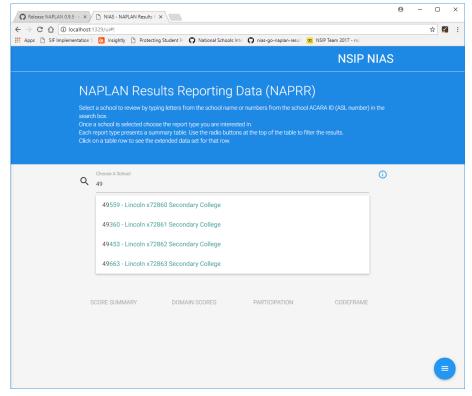
6. Open your browser (Google Chrome or Mozilla Firefox) and navigate to: http://localhost:1329/ui



7. The NAPLAN Results Reporting Data Web User Interface will display. Click ACCEPT to agree to the Conditions of Data Use:

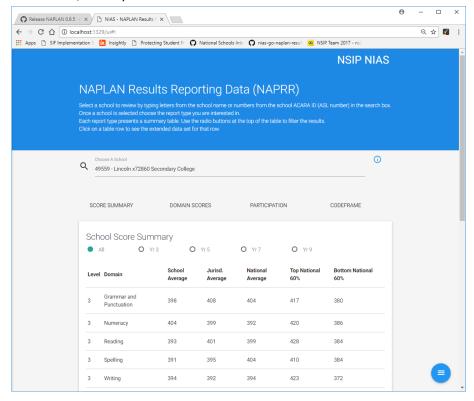


8. To begin viewing data, select a school from the search box by typing letters from the school name or the school ACARA ID and choosing the required school.





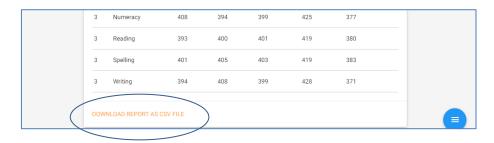
9. Once a school is selected its School Score Summary will be displayed. As the data is generated, the Domain Scores, Participation and Codeframe links will activate.



10. To navigate between reports available for the selected school, click on the links displayed below the school name.



11. Reports can be downloaded in csv format by clicking on the link at the bottom of the report.



12. Clicking on the blue button at the bottom of the screen will open up menus for Help, Privacy and the Results Reporting Data Set Specification

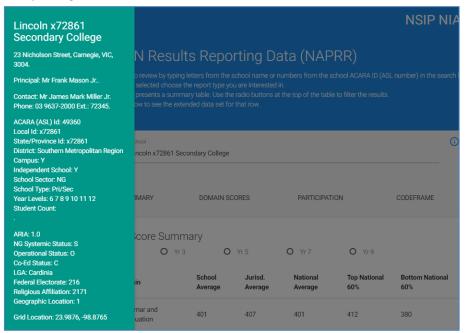




13. To view information about the school displayed click on the button to the right of the school name



14. Information will display on the left of the screen. Click back on the main screen to return to NAPRRQL reporting.





# 3.2 Loading data files and generating reports

**Important Note**: Because the installation for NAPRRQL includes sample files for testing, it is important that these files are removed first prior to copying the relevant data files to the folders as described below.

The NAPRRQL will process any .xml.zip or .xml file it finds in the folder, which means it will process the sample file along with any files copied in. This also means that multiple files can be loaded into the **naprrql\in** folder and be processed at the one time. However, those files need to describe distinct students' results: if any XML objects in the files have the same RefIDs (global identifiers), NAPRRQL will abort, as it cannot establish which object should take priority. That will happen for example if you have a zipped and unzipped instance of the RRD file in the same directory.

The sample files that must be <u>removed</u> are the files 10schools.xml.zip and 100schools.xml.zip contained in the folder: \naprql\in.

Files and folders in the \naprrql\out folder will be deleted each time the NAPRRQL tool is run so it is not necessary to delete sample data from here.

Please refer back to section 3.1 NAPRRQL Sample data for screenshots if required.

- 1. To run NAPRRQL and populate it using data from the National Assessment Platform, ensure your data file is in .xml format and zipped
- 2. Copy the file to the **naprrql\in** folder.
- 3. Navigate to the installation folder in a console or terminal and run **naprrql.exe -ingest** on Windows, **naprrql -ingest** on Linux and Macintosh. This launches the various components and services of NAPRRQL and begins processing of data files in the \in folder.
- 4. The application ingests the data in preparation for reporting. Note that the ingest process only needs to be done once unless the data changes.
- 5. Once the ingest is complete, to generate NAPLAN Results Reports in .csv format, run **naprrql.exe -report** on Windows, **naprrql --report** on Linux and Macintosh. A progress bar will indicate how far NAPRRQL has gone in generating the reports.
- 6. Report generation involves all reports specified in the **config** directory as being activated. NAPRRQL under version 1.2.0 of NIAS (release late 2021) is substantially faster than its predecessors. Nonetheless, processing the file can take a long time; the result set for a jurisdiction will still likely take tens of minutes (though no longer hours), and should be run on a computer with the most memory available. (That is because the speed enhancement involves generating multiple reports simultaneously, which is memory dependent.)
- 7. Once the report generation is complete, to run the web interface for NAPLAN Results Reporting run **naprrql.exe** on Windows, **naprrql** on Linux and Macintosh. Alternatively, the csv files can be viewed in the **out** folder.
- 8. Important: The window can be minimised but should not be closed whilst running NAPRRQL. Closing the window terminates that component of the NAPRRQL reporting tool.
- 9. Open your browser (Google Chrome or Mozilla Firefox) and navigate to: http://localhost:1329/ui
- 10. The NAPLAN Results Reporting Data Web User Interface will display.



- 11. To begin viewing data, select a school from the search box by typing letters from the school name or the school ACARA ID and choosing the required school.
- 12. Navigation of the available reports is explained in the following pages.

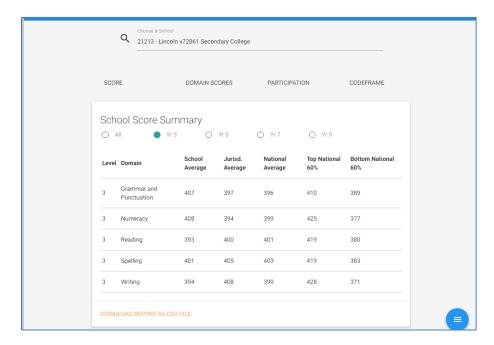
Note: To help speed the process up, you should disable any reports you will not be using. All reports are activated by default. To disable a report, change its corresponding configuration file in the **config** folder to read "activated = false" instead of "activated = true". The reports generated by NIAS are described in sections 5.3 and 5.4.

# 3.3 Report Functionality

# **School Score Summary Report**

Select this report by clicking on the SCORE tab below the school name.

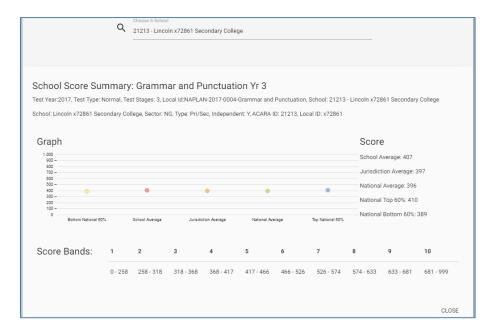
By default all domains for all year levels will be displayed. This can be filtered by Year Level by choosing the appropriate year level radio button at the top of the report.



The displayed report can be exported by clicking on the link at the bottom of the report

To view extended data for any particular row, click on the required row. A screen displaying further data graphically will be displayed. By hovering the mouse over the data points on the graph the values will display.



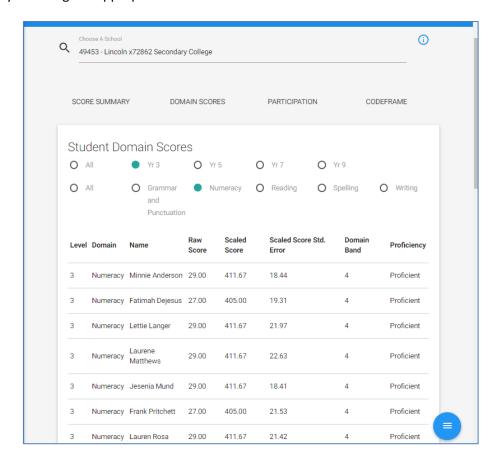


Click CLOSE to return to the previous screen.

# **Student Domain Scores Report**

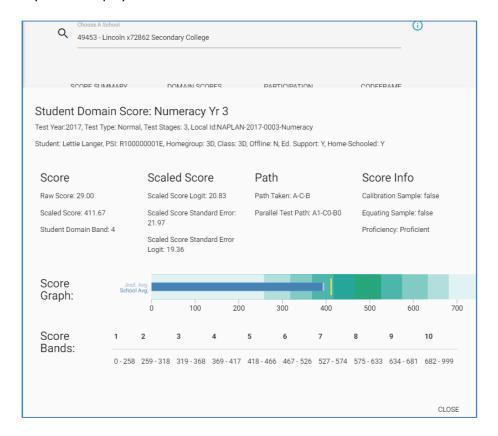
Select the required school. To access this report, click on the DOMAIN SCORES tab below the school name.

By default, all domains for all year levels will be displayed. This can be filtered by Year Level and/or Domain by choosing the appropriate radio buttons.





To view extended data for any particular row, click on the required row. A screen displaying further data graphically will be displayed.



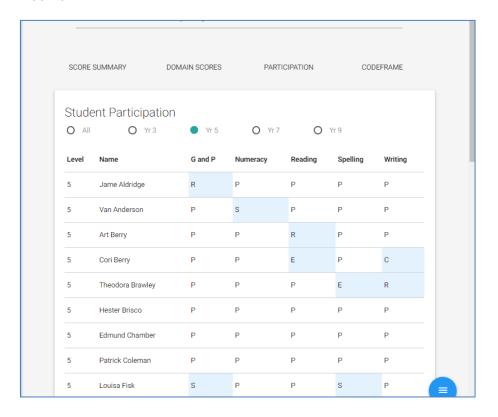
Click CLOSE to return to the previous screen.



# **Student Participation Report**

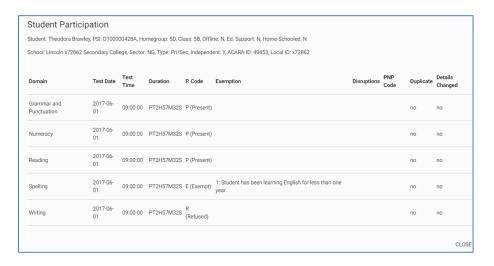
Select the required school. To access this report, click on the PARTICIPATION tab below the school name.

By default, all domains for all year levels will be displayed. This can be filtered by Year Level by choosing the appropriate radio buttons.



Participation codes other than P (present) are highlighted for easy identification on screen.

Click to view further data for a particular row. A pop up screen will display information about the student, the school, each test, participation codes and other events such as exemptions or disruptions.



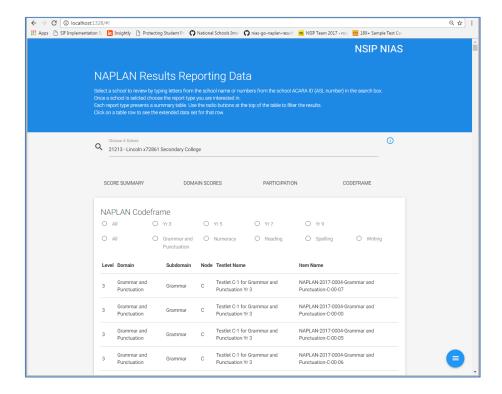
Click CLOSE to return to the previous screen.



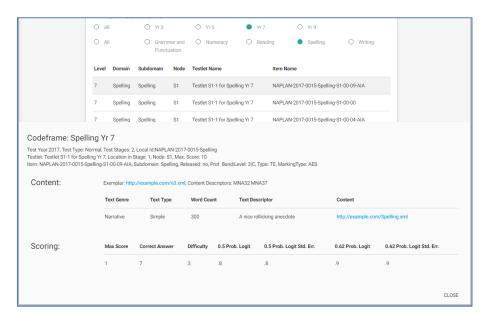
# **Codeframe Report**

Select this report by clicking on the CODEFRAME tab below the school name.

By default, the NAPLAN Codeframe Report will display test items for all domains for all year levels. This can be filtered by Year Level and/or Domain by choosing the appropriate radio buttons at the top of the report.



Click to view further data for a particular row. A pop up screen displaying information about the test and testlet associated with the selected test item will display. Links to Exemplar and Content are also available on this page.



Click CLOSE to return to the previous screen.



# Section 4 - Audit facility NAPLAN Registration

The NAPLAN Results Reporting data tool has a facility by which a NAPLAN Registration data file can be compared with an NAPLAN Online Results file to check for records which may be unique to each file. It compares a CSV file of Student Registration records (located in the Napcomp\in\registration folder) with the student records in the NAPLAN Online results XML file contained in the Napcomp\in\results folder, and detects which students appear only in one or the other file.

The comparison runs in two passes.

- First, records in the two files which have the same Platform Identifier (PSI) are eliminated.
   (For the comparison to run efficiently, users should endeavour to download from the Student Registration Management system a CSV file containing all student records, and includes their allocated PSIs.)
- Second, all remaining records from the two files are compared according to the fields they
  have in common, drawn from the following list: Family Name, Given Name, Middle Name,
  Local Id, PSI, ACARA ID of school, and birth date.
- Be careful to ensure that the birth date in the CSV file is represented in the same format as
  in the RRD file, as YYYY-MM-DD. If you edit the CSV file in Excel, Excel will tend to
  autoformat anything that looks like a date in the system default format, which is usually
  DD/MM/YYYY. The comparison will deem those two dates not to be the same.

# 4.1 Using the audit facility and generating Mismatches report

- 1. To run the NAPRRQL audit tool, copy the required registration data file (xxx.csv) into the folder: napcomp\in\registration
- 2. The Results (xxx.XML) file should be in the napcomp\in\results folder.
- 3. Navigate to the **napcomp** folder in a console or terminal and run **napcomp.exe**. This launches the various components and services of NAPRRQL and begins the comparison of the csv and xml files.
- 4. Once the comparison is complete, the mismatches are output to csv files in the **napcomp\out** folder.
  - The file RegisteredButNotInResults.csv contains a listing of the students found to be unique to the NAPLAN Registration file (PSI, user-defined key, and RefId) but not in the Results and Reporting file
  - The file ResultsButNotInRegister.csv contains a listing of all the student records unique to the Results & Reporting file, but not in the Student Registration Results.



# **Section 5 - NAPLAN Results Reporting Validation and QA Reports**

NIAS produces a number of reports for validation of the results and reporting dataset. The tables in section 5.2 describe these reports.

# **5.1 Generating Results Validation reports**

- 1. Navigate to the **naprrql** folder (e.g. C:\NIAS\naprrql)
- 2. Run naprrql.exe -qa on Windows, naprrql -qa on Linux and Macintosh. This will generate the QA reports in addition to the normal reports described. This step performs the data ingest step by default; if you want to avoid doing that again, and have already run ingest, run NAPRRQL with the added option --skipingest.
- 3. This launches the various components and services of NAPRRQL, creates a **qa** folder in the **out** folder and generates the files listed below. The distinction between reports filed under folder qa and reports filed under qa\error\_reports, made in previous versions of NAPRRQL, is no longer made: all reports appear in the same folder.

# **5.2 QA Reports**

itemWritingPrinting.	CSV
Purpose	<ul> <li>Reports one row of response data per student per test item presented within a NAPLAN test for the Writing domain only</li> <li>Detailed information which can be used for ingest into data analysis systems</li> </ul>
What to expect	<ul><li>Very large report</li><li>Includes a column for each subscore</li></ul>
Look out for	

orphanEvents.csv	
Purpose	<ul> <li>Reports any NAPStudentEvents whose corresponding school does not have a SchoolInfo object in the data set (no details have been provided about the school, or the school does not exist)</li> </ul>
What to expect	Ideally this report should be empty
Look out for	Any entry in this report needs to be investigated

orphanScoreSummaries.csv	
Purpose	<ul> <li>Reports any score summaries whose corresponding school does not have a SchoolInfo object in the data set (no details have been provided about the school, or the school does not exist)</li> </ul>
What to expect	Ideally this report should be empty
Look out for	Any entry in this report needs to be investigated

orphanStudents.csv	
Purpose	<ul> <li>Reports any students whose corresponding school does not have a SchoolInfo object in the data set (no details have been provided about the school, or the school does not exist)</li> </ul>



What to expect	•	Ideally this report should be empty
Look out for	•	Any entry in this report needs to be investigated

qaCodeframeCheck.cs	V	
Purpose	•	Reports all tests, testlets and items referenced in responses that are not included in the Codeframe
What to expect	•	Ideally this report should be empty
Look out for	•	Tests / Testlets / Testltems should not be responded to if they are not part of the codeframe: any entry in this report needs to be investigated

qaSchools.csv	
Purpose	<ul> <li>Reports one row per school, summary of school information as well as data from student registration information and results information</li> <li>Includes total registered students and summary of student count by Year level</li> <li>Includes total test attempts by year level and domain</li> <li>Includes counts of students by participation status</li> <li>Includes count of disruptions</li> </ul>
What to expect	<ul> <li>All schools for the sector should be listed</li> <li>Can check response counts against expected students registered per test level</li> </ul>
Look out for	Discrepancies between number of students registered at each year level for each test domain; reasonable number of students exempt, absent, experiencing disruptions etc.

systemCodeframe.csv	
Purpose	<ul> <li>Reports all Items against Testlets and Tests in the Codeframe</li> <li>Includes Item difficulty, correct answer, item type</li> <li>Detailed information which can be used for ingest into data analysis systems</li> </ul>
What to expect	Large report
	One row for every Item in Codeframe
Look out for	

	systemGuidCheck.csv		
Purp	ose	•	Reports any GUID that references the wrong kind of object, or
			doesn't reference any object included in the data set
What	t to expect	•	Ideally this report should be empty
Look	out for	•	If any data appears, report will show the correct kind of object the GUID should point to. Any entry in this report needs to be investigated.



system	Responses.csv	
Purpose	•	Reports one row for every student per school registered for a test domain, along with information on their response if available Includes participation code, path taken for domain and raw score Detailed information which can be used for ingest into data analysis systems
What to expe	ect •	Very large report Will include a row for every student registration for all tests, but not all rows will contain responses
Look out for		

systemScoreSummaries.csv		
Purpose	•	Reports a row for every score summary included in the data set, sorted by school, domain and year level
What to expect	•	Use to check expected year levels
	•	2017/18 writing may be included more than once, as score
		summaries are per test rather than test domain
Look out for	•	Any school without an entry for a domain-year level pair (other
		than Yr 3 Writing)

systemExtraneousCharactersStudents.csv		
Purpose	•	Reports a row for every student whose name contains a
		character other than a letter, an apostrophe, a hyphen, or space
What to expect	•	Ideally this report should be empty
Look out for	•	Check for any students whose names may cause SSSR report to
		crash

systemStudentEventA	systemStudentEventAcaraIdDiscrepancies.csv	
Purpose	•	Reports a row for every test administered at a different school
		from where the student was enrolled
What to expect	•	Ideally this report should be empty
Look out for	•	Check for any students whose school of enrolment and school
		administering the test conflict. If a student has been registered
		against two schools, the first school of registration will be used
		as the control.

systemStudentTestYearLevelDiscrepancies.csv		
Purpose	•	Reports a row for every test administered at a different test
		level from the year level that the student was enrolled in
What to expect	•	Ideally this report should be empty
Look out for	•	Check for any students whose year level conflicts with the test
		level they were administered.



systemMissingTestlets	CSV
Purpose	<ul> <li>Reports a row for every student response set with a     participation status of P, which contain less testlets (according     to the ParallelTest field of the student response set object) than     are expected for the given test level and test domain. (For 2018,     these are: three for Reading and Spelling; three for Numeracy     Yrs 3 and 5; four for Numeracy Yrs 7 and 9; one form Grammar     &amp; Punctuation and Writing.)</li> </ul>
What to expect	Ideally this report should be empty
Look out for	<ul> <li>Check for any students that have not been presented the full count of testlets expected. Check the test disruptions and total lapsed time for the test event, as potential explanations.</li> </ul>

itemExpectedRespons	es.csv
Purpose	<ul> <li>Reports one row per student per test</li> <li>Presently up to 3 Testlets per test</li> <li>Lists the number of items per testlet that a student is expected to have answered (according to the codeframe), the number of correct/incorrect/not attempted and not presented items in that testlet; and any discrepancies between the number of items expected and referenced in the response</li> <li>Accounts for any cases where all item responses in the testlet are missing. To highlight these the report injects a dummy "empty testlet report" item response into the testlet which is displayed in the report error. Any students with partial results in their PRD will be found.</li> </ul>
What to expect	<ul><li>A row per student response per test</li><li>At least one testlet per test populated</li></ul>
Look out for	<ul> <li>No items in the Not In Path category</li> <li>Listings of discrepancies ("Expected not found, Found not expected") to be empty square brackets ("[]")</li> <li>Number of expected items per testlet to equal the correct/incorrect/not attempt/not presented items per testlet</li> </ul>

systemItemCounts.csv		
Purpose	•	Reports the number of times an item is in a response at all
What to expect	•	A row for every item in the codeframe
Look out for	•	High counts for substitute items
	•	Zero counts for any item

systemObjectFrequency.csv		
Purpose	<ul> <li>Reports for every student the number of events they have recorded, the number of events with participation status P/R/S (Participated/Refused/Sanctioned Abandonment)—which are</li> </ul>	



	<ul> <li>expected to have produced responses; and the number of responses</li> <li>Also includes P/R/S events without responses, and responses without P/R/S events</li> </ul>
What to expect	• A row for every unique student in the data set, independent of school
Look out for	<ul> <li>Check for discrepancies the number of events with participation status P/R/S and the number of responses</li> <li>Check for any instances of a student participating in more than five distinct events (as identified by test level plus test domain)</li> </ul>

systemParticipationCodeImpacts.csv		
Purpose	Reports tests for which the response contents are unexpected based on the participation code	
What to expect	Ideally this report should be empty	
Look out for	<ul> <li>"Adaptive pathway without student undertaking test" if:         <ul> <li>participation code = S, P</li> <li>PathTakenForDomain or ParallelTest are not empty</li> </ul> </li> <li>"Scored test with status other than P or R" if:         <ul> <li>participation code ≠ P, R</li> <li>RawScore or ScaledScore is not empty</li> </ul> </li> <li>"Non-zero score with status of R" if:         <ul> <li>participation code = R</li> <li>RawScore is not empty</li> <ul> <li>RawScore ≠ 0</li> </ul> </ul></li> <li>"Unscored test with status of P or R"</li> <li>participation code = P, R</li> <li>RawScore or ScaledScore is empty</li> </ul>	

systemRubricSubscoreMatches.csv		
Purpose	<ul> <li>Reports item/response pairs in which the rubric types and subscore types do not match</li> </ul>	
What to expect	Ideally this report should be empty	
Look out for	<ul> <li>Where there are SubscoresNotDefined which are subscores with no corresponding rubric, or that are not in the list of 10 expected rubric names</li> <li>Where there are RubricsNotScored which are rubrics with no corresponding subscore in the item response</li> </ul>	

systemParticipationCo	systemParticipationCodeItemImpacts.csv		
Purpose	•	Reports items for which the item responses are unexpected based on the participation code, focusing on score at test level, testlet level and item level	
What to expect	•	Ideally this report should be empty	
Look out for	•	"Response captured without student writing test" if:  o participation code ≠ S, P  o Response is not empty	



	Consideration the status of boundary Down Diff.
•	Scored test with status other than P or R if:
	<ul> <li>participation code ≠ P, R</li> </ul>
	<ul> <li>TestletScore, ItemScore or Subscores are not empty</li> </ul>
•	Non-zero Scored test with status of R if:
	<ul><li>Participation code = R</li></ul>
	<ul> <li>TestletScore, ItemScore or Subscores is not empty</li> </ul>
	<ul> <li>TestletScore, ItemScore or Subscores ≠ 0</li> </ul>
•	Missing testlet score with status of P or R if
	<ul><li>Participation code = P, R</li></ul>
	<ul> <li>TestletScore is empty</li> </ul>
	<ul> <li>This error is not as serious</li> </ul>
•	Unscored test with status of P or R
	<ul><li>Participation code = P, R</li></ul>
	<ul> <li>ItemScore is empty</li> </ul>
•	Unscored writing test with status of P
	<ul><li>ParticipationCode = P</li></ul>
	<ul><li>TestDomain = Writing</li></ul>
	<ul> <li>Subscore is empty</li> </ul>

systemTestAttempts.csv		
Purpose	<ul> <li>Reports all sanctioned abandonments for students in schools for sector</li> </ul>	
What to expect	Small number of rows	
Look out for		

systemTestCompleten	systemTestCompleteness.csv	
Purpose	<ul> <li>Reports for each test per year level per school in sector counts for Present and Sanctioned Abandonment, and discrepancies between attempts (events with status P or R) and responses</li> </ul>	
What to expect	Row per school per domain per test level	
Look out for	• List of attempts with no response should be empty for all rows	
	• List of responses with no attempts should be empty for all rows	
	• P_Attempts + S_Attempts + R_Attempts should add up to	
	Responses	

systemTestIncidents.c	SV	
Purpose	•	Reports all non-empty test disruptions by student, school and domain
What to expect	•	Small number of rows for disruptions impacting individual students  Larger number of rows for disruptions impacting cohort of students
Look out for	•	Schools with high proportion of disruption

svstei	mTestT	vnelm	pacts.csv
SVSLCI	1116361	VDCIIII	Dacts.cs



Purpose	•	Reports tests for which the response contents are unexpected
		based on the test domain
What to expect	•	Ideally this report should be empty
Look out for	•	"Writing test with adaptive structure" if
		<ul><li>TestDomain = Writing</li></ul>
		<ul> <li>PathTakenForDomain or ParallelTest is not empty</li> </ul>
	•	"Non-Writing test with non-adaptive structure" if
		<ul> <li>TestDomain ≠ Writing</li> </ul>
		<ul> <li>PathTakenForDomain or ParallelTest is empty</li> </ul>

systemTestTypeItemIr	npacts.csv		
Purpose	·	Reports items for which the item responses are unexpected based on the test domain, focusing on score at test level, testlet level and item level	
What to expect	Ideally this report should be empty	Ideally this report should be empty	
Look out for	"No subscores for Writing Test" if		

## **5.3 System Reports**

Reports are generated in the system\_reports folder as a result of using the **-report** option in NIAS. As with QA reports, if you want to avoid reingesting the RRD file, add the **-skipingest** option.

### In the following,

- reports prefixed with nsw are specific to NSW,
- reports prefixed with qcec are specific to the QCEC,
- reports prefixed with qcaa and qld are specific to the QCAA,
- reports prefixed with act are specific to ACT,
- reports prefixed with sa are specific to South Australia.

## For itemPrinting.csv, see 5.5.

	0 /		
	compareItemWriting.c	SV	
Purpose		•	Used to compare successive writing extract instances (using csvdiff mode)
		•	Reports student identifiers, participation code, word count, start time, and item response
Wha	t to expect	•	One row per student for each student that has done a writing test in the current writing extract.
Look	out for	•	Participation statuses that have changed from P between extracts: any such participation statuses indicate students whose results need to be re-marked.  Any changes in word count or text of writing responses.



compareRRDtests.csv		
Purpose	<ul> <li>Used to compare overall status of NAPLAN testing over successive writing extract instances (using csvdiff mode)</li> <li>Reports student identifiers, test IDs, participation code, start time, and parallel paths</li> </ul>	
What to expect	• One row per student for each student for each test registered against in the current writing extract.	
Look out for	<ul> <li>Any changes in participation statuses or parallel paths between instances.</li> </ul>	I

systemPNPEvents.csv		
Purpose	•	Reports on all students with at least one PNP code for an event.
What to expect	•	One row for each test event which has at least one associated PNP code.
Look out for		rivir code.

systemCodeframe.csv		
Purpose	•	Reports for each year level and domain, Testlet information including Name, Location, Node, Maximum Score and Items, including difficulty Maximum score, difficulty and Item Type
What to expect		
Look out for		

systemDomainScores.csv		
Purpose	<ul> <li>Reports raw and scaled scores for each student, year level and domain</li> </ul>	
What to expect	One row per student per test domain	
Look out for		

systemObjectsCount.c	systemObjectsCount.csv		
Purpose	<ul> <li>Summary report showing counts for: schools, students, test events, student responses, tests, testlets, test items, codeframes &amp; score summaries</li> </ul>		
What to expect			
Look out for			

systemParticipation.cs	systemParticipation.csv		
Purpose	<ul> <li>Reports participation codes for each student in each school by domain</li> </ul>		
What to expect			
Look out for			

S	ystemSch	nools.csv				
---	----------	-----------	--	--	--	--



Purpose	•	Reports school registration details, including school type, sector, principal name and websites
What to expect		
Look out for	•	Student count will only be populated if it has been submitted in Registration

systemScoreSummarie	systemScoreSummaries.csv		
Purpose	<ul> <li>Reports for each school the Local Test Name and averages for School, Jurisdiction and National</li> </ul>		
What to expect			
Look out for			

qldStudent.csv	qldStudent.csv	
Purpose	• Basic registration information for each student by school in TAA, following QLD TAA format requirements	
What to expect		
Look out for		

qldStudentScore.csv	
Purpose	<ul> <li>Reports Student ID Domain, Year level, raw and Scaled scores, Band Participation status for each student, following QLD TAA format requirements</li> </ul>
What to expect	
Look out for	

qldTestData.csv	qldTestData.csv		
Purpose	<ul> <li>Reports item information per year level and domain, includes sequence and item type, following QLD TAA format requirements</li> </ul>		
What to expect			
Look out for			

qcaa_napo_event_stu	qcaa_napo_event_student_link.csv	
Purpose	Export RRD to QCAA database table	
What to expect	One row for each NAPEventStudentLink object	
Look out for		

qcaa_napo_items.csv	qcaa_napo_items.csv		
Purpose	•	Export RRD to QCAA database table	
What to expect	•	One row for each NAPTestItem object	
Look out for			

ncaa	nano	schoo	le cev



Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each SchoolInfo object
Look out for		

qcaa_napo_student_response_set.csv		
Purpose	Export RRD to QCAA database table	
What to expect	•	One row for each NAPStudentReponseSet (the top level scoring information)
Look out for		

qcaa_napo_students.csv		
Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each StudentPersonal object
Look out for		

qcaa_napo_testlet_items.csv		
Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each mapping of a testlet to a test item in NAPTestlet
Look out for		

qcaa_napo_testlets.csv		
Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each NAPTestlet object
Look out for		

qcaa_napo_tests.csv		
Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each NAPTest object
Look out for		

qcaa_napo_writing_rubric.csv		
Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each subscore received against a rubric in a NAPStudentResponseSet object for writing
Look out for		

qcaa_test_score_summary.csv		
Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each NAPTestScoreSummary object
Look out for		



isrPrinting.csv	
Purpose	<ul> <li>Reports for student including local ID, name, scores for each domain, mean scores</li> <li>Can be used to facilitate merge with paper records to support printing of hardcopy ISRs.</li> </ul>
What to expect	A record for each student
Look out for	

isrPrintingExpar	nded
Purpose	<ul> <li>Reports for student including local ID, name, and, for each domain: scaled scores for the student, scaled score standard deviations for the student, mean scores (across the school), pathways for test responses, and full demographic information for each student</li> <li>Can be used to facilitate merge with paper records to support printing of hardcopy ISRs.</li> </ul>
What to expect	A record for each student
Look out for	

nswItemDescriptors.csv		
Purpose	Reports the item descriptor for each item in the codeframe	
What to expect		
Look out for		

nswPrint.csv		
Purpose	•	Reports the domain scores, participation status, and DAC/PNP codes for each test sat by a student, following NSW TAA format requirements
What to expect	•	A record for each student, including all test domain responses
Look out for		

nswWritingScripts.csv	
Purpose	Reports writing scripts for all Writing tests sat by students, following NSW TAA format requirements
What to expect	A record for each student, including their writing script.
Look out for	HTML and punctuation in the writing script field.
	Escaped quotation marks and quotation marks around the
	entire field, if necessary, to comply with CSV requirements.

nsAllPearsonY3.csv		
Purpose	•	Output all results of year 3 students, following the fixed-width format prescribed by Pearson for processing.
What to expect	•	A record for each student, covering all responses in all tests the student has sat, with fixed width fields rather than comma-
		delimited fields.



Look out for	•	Students enrolled in Writing but not Numeracy.
	•	Scores for individual items add up correctly.

	nswAllPearsonY5.csv		
Purp	ose	•	Output all results of year 5 students, following the fixed-width
			format prescribed by Pearson for processing
Wha	t to expect	•	A record for each student, covering all responses in all tests the
			student has sat, with fixed width fields rather than comma-
			delimited fields.
Look	out for	•	Scores for individual items add up correctly.

nswAllPearsonY7.csv		
Purpose	•	Output all results of year 7 students, following the fixed-width format prescribed by Pearson for processing
What to expect	•	A record for each student, covering all responses in all tests the student has sat, with fixed width fields rather than commadelimited fields.
Look out for	•	Scores for individual items add up correctly.

nswAllPearsonY9.csv		
Purpose	•	Output all results of year 9 students, following the fixed-width format prescribed by Pearson for processing
What to expect	•	A record for each student, covering all responses in all tests the student has sat, with fixed width fields rather than commadelimited fields.
Look out for	•	Scores for individual items add up correctly.

nswWritingPearsonY3	CSV
Purpose	Output the writing results of year 3 students, following the fixed-width format prescribed by Pearson for processing.     Because no students are registered in the platform for Year 3     Writing, the report outputs demographic information for Year 3     Numeracy students instead, to save effort.
What to expect	A record for each student, with fixed width fields rather than comma-delimited fields.
Look out for	<ul> <li>Students enrolled in Writing but not Numeracy.</li> <li>There should be no writing results included in the report, since none are present in the RRD file: the file is to be used as a template to be populated by merging the writing results in, out of band.</li> </ul>

nswWritingPearsonY5.csv		
Purpose	<ul> <li>Output the writing results of year 5 students, following the fixed-width format prescribed by Pearson for processing</li> </ul>	



What to expect	•	A record for each student, with fixed width fields rather than comma-delimited fields.
Look out for	•	There should be no writing results included in the report, since none are present in the RRD file: the file is to be used as a template to be populated by merging the writing results in, out of band.

nswWritingPearsonY7.	csv
Purpose	<ul> <li>Output the writing results of year 7 students, following the fixed-width format prescribed by Pearson for processing</li> </ul>
What to expect	• A record for each student, with fixed width fields rather than comma-delimited fields.
Look out for	<ul> <li>There should be no writing results included in the report, since none are present in the RRD file: the file is to be used as a template to be populated by merging the writing results in, out of band.</li> </ul>

nswWritingPearsonY9	.csv	
Purpose	•	Output the writing results of year 9 students, following the fixed-width format prescribed by Pearson for processing
What to expect	•	A record for each student, with fixed width fields rather than comma-delimited fields.
Look out for	•	There should be no writing results included in the report, since none are present in the RRD file: the file is to be used as a template to be populated by merging the writing results in, out of band.

actSystemDomainScores.csv		
Purpose	•	Reports raw and scaled scores for each student, year level, domain, parallel path, and participation
What to expect	•	One row per student per test domain
Look out for		

saHomeschooledTests.csv		
Purpose	Reports on test attempt status for home schooled students	
What to expect	A record for each student, including test attempt status and	
	Reporting school details.	
Look out for		

### **5.4 Split Reports**

By default, NAPRRQL generates only reports covering the entirety of the data it has ingested. However, NAPRRQL also has functionality that can break down reports according to school, domain, and/or year level, according to how it is configured, and output to a separate folder (by default out\_split). This functionality replaces the out\school\_reports reports generated in previous versions of NAPRRQL, which only allowed breakdown according to school.



In order to ensure that reports are broken down, edit the file <code>config\_split\config.toml</code>, to read <code>Enabled = true</code> under the <code>[Splitting]</code> heading, instead of <code>Enabled = false</code>. The line <code>Schema = ["School", "YrLevel", "Domain"]</code> indicates that, wherever possible, reports will be broken down by all three of School, Year Level, and Domain: so any one report file in the broken down version will only contain results applicable to a single school, a single year level, and a single domain. Reports will be filed in a subfolder relevant to its contents. (For example, the subfolder <code>out\_split\21212\3\Numeracy</code> will contain reports that include only results for Year 3 Numeracy tests in the school with ACARA ID 21212.) If you require fewer levels of breakdown, remove one or two of the options.

If a report cannot be broken down by domain, because it contains columns relating to multiple domains, its domain folder will be named AllDomains.

Splitting functionality only applies to those reports whose configuration file (under config) includes as its first three fields "School" = "CalculatedFields.SchoolId", "YrLevel" = "CalculatedFields.YrLevel", and "Domain" = "CalculatedFields.Domain". If the config file does not have those fields at the start, it cannot be processed by the report splitter, and it will be ignored. For example, the report configuration file config\ActSystemDomainScores.toml does include those fields, so system\_reports\ActSystemDomainScores.csv can be split. The report configuration file config\SystemCodeframe.toml does include those fields, so system\_reports\SystemCodeframe.csv cannot be split.

### 5.5 Item Printing

To generate **itemResults.csv**, run **naprrql.exe -itemprint** on Windows, **naprrql --itemprint** on Linux and Macintosh. This generates a CSV report of all individual item responses for all domains except for Writing (which is generated instead in the QA report itemWritingPrinting.csv). There is one row for each item responded to by a student.

This creates the following reports within the folder item\_printing (under the out folder).

itemPrinting.csv	
Purpose	<ul> <li>Reports one row of response data per student per test item presented within a NAPLAN test</li> <li>Detailed information which can be used for ingest into data analysis systems</li> </ul>
What to expect	Very large report
	This report excludes writing
Look out for	

nswltemPrinting.csv	
Purpose	• Reports item responses for each item responded to, against the student PSI, following NSW TAA format requirements
What to expect	A record for each item response
Look out for	



qcaa_napo_student_responses.csv		
Purpose	•	Export RRD to QCAA database table
What to expect	•	One row for each individual student item response contained in NAPStudentReponseSet
Look out for		

PrintAll.csv	
Purpose	<ul> <li>Reports all item responses for all tests sat by a student, following NSW TAA and QCEC format requirements</li> </ul>
What to expect	<ul> <li>A record for each student, including all item responses in all tests</li> </ul>
Look out for	<ul> <li>Very large number of columns: the report has a fixed number of columns, and allows 30 items per testlet, with 3 testlets per test (4 for Yr 7 and 9 Numeracy).</li> </ul>



#### 5.6 XML

Note: This functionality generates modified RRD XML file/s and it is recommended to be used only after reading the below guidance.

This function is used to re-extract redacted xml from the Results and Reporting dataset as both a single file per ingest (typically a single RRD) AND a separate XML file per school (based on ACARAID).

The supplied default naprrql.toml file by default redacts the following values:

- Student Item Response
- Item Correct Answer

for all tests except Writing set.

Run **naprrql.exe -xml** on Windows, **naprrql --xml** on Linux and Macintosh.

naprrql --xml: Outputs all ingested NAPRR records in XML format. This outputs both a single file for
the entire sector, as out\redacted\_xml\sif.xml, and one file per school in a folder named for
the ACARA ID of the school, as out\redacted\_xml\{ACARID}\sif.xml. All school-specific XML
files include the same codeframe information, as well as student and response data specific to the
school; so the school-specific XML files are self-contained.

<u>IMPORTANT:</u> If you want the XML output to reflect the full contents of the input XML file, you *must* remove all entries from the XMLFilter element in the **naprrql.toml** file (the supplied **naprrql.toml** file contains entries to demonstrate the redaction functionality).

The XML follows the SIF/XML schema just like the output of the National Assessment Platform. In particular, elements are redacted by setting their xsi:nil attribute to true, rather than removing the element from the file. **However it has the following differences**:

- There are no container elements, such as StudentPersonals or NAPTests (although the
  container elements are not used consistently in the source XML anyway). (These container
  elements are also no longer going to be generated by the National Assessment Platform as
  of 2019.)
- Empty elements like <StateProvince/> will have space inserted between the tag name and the />.
- If an element in the source file is already marked as redacted or missing, by setting its xsi:nil attribute to true (e.g. <GridLocation xsi:nil="true" />), it will simply be left out of the XML output.
- Objects will not necessarily occur in the same sequence in the output file as they do in the source file.

You can set elements to be redacted in the XMLFilter element in the **naprrql.toml** file. The XMLFilter element is an array of paths of elements to be redacted, in XPath notation; e.g. /NAPTest/TestContent/DomainBands/Band1Upper,



/NAPTestlet/TestItemList/TestItem[1]/TestItemLocalId. All paths should be prefixed with /followed by the filtered object name.

We have provided some sample values in the **naprrql.toml** provided with the downloaded program. **IMPORTANT:** If you want the XML output to reflect the full contents of the input XML file, you *must* remove all entries from the XMLFilter element in the **naprrql.toml** file. The supplied **naprrql.toml** file contains entries to demonstrate the redaction functionality, including two sample redaction sets (the second is commented out).

### **5.7 DAC/PNP codes**

Note: This functionality modifies the RRD and is only recommended to be used with guidance from the NSIP development team.

This function adds DAC codes from a CSV file into the RRD extract currently ingested into NIAS, and outputs the patched RRD extract as an XML file, using the same conventions as the **-xml** option. (The XML file is output as out\sif.xml.) The CSV file is expected to be the report out\system\_reports\systemPNPEvents.csv generated by **naprrql** -report, or a subset of rows from that report.

Run naprrql.exe —pnpadd FILENAME.CSV on Windows, naprrql -- pnpadd FILENAME.CSV on Linux and Macintosh, where FILENAME.CSV is the CSV file containing the DAC codes, derived from systemPNPEvents.csv.



## 5.8 Reports available via NAPRRQL user interface

These reports are available using the NIAS web interface following the ingest of data and the generation of school reports. Instructions for generating and using these reports are in <u>section 3</u> of this document.

School Sco	ore Summary
Purpose	<ul> <li>Displays for selected school all domains for all year levels:</li> </ul>
	<ul> <li>School Average</li> </ul>
	<ul> <li>Jurisdiction Average</li> </ul>
	<ul> <li>NationalAverage</li> </ul>
	<ul> <li>Top National 60%</li> </ul>
	o Bottom National 60%
What to expect	Filters available for Year level
	Can drill down on individual rows to view information
	graphically
	Report can be downloaded as csv file

Student Domain	Scores
Purpose	Displays for selected school scores for each student for each domain      Rawssere
	<ul> <li>Raw score</li> <li>Scaled Score</li> <li>Scaled Score Std Error</li> <li>Domain Band</li> <li>Proficiency</li> </ul>
What to expect	<ul> <li>Filters available for Year level and domain</li> <li>Can drill down on individual rows to view information graphically</li> <li>Report can be downloaded as csv file</li> </ul>

Student Participation		
Purpose	•	Displays participation codes for each student for each domain
What to expect	•	Filters available for Year level
	•	Can drill down on individual rows to view each domain test details as well as exemption, disruptions and DAC/PNP codes Report can be downloaded as csv file

NAPLAN Codeframe	
Purpose	<ul><li>Displays for each year level and domain:</li><li>Subdomain</li></ul>
	<ul><li>Node</li><li>Testlet Name</li></ul>
	o Item Name
What to expect	Can drill down on individual rows to view further information
	on Content, Writing Rubric and Scoring



# **Section 6 Support**

## 6.1 Support

Please contact NSIP directly at <a href="mailto:info@nsip.edu.au">info@nsip.edu.au</a> or Phone: +61 3 9910 9827 for support

To be notified of updates to the NIAS tools, subscribe to notifications on github: <a href="https://github.com/nsip/nias2/releases">https://github.com/nsip/nias2/releases</a>