SMARTER REPORTING TEST RESULTS TRANSMISSION FORMAT

Revision History for Current Version

Revision Description	Date

3.0: Annual Update includes:
• Grammatical and spelling fixes.
• Added clarifying ISO date standards and updated language ISO standards.
• Term "Acceptable Values" changed to "Compatible Values" to clarify the values are compatible with the RDW.
• Clarification to definitions and business rules.
• Added Compatible Value ADEL for EnglishLanguageAcquisitionStatus
• Summative and Interim WER Score Updates
   o Notes clarifying WER Scores for Summative Assessments are submitted at the Test -> Opportunity -> Score level. measureOf and measureLabel for Summative WER Scores added in Table 13.
   o Notes clarifying WER Scores for Interim Assessments will continue to be submitted at the Test -> Opportunity -> Item-> ScoreInfo level (Table 19).
• Summative and Interim Condition Code Updates
   o Condition codes for Summative Assessments are submitted at the Test -> Opportunity -> Score level. measureOf and measureLabel for added (Table 13).
   o Notes clarifying Condition Codes for Interim Assessments will continue to be submitted at Test -> Opportunity -> Item-> ScoreInfo level (Table 19).
• Generic subscore variables added to Table 13 for non-SB assessments.
	03/19/2021

Purpose

The purpose of this document is to provide a format specification describing the output of a Test Delivery System (TDS) or Test Integration System (TIS) which feeds student result data into the Smarter Balanced Reporting Data Warehouse (RDW) of the Smarter Reporting System (SRS). The specification includes a table describing each XML node and attribute. No matter the TDS, the RDW requires student test result information to be ingested in this format. In addition, the XSD and sample XML files are available to support accurate, valid transmission of student test results.

Test Results Data Flow Overview

This document describes the data interface between a member service provider's Test Integration component and the Reporting Data Warehouse.

The Test Integration component receives the completed assessment from Test Delivery System, delivers responses to external scoring engines, and receives and collates results from external scoring engines. The Test Results Transmission (TRT) Specification for Reporting is written in broad terms to allow the highest number of scenarios to be covered. However, it should be noted, that this document cannot cover every scenario given the different reporting requirements of various states.

The information in a TRT is used in several capacities including reporting scores to educators, and analytics to evaluate test efficiency. Some TDS field requirements change depending on the type of test, use of data, and requirements of the client. The transmission of PII data and/or de-identified data may change requirements as well.

Therefore, a best practice is for Service Providers and Smarter Balanced to conduct a TRT mapping review to provide a more granular discussion of each field and compatible values.

Preparing for Ingest

Prior to starting initial student test results transmission, Smarter Balanced and the Service Provider will complete a TRT mapping review to support the development of a valid TRT XML. Service Providers and Smarter Balanced will review the following TRT specification and resolve incompatible values, new values, or fields that require clarification.

Next, the Service Provider and Smarter Balanced will review subject and test configurations for non-Smarter Balanced assessments to develop the subject and test definition files used in the Reporting Data Warehouse (RDW). Subject definition files define the unique characteristics of a subject. Test definition files define the specific scoring information for an assessment in a given year. TRTs are validated against the subject and test definition files during ingestion. Subject and test definition files for Smarter Balanced assessments are developed following the naming conventions and

configurations as set forth by the Smarter Balanced produced test package (these are noted in the TRT specification below).

Data Transmission Process

Once the TRT mapping exercise and subject and test configurations are complete and validated, the standardized data transmission process between Smarter Balanced and the Service Provider is described below in Figure 1. During each step listed below, Smarter Balanced will notify the Service Provider when the system is ready to accept TRTs and into which environment to submit them. The Service Provider will notify Smarter Balanced when they transmit and provide totals of number of TRTs submitted upon completion to validate receipt and reconciliation.
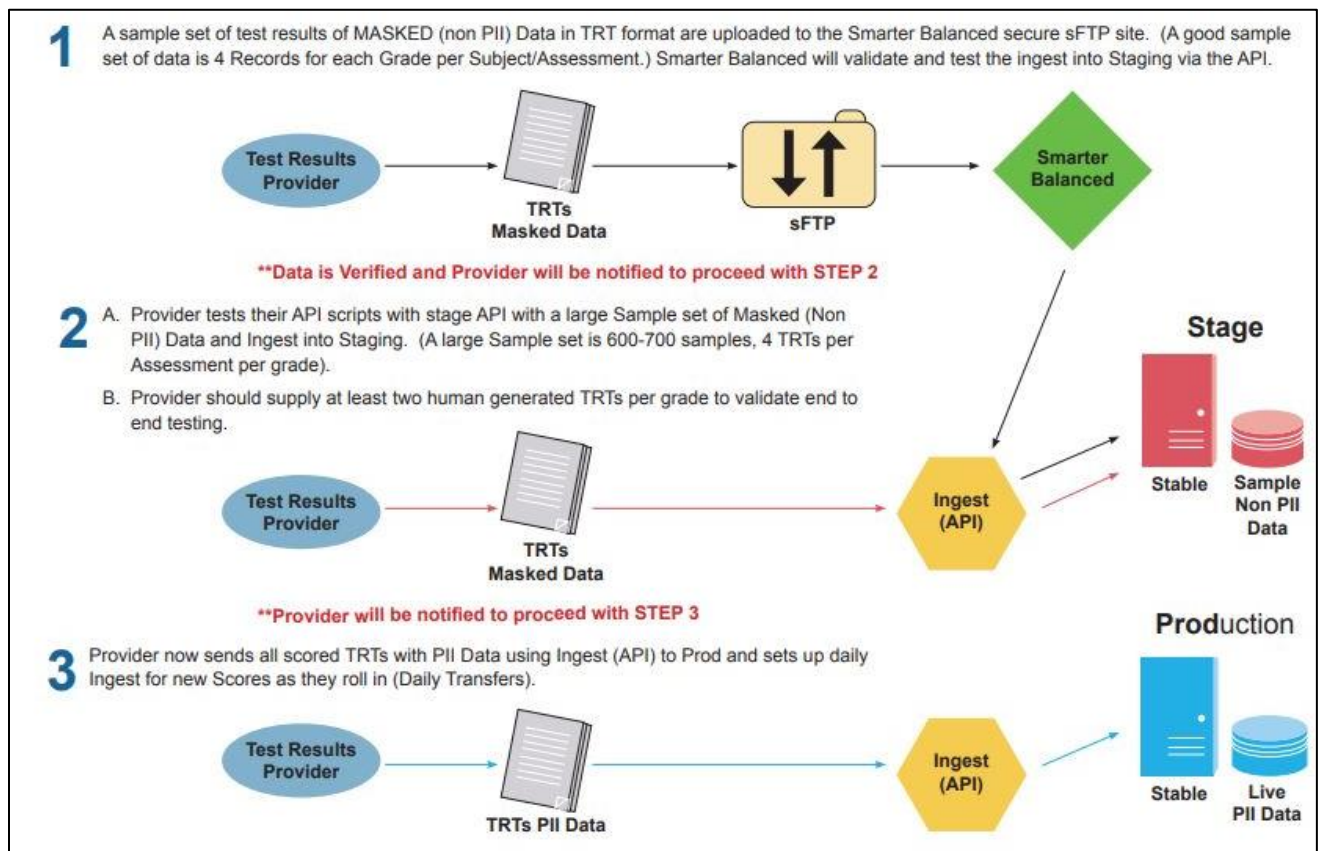
Figure 1. Assessment Ingest Process

Step 1 in the graphic shows the testing of masked or generated TRT samples. These non-PII data samples are posted to the sFTP server for Smarter Balanced to review and validate for errors. Smarter Balanced will test the samples and confirm the formatting is corrected based on the agreed TRT mapping.

In Step 2, the Service Provider sends masked or generated TRT samples (to a testing environment) to validate the successful transmission of TRTs using REST API protocols. Once Smarter Balanced completes the quality check in Step 2, Smarter Balanced will inform the Service Provider when the system is ready for Step 3.

In Step 3, the final TRTs will be transmitted into the data warehouse using the API to the Production environment. At the end of transmission, the Service Provider and Smarter Balanced will reconcile totals and review error reports to ensure the transmissions were successful.

Test Integration Format

Test Integration XML Output Format

The following tables provide information regarding the XML output format and its associated XSD, such as the allowable values, sizes, and descriptions, as well as any standards alignment.

The fields in the following tables use these conventions:

- **Case sensitivity**: TDS Field names are case sensitive and follow the guideline that the XML *Node/Element* is in UpperCamelCase, while node *attributes* are in lowerCamelCase.
- **Order sensitivity**: TDS Fields are not order-sensitive.
- **Non-required (optional) fields**: By default, these fields do not need to be included in the XML file. A missing optional field is simply treated as not present or not applicable. If an optional field is included in the XML file, it must meet the data element and value restrictions for that field.
- **Cardinality**: The number of possible instances of a particular node is defined clearly in the XSD.
- **Dates**: Dates are formatted based on ISO 8601. Example: 2021-05-08T13:26:45.748000 or YYYY-MM-DD

CEDS References

The reference columns in the following tables contain footnotes to the appendix at the end of the document. The appendix contains the links to the Common Education Data Standards (CEDS) references that are used to determine appropriate standardization data.

Test Result Transmission (TRT) Specification

TDS Report: Test

Table 1 provides the XML Output Format for the XML Hierarchy TDS Report: Test. Table 2 provides clarification and definitions to some compatible values.

Table 1. Test Integration XML Output Format (TDS Report: Test)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
name	Name of the test. All test names will be reviewed and approved by Smarter Balanced prior to transmission.	xsd: token	Required; Unique to the RDW for each test	250	Smarter Balanced test names will match the Test Packages: (SBAC)-Assessment-Subject-SubjectCategory-Grade-AcademicYear.	SBAC-IAB-ELA-Editing-11-2020-2021	1
subject	Code referencing the content area of test administered. (e.g., ELA, Math)	xsd: string	Required; Unique to the RDW for each test	10 (min: 3)	Alphanumeric Must match assessment package. Smarter Balanced assessment values are ELA and Math.	ELA, Math, ELPAC	
testId	The Test Authoring ID of the test, independent of client, season, and year. All testIds will be reviewed and approved by Smarter Balanced prior to transmission.	xsd: token	Required; Unique by test	255	For Smarter Balanced tests the testID originates in the Test Package.	SBAC-IAB-ELA-Editing-11	2
bankKey	Key identifying the item bank of the associated test items. For Smarter Balanced assessments, the bankKey is 200.	xsd: unsigned int	Required	8	Positive 32-bit integer	200	

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
handScoreProject	If this test has items that are scored by hand, this is the ID of the hand score project (either in own hand scoring center, or an ID to identify a subcontractor's hand scoring project).	xsd: unsigned int	Optional	8	Positive 32-bit integer		
contract	The name of the Service provider's contract with the client.	xsd: token	Optional	100	One or more printable ASCII characters	ELPAC, CAASPP, ELPA	
mode	The method of how a student takes the assessment. Values are defined in the Test Compatible Values Table (Table 2).	xsd: token	Required	50	Online Paper Scanned	Online	
grade	The grade level the assessment is designed to be taken.	xsd: token	Required	100	See Test Compatible Values (Table 2) Prepend leading zero if less than 2 digits.	03	3
assessmentType	This field represents the assessment purpose such as Summative or Interim.	xsd: token	Required	20	Interim Summative	Interim	4
academicYear	Academic year in which the test is given in YYYY format.	xsd: integer	Required	4	1900 <= YYYY <= 9999	A test given during academic year 2020-21 would be coded 2021.	5
assessmentVersion	Number identifying the version of the assessment in order to track changes made to an assessment.	xsd: token	Optional	30	Alphanumeric string	abcd12345	

Compatible Values for Test Section

Table 2. Test Section Compatible Values and Definitions

XML Hierarchy	TDS Field Name (attribute)	Acceptable Value	Definition
TDS Report: Test	mode	Online	A student took the test using a computer system.
		Paper	The student took the test on paper and someone entered the answers into the system.
		Scanned	Use of scantron.
TDS Report: Test	grade	T	Infant/toddler
		PR	Preschool
		PK	Prekindergarten
		TK	Transitional Kindergarten
		KG	Kindergarten
		01	First grade
		02	Second grade
		03	Third grade
		04	Fourth grade
		05	Fifth grade
		06	Sixth grade
		07	Seventh grade
		08	Eighth grade
		09	Ninth grade
		10	Tenth grade
		11	Eleventh grade
		12	Twelfth grade
		13	Grade 13

XML Hierarchy	TDS Field Name (attribute)	Acceptable Value	Definition
		PS	Postsecondary
		UG	Ungraded

TDS Report: Examinee

Table 3 provides the XML Output Format for the XML Hierarchy TDS Report: Examinee. Table 4 provides a list XML Output Format for the XML Hierarchy TDS Report: Examinee: examineeAttributes including the four TDS fields that will be submitted for each examineeAttribute submitted in a TRT. Table 5 provides a list of acceptable examineeAttributes names and values.

Table 6 provides the XML Output Format for the XML Hierarchy TDS Report: Examinee: examineeRelationships.

Table 3. Test Integration XML Output Format (TDS Report: Examinee)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
key	Internal examinee key	xsd: unsigned long	optional	16	Positive 64-bit integer		
isDemo	This field allows a test to be marked as a demonstration TRT.	xsd: boolean	optional	5	1 – True, demo user 0 – False, real student		

TDS Report: Examinee: examineeAttributes

The examineeAttribute values are the same as used for test registration. In addition to required fields, any student demographic data reported in the Smarter Reporting System must be transmitted in the examineeAttribute section for each TRT. For example, if the member wishes to report to their users a student's Primary Language, then the appropriate attribute must be included in the TRT XML. The following four fields in Table 4 will be submitted for each attribute from Table 5 transmitted in a TRT.

Table 4. Test Integration XML Output Format (TDS Report: Examinee: examineeAttribute)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
name	Name, value, context, and contextDate fields repeat for each attribute provided. See Examinee Attributes (Table 5) for required and optional name and values.	xsd: token	Required for each name field transmitted. See Examinee Attributes (Table 5) for required and optional attributes.	See Examinee Attributes (Table 5)	See Examinee Attributes (Table 5)	Birthdate	6-31
value	An acceptable value from Examinee Attributes (Table 5) for attribute name submitted.	xsd: token	Required for each name field transmitted. See Examinee Attributes (Table 5) for required and optional attributes.	500	See Examinee Attributes (Table 5)	2010-09-01	
context	Identifies when the attribute is submitted. Initial is before scoring phase has been validated. Final is transmission upon the scoring phase being finalized.	xsd: token	Required for each name field transmitted. See Examinee Attributes (Table 5) for required and optional attributes.	50	INITIAL FINAL	FINAL	
contextDate	Date of the context field submission.	xsd: dateTime	Required for each name field transmitted. See Examinee Attributes (Table 5) for required and optional attributes.	23	date+time in ISO 8601 format	2019-05-08T13:26:45.748000	

Table 5. examineeAttribute Table

TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Width	Compatible Values	Business Rules	CEDS Ref
name	LastOrSurname	Last name of the student.	xsd: token; alphanumeric / special	Required	35	One or more printable ASCII characters		6
name	FirstName	First name of the student.	xsd: token; alphanumeric / special	Required	35	One or more printable ASCII characters		7
name	MiddleName	Middle name of the student.	xsd: token; alphanumeric /special	Required if available	35	One or more printable ASCII characters		8
name	Birthdate	The year, month, and day on which a person was born, in the format YYYY-MM-DD (zero padded)	xsd: string; Numeric+dash	Required if available	10	1900 <= YYYY <= 9999 01 <= MM <= 12 01 <= DD <= 31	Prepend leading zero if less than 2-digit month or day	9
name	StudentIdentifier	State assigned student Identifier which is unique within that state. Every student should have a unique SSID within their state.	xsd: token; alphanumeric	Required	40	One or more printable ASCII characters		10

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TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Width	Compatible Values	Business Rules	CEDS Ref
name	AlternateSSID	A State assigned student Identifier which is unique within that state. This identifier is used by states that do not wish to share student personal identifying information outside of state-deployed systems. Components sending data to Consortium-deployed systems would use this alternate identifier rather than the student's SSID.	xsd: token; alphanumeric	Optional	50	One or more printable ASCII characters	Do not validate SSIDs differently across different states.	
name	GradeLevelWhenAssessed	Student's enrolled grade.	xsd: token; alphanumeric	Required	2	See Examinee Compatible Values (Table 8)	Prepend leading zero if less than 2 digits.	11
name	Sex	Student's identified gender.	xsd: token; enum	Required	6	Male Female Nonbinary Neutral		12
name	HispanicOrLatinoEthnicity	Hispanic Ethnic Flag	xsd: token; enum	Required	3	Yes No	At least one race field must be marked Yes	13
name	AmericanIndianOrAlaskaNative	American Indian/ Alaska Native Flag	xsd: token; enum	Required	3	Yes No	At least one race field must be marked Yes	14
name	Asian	Asian Flag	xsd: token; enum	Required	3	Yes No	At least one race field must be marked Yes	15

TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Width	Compatible Values	Business Rules	CEDS Ref
name	BlackOrAfricanAmerican	African American Flag	xsd: token; enum	Required	3	Yes No	At least one race field must be marked Yes	16
name	White	White Flag	xsd: token; enum	Required	3	Yes No	At least one race field must be marked Yes	17
name	NativeHawaiianOrOtherPacificIslander	Native Hawaiian or Pacific Islander Flag	xsd: token; enum	Required	3	Yes No	At least one race field must be marked Yes	18
name	DemographicRaceTwoOrMoreRaces	A person having origins in any of more than one of the racial groups.	xsd: token; enum	Required	3	Yes No	At least one race field must be marked Yes	19
name	Filipino	Filipino Flag	xsd: token; enum	Optional	3	Yes No	At least one race field must be marked Yes	
name	IDEAIndicator	Student enrolled in IEP.	xsd: token; enum	Required	3	Yes No	Cannot be blank	20
name	LEPStatus	Student identified as LEP.	xsd: token; enum	Required	3	Yes No		21
name	EnglishLanguageAcquisitionStatus	Student identified as LEP.	xsd: token; enum	Optional	4	See Examinee Compatible Values (Table 8)	This field is for California Longitudinal Pupil Achievement Data System (CALPADS). It replaces the LEPStatus field.	21

TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Width	Compatible Values	Business Rules	CEDS Ref
name	Section504 Status	Student with 504 plan.	xsd: token; enum	Required	22	Yes, No Unknown/ Cannot Provide		22
name	EconomicD isadvantag eStatus	An indication that the student met the State criteria for classification as having an economic disadvantage.	xsd: token; enum	Required	3	Yes No	Cannot be blank	23
name	LanguageC ode	The code for the specific language or dialect that a student uses to communicate.	xsd: token; enum	Optional	3	see http://ceds.ed.go v/language Codes.aspx	Must match SRS language code table.	24
name	EnglishLan guageProfi ciencyLeve l	An indication of the progress made by a student toward English proficiency.	xsd: token; Alphanumeric	Optional	20	One or more printable ASCII characters. Compatible Values have changed to non-enum, alphanumeric entry.		
name	MilitaryStat us	An indication that the student's parent or guardian is on Active Duty, in the National Guard, or in the Reserve component of the US military service.	xsd: token enum	Optional	25	NotMilitaryConn ected ActiveDuty NationalGuardO rReserve Unknown		25

TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Width	Compatible Values	Business Rules	CEDS Ref
name	MigrantStatus	Persons who are, or whose parents or spouses are, migratory agricultural workers (including migratory dairy workers, or migratory fishers) and who in the preceding 36 months, in order to accompany such parents or spouses or to obtain themselves temporary/ seasonal employment in agricultural or fishing work have: (A) moved from one LEA to another; (B) in a state that comprises a single LEA, moved from one administrative area to another within such LEA; or (C) reside in an LEA of more than 15,000 square miles, and migrate a distance of 20 miles or more to a temporary residence to engage in a fishing activity.	xsd: token enum	Optional	3	Yes No <blank>		26

TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Width	Compatible Values	Business Rules	CEDS Ref
name	FirstEntryDateIntoUSSchool	The year, month and day of a person's initial enrollment into a United States school.	xsd:string; Numeric+dash	Optional	10	YYYY-MM-DD \<blank\>		27
name	LimitedEnglishProficiencyEntryDate	The year, month and day a student classified as limited English proficient entered the LEP program.	xsd:string; Numeric+dash	Optional	10	YYYY-MM-DD \<blank\>		28
name	LEPExitDate	The year, month and day a student classified as limited English proficient exited the LEP program.	xsd:string; Numeric+dash	Optional	10	YYYY-MM-DD \<blank\>		29
name	TitleIIILanguageInstructionProgramType	Title III Language Instruction Program Type	xsd: token enum	Optional	27	See Examinee Compatible Values (Table 8)		30
name	PrimaryDisabilityType	The major or overriding disability condition that best describes a person's impairment.	xsd: token enum	Optional	3	See Examinee Compatible Values (Table 8)		31

TDS Report: Examinee: examineeRelationships

Examinee Relationships define the relationship of the student to the organizations (e.g. district, school).

Table 6. Test Integration XML Output Format (TDS Report: Examinee: examineeRelationship)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
entityKey	ART unique identifier for the entity referenced in the examineeRelationship "name" field.	xsd: token	Deprecated in V2.0 on 03/20/2020.	22	Entity identifier + state abbreviation	983685	
name	Name of the entity.	xsd: token	Name, value, context, and contextDate fields repeat for each relationship provided. See Examinee Relationships (Table 7) for required and optional attributes.	60	See Examinee Relationships (Table 7).	DistrictId	32-36
value	Value of the attribute identified by the examineeRelationship "name" fields.	xsd: token	Name, value, context, and contextDate fields repeat for each relationship provided. See Examinee Relationships (Table 7) for required and optional attributes.	40	Must align with ART for the District ID/ School ID. One or more printable ASCII. characters	9998887776 6655	
context	Identifies when the attribute is submitted. Initial is before scoring phase has been validated. Final is transmission after scoring is finalized.	xsd: token	Required for each name field transmitted. See Examinee Relationships (Table 7) for required and optional attributes.	50	INITIAL FINAL	INITIAL	
contextDate	Date of the context field submission.	xsd: dateTime	Required for each name field transmitted. See Examinee Relationships (Table 7) for required and optional attributes.	23	date+time in ISO 8601 format	2014-09-27T17:48:13.917-05:00	

Table 7. examineeRelationship Table

TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Compatible Values	Business Rules	CEDS Ref
name	StateAbbreviation	2-character state code as defined by CEDS and as extended in Compatible Values.	xsd: token; enum	Required	One or more printable ASCII characters.	Must be present in database prior to adding students to it.	32
name	DistrictId	The district responsible for specific educational services and/or instruction of the student.	xsd: token; alphanumeric	Required	One or more printable ASCII characters. Limited to 40 characters.	Must be present in database prior to adding students to it. No special characters. Limit one DistrictID per TRT.	33
name	DistrictName	District Name	xsd: token; alphanumeric / Limited Special Characters	Required	One or more printable ASCII characters. Limited to 60 characters.	Limited special characters allowed: Ampersand Space Comma Hyphen Parenthesis Period Single Quotation mark	34
name	SchoolId	The school responsible for specific education services and/or instruction of the student.	xsd: token; alphanumeric	Required	One or more printable ASCII characters. Limited to 40 characters.	Must be present in database and associated Parent District. No special characters. Limit one SchoolID per TRT.	35

TDS Field Name (attribute)	Attribute (Value)	Attribute Definition	Data Type	Required	Compatible Values	Business Rules	CEDS Ref
name	SchoolName	Institution Name	xsd: token; alphanumeric / Limited Special Characters	Required	One or more printable ASCII characters. Limited to 60 characters.	Limited special characters allowed: Ampersand Space Comma Hyphen Parenthesis Period Single Quotation mark	36
name	StateName	Full state name	xsd: token; alpha	Required	One or more printable ASCII characters State Name: spaces and commas allowed.		
name	StudentGroupName	Name of the student group.	xsd: token; alphanumeric	Optional	One or more printable ASCII characters		

Compatible Values for Examinee Sections

Table 8. Examinee Section Compatible Values and Definitions

XML Hierarchy	TDS Field Name (attribute)	Acceptable Value	Attribute Definition
TDS Report: Examinee: examineeAttribute	name: GradeLevelWhenAssessed	T	Infant/toddler
		PR	Preschool
		PK	Prekindergarten
		TK	Transitional Kindergarten
		KG	Kindergarten
		01	First grade
		02	Second grade
		03	Third grade
		04	Fourth grade
		05	Fifth grade
		06	Sixth grade
		07	Seventh grade
		08	Eighth grade
		09	Ninth grade
		10	Tenth grade
		11	Eleventh grade
		12	Twelfth grade
		13	Grade 13
		PS	Postsecondary
		UG	Ungraded
TDS Report: Examinee: examineeAttribute	name: EnglishLanguageAcquisitionStatus	EL	English Learner

XML Hierarchy	TDS Field Name (attribute)	Acceptable Value	Attribute Definition
		EO	English Only
		IFEP	Initial Fluent English Proficient
		FREP	Fluent Reclassified English Proficient
		TBD	To Be Determined
		ADEL	Adult English Learner
TDS Report: Examinee: examineeAttribute	name: TitleIIILanguageInstructionProgramType	DualLanguage	Duel language
		TwoWayImmersion	Two-way immersion
		TransitionalBilingual	Transitional bilingual
		DevelopmentalBilingual	Developmental bilingual
		HeritageLangague	Heritage language
		ShelteredEnglishInstruction	Sheltered-English instruction
		StructuredEnglishImmersion	Structured-English immersion
		SDAIE	Specially designed academic instruction delivered in English (SDAIE)
		ContentBasedESL	Content based ESL
		PullOutESL	Pull out ESL
		Other	Other
TDS Report: Examinee: examineeAttribute	name: PrimaryDisabilityType	AUT	Autism
		DB	Deaf/Blindness
		DD	Developmental delay
		EMN	Emotional disturbance
		HI	Hearing impairment
		ID	Intellectual disability

XML Hierarchy	TDS Field Name (attribute)	Acceptable Value	Attribute Definition
		MD	Multiple disabilities
		OI	Orthopedic impairment
		OHI	Other health impairment
		SLD	Specific learning disability
		SLI	Speech or language impairment
		TBI	Traumatic brain injury
		VI	Visual impairment
TDS Report: Examinee: examineeRelationship	Name: StateAbbreviation	AA	Armed Forces Americas
		AE	Armed Forces Africa, Canada, Europe, and Middle East
		AP	Armed Forces Pacific
		TS	Test State
		OT	Other
		Two-Character US State and Territory Identifiers	Defined by CEDS

TDS Report: Opportunity

This section defines the opportunity and condition of a single administration of the assessment for a student. Accommodations, Scores, and Generic Variables are subsections of Opportunity that are potentially submitted for both summative and interim assessments. The subsections covering Segments, Items, and further Score attributes are specific for interims.

Table 9. Test Integration XML Output Format (TDS Report: Opportunity)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
server	Name of the Test Delivery System (TDS) server used to administer this test.	xsd: token	Optional	128	One or more printable ASCII characters.		
database	Name of the Test Delivery System (TDS) database used to administer this test.	xsd: token	Optional	128	Zero or more printable ACSII characters.		
key	A globally unique identifier for the opportunity. Required to be unique by student and opportunity.	xsd: token	Required	36	One or more printable ASCII characters.		
oppId	A unique identifier (within client) of the test opportunity. Required to be unique by student and opportunity.	xsd: unsigned Long	Required; this field must be a unique field.	16	Positive 64-bit integer		
startDate	Date and time the student started the opportunity.	xsd: dateTime	Required	23	date+time in ISO 8601 format	2020-10-20T17:48:13.917-05:00	37
status	Status of the opportunity.	xsd: token	Required	50	See Opportunity Compatible Values (Table 10)		
validity	Validity of the individual test result. Valid means the student's responses are valid whereas invalid means the student's responses may be compromised (e.g., cheating).	xsd: token	Required	7	valid invalid		
completeness	If the opportunity meets the criteria of test completion. Note: Not all assessments require all questions to be answered to be considered complete.	xsd: token	Required	8	Partial Complete		

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
opportunity	A counter for the number of times a student has taken this test.	xsd: unsigned Int	Required	8	Positive 64-bit integer		
statusDate	The date and time the status of this opportunity last changed. Initially, this is close to the opportunityDateCompleted, but subsequent submission will require a later date for the system to process (e.g. for resets, invalidations, hand scores being added).	xsd: dateTime	Required	23	date+time in ISO 8601 format		
dateCompleted	Date the opportunity was submitted for scoring, date of invalidation, or forced completion date.	xsd: dateTime	Required	23	date+time in ISO 8601 format		38
pauseCount	Number of times Examinee paused the opportunity.	xsd: unsigned Int	Required	8	Positive 32-bit integer		
itemCount	Number of items in the XML file. Note: these are presented items plus prefetched items (there could be items the student never saw).	xsd: unsigned Int	Required	8	Positive 32-bit integer		
ftCount	Number of field test items in count.	xsd: unsigned Int	Required	8	Positive 32-bit integer		
abnormalStarts	The number of times the test was restarted after an abrupt end to a test (e.g. browser, crash, power shutdown, network loss).	xsd: unsigned Int	Required	8	Positive 32-bit integer		
gracePeriodRestarts	The number of times the student paused the test and restarted it within the grace period (20 minutes).	xsd: unsigned Int	Required	8	Positive 32-bit integer		

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
TAID	ID of the Test Administrator that administered this test (often the TA's e-mail address).	xsd: token	Optional; De-identified data: never	128	Zero or more printable ACSII characters.		39
TAName	Name of the Test Administrator that administered this test.	xsd: token	Optional; De-identified data: never	128	Zero or more printable ACSII characters.		
sessionId	Test Delivery System's ID for the session in which this test was taken.	xsd: token	Optional; De-identified data: never	128	Zero or more printable ACSII characters.		
windowId	The ID of the window in which the test was administered (e.g., EOC-Spring)	xsd: token	Required	50	One or more printable ASCII characters.		
windowOpportunity	A counter that counts the number of times a student has taken this test in this window.	xsd: token	Optional	8	Zero or more printable ACSII characters.		
completeStatus	Deprecated field. Completeness is the required field.	xsd: token	Deprecated	8	Partial Complete		
administrationCondition	The type of administration for the opportunity. For interim assessments, the administration is considered either Standardized (SD) or Nonstandardized (NS). For summative assessments the administration is considered valid (Valid) or invalid (IN).	xsd: token	Required	20	Valid IN SD NS		
dateForceCompleted	The date and time a test is forced completed. Depending on client configuration, a force complete is when a student completes the test, but runs out of time prior to choosing to submit the responses.	xsd: dateTime	Optional	8	date+time in ISO 8601 format		

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
clientName	Name of the client this test is administered.	xsd: token	Required	255	One or more printable ASCII characters.	Oregon, California	
assessmentParticipantSessionPlatformUserAgent	A list of product tokens (keywords) with optional comments that identifies the client hardware and software with which the assessment was delivered to the student during the assessment session. Implementation Note: The recommended approach is to store the userAgent string returned as part of an HTTP header.	xsd: string	Online: Required	512	<User-Agent string>	An assessment session delivery via iPad might have "Mozilla/5.0 (iPad; U; CPU OS 3_2_1 like Mac OS X; en-us) AppleWebKit/531.21.10 (HTML, like Gecko) Mobile/7B405" If string unknown, may submit "Online Test"	40
effectiveDate	The first date of the first window for a given assessment.	xsd: string	Optional	10	YYYY-MM-DD, where 2000 <= YYYY <= 9999 01 <= MM <= 12 01 <= DD <= 31	2021-03-01	
testReason	Enables more granular interim reporting.	xsd: string	Optional	255			

Compatible Values for Opportunity Section

Table 10. Opportunity Section Compatible Values and Definitions

XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	Attribute Definition
TDS Report: Opportunity	status	appeal	Test opportunity within a Test Delivery System has been flagged for appeal.

XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	Attribute Definition
		completed (deprecated)	Deprecated in version 1.15 on 05/21/2019.
		expired	Test opportunity within a Test Delivery System has expired
		handscoring	Test opportunity within a Test Delivery System is in the process of being hand scored.
		invalidated (deprecated)	Deprecated in version 1.15 on 05/21/2019.
		paused	Test opportunity within a Test Delivery System has been paused.
		reported	Test opportunity within a Test Delivery System has been reported as a TRT
		reset	Previously reported test opportunity has been reset and the exam is flagged for deletion from RDW.
		scored	Test opportunity within a Test Delivery System has been scored.
		submitted	Test opportunity within a Test Delivery System has been submitted.
TDS Report: Opportunity: Item	format	EBSR	Evidence-based selected response
		EQ	Equation
		ER	Extended Response
		GI	Grid Item
		HTQ	Hot Text Questions
		MC	Multiple Choice
		MI	Match Interaction
		MS	Multi-Select
		SA	Short Answer
		TI	Table Interaction
		TUT	Tutorial Item Type
		WER	Writing Extended Response

XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	Attribute Definition
		WORDLIST	Item containing glossary entries
		Stimulus	Item type used for stimulus passages

TDS Report: Opportunity: Accommodation

The accommodation section defines the codes representing accessibility and accommodation features used by a student during an assessment. All values must be reviewed and approved by Smarter Balanced prior to transmission to ensure the values are compatible with the default schema.

<div align="center">Accessibility Features and Use Codes</div>

For Smarter Balanced exams, Accessibility Features are divided into three categories: Universal Tools, which are made available to all students; Designated Supports, which require pre-authorization by a teacher or administrator; and Accommodations, which require a student to have a documented disability or IEP plan. The Smarter Balanced "Usability, Accessibility, and Accommodations Guidelines" offer more detail about the categories and specific features. Because the file format predates this categorization, the <Accommodation> element is used to report all accessibility feature types. The types whose Compatible Values (codes) begin with TDS_ are accommodations; those beginning with NEDS_ are Non-Embedded Designated Supports; those beginning with NEA_ are Non-Embedded Accommodations.

Raw information regarding accessibility feature use is reported in the <Accommodation> elements as described in the table below (Table 11). For each accommodation used by the student, a derivative "feature use code" is reported in a Score element. In these elements, the "measureLabel" property is set to "accommodation", the "measureOf" property is set to the accommodation type, and the "score" property is set to one of "feature use codes" in the table below. The current open source solution does not track whether the feature was **designated** for a student and only tracks **uses** in select cases. Accordingly, only values 3, 4, 6, 7 and 8 are likely to appear in test results. The other values are defined to provide for future enhancement.

More information for Accessibility Features and Use Codes can be found HERE.

Table 11. Test Integration XML Output Format (TDS Report: Opportunity: Accommodation)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
type	Accommodation or accessibility feature.	xsd: token	Required	510	http://www.smarterapp.org/documents/ISAAP-AccessibilityFeatureCodes.pdf Values are updated in separate document.		41
value	An acceptable accommodation value the accommodation type submitted. Note: There is a one to one relationship between value and code. All values will be reviewed and approved by Smarter Balanced prior to transmission.	xsd: token	Required	510	One or more printable ASCII characters.		42
code	An acceptable code for the accommodation type and value. All codes will be reviewed and approved by Smarter Balanced prior to transmission.	xsd: token	Required	510	One or more printable ASCII characters.		
segment	Segment number in which the accommodation applies. A 0 means the accommodation applies to the entire test (i.e. all segments)	xsd: unsigned Int	Required	8	Positive 32-bit integer, null allowed		

TDS Report: Opportunity: Scores

Table 12. Test Integration XML Output Format (TDS Report: Opportunity: Score)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width (chars)	Compatible Values	Examples	CEDS Ref
measureOf	The set of items this value measures. Usually a strand of an Affinity Group.	xsd: token	Required	150	One or more printable ASCII characters.	See Scores Used by Smarter Balanced Reporting System (Table 13)	
measureLabel	Label of this measure.	xsd: token	Required	150	One or more printable ASCII characters.	See Scores Used by Smarter Balanced Reporting System (Table 13)	
value	Value of the measure.	xsd: token	Required	64	One or more printable ASCII characters.	See Scores Used by Smarter Balanced Reporting System (Table 13)	
standardError	The value of the standard error for the measure.	xsd: token	Required	8	Float, null allowed	See Scores Used by Smarter Balanced Reporting System (Table 13)	

Scores Used by Smarter Reporting System

The Smarter Reporting System accepts scores for both interim and summative assessments as well as scores from Smarter Balanced assessments and other authors. Scores defined in the Opportunity section are not associated with a specific assessment item, but either of the entire opportunity or the results of an non-reported item (as with Smarter Balanced writing performance tasks).Table 13 indicates how these scores and the accommodations appear in the "Score" elements of the TRT XML for each type of score.

For Smarter Balanced assessments, the SRS reports an overall scale score and either three (math) or four (ELA) claim scores. For non-Smarter Balanced assessments, the "generic subscore code" represents non-ELA or Math subscores that will be agreed upon with the member and service provider during the TRT mapping process to ensure the code is compatible. The measureOf field is flexible enough to add other scores, but the measureLabel is limited to the values provided.

This table includes the information for reporting Smarter Balanced summative assessment target scores, writing extended response scores, and condition codes. In interim assessments, these scores are provided in the item section of the TRT (refer to Table 16) as the scores are directly related to a specific item.

Table 13. Scores Used by Smarter Reporting System

measureOf	measureLabel	Value	standardError	Description
Overall	ScaleScore	xsd: int	xsd: int	The overall scale score for the entire test.
Overall	PerformanceLevel	1-4	Not included	Integer value of the achievement level corresponding to the scale score. If null, ScaleScore will also be null.
Overall	Attempted	Y N	N/A	Attemptedness of the opportunity
1	ScaleScore	xsd: int	xsd: int	Math Claim 1 scale score
1	PerformanceLevel	1-4	Not included	Math Claim 1 integer value of the achievement level corresponding to the scale score.
SOCK_2	ScaleScore	xsd: int	xsd: int	Math Claim 2, 4 scale score
SOCK_2	PerformanceLevel	1-4	Not included	Math Claim 2, 4 integer value of the achievement level corresponding to the scale score. If null, ScaleScore will also be null.
3	ScaleScore	xsd: int	xsd: int	Math Claim 3 scale score
3	PerformanceLevel	1-4	Not included	Math Claim 3 integer value of the achievement level corresponding to the scale score. If null, ScaleScore will also be null.
SOCK_R	ScaleScore	xsd: int	xsd: int	ELA Claim 1 scale score
SOCK_R	PerformanceLevel	1-4	Not included	ELA Claim 1 integer value of the achievement level corresponding to the scale score. If null, ScaleScore will also be null.

measureOf	measureLabel	Value	standardError	Description
2-W	ScaleScore	xsd: int	xsd: int	ELA Claim 2 scale score
2-W	PerformanceLevel	1-4	Not included	ELA Claim 2 integer value of the achievement level. If null, ScaleScore will also be null.
SOCK_LS	ScaleScore	xsd: int	xsd: int	ELA Claim 3 scale score
SOCK_LS	PerformanceLevel	1-4	Not included	ELA Claim 3 integer value of the achievement level. If null, ScaleScore will also be null.
4-CR	ScaleScore	xsd: int	xsd: int	ELA Claim 4 scale score
4-CR	PerformanceLevel	1-4	Not included	ELA Claim 4 integer value of the achievement level. If null, ScaleScore will also be null.
"generic subscore code"	ScaleScore	xsd:int	xsd:int	Subscore scale score
"generic subscore code"	PerformanceLevel	1-6	Not included	Integer value of the performance level for the subscore. If null, ScaleScore will also be null.
Target identifier	StudentRelativeResidualScore	xsd: float min: -1.0 max: 1.0	xsd: float	The summed residual between observed and overall student estimated score as defined in the referenced scoring calculation document. SB Target identifier measureOf ELA example: 1-IT|8-11
Target identifier	StandardMetRelativeResidualScore	xsd: float min: -1.0 max: 1.0	xsd: float	The summed residual between observed and standard met score as defined in the referenced scoring calculation document.
Target identifier	ItemCount	1-n	Not included	The number of items that were presented to the student in this target
Target identifier	ItemCountScored	1-n	Not included	The number of items that were scored in this target
Target identifier	RawScore	xsd: int	Not included	Raw score

measureOf	measureLabel	Value	standardError	Description
SOCK_ARGU_ORG	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of argumentative with a trait of organization/purpose.
SOCK_ARGU_CON	RawScore	xsd: int 0-2	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of argumentative with a trait of conventions.
SOCK_ARGU_EVI	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of argumentative with a trait of evidence/elaboration.
SOCK_EXPL_ORG	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of explanatory with a trait of organization/purpose.
SOCK_EXPL_CON	RawScore	xsd: int 0-2	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of explanatory with a trait of conventions.
SOCK_EXPL_EVI	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of explanatory with a trait of evidence/elaboration.
SOCK_INFO_ORG	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of informational with a trait of organization/purpose.
SOCK_INFO_CON	RawScore	xsd: int 0-2	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of informational with a trait of conventions.
SOCK_INFO_EVI	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of informational with a trait of evidence/elaboration.

measureOf	measureLabel	Value	standardError	Description
SOCK_NARR_ORG	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of narrative with a trait of organization/purpose.
SOCK_NARR_CON	RawScore	xsd: int 0-2	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of narrative with a trait of conventions.
SOCK_NARR_EVI	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of narrative with a trait of evidence/elaboration.
SOCK_OPIN_ORG	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of opinion with a trait of organization/purpose.
SOCK_OPIN_CON	RawScore	xsd: int 0-2	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of opinion with a trait of conventions.
SOCK_OPIN_EVI	RawScore	xsd: int 0-4	Not included	Summative Only: ELA Writing Extended Response score for a writing purpose of opinion with a trait of evidence/elaboration.
"Any WER measureOf"	conditionCode	xsd: string (20 char)	N/A	SB Summative Compatible Values: B, L, I, M, T

TDS Report: Opportunity: GenericVariable

Table 14. Test Integration XML Output Format (TDS Report: Opportunity: GenericVariable)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
context	Optional field to be used for unique IDs that are not covered by other TDS fields. Typically used to combine student's opportunity of CAT and PT tests.	xsd: token	Note is optional, but if used all attributes are required.	50	One or more printable ASCII characters.		
name	Identifying name for the ID.	xsd: token	General use	50	One or more printable ASCII characters.		
value	Identifier value	xsd: string	General use	255	One or more printable ASCII characters.		

TDS Report: Opportunity: Segment

This section defines the segments of the assessment and the position of items in the segment and is therefore required for interim assessments. It is optional for summative assessments.

Table 15. Test Integration XML Output Format (TDS Report: Opportunity: Segment)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width (chars)	Compatible Values	Examples	CEDS Ref
id	Segment the item was administered in.	xsd: token	Required for Interims; Optional for Summative	250	One or more printable ASCII characters.		
position	Position of the segment on the test.	xsd: unsigned Int	Required for Interims; Optional for Summative	8	Positive 32-bit integer, null allowed		

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width (chars)	Compatible Values	Examples	CEDS Ref
formKey	The TIMS key of the form (if algorithm=fixedform).	xsd: token	Optional for Interims; Optional for Summative	100	One or more printable ASCII characters.		
formId	If the algorithm is fixedform, then this is the ID of the form for the segment. Otherwise, null.	xsd: token	Optional for Interims; Optional for Summative	150	One or more printable ASCII characters.		
algorithm	Item selection algorithm that was used for this segment.	xsd: token	Optional for Interims; Optional for Summative	50	One or more printable ASCII characters.		
algorithmVersion	Version of the item selection algorithm that was used for this segment.	xsd: token	Optional for Interims; Optional for Summative	50	One or more printable ASCII characters.		

TDS Report: Opportunity: Item

These fields define values that describe items reported in an interim assessment, how they were scored, and other pertinent information. If no item-level data will be reported, this section, subsection, and fields will not be included in the TRT.

Table 16.Test Integration XML Output Format (TDS Report: Opportunity: Item)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
position	Ordinal position of item on test.	xsd: unsigned Int	Required: Interim; Optional: Summative	8	Positive 32-bit integer, null allowed		
segmentId	Should match provided Segment category provided.	xsd: token	Required: Interim; Optional: Summative	250	One or more printable ASCII characters.		

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
bankKey	Item Authoring bank identifying the group of the item for the assessment. Smarter Balanced provides this value for Smarter Balanced tests.	xsd: token	Required: Interim; Optional: Summative	40	One or more printable ASCII characters.		43
key	Item identifier from Item Authoring. Smarter Balanced provides this identifier for Smarter Balanced tests.	xsd: unsigned Long	Required: Interim; Optional: Summative	40	Positive 64-bit integer		
clientId	How client identifies the item.	xsd: token	Optional: Interim; Optional: Summative	80	One or more printable ASCII characters.		
operational	Identifies if the item is operational or a field test.	xsd: unsigned Int	Required: Interim; Optional: Summative	8	1 if operational, 0 if field test.		
isSelected	Whether the student submitted the response for scoring or not.	xsd: unsigned Int	Required: Interim; Optional: Summative	8	0 if not submitted or 1 if submitted.		
format	The item type.	xsd: token	Required: Interim; Optional: Summative	50	See Opportunity Compatible Values (Table 17)		44
score	Number of scorepoints earned by Examinee.	xsd: float	Required: Interim; Optional: Summative	8	Unsigned float, -1 means not scored.		
scoreStatus	Provided by independent item scoring engine.	xsd: token	Optional: Interim; Optional: Summative	50	NOTSCORED SCORED SCORINGERROR WAITINGFORMACHINESCORE		
adminDate	Date and time item was administered to Examinee.	xsd: dateTime	Required: Interim; Optional: Summative	23	date+time in ISO 8601 format		

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
numberVisits	Number of times the student modifies his response to the item.	xsd:unsigned Int	Required: Interim; Optional: Summative	8	Positive 32-bit integer, null allowed		
responseDuration	Total time student spent responding to an assessment item. For multiple items on a page, this value may be divided evenly among the items.	xsd: float	Required: Interim; Optional: Summative	8	Time spent in seconds. Decimals may express fractions of seconds.		
mimeType	MIME type of item response.	xsd: token	Required: Interim; Optional: Summative	255	One or more printable ASCII characters.		
strand	Top level strand in the strand hierarchy the item is on.	xsd: token	Optional: Interim; Optional: Summative	150	One or more printable ASCII characters.		
contentLevel	Lowest level strand in the strand hierarchy the item is a part of.	xsd: token	Optional: Interim; Optional: Summative	150	One or more printable ASCII characters.		
pageNumber	Number of the (online) page the item appears on.	xsd:unsigned Int	Required: Interim; Optional: Summative	8	Positive 32-bit integer		
pageVisits	Number of times the student visited the (online) page this item is on.	xsd: unsigned Int	Required: Interim; Optional: Summative	8	Positive 32-bit integer		
pageTime	Time (in milliseconds) the student spent on the (online) page this item is on.	xsd: int	Required: Interim; Optional: Summative	8	Signed 32-bit integer		
dropped	Whether the item is dropped. If an item was administered but later inactivated, the RDW might receive a new record with this flag turned on.	xsd: unsigned Int	Required: Interim; Optional: Summative	8	0 is not dropped. 1 item is dropped.		

Compatible Values for Item Section

Table 17. Item Section Compatible Values and Definitions

XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	Attribute Definition
TDS Report: Opportunity: Item	format	EBSR	Evidence-based selected response
		EQ	Equation
		ER	Extended Response
		GI	Grid Item
		HTQ	Hot Text Questions
		MC	Multiple Choice
		MI	Match Interaction
		MS	Multi-Select
		SA	Short Answer
		TI	Table Interaction
		TUT	Tutorial Item Type
		WER	Writing Extended Response
		WORDLIST	Item containing glossary entries
		Stimulus	Item type used for stimulus passages

Table 18. Test Integration XML Output Format (TDS Report: Opportunity: Item: Response)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
type	Type of responseValue. 'reference' is used for scanned paper tests where the scanned response is not included, but only a reference to the file containing the scanned response.	xsd: token	Optional unless Paper Pencil then Required	10	value reference		
<node text>	If responseType is 'value' then the actual response. Note that both MC and CR responses are captured here. If responseType is 'reference' then the filename where the scanned response is saved.	xsd: string	Online: Required	unlimited			45
key	Each response will receive a unique identifier key, which will serve as a more accurate way to match it with an excepted score.	xsd: string	Optional	255			
date	Date and time the student responded to the item.	xsd: dateTime	Required	23	date+time in ISO 8601 format		46

Table 19. Test Integration XML Output Format (TDS Report: Opportunity: Item: ScoreInfo)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CED S Ref
scorePoint	Output of the machine scorer giving reasons for the assigned score. Contains dimension scores for certain items.	xsd: float	ScoreInfo element required for Item Types EQ, SA, and WER. Preferred for GI and TI. Optional for all other Item Types.	8	float, -1 allowed		
maxScore	Maximum score point.	xsd: float	If included ScoreInfo element is sent, this attribute is required.	8	float, -1 allowed		
scoreDimension	Identifies score dimension property. This field is used for WER scores for interim assessments.	xsd: token	If included ScoreInfo element is sent, this attribute is required.	255	Conventions Evidence/Elaboration Organization/Purpose Overall		
scoreStatus	Provided by independent item scoring engine.	xsd: token	If included ScoreInfo element is sent, this attribute is required.	22	NotScored Scored ScoringError WaitingForMachineScore		
conditionCode	For hand-scored items and machine-scored NL items. This field is used for WER condition codes for interim assessments.	xsd: string	Optional	20	One or more printable ASCII characters.		
sequence	For computer adaptive assessments, the order in which items were presented to the student.	xsd: string	Optional	255			

TDS Report: Opportunity: Item: ScoreInfo: ScoreRationale

Table 20. Test Integration XML Output Format (TDS Report: Opportunity: Item: ScoreInfo: ScoreRationale)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
	For Short Answer and Writing Extended Response items, this element is used to record the scorer's response from a hand scoring system.	xsd: string	Optional	unlimited			

TDS Report: Opportunity: Item: scoreInfo: Message

Table 21. Test Integration XML Output Format (TDS Report: Opportunity: Item: ScoreInfo: Message)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width (chars)	Compatible Values	Examples	CEDS Ref
	Contains hard-scoring information in JSON format, along with a scorer ID.	xsd: string	Optional	unlimited	JSON formatted string		

Table 22. Test Integration XML Output Format (TDS Report: Opportunity: Item: ScoreInfo: SubscoreList)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
	SubscoreList has no attrs, but can have nested ScoreInfo nodes for multi-dimensional items.	xsd: string	Optional	N/A	Nested <ScoreInfo> elements		

TDS Report: Opportunity: Score

This section is not parsed by the Smarter Reporting system. It is an optional section reserved for prospective non-Smarter Balanced trait scores (e.g., performance tasks) or non-reported data (e.g., summative handscored notes). Any use of this section should be discussed prior to transmission during the TRT mapping process.

Table 23. Test Integration XML Output Format (TDS Report: Opportunity: Score)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
value	The score (or condition code if type isn't final).	xsd: token	Required	10	One or more printable ASCII characters		

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
compName	Name of the component.		Required	50	Dimension: if the score is a dimension score. ScorePoints: if there are no dimensions and it is the score for the whole item. ConditionCodes: if the score value is actional a condition code (typically apply to all dimensions).		
dimension	Identifies score dimension property.		Required	50	One or more printable ASCII characters		
sequence	Used to count backreads. 1 for all other types.		Required	8	One or more printable ASCII characters		
conditionCode	Blank if this record is for a regular score, otherwise list the condition code. Only used for final scores.		Required	10	Positive 32-bit integer		
type	Type of the score.		Required	50	One or more printable ASCII characters		
userId	ID of the scorer.		Required	50	Initial Reliability Resolution Backread Final		
userLastName	Last name of the scorer.		Optional	50	One or more printable ASCII characters		
userFirstName	First name of the scorer.		Optional	50	One or more printable ASCII characters		

TDS Report: Comment

Table 24. Test Integration XML Output Format (TDS Report: Comment)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
context	Context of the comment (e.g. TESTITEM or GlobalNotes).	xsd: token	Comment element is optional; if included, this attribute is required.	200	One or more printable ASCII characters		
itemPosition	If this was an item level comment (context = TESTITEM), the position of the item the comment refers to.	xsd: unsigned Int	Comment element is optional; if included, this attribute is required.	8	Positive 32-bit integer, null allowed		
date	Date and time the comment was entered.	xsd: dateTime	Comment element is optional; if included, this attribute is required.	23	date+time in ISO 8601 format		
<node text>	Comment verbiage.	xsd: string	Comment element is optional; if included, this attribute is required.	unlimited			

TDS Report: toolUsage

Table 25. Test Integration XML Output Format (TDS Report: toolUsage)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
type	Tools used on certain items or item groups (passages). Type of the tool.	xsd: token	toolUsage element is optional; if included, this attribute is required.	100	One or more printable ASCII characters	TTS (Text To Speech)	
toolCode	Code for the tool.	xsd: token	toolUsage element is optional; if included, this attribute is required.	100	One or more printable ASCII characters		

TDS Report: toolUsage: toolPage

Table 26. Test Integration XML Output Format (TDS Report: toolUsage: toolPage)

TDS Field Name (attribute)	Data Element Description	Data Type	Required	Width	Compatible Values	Examples	CEDS Ref
page	Online page the tool was used on.	xsd: unsigned Int	toolPage element is optional; if included, this attribute is required.	8	Positive 32-bit integer		
groupId	Item or Passage ID.	xsd: token	toolPage element is optional; if included, this attribute is required.	59	One or more printable ASCII characters		
count	Number of times the tool was used.	xsd: unsigned Int	toolPage element is optional; if included, this attribute is required.	8	Positive 32-bit integer		

Appendixes

References

External References

Table 27. External References

| No.	Reference	Link	Author	Version
1	Common Education Data Standards (CEDS) specification	https://ceds.ed.gov/elements.aspx	ceds.ed.gov	4.0
2	Administration and Registration Tool (ART) Upload File Formats	https://www.smarterapp.org/documents/Administration_and_Registration_Tools_User_Guide.pdf	Smarter Balanced	
3	Smarter Balanced Reporting System User Guide	https://portal.smarterbalanced.org/library/en/reporting-system-user-guide.pdf	Smarter Balanced	
4	Sample XML Outputs TRT On Boarding Pack	https://smarterreporting.org/vendors/	Smarter Balanced	1.0
5	Test Integration Format XSD (Schema)	https://smarterreporting.org/vendors/	Smarter Balanced	3.0

TRT Hierarchy Diagram
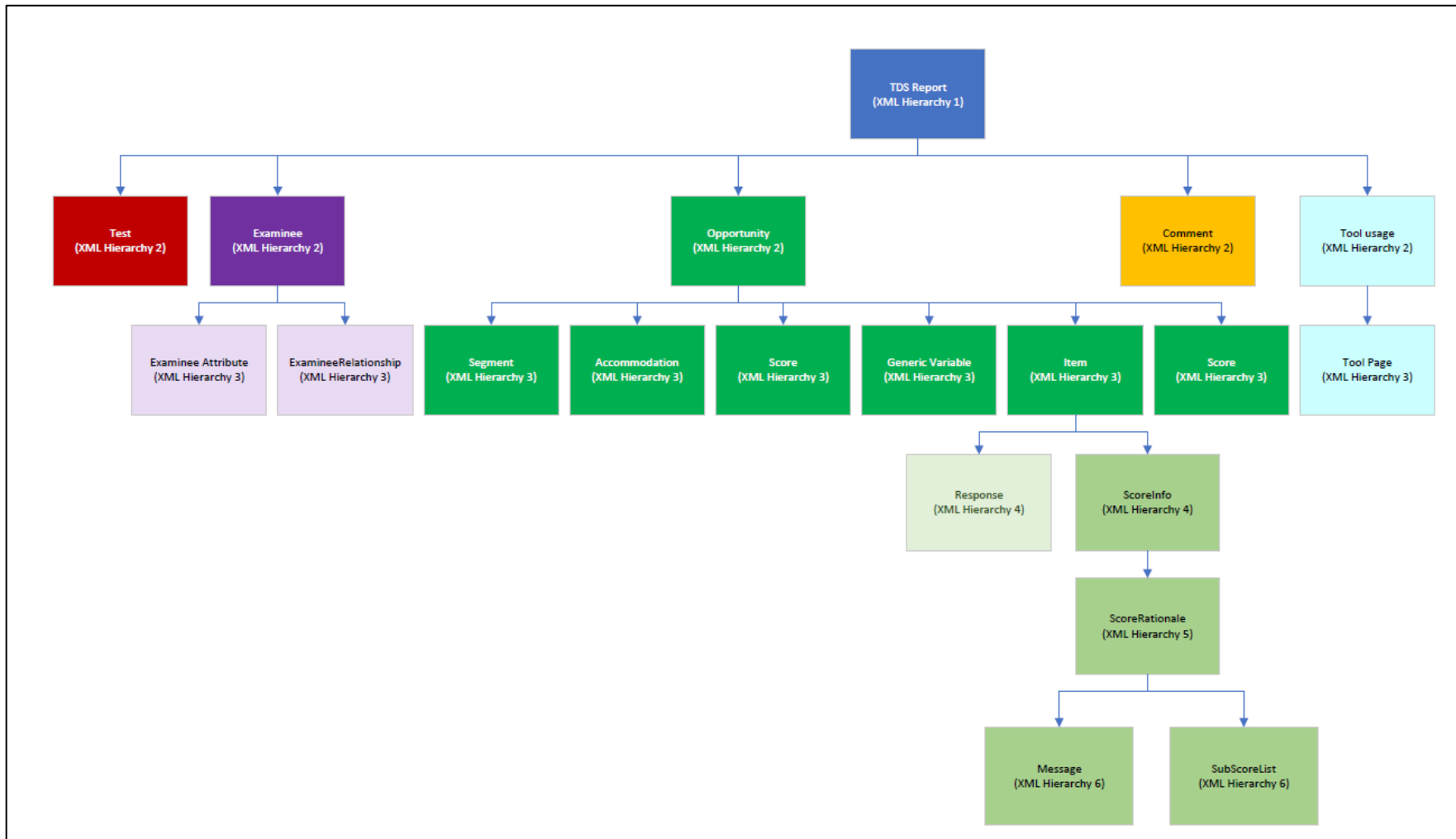
Figure 2. Graphical representation of the Hierarchy of a TRT XML

CEDS Reference Table

All CEDS references can be found on the website linked in Table 27.

For convivence, the table below provides the reference number used in the format specification tables, the appropriate TDS Field Name, any affected attributes, the CEDS Element ID, the webpage for the ID, and the CEDS Domain Entity Schema location for the element.

Table 28. CEDS References

CEDS Ref No.	XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	CEDS Element ID	Webpage	CEDS Domain Entity Schema
1	TDS Report: Test	name		CEDS Element ID 000977	https://ceds.ed.gov/element/000977	K12 -> Assessments -> Assessment Administration -> AssessmentAdministrationName
2	TDS Report: Test	testId		CEDS Element ID 1067	https://ceds.ed.gov/element/001067	K12 -> Assessments -> Assessment -> AssessmentIdentifier
3	TDS Report: Test	grade		CEDS Element ID 177	https://ceds.ed.gov/element/000177	K12 -> Assessments -> Assessment -> AssessmentLevelForWhichDesigned
4	TDS Report: Test	assessment Type		CEDS Element ID 29	https://ceds.ed.gov/element/000029	K12 -> Assessments -> Assessment -> AssessmentType
5	TDS Report: Test	academicYear		CEDS Element ID 243	https://ceds.ed.gov/element/000243	K12 -> K12 School -> Session -> SchoolYear
6	TDS Report: Examinee: examineeAttribute	name	LastOrSurname	CEDS Element ID 172	https://ceds.ed.gov/element/000172	K12->K12 Student- >Identity->Name
7	TDS Report: Examinee: examineeAttribute	name	FirstName	CEDS Element ID 115	https://ceds.ed.gov/element/000115	K12->K12 Student->Identity->Name

CEDS Ref No.	XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	CEDS Element ID	Webpage	CEDS Domain Entity Schema
8	TDS Report: Examinee: examineeAttribute	name	MiddleName	CEDS Element ID 184	https://ceds.ed.gov/element/000184	K12->K12 Student->Identity->Name
9	TDS Report: Examinee: examineeAttribute	name	Birthdate	CEDS ID Element 33	https://ceds.ed.gov/element/000033	K12->K12 Student- >Demographic
10	TDS Report: Examinee: examineeAttribute	name	StudentIdentifier	CEDS Element ID 1071	https://ceds.ed.gov/element/001071	K12->K12 Student- >Identity->Identification
11	TDS Report: Examinee: examineeAttribute	name	GradeLevelWhenAssessed	CEDS Element ID 126	https://ceds.ed.gov/element/000126	K12 -> Assessments - > Assessment Registration
12	TDS Report: Examinee: examineeAttribute	name	Sex	CEDS Element ID 255	https://ceds.ed.gov/element/000255	K12->K12 Student- >Demographic
13	TDS Report: Examinee: examineeAttribute	name	HispanicOrLatinoEthnicity	CEDS Element ID 144	https://ceds.ed.gov/element/000144	K12->K12 Student- >Demographic
14	TDS Report: Examinee: examineeAttribute	name	AmericanIndianOrAlaskaNative	CEDS Element ID 16	https://ceds.ed.gov/element/000016	K12->K12 Student- >Demographic
15	TDS Report: Examinee: examineeAttribute	name	Asian	CEDS Element ID 20	https://ceds.ed.gov/element/000020	K12->K12 Student- >Demographic
16	TDS Report: Examinee: examineeAttribute	name	BlackOrAfricanAmerican	CEDS Element ID 34	https://ceds.ed.gov/element/000034	K12->K12 Student- >Demographic
17	TDS Report: Examinee: examineeAttribute	name	White	CEDS Element ID 301	https://ceds.ed.gov/element/000301	K12->K12 Student- >Demographic

CEDS Ref No.	XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	CEDS Element ID	Webpage	CEDS Domain Entity Schema
18	TDS Report: Examinee: examineeAttribute	name	NativeHawaiian OrOtherPacificIs lander	CEDS Element ID 192	https://ceds.ed.gov/element/ 000192	K12->K12 Student- >Demographic
19	TDS Report: Examinee: examineeAttribute	name	DemographicRa ceTwoOrMoreR aces	CEDS Element ID 973	https://ceds.ed.gov/element/ 000973	K12 -> K12 Student -> Demographic
20	TDS Report: Examinee: examineeAttribute	name	IDEAIndicator	CEDS Element ID 151	https://ceds.ed.gov/element/ 000151	K12->K12 Student- >Disability
21	TDS Report: Examinee: examineeAttribute	name	LEPStatus EnglishLanguag eAcquisitionStat us	CEDS Element ID 180	https://ceds.ed.gov/element/ 000180	K12 -> K12 Student -> Limited English Proficiency
22	TDS Report: Examinee: examineeAttribute	name	Section504Statu s	CEDS Element ID 249	https://ceds.ed.gov/element/ 000249	K12 -> K12 Student -> Disability
23	TDS Report: Examinee: examineeAttribute	name	EconomicDisad vantageStatus	CEDS Element ID 86	https://ceds.ed.gov/element/ 000086	K12 -> K12 Student -> Economically Disadvantaged -> EconomicDisadvantageStatus
24	TDS Report: Examinee: examineeAttribute	name	LanguageCode	CEDS Element ID 1637	https://ceds.ed.gov/element/ 001637	K12 -> K12 Student -> Language and CEDS Language Codes The CEDS ISO 639-3 Language Code option set comes from the ISO 639-3 standard, the Latin-1 download. Only living language code types from the ISO standard are included in the CEDS list. Special scope and discontinued codes are excluded.

CEDS Ref No.	XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	CEDS Element ID	Webpage	CEDS Domain Entity Schema
25	TDS Report: Examinee: examineeAttribute	name	MilitaryStatus	CEDS Element ID 1576	https://ceds.ed.gov/element/ 001576	K12 -> K12 Student -> Demographic
26	TDS Report: Examinee: examineeAttribute	name	MigrantStatus	CEDS Element ID 189	https://ceds.ed.gov/element/ 000189	K12 -> K12 Student -> Migrant -> MigrantStatus
27	TDS Report: Examinee: examineeAttribute	name	FirstEntryDateIntoUSSchool	CEDS Element ID 529	https://ceds.ed.gov/element/ 000529	K12 -> K12 Student -> Immigrant
28	TDS Report: Examinee: examineeAttribute	name	LimitedEnglishProficiencyEntryDate	CEDS Element ID 1247	https://ceds.ed.gov/element/ 001247	K12 -> K12 Student -> Limited English Proficiency
29	TDS Report: Examinee: examineeAttribute	name	LEPExitDate	CEDS Element ID 570	https://ceds.ed.gov/element/ 000570	K12 -> K12 Student -> Limited English Proficiency
30	TDS Report: Examinee: examineeAttribute	name	TitleIIILanguageInstructionProgramType	CEDS Element ID 447	https://ceds.ed.gov/element/ 000447	K12 -> K12 School -> Institution Characteristics
31	TDS Report: Examinee: examineeAttribute	name	PrimaryDisabilityType	CEDS Element ID 218	https://ceds.ed.gov/element/ 000218	K12 -> K12 Student -> Disability
32	TDS Report: Examinee: examineeRelationship	name	StateAbbreviation	CEDS Element ID 267	https://ceds.ed.gov/element/ 000267	K12 -> SEA -> Address USPS
33	TDS Report: Examinee: examineeRelationship	name	DistrictId	CEDS Element ID 637	https://ceds.ed.gov/element/ 000637	K12 -> K12 Student -> Enrollment

CEDS Ref No.	XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	CEDS Element ID	Webpage	CEDS Domain Entity Schema
34	TDS Report: Examinee: examineeRelationship	name	DistrictName	CEDS Element ID 204	https://ceds.ed.gov/element/000204	K12 -> Identification -> Organization Identifier
35	TDS Report: Examinee: examineeRelationship	name	SchoolId	CEDS Element ID 1069	https://ceds.ed.gov/element/001069	K12->K12 Student- >Enrollment
36	TDS Report: Examinee: examineeRelationship	name	SchoolName	CEDS Element ID 191	https://ceds.ed.gov/element/000191	K12 -> K12 School -> Identification
37	TDS Report: Opportunity	startDate		CEDS Element ID 962 CEDS Element ID 963	https://ceds.ed.gov/element/000962 https://ceds.ed.gov/element/000963	K12 -> Assessments -> Assessment Administration ID
38	TDS Report: Opportunity	dateCompleted		CEDS Element ID 964 CEDS Element ID 965	https://ceds.ed.gov/element/000964 https://ceds.ed.gov/element/000965	K12 -> Assessments -> Assessment Administration
39	TDS Report: Opportunity	TAID		CEDS Element ID 88	https://ceds.ed.gov/element/000088	K12 -> K12 Staff -> Contact -> Email
40	TDS Report: Opportunity	assessmentParticipantSessionPlatformUserAgent		CEDS Element ID 1152	https://ceds.ed.gov/element/001152	K12 -> Assessments -> Assessment Participant Session -> AssessmentParticipantSessionPlatformUserAgent
41	TDS Report: Opportunity: Accommodation	type		CEDS Element ID 385	https://ceds.ed.gov/element/000385	K12 -> Assessments -> Assessment Participant Session

CEDS Ref No.	XML Hierarchy	TDS Field Name (attribute)	Attribute (Value)	CEDS Element ID	Webpage	CEDS Domain Entity Schema
42	TDS Report: Opportunity: Accommodation	value		CEDS Element ID 724	https://ceds.ed.gov/element/ 000724	K12 -> Assessments -> Assessment Item -> Assessment Item Response
43	TDS Report: Opportunity: Item	bankKey		CEDS Element ID 1181	https://ceds.ed.gov/element/ 001181	K12 -> Assessments -> Assessment Item
44	TDS Report: Opportunity: Item	format		CEDS Element ID 1158	https://ceds.ed.gov/element/ 001158	K12 -> Assessments -> Assessment Item -> Assessment Item APIP Interaction
45	TDS Report: Opportunity: Item: Response	<node text>		CEDS Element ID 724	https://ceds.ed.gov/element/ 000724	K12 -> Assessments -> Assessment Item -> Assessment Item Response
46	TDS Report: Opportunity: Item: Response	date		CEDS Element ID 958 CEDS Element ID 959	https://ceds.ed.gov/element/ 000958 https://ceds.ed.gov/element/ 000959	K12 -> Assessments -> Assessment Item -> Assessment Item Response

Revision History for Version 2 (Released March 2020)

Revision Description	Author	Date
2.1: Update includes: • Data element languageCode changed to required. • measureOf ELA Claim and Target identifier formats fixed in Table 14.	Smarter Balanced	07/22/2020
2.0: New version of the document is released. Major updates to definitions, requirements, acceptable values, and the layout of the document.	Smarter Balanced	03/12/2020

Revision History for Version 1 (Prior to 2020)

Revision Description	Author/Modifier	Date
0.1: Initial Release (DRAFT)	Rami Levy	April 28, 2014
0.2: Clarified that this specification covers both the TDS-to-TIS and TIS-to-DW interfaces, as they are exactly the same.	Rami Levy	July 8, 2014
0.3: Removed Opportunity/windowStart	Rami Levy	July 18, 2014
0.4: Added/updated complete list of acceptable values for ExamineeAttributes and Accommodations	Rami Levy	August 3, 2014
0.5: Updated based on Smarter feedback. Several comments updated, added to better describe allowable values; added effectiveDate attribute. Updated XSD and sample XML.	Rami Levy	August 14, 2014
0.6: Added and clarified proposed solutions for accessibility feature coding, achievement levels and subscores.	Brandt Redd (based on proposal from David Lopez de Quintana)	September 18, 2014
1.1 Updated reporting of accommodations	Brandt Redd (based on submissions from Rami Levy)	October 29, 2014
1.1 Changed "Eligible" for accommodations to "Designated"	Brandt Redd	6 December 2014
1.1 Corrections to sample XML for accommodations	Brandt Redd (based on information from Rami Levy)	17 December 2014
1.2 Updated XSD and added second sample result	Brandt Redd based on information from Rami Levy)	17 January 2015

Revision Description	Author/Modifier	Date
1.4 Updated XSD	Brandt Redd based on information from Rami Levy)	28 January 2015
1.5 Updated requirements	Brandt Redd, Vivian Penet	23 May 2015
1.6 Added two new format properties: "completeStatus" and "administrationCondition"	Alex Dean	02 November 2015
1.7 Updated several fields from required to optional and added three new fields. Updated the sample XSD file.	Alex Dean	20 July 2016
1.8 Indicated that Smarter Balanced does not use the Formative assessment type	Alex Dean	10 February 2017
1.9 Added "responseDuration" Item field. Updated sample XSD and XML.	Alex Dean	7 March 2017
1.10 Adjusted the following: • Opportunity:Segment:algorithm and Opportunity:Segment:algorthmVersion are optional • Opportunity:Item:Response:type is optional with a default value • Opportunity:responseDuration changed to float • Opportunity:validity added "blank" as an acceptable value • Opportunity:administrationCondition enum values match the data model • Opportunity:completeness and Opportunity:completeStatus are optional. Enum values match data model. Added footnote for both fields that explain completeStatus is preferred over completeness. • Opportunity:effectionDate is optional • ExamineeAttribute:AlternateSSID is optional • Opportunity:assessmentParticipantSessionPlatformUserAgent added "blank" as an acceptable value	Alex Dean	13 April 2017
1.11 Adjusted the following: • Scores used by Smarter Balanced Assessments table – align with the Test Results Data Dictionary • Added optional Filipino ethnicity field	Alex Dean	09 May 2017
1.12 Added EnglishLanguageAcquisitionStatus field	Alex Dean	26 July 2018
1.13 Added MilitaryStatus field	Alex Dean	7 August 2018

Revision Description	Author/Modifier	Date
1.14 Adjusted the following: • Added target level scores to the "Scores Used by Smarter Balanced Assessments" table • Added "Other" as a Sex choice	Alex Dean	28 November 2018
1.15 Adjusted the following: • Opportunity: status – deprecated the expired status • Opportunity: completeness – added expired	Alex Dean	21 May 2019