

# **Component Test Plan**

## **SBAC-11 Test Admin**

**Version 2.0**

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Test Administration	

#### Revision History

Date	Version	Description	Author
07/28/14	1.0	Initial Draft and introduction	Ryan Marinello
07/28/14	1.1	Requirement tracing	Ryan Marinello
07/28/14	1.2	Template changes	Ryan Marinello
07/28/14	1.3	Level 2's	Ryan Marinello
07/28/14	1.4	API	Ryan Marinello
07/28/14	1.5	Version of Source	Ryan Marinello
07/28/14	1.6	API work	Ryan Marinello
08/12/14	1.7	Dependent Services	Ryan Marinello
08/12/14	1.8	Domain description	Ryan Marinello
08/13/14	1.9	Validation changes	Ryan Marinello
08/11/14	2.0	Search changes	Ryan Marinello

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## I. Purpose

The purpose of this document is to describe the testing strategy and test scenarios applied to the tested component.

### I. Overview

1. The overall responsibilities of the Test Administration component are:
  - a. Creation and Management of Proctor Roles
  - b. Creation and Management of Test Platforms
  - c. Creation and Management of Accessibility Equipment
  - d. Creation and Management of Facilities
  - e. Creation and Management of Time Periods
  - f. Creation and Management of Schedule
  - g. Creation and Management of Participation Reports
  - h. Creation and Management of Detail Report
  - i. Creation and Management of Proctor Schedule Report
  - j. Creation and Management of Schedule Summary

The user audience for Test Admin component is:

- 1) The user group of Test Registration data, (demographics and accommodations) integrated within Test Administrations scheduling and reporting admin functions as well as users and role information, teachers, proctors, facilities, test equipment component

## II. Component: Test Admin

Beginning with aggregated data collection from facilities, assessments, student data and proctor data objects the Test Admin component integrates data shared through Test Registration's pre-test administration assessment workflow (comprised of form assignment, registration of students and scheduling assessments) and transitions into Test Administration's process of proctoring, scheduling, testing platforms, equipment management, facilities, time slots, reports and report summaries.

### III. Scope of Testing

This plan focuses on verification and validation testing of the Test Admin component based on the Level 2 component requirements. Mission statement: prove level 2 requirements for Test Admin which are believed to be correct and applied Heuristic model: CBC (contextual, beneficial, congruent)

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## 1. Verification Testing

Verification testing will cover the functional testing of requirements.

Requirement Document	Document Name	Location	Version
Level I Requirements	DRC SBAC11 Requirements – Test Administration Level 1	Knowledge Tree -> High Level Requirements -> DRC	V.5
Level II Requirements	DRC SBAC11 Requirements – Test Administration Level II	Knowledge Tree -> Requirements -> Level II Requirements	V.5

## 2. Validation Testing

Validation testing will cover scenario testing.

Scenario	Endpoints and examples
Display and Describe the Test Authoring API RESTful Services and Controllers Test Registration and Test Administration endpoints appear in the examples list, but only Test Administration endpoints appear in bold with supporting test information below.	<ol style="list-style-type: none"> <li>1. <a href="http://localhost:8080/rest/api">http://localhost:8080/rest/api</a></li> <li>2. /api/template</li> <li>3. /api/institution</li> <li>4. /api/<b>testplatform</b></li> <li>5. /api/<b>facility</b></li> <li>6. /api/groupofdistricts</li> <li>7. /api/groupofinstitutions</li> <li>8. /api/groupofstates</li> <li>9. /api/states</li> <li>10. /api/entityNames</li> <li>11. /api/studentGroup</li> <li>12. /api/tsbassessment</li> <li>13. /api/<b>proctorScheduleReport.PDF</b></li> <li>14. /api/testStatus</li> <li>15. /api/loadCrosswalks</li> <li>16. /api/assessmentSubject</li> <li>17. /api/client</li> <li>18. /api/subject</li> <li>19. /api/<b>accessibilityEquipment</b></li> <li>20. /api/<b>proctor</b></li> <li>21. /api/district</li> <li>22. /api/studentGroups</li> <li>23. /api/crosswalkMap</li> <li>24. /api/subjects</li> <li>25. /api/assessment</li> <li>26. /api/datawarehouse</li> <li>27. /api/student</li> <li>28. /api/users</li> <li>29. /api/schedule</li> <li>30. /api/uploadFile</li> </ol>

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	31. /api/ <b>proctorassessments</b> 32. /api/ <b>clients</b>
RESTful Response Codes	<ol style="list-style-type: none"> <li>1. 200 for GET and PUT with response content</li> <li>2. 201 for POST with response content</li> <li>3. 204 for DELETE no response message</li> <li>4. 404 for Not supported endpoint</li> <li>5. 500 Error(s) from un-supported requests</li> </ol>
<a href="http://localhost:8080/rest/api/testplatform">http://localhost:8080/rest/api/testplatform</a> Content-Type: application/json  Supported Methods: POST, PUT, GET, DELETE	/ GET / 200 codes /testplatform/ GET / testplatform / POST / testplatform /Id/ PUT / testplatform /Id DELETE
<a href="http://localhost:8080/rest/api/facility">http://localhost:8080/rest/api/facility</a> Content-Type: application/JSON  Supported Methods: GET, POST, PUT	/facility GET and POST and PUT /facility/53e8fa9fe4b0ce4f5bace31a
<a href="http://localhost:8080/rest/api/proctorScheduleReport.pdf">http://localhost:8080/rest/api/proctorScheduleReport.pdf</a> Content-Type: application/JSON  Supported Methods: GET	/proctorScheduleReport GET
<a href="http://localhost:8080/rest/api/accessibilityEquipment">http://localhost:8080/rest/api/accessibilityEquipment</a>  Content-Type: application/JSON  Supported Methods: GET, POST, PUT	/accessibilityEquipment /accessibilityEquipment/53e8fa9fe4b0ce4f5bace31a
<a href="http://localhost:8080/rest/api/proctor">http://localhost:8080/rest/api/proctor</a>  Content-Type: application/JSON  Supported Methods: GET, POST	/proctor /proctor/53e8fa9ee4b0ce4f5bace2fe

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<a href="http://localhost:8080/rest/api/schedule">http://localhost:8080/rest/api/schedule</a>  Content-Type: application/JSON  Supported Methods: GET, POST, PUT, DELETE	/schedule scheduleName=schedule1
<a href="http://localhost:8080/rest/api/proctorassessments">http://localhost:8080/rest/api/proctorassessments</a>  Content-Type: Application/JSON  Supported Methods: GET	/proctorassessments entityLevel=STATE&entityName=AK&date=2014-08-11
DOMAIN	AccessibilityEquipment, Affinity, Availability, Facility, Facility Availability, ParticipationDetailReport, ParticipationSummaryReport, Proctor, ProctorRole, ProctorScheduleReport, ReportLevel, Seat, Status, TimeSlot
SEARCH	AccessibilityEquipment, FacilityAvailability, FacilitySearch, ProctorRoleSearch, ScheduleSearch, SeatSearch, TestPlatformSearch
VALIDATIONS	DuplicateAvailabilityWindows,EndTimes,FacilityAvailabilityDates, OverlappingAvailabilityWindows,ScheduleDates, StudentTestReportsTimes, TimeSlots
Describe the Services	Dependencies
http	AccommodationService
http	AssessmentService
http	ClientService
http	CurrentUserService
http	DateComparisonService
http	DistrictService
http	DownloadTemplateService
http	EntityNameService
http	EntityService
http	GroupOfDistrictsService
http	GroupOfInstitutionsService
http	GroupOfStatesService
http	ImportFileService

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http	InstitutionService
http	PreviewFileService
http	ProctorService
http	SaveFileService
http	StateService
http	StudentGroupService
http	StudentService
http	SubjectService
http	TenantUserService
http	UserService
http	ValidateFileService
http	VersionService
http	XwalkService

#### IV. Test Strategy

##### 1. Test Tools

Tools may be used to:

- Invoke business rules by manipulating, creating, deleting or updating test data
- Determine test pass/fail criteria in a manual and automated fashion
- Document requirements to traceability

##### 2. Test Environment

The DRC test environment is located at DRC and supported by the development team. The environment uses the following software, tools and frameworks:

Tool, Framework, Software, etc.	Category	Version
Java	Programming Language	1.7
Spring Framework	Framework	3.2.0
MongoDB	Database	2.0
EC2	AWS	n/a
Oracle VirtualBox	Virtual Machine	4.2.6
Apache Tomcat	Server	7.0.35
Servlets	Platform	2.5
Advanced Rest Client Google Chrome	Testing tool	3.1.1
Hexawise	Testing tool	n/a
cURL	Testing tool	7.2.8.1
Chrome, Firefox, IE, Safari	Browsers	
FileZilla	Testing tool – SFTP	3.6.0.2



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### 3. Test Interface

The Test Administration interface provides user friendly web services, search widgets, drag and drop controls and CRUD functionality. Sorting columns within appropriate grids, creation and management screens and collected data generated in a .PDF format report.

## V. Test Deliverables

The table below lists the deliverables providing proof of testing.

Document Name	Type
Test Plan (this document)	PDF
Test Results (this document)	PDF
Test Scripts	PDF
Test Dashboard (this document)	PDF
Test Report (this document)	PDF

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## Acceptance Criteria

**The Test Administration component interface laces the Test Registration data with the administration tools providing user options for scheduling, reporting, proctoring, time slot management, hardware test device inventory, test platform management, accessibility equipment management and facility management. The interface supports CRUD operations for users interacting with creating and managing administration functions based on tenancy. Consequently, the goal of testing is not to completely demonstrate that currently documented requirements have been exactly met; rather, the goal is to demonstrate that the delivered Test Administration component fulfills the basic purpose of the component and can be enhanced or modified as requirements are discovered and finalized.**

## II. Introduction

2. Overall the creation and management abilities supported by this component foster said purpose across a test system. This includes:
  - a. A UI to allow for creation and management
  - b. A REST service to return a web-addressable path
  - c. A UI for storing system configuration data
  - d. RESTful services system configuration data and integration data
  - e. A Database of collections of data
  - f. Authentication Integration for login and logout

## Terms and Definitions

Term	Definition
Assessment	Data items which may include images to be displayed or included on a user interface. The data items may be associated to a component, and a tenant.
Package	The customization of the appearance of the system for a particular Consortium client. Branding assets include logos and banners.
Core Standards	The portion of Program Management that is responsible for externalizing properties and managing component endpoints.
Content	The portion of Test Authoring responsible for data management
RESTful Endpoint	The location of a service, pointed to by a URI
Program	For the purposes of these requirements, the term “program” refers to a customer’s plan for administering tests. A program is not considered to be an entity.

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URI	Uniform Resource Identifier, a string of characters used for identifying and locate a resource
Tenancy	Hierarchical structured component
DTD	Document Type Definition provided by AIR
TIB	Test Item Bank
TSB	Test Specification Bank
TR	Test Registration
TAA	Test Administration

## Terms and Definitions

Term	Definition
APIP	Accessible Portable Item Profile. A technical standard that focuses on accessibility in assessment items.
Blueprint	The design for a test. The test blueprint indicates the number of test questions or points related to each competency on the test and the relative emphasis placed on each competency.
Field Test	Test made up of test items intended to develop and calibrate new assessments.
Grade Level	Grade or standard the item is designed for
Item	A question on a test. It may be composed of several parts including audio and visual files.
Item Author	A person or agency responsible for item creation.
Item Bank	A systems application that manages the storage and retrieval of assessment items, tracks item versioning and lineage, and provides a robust search and query capability that allows searching on all types of metadata.
Item Status	A term used to indicate how an item can be used. Some of the valid values are: <ul style="list-style-type: none"> <li>Pilot Test</li> <li>Field Test</li> <li>Operational</li> </ul>
JSON	JavaScript Object Notation, a lightweight, text based, open standard designed for human-readable data interchange.
Pilot Test	A trial series of new or modified items given to a select group of students.
Retired Item	An item that will no longer be used for an assessment.
Rubric	a guide listing specific criteria for grading or scoring academic papers, projects, or tests
Runtime exception	An unanticipated condition for which no error handling exists but normal processing cannot continue
Source Item Bank	The Item Bank from which an item is pushed to a Test Item Bank
XML	Extensible Markup Language, a set of rules for encoding documents in machine-readable form.

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## Data and Data Relationships

Test Administration will be architected as a module or a function within the existing Test Registration component due to the high degree of overlap in the information required. The following describes the partition of functionality for the Pre-Test Administration Phase components, Test Registration and the partition of functionality for the Pre-Test Administration phase components, Test Registration and Test Administration

Component	Allocated Functionality	Downstream Applications
Test Registration	Institution data: schools, districts, other levels User data: users, user attributes, roles, associated institutions Student data: student attributes and demographics Student accommodations: accommodations on a per-subject basis Assessment information: configuration of assessments and eligibility rules	<ul style="list-style-type: none"> <li>• Data Warehouse</li> <li>• Single Sign-On</li> <li>• Test Delivery</li> </ul>
Test Administration	Capture information about institution computing facilities Schedule institution facilities, students and proctors for assessment time slots Reports	none

## Requirements

Requirements are numbered according to the following convention:

1. RFP.## - a requirement from the RFP
2. RADPM.## - a requirement from the detailed requirements from RFP-11 or the Architecture document
3. PRPM.## - a requirement from the Proposal

Source.ID	RFP-11 Requirement	Interpretation and/or Allocation of Requirement	Analysis of Requirement
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RFP 27	System must allow select administrative users to view aggregate test information by course, such as number of tests scheduled (by date), number of tests being administered (real-time), number of tests completed, and number of score able tests completed.	Test Administration	This requirement requests an aggregate report of assessments scheduled, administered and completed. A combined Test Registration and Administration component fulfils this requirement as follows: Test Registration is already aware of the configured as Assessments Test Administration adds the requirement to capture Information about testing facilities and to schedule students , so it is aware of what students have been scheduled and for when they are scheduled Test Registration is already committed to providing a
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			<p>“student package” of information to Test Delivery when a student logs to the Student Application to take an assessment, which provides “in-process” information to Test Registration</p> <p>Test Registration can also be notified with a student completes an assessment, providing Test Registration with completed assessment information</p> <p>Based on this, Test Administration will have all the information needed to deliver the report requested in this requirement.</p>
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RFP 35	System must have a robust scheduling tool to maximize school testing capacity.	Test Administration	<p>Test Administration adds the ability to schedule students for assessments in an “airline seat” reservation system.</p> <p>Test Registration is already provided with institution, teacher and student data</p> <p>To fulfill this requirement, Test Administration adds</p> <p>The ability to capture information about a school’s testing facility including the number of seats,</p> <p>The type of testing equipment (computers, tablets, etc.),</p> <p>Accessibility resources (Braille printers and output devices, large screens, projectors, etc.),</p> <p>The ability to break down assessment testing windows into time slots,</p> <p>Assignment of proctors to time slots, and</p> <p>Assignment of students to time slots based on Student Groups</p> <p>Grade or any other student demographic attributes</p> <p>ns for assignment to accessibility resources</p>
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RFP 43	System must allow administrative users to limit testing session length or item response times for Interim tests.	Test Administration	
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RFP 49	System must enable students to be clustered according to classes, programs, or other groupings for the purposes of scheduling, monitoring, reporting.	Test Administration	<p>Test Registration/Administration can only schedule students based on Student Groups or based on student demographics or accommodations, which is all the information that Test Registration/Administration has about students.</p> <p>“Classes, programs or other groupings” requires information beyond what this component currently has. Additional information is required from Smarter Balanced. Potentially, Student Groups can be extended to accommodate this requirement.</p>
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RFP 52	System must allow administrative users to access reports detailing system usage by school and district.	Test Administration	The reporting facility indicated in requirement 27 will fulfill this requirement. School and district are grouping categories for this report.
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RFP 59	System must allow administrative users to access a report of students tested and not tested.	Test Administration	The reporting facility indicated in requirement 27 will fulfill this requirement. School and district are grouping categories for this report.
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PRTIB.2	TRA will provide the means for users to add information about the equipment allocated for student testing at a particular institution's testing facilities such as: Number of seats available for student testing Type of devices available for student testing per seat (desktop computer, laptop, tablet, etc.) Number of seats with special accessibility equipment such as screen readers, Braille printers, Braille displays, large screens, etc..	Testing Facilities Equipment	Responsible school users need to set up TRA with the number of seats available for testing, the types of testing equipment for each seat and the number of seats equipped with special accessibility equipment. The types of testing equipment and the types of accessibility equipment are selected from a configured list.
PRTIB.2.1	TRA will allow the configuration of new types of testing equipment such as desktop computers, laptop computers, tablets, etc., to allow for configuration of device types currently in use, and allow for future device types not known at this time.	Testing Facilities Equipment	This requirement is for the configuration of the types of devices that will be used for student testing. Users choose from this configured set.
PRTIB.2.2	TRA will allow for the configuration of accessibility equipment currently in use, and allow for configuration of future types of accessibility equipment not known at this time	Testing Facilities Equipment	This requirement is for the configuration of the types of accessibility information that will be used for student testing. Users choose from this configured set.
PRTIB.3	TRA allows for selection of assessments to schedule	Assessments	In order to create time slots for test scheduling, TRA must know the particular assessments and testing windows for these assessments to schedule
PRTIB.3.1	TRA allows for further limiting the scheduling period within the testing window for each assessment	Assessments	Particular schools may be assigned a more slimited testing window than the overall window available for the assessment. Schools must be able to constrain scheduling to a shorter period) than the overall window allows
PRTIB.3.2	TRA will allow the user to select one or more assessments for scheduling of students	Assessments	In order to schedule students, TRA must know which assessments to schedule students for.
PRTIB.4	TRA will allow the creation of test slots within the testing windows provided for each of the selected testing windows. The test slots shall be: Designated for particular assessments (may be more than one) Designated for particular grade(s) (optional) Within the overall testing window(s) Between arbitrary start and end dates/times, possibly multiple non-contiguous start and end	Test Slots	Particular schools are often assigned testing windows that are a subset of the overall assessment window, so the school needs to create a set of test slots of arbitrary length (usually 1-2 hours each) within a prescribed time period.

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	<p>dates</p> <p>Between designated start and end hours in the testing day</p> <p>Not allocated during certain hours of the school day such as lunch periods</p> <p>arbitrary duration</p>		
PRTIB.4.1	TRA will automatically create multiple test slots in bulk based on the criteria above.	Test Slots	Once the criteria for the test slots is provided to TRA, it should automate the creation of+ the test slots, and allocate them in bulk.
PRTIB.4.2	TRA shall provide the means to add an assessment to already existing test slots	Test Slots	The user may have forgotten to add a particular assessment to test slots
PRTIB.4.3	TRA shall provide the means to manually assign test slots and/or edit test slots after bulk allocation to add or remove particular time to accommodate schedules and activities within the institution.	Test Slots	Bulk allocation is a blunt tool, and school users must be able to manually tweak the automatic allocation of test slots to add/EDIT and delete certain slots.
PRTIB.5	TRA shall provide the means to configure roles that are authorized to proctor an assessment	Proctor Allocation	The role system in the Smarter Balanced applications is loosely based on role to permission mapping. However, TRA must be told the particular roles that are authorized to proctor an assessment so it can search for individuals at the same school with the appropriate role for allocation.
PRTIB.5.1	<p>TRA shall provide the means for individual proctors to provide information about affinity for particular subject or subjects:</p> <p>Only the named subject or subjects</p> <p>Non-exclusive affinity for a particular subject or subjects(s)</p> <p>affinity for subjects (default)</p>	Proctor Allocation	In order to schedule proctors for particular time slots, TRA must know any individual proctor preference for particular assessment subjects.
PRTIB.5.2	<p>TRA shall provide the means for individual proctors to provide information about their availability to proctor applications:</p> <p>available time period(s) during the day</p> <p>“backout” period of unavailability during the day</p>	Proctor Allocation	In addition to subject affinity, TRA must be aware of when particular proctors are available for proctoring assessments
PRTIB.5.3	The subject(s) for configuring proctor affinity shall be selected from subjects for assessments currently configured in Test Registration/Administration	Proctor Allocation	TRA does not hold subject metadata independent of the subjects defined in each configured assessment.
PRTIB.5.4	<p>TRA shall provide the means to automatically allocate proctors to test slots based on various distribution criteria such as:</p> <p>Round-robin auto-scheduling of all proctors whose role is associated with the given institution with the appropriate role(s)</p> <p>Scheduling based on proctor affinity for the subject(s) for the assessments allocated for the given time slots</p>	Proctor Allocation	TRA should provide automation in the bulk scheduling of proctors to configured time slots.

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	und-robin or subject affinity allocation based on ection of individual proctor(s)		
PRTIB.5.5	TRA shall provide the means to manually allocate individual proctors to time slots and/or manually change automatic assignment of proctors to particular time slots.	Proctor Allocation	In addition to automatic allocation of proctors, TRA provide the means to manually allocate or manually fine-tune the bulk allocation provided by TRA
PRTIB.6	TRA allows for configuration of per-school, per-district or per-state business rules that map student demographics and accommodations to particular “seats” with special testing devices or accessibility equipment	Student Assignment	In order to facilitate student scheduling, TRA must be instructed on how to map students to particular types of equipment. For example, rules may be developed that map: students of particular grades to only desktop computers and laptops students of particular grades to any type of test delivery device student requiring particular accommodations to computers equipped with particular types of accessibility equipment Please note that it is not required that student demographics be mapped in order to schedule students. The assessment eligibility rules are enough to allocate students to time slots
PRTIB.6.1	TRA shall permit the bulk allocation of students to time slots based on the following: Student eligibility for given assessment(s) are matched to the assessment(s) selected for test slots The enrolled grade of the student can be matched to selection of grade(s) for time slots if time slots are associated to given grades Student demographics inity for particular “seats” with special accessibility equipment based on student accommodations	Student Assignment	This requirement allow for the bulk allocation of students based on all the information provided for the student (demographics and accommodations) to assessment “seats” in particular time slots, taking into account any special equipment needed to satisfy particular accommodations
PRTIB.6.2	TRA shall provide the means to manually allocate a student to a particular time slot individual students to time slots and/or manually change students that were automatically allocated to a time slot	Student Assignment	This requirement allows for the annual allocation of students to time slots and for the fine-tuning of a previous automatic allocation
PRTIB.7	TRA shall provide a participation report that indicates the number of: <ul style="list-style-type: none"> <li>Eligible students that have no yet tested,</li> <li>In-process assessments, and</li> <li>Completed assessments.</li> </ul>	Reports	The requirement for assessment reporting satisfies RFP-11 requirements 27, 52 and 59.
PRTIB.7.1	In addition to an aggregate participation report, TRA will provide a report of an individual student’s testing status that indicates all assessments this student is eligible for, and whether each assessment is pending, in-process or completed.	Reports	This requirement allows for the same type of aggregate information as above, but drills down to an individual student.



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PRTIB.7.2	The participation reports can be tiered by any of the following categories: State, district and institution Grade Subject Assessment Test Slots Equipment "seats"	Reports	This requirement details how the report is broken down.
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## Notes

DRC / AIR 5-8-2014 tech meeting:

Test admin scheduling is just a planning tool; TD isn't directly using the data

David to find out more about forms and whether test admin needs to worry

airline scheduling:

- only so many seats
- assign people to the seats
- school tells TA they have a computer lab with 20 seats
- tells TA how long a test will take (setup, test, cleanup)
- system knows how many proctors are in the school
- how many tests can be administered during test windows
- system knows students and tests
- School tells accommodation seats (braille, large fonts, etc.)
- press a button and system tries to lay out a schedule
- school can tweak
- schedule by grade, mixed grades
  - grade, subject
  - demographics
  - accommodations

Heart of reporting: aggregate reports on number of tests scheduled, administered, and completed

- students taking a test, have taken
- students who haven't taken tests

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- break down by assessment, district, institution, student
- web pages (html preview), pdf export, maybe CSV and XLS

David to get more info about RFP 49 - do we need to extend student groups on student page under eligible assessments, display test status plus number of times taken

#### Tech Meeting Notes 5-22-2014

- Q: Are accommodations a general pool or are they grouped based on purpose, such as an accessibility accommodations pool? added to TESTADMIN-144
  - similar to eligibility, is that student eligible to use a specific device based on accommodations
  - there are some accommodations that are implicitly delivered by all systems, so no rules needed
  - some accessibility equipment is attached to all seats, create rules to map accommodations to that equip
  - some are only attached to limited seats, create rules to map accommodations to that equip
- \*a "blessed" list of subjects that are valid for the tenant - but who controls it? Test Reg. If trying to import an assessment from TSB, change mismatches to what is in TSB then auto-change any accommodations already existing - TESTREG-904
- \* student export should be one row for each set of accommodations - TESTREG-903

- We wanted to verify with you that we should be validating the uniqueness of the Student external id. The file format spreadsheet says that the external id is unique within a state. We found out that we are not validating this currently and want to be sure that really is a validation that is needed.

- YES - TESTREG-905

- We would like to add validations to the State Abbreviation fields that are on all of the entities that are Group Of Districts and lower. We would like to validate that the value is one of the valid state abbreviations. We would also like to validate that the value is valid according to the hierarchy that the entity is in. - TESTREG-906

- validate that the state abbreviation is actually a valid state abbreviation
- when validating the parent entity, use the state abbreviation chosen in the child

- Can a seat in a testing facility have more than one testing platform associated to it?

- NO - added to TESTADMIN-142
- We need to discuss allowing the modification of entity id from the UI
  - yes, this should be allowed and associations should be switched - TESTREG-907

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## Meeting Notes from 6-5

Q: should we have assessment, subject, or grade affinities tied to time slots? yes

-- Added to TESTADMIN-146

-example: 3rd grade ELA between 9 and 10am, could be more than 1 test

-required to take a test and also a performance task (which is a special task) within the same time slot

Q: when scheduling should the algorithm aim to fill test facilities as much as possible?

Q: are there any rules we want to have surrounding that?

Q: if the number of eligible students for an assessment exceeds the number of seats in a facility are there rules for how to split up the students into multiple time slots? Rules for whether time slots for an assessment should be contiguous, etc.?

Advised to err on the simplest side....

Attempt to front load and pack as much as possible, admins should use restrictions and affinities to tweak allocations -- Added to TESTADMIN-133

Option - testing lab has 25 seats, nothing stops them from just defining it as having 15 seats

Q: what kind of attributes does a testing platform and accessibility equipment need? name, type, os, version, asset tag? no answer yet. David will ask SB -- Received a document with details about accessibility equipment, working on absorbing data

Q: do we have the concept of beginning of the day and end of the day for scheduling purposes? if so, is it configurable?

Property of testing facility; Testing facility can have a bounding interval. -- Added to TESTADMIN-141

Q: for proctor availability, do we allow proctors to set periods of availability or unavailability? or both? or 3 states: available, unavailable, not specified. Allow for multiple date ranges that are non-overlapping where available time periods are specified. No "unavailability" needed. -- Added to TESTADMIN-139

Q: can schedules have overlapping dates? -- Added to TESTADMIN-128

-do not permit overlap

TD would like to start defining the new interface for TA sooner rather than later

- Would it ever be appropriate to allocate more than 1 Proctor to a time slot in a schedule? **No. Only one proctor is required per time slot.** -- Added to TESTADMIN-128, TESTADMIN-133

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- If we allocate more than one assessment to a time slot, do they need to have the same Proctor?

- If a Proctor is only available for part of a time slot, is it valid to allocate them for part of the time slot and allocate a different Proctor for the rest of the time slot? **No. Move on to another proctor that is available for the entire time slot. -- Added to TESTADMIN-133**

Notes from Test Admin meeting on 6-17-2014:

- a proctor can select a level of affinity for scheduling (strict, non-strict, none) -- Added to TESTADMIN-137
- Should a facility be able to define days or time periods of unavailability so that the scheduling algorithm doesn't try to schedule things --- Facility time slots will have a date component as well as time. Create an unavailability feature to lay out exceptions to availability. Do the same for Proctor availability. Default every day in a date range with the same time slots to avoid user duplication. -- Added to TESTADMIN-146 and created TESTADMIN-153
- workflow doc states:

Define: time slots (they are)

β Associated with a testing facility or groups of seats or individual seats within a testing facility

Can a seat have completely different time slots than the facility? Or do all the time slots have to match up? --- There could be an exception for seats with specific equipment. By default time slots are for all seats and you can override for specific seat(s) --- already a part of TESTADMIN-142

- Can we discuss scheduling algorithm rules? from your workflow doc:

\* Proctor assignment plan (individual proctor priority, round-robin, affinity-based)

\* Student assignment plan (by assessment(s), grade(s), subject(s), gender(s))

\* Time slot assignment plan (this may clash with the time slot affinities declared above: some analysis may be needed to determine how they map)

\* Any scheduling algorithm configurations (not sure what these are at this time)

--- Proctor assignment: use the proctor constraints and smooth out load as evenly as much as possible based on those constraints

--- Student assignment: please try to prioritize by grade, subject, assessment, etc in a single time slot... strict/non-strict ... provide ability to select an order or let system choose order. Assessment and subject may need to have strictness on each specific item rather than at the whole category level, prioritize based on order of selection

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--- Time slot assignment: no other plans other than current constraints

--- Seats have time slots, so can configure specific seats for accessibility constraints only during certain time slots

--- Front load schedules, no other scheduling algorithm configuration

- Also, at what level does the admin define the rules? At the institution level? --- defined at a schedule level, provide a way to copy schedules

----- Added to TESTADMIN-133 and TESTADMIN-129

- Let's start talking a bit about reports, how should aggregation and filtering work? Are reports for a "schedule" or for a specific day?
- lowest level: particular student (name, ssid), test, facility, time slot, accessibility equipment
- proctor level: proctor, time slot, assessment, facility

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## VI. Test Dashboard

	A	B	C	D	E	F	G	H
1	Component	Test No.	Test Case Scenarios	Tests Fulfilled		Build	Expected Delivery	
2	SB-11 Test Administration			Pass	Fail	v0.0.1	August15,2014	
3		<a href="#">Script1.0</a>	AccessibilityEquipment		1			
4		<a href="#">Script2.0</a>	Facilities		1			
5		<a href="#">Script3.0</a>	Proctor_Roles		1			
6		<a href="#">Script4.0</a>	Reports		1			
7		<a href="#">Script5.0</a>	Scheduling		1			
8		<a href="#">Script6.0</a>	Student		1			
9		<a href="#">Script7.0</a>	TestPlatform		1			
10		<a href="#">Script8.0</a>	TimePeriods		1			

## VII. Executive Test Summary

Our primary test objective was to prove Test Administration component was capable to execute level I and level II requirements and received for required functional areas which are covered in the test plan. Test Administration component was integration tested among previously delivered SBAC11 components in conjunction with dependencies to Core Standards web services and SAML / SSO authentication.

Component interactions, tenancy and deployment tests cover URI, REST operations, RESTful web API HTTP controllers, layers, JSON responses, database collections, UI/persistence, database and web services, authentication, roles and permissions.

Test coverage consisted of positive, negative, boundary and user scenarios based from L2 requirements for transitory hierarchical tenancy setup, inheritance of configurations and dependent functionality feeding Test Administration's user interface navigations.

Browser performance and compatibility UI testing was performed cross browsers using Chrome, Fire Fox, Safari and IE where default settings were tested. http: tests covered look and feel standards, services, functionality, logic and usability.

UI testing was based from supporting UI AIR guidelines and direction from their UI team experts that provided unique icons for functional areas, navigational pages and designs and layouts for Test Administration and Test Registration user interfaces.

Test Equipment / Tools – include but are not limited to: a repeatable infrastructure environment and intel core i5 laptops accessing the /api and using either Fire Fox, IE,Safari or Chrome browsers and their respective REST client plugins. Mac book pro with retina quad core i7 and a Linux Ubuntu 12.04

All defect discoveries or improvements revealed during testing were quickly reported, managed and fixed in JIRA. Test coverage analysis compiles from combinatorial pairs, cobertura reports and requirements.

The heuristic test strategy, a simple model was used considering the requirements, tests, and environment and product elements.

Overall the Test Administration component dependencies are offer simplicity of use yet the logic is

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functionally complex and it is an integrated component offering good design, reliability, scalability, usability, as well as capability for it's intended puposes.