

From: [John Jesse](#)
To: [Nielsen, Darin](#)
Subject: Requested information
Date: Tuesday, May 29, 2018 10:17:41 AM

Darin,

Please find below the information you requested for your internal use.

Let me know if you have any questions or need anything else.

Thanks,

John

During operational testing this spring, three primary events made an impact on testing for some students.

On April 11, Questar became aware of an issue with our hosting vendor that affected student testing in one state. We took immediate action to resolve the technology issue and students were able to resume successful testing.

The second issue — caused by a new system interaction specific to one state's program — affected students only in that state. This issue presented itself on Monday April 16. From a user perspective, it prevented some students from logging in or submitting tests. Through triangulated monitoring, the issue became apparent at approximately 7:27 a.m. Once we identified the cause, Questar worked to mitigate the issue. The issue was corrected by approximately 8:42 a.m.

The third event occurred on April 17, at approximately 8:28 a.m. In this case, the F5 load-balancer servicing Nextera requests became impaired when concurrent connections and bandwidth throughput increased exponentially and unexpectedly. This surge in system use caused the load-balancer to fail, preventing access to Nextera systems. Human intervention restored access to these systems at approximately 11:18

a.m. Questar continues an internal investigation and is participating in an additional external audit to identify exactly what occurred. Final conclusions have not been made at this time. However, we have found no indications of security infractions.

John Jesse
Vice President, Sales & Marketing
jjesse@questarai.com



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Nielsen, Darin

From: Elliot Dunn <edunn@questarai.com>
Sent: Wednesday, September 19, 2018 2:33 PM
To: Nielsen, Darin; Wright, Jared; Carter, Cydnee; Rathke, Kim
Cc: Josh Borton; Stephanie Creps; Michelle Sorem; Tyler Jaax; Pahchie Vang; Amelia Schmidt; Lisa Rose; Elliot Dunn
Subject: RE: RISE feedback/suggestions
Importance: High

Good afternoon Darin,

Below please find Questar's responses/updates to yesterday's discussion topics, as well as known dates that can be shared with the LEA Assessment Directors tomorrow. Let me know if you have any questions.

Thank you,
Elliot

From: Nielsen, Darin <Darin.Nielsen@schools.utah.gov>
Sent: Tuesday, September 18, 2018 2:56 PM
To: Elliot Dunn <edunn@questarai.com>
Cc: Wright, Jared <Jared.Wright@schools.utah.gov>; Carter, Cydnee <Cydnee.Carter@schools.utah.gov>
Subject: RISE feedback/suggestions

Good afternoon Elliot,

Thank you for taking time to meet with me and some of my team members this morning. I'm writing this email as follow-up to that meeting. Below are items/issues discussed that required additional action or information.

- a. Questar agreed that the process of rostering in the classroom assessment builder needs to and will be handled in a similar manner as rostering for the summative assessments. By October 1, 2018 rostering for the benchmark assessments will be done by class. *I can confirm that Questar will have a fix in place so that class rosters submitted via UTREx will be captured as default Groups in the Benchmark section of Nextera Admin.*
- b. Questar is going to consider the possibility of allowing Utah to set a statewide student password, by assessment. This would facilitate the needs of our LEA's to provide a less labor intensive assessment proctoring environment than the one proposed by Questar. If possible, a response to this request will be provided by Thursday morning. *Because RISE in a MST adaptive assessment with multiple assembly unit groups (AUGs) that are spiraled out to Utah test-takers, we cannot have a unique password—for example) for grade 4 mathematics—that is used across the state. I can, however, share the specs for student password generation in Nextera for Utah RISE testing:*
 - *Passwords will be alpha-numeric and six characters long.*
 - *Passwords will not contain special characters.*
 - *Passwords will not be case sensitive.*
 - *The following characters and numbers will not be generated into a password:*
 - *Lowercase L "l" (easily confused with 1)*
 - *Uppercase I "I" (easily confused with 1)*
 - *The number "1" (easily confused with "l")*
 - *"o" (easily confused with zero)*

- Zero "0" (easily confused with "o")
 - Uppercase S "S" (easily confused with 5)
 - The number "5" (easily confused with "S")
- c. Video tutorials and supporting documentation, that can be used to provide proctor and test setup training, will be made available as soon as possible. This will help USBE address LEA concerns about not being prepared to train and administer RISE assessments. *This is correct. We will begin our focus with a brief but accurate tutorial of how to set up and administer a Benchmark test session. We will also produce a tutorial on how to navigate the Utah RISE Portal.*
- d. The value of having a demo account (dummy school) with all associated functionality available for training was discussed. While this functionality is not available in Questar's solution, USBE expressed a need for this type of tool. USBE looked at the possibility of uploading a "dummy school" from UTREx into Nextara but that functionality is not currently available in UTREx. *We have two potential possibilities for demo accounts: through existing UTREx data or through existing Questar data used for User Acceptance Testing. The key with this component is access: Questar can easily set this up for the USBE and Questar to utilize for various demonstrations. Making demo accounts available statewide would require additional development work and would also be very difficult to control.*
- e. Questar is going to provide USBE with an explanation of the benefits of requiring multiple testing sessions rather than allowing one session to be used to administer a variety of assessments. *We actually do not see benefits to this approach, and we understand that administering multiple makeup sessions separately in the same computer lab is not easy for school administrators and proctors. Such a scenario is tied to the current Nextera Admin design. That being said, this is a roadmap refactor item that Questar plans to address before 2019-2020 RISE testing.*
- f. USBE is going to provide Questar with the LEA testing plan information. *Thank you. Receiving the LEA Summative testing dates for 2018-19 will allow Questar to plan for testing peaks with our Customer Support team, IT infrastructure team (server usage), as well as our LASR team (i.e., when are the ideal weeks in spring 2019 for Questar to be on-site in Utah to assist the USBE with school visits and observations).*

Known dates:

Monday, September 24: Mass upload of Teacher accounts available in Nextera Admin.

Friday, September 28: Assuming Questar receives a clean pre-ID file on Monday, September 24, we should have all LEA/school/class roster information loaded to Nextera Admin.

Regards,

Darin Nielsen
Assistant Superintendent of Student Learning
Utah State Board of Education

Nielsen, Darin

From: Nielsen, Darin
Sent: Thursday, November 8, 2018 1:37 PM
To: Lisa Rose
Cc: Jones, Scott; Norman, Patty
Subject: Utah Concerns
Attachments: Questar Contract - Terms & Conditions.pdf

Hello Lisa,

As we are now 39 days into the benchmark and 8 days into the fall summative testing windows, without full operational capability, I want to express some of my concerns with the status of the RISE testing platform. While I believe your team is working diligently to address the existing issues that prohibit access to the RISE assessments I am concerned with the impact the delays are having on our education community. I recognize that the successful development and delivery of RISE is dependent on the full team, USBE staff as well as Questar employees and understand delays in service for a complex state assessment system can sometimes be attributed to multiple factors. However, in addition to our concerns about the impact this is having on our education community, the USBE business operations staff has asked that I begin looking at the suitability for liquidated damages, as prescribed in our contract. In regards to the Terms and Conditions provisions of our contract I believe the following areas apply:

Attachment C-3-b

... "failure on the part of the Contractor to provide access for students to begin or complete a test available through Contractor's assessment system during regularly scheduled hours within established testing windows"

- Benchmarks experienced a delayed start and still has "bugs" in reporting. (I'm not considering the writing benchmarks for grades 3,4,6, & 7 due to inclusion by contract amendment)
- Interim assessments moved from November 1 to November 19
- Summative assessments moved from November 1 to November 12 (this new release date appears to be unattainable)

..."failure on the part of the Contractor to provide access for LEA/school personnel to perform administrative functions of the assessment system at any time, agreed upon maintenance windows excepted."

- Test Administration Manual – contract requires "completed and USBE approved two months prior to the start of each test session." This has not yet been completed.
- Only one (Kim) USBE employee has been given access to the benchmarks. This is critical to quality control and approval. USBE expects all applicable staff be given requested access.
- While "proctor role" (not available for benchmarks) provides the ability for educators to administer assessments to students for which they are not the teacher of record, this doesn't provide a level of access that teachers operating in a dual assignment (i.e. special education, coteaching, etc.) need.
- In September, you indicated that a demo site would be provided, to assist USBE staff in their responsibilities. This is not yet available.
- USBE development staff can only review forms, they don't have access to live format. This can equate to quality control problems resulting in delays.

..."service interruption that prevents LEA/school personnel from accessing administrative functions for more than one day from November through March"

- While USBE staff have been provided “impersonate” permission, this functionality is better suited for helpdesk issues or support. It doesn’t allow USBE staff to ensure quality control of the RISE products/system. Without a preview capability we are dependent on the school level personnel to inform us of problems or issues that then result in unnecessary interruptions of service. An example of this is the preview capability which included a print function. USBE staff could have identified this problem and assisted in resolving it had access been provided.
- The USBE development team has been provided very limited time for item review assessment items. This can result in delivery delays.

I appreciate the important role you provide in advocating for Utah, aligning Questar resources, and ensuring that a high quality product is delivered on time. I continue to expect that the RISE assessment system will meet all of the objectives outlined in our contract and our teams will work collaboratively to accomplish this shared goal.

Sincerely,

Darin Nielsen
Assistant Superintendent of Student Learning
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250 E 500 S.
P.O. Box 144200
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801-538-7811



Questar Response to email from Darin Nielsen dated 12/12/2018

One of the purposes of the update is to bring awareness to the Board, concerns related to the development and administration of the RISE assessment, that staff believe present risks. Examples of those risks include:

1. Risk of not having a science summative assessment for grades 6, 7, 8 by the March 19th Spring summative window. On December 6, 2018 I received an email from Elliot Dunn where he wrote, "at this time we are already past the point where we can deliver middle school science at the beginning of the Spring Summative window on March 19". According to Elliot this is a result of Questar being able to obtain the IRT parameters from AIR for the shared/borrowed test content (item sharing MOU).

*Questar is striving to hit production milestones that will allow Utah RISE middle school science testing to begin on March 19. However, there have been several significant delays in the receipt of test content, metadata, and item statistics from the USBE/AIR that have put a March 19 go-live very much at risk. Questar knew from the outset of the program that middle school science test production could not begin until final item statistics and approved cut scores were available following the mid-September standard setting meeting (for SAGE conducted by AIR). As such, Questar set the production schedule to begin **October 8**, following the first state board meeting after the standard setting.*

Following are the dates Questar received middle school science content, metadata, and item statistics:

Utah-owned Content

- *Content Received – April 24*
- *Complete Data Received – October 23*
- *Standard Setting Report Received – October 25*

Borrowed/Shared Content (without which MST blueprint coverage is not possible)

- *Content Received – November 20*
- *Complete Data Received – December 10*

Additional issues causing risk include:

- *Questar has requested, and not received access to the Science content in the AIR demo system. We are able to login, but the content is not there. We have been able to pull up Secondary Math 1 items, so we know the system is functioning. It is vital to the item development process that we see the items and how they render. - Robin ?*
- *Questar has not received enough middle school science braille items to produce a MST form in EBAE or UEB, and this includes the shared/borrowed content. ?*

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2. Risk of missing the Spring summative assessment window. Whereas Questar missed the benchmark (October 1, 2018), Fall summative/interim (November 1, 2018), and is already identifying that grades 6-8 science summative assessments will not be available by the Spring summative window, it is unlikely that other deadline dependent deliverables will be ready by the Spring summative window.

Other than middle school science (explained in item 1) and the known delay of ELA braille (April 15, per the USBE's use of an independent braille vendor outside Questar's contract and control), there is no foreseen risk for the Spring Summative window to be delayed. Questar has a full week plus (March 9-18) to pull down the Mid-Year Summative MST forms and replace them with the Spring Summative forms, which are the same core AUGs but with new Utah-teacher-written field test items. Questar is also adding Secondary Math 1 to the Summative Assessment suite, and it is on-schedule for the March 19 release to the field.

3. Risk of having incomplete rosters. Contract item IT 1.21 establishes the requirement for Questar to receive nightly data files from USBE identifying test eligibility based on student enrollment in USBE course codes. An API has not been fully developed, automatic updates are not currently possible, and as a result we continue to struggle with up-to-date, error free rosters.

Questar has made headway on this issue since the November Planning Meeting in Utah—with our new CIO Brendan Kealey leading the efforts in Technology. With the update of the Teacher Batch Upload file layout by January 3, Questar will be in a much stronger position to accept nightly pre-ID delta files without data pairing errors that have prevented teachers from seeing their newly uploaded student records.

Per the USBE request to implement OneRoster API, we have provided the USBE with a Scope of Work for implementing OneRoster API. It includes an implementation timeline for summer 2019 to ensure the process—should the USBE opt to add it to the contract—is seamless by the start of Mid-Year testing in the fall of 2019. The USBE is currently reviewing the Scope of Work specifications.

4. Risk of not receiving return data for USBE reporting processes. With the difficulty we have experienced in the Questar development of an API, creating accurate rosters, and allowing for what Questar refers to as “off level testing” it is likely USBE will experience problems and delays with return data requirements outlined in PM 1.13.5 of the contract. This is also impacted by the lack of an operational API.

Questar bid the Utah RISE contract with an established API plan. The USBE decision to move to OneRoster API on April 23 put Questar in a position where rollout of OneRoster was not possible by October 1 given the timing, available resources, and assumed costs. This led to a mutual agreement



between Questar and the USBE, where Questar would handle Year 1 RISE student registration via a pre-ID file process, with OneRoster to start in Year 2 of the contract.

Questar assumes that the reference to PM 1.13.5 refers to Questar working with the USBE “to establish processes and procedures to address...the provision of return data for USBE reporting processes.” The USBE decided that the nightly return files referenced in IT 1.21 are not required this year, and as such Questar plans to provide a final state data file via sFTP. The lack of an API does not impact delivery of the file.

The Setup and Installation Guide, Test Readiness Guide, and Nextera User Guide— additional items referenced in PM 1.13.5— have been posted with revisions that include additional requests from the USBE.

Development is currently underway to allow students to be registered by the Test Subject ID in the Class pre-ID file. Registration by Test Subject ID is necessary because course codes vary based on the LEA. Questar is also recoding form assignment logic and will need to redeploy forms. Once all development is completed, Questar will perform regression testing. We anticipate a February 1 date for development to be complete. Questar has provided a workaround process to the USBE in the short-term.

5. Risk of USBE staff not being able to perform their duties. On September 18, 2018 USBE provided a written request for the creation of a demo account with all associated functionality available for training. This became necessary because of the limitations of access available in the Questar system for USBE staff to operate and view the system functionality. This demo account has not yet been provided and USBE has not received a date for which that system or an alternative method for system review will be made available.

Questar is committed to providing the USBE access to both the Summative and Benchmark systems to allow the USBE the ability to see the Utah RISE testing experience.

Summative, Interim, and Benchmark Assessments

Questar has provided the USBE with demo accounts to view the system via different user roles in their own USBE Demo LEA. The USBE will use the Impersonator action to experience all levels of user access in Nextera. This demo LEA can be used for trainings and for the USBE to assist the field when they receive questions about navigating within Nextera. This information will be communicated and explained during the next RISE Technology call with the USBE.

6. I will also share some of the issues that are considered critical or high needs, include the password requirements for students to access the system (concerns expressed in writing on September 18,



2018 as well as other times since that point), lack of a question sampler that contains all item types and the inability for special education teachers to proctor tests and access reports for students they provide services for.

The Questar online platform was built with a focus on security and minimizing the risk of mis-assigning tests. Our current model generates passwords on a per-test-assignment basis to ensure that a student is logging in to the specific test they are there to take. Questar's current contract with Utah does not require the ability for students to use the same password to access multiple tests. While Questar is willing to explore how other models could work, we cannot commit to changing the existing system until we have had a chance to complete design work and understand all implications to this change. Questar will move forward with exploring the change to the system to determine feasibility and any impacts. We anticipate being able to provide the USBE with our findings in February 2019.

Questar has provided the USBE with Question Samplers inherited from the SAGE program. There is one item type (line match) that is not yet included in the Samplers. At the November Planning Meeting, the USBE requested that this item type be made available prior to Spring testing. Questar is on track to provide updated Samplers that include "line match" items prior to Spring testing.

We anticipate the Secondary Math 1 Question Sampler to be complete by 3/1/2019, following the schedule below:

- *USBE review of item selections – 1/2-1/8*
- *USBE Online Review – 2/4*
- *Revisions and Final USBE Approval – 2/11-2/15*
- *Posted Live to the RISE Portal – 3/1*

The middle school science Question Sampler is currently being designed by the USBE and Questar.

The RISE Benchmarks are currently available with a teacher role only. Special Education teachers can administer Summative and Interim assessments using the proctor role. To allow Special Education teachers to view student reports, Questar is actively working on a USBE request to add a Report Viewer role for the Benchmarks, Interims, and Summative (LEA level and School Level).

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Administration Readiness Checklist for Utah RISE

DRAFT: December 21, 2018

This document provides a list of recommended high-level evaluation activities that the Utah State Board of Education should apply to the initial implementation of the Utah Readiness Improvement Success Empowerment (RISE).

Development

- **Operational Forms/Panels.** Operational test forms (MST panels for RISE and fixed length forms for Aspire Plus), including any accommodated forms, for all grade levels and content areas have been reviewed for content and psychometric characteristics, bias and sensitivity, and approved by USBE for administration.
- **Field Test Sets.** Field test item sets (standalone or embedded) have been reviewed for content and bias/sensitivity and approved for administration.
- **Test Maps.** All test maps, including answer keys, have been reviewed for accuracy and approved for administration.
- **Content Packages.** QTI packages containing test content for computer-based assessments have been tested in the online test delivery platform and interface for quality (e.g., all item types render and function correctly, no missing content, accurate administration of all possible paths in MST) and approved for administration.

Administration

- **Administration Materials.** All administration materials, including test administration manuals, teacher and student directions/user guides, online tutorials and practice tests, have been tested (if applicable), reviewed, and approved.
- **District and School Readiness.** Minimum client-side technology requirements (e.g., devices, form factor, operating system, web browser, network bandwidth) for the online test delivery platform have been communicated to districts and schools. Tools, utilities, and/or documentation have been provided to districts and schools to support technical readiness for online testing.
- **Load Testing.** Extensive load (stress) testing at operational loads or greater has been conducted to confirm that the online testing system operates correctly and has adequate capacity to meet expected spring testing volume.
- **Test Delivery Platform.** All key features and functionalities in the online test delivery system, including navigation of testing interface, management of units/sessions, testing times and testing windows, availability of accommodations, accessibility features and online testing tools, accurate capture of student responses, security and privacy of data, management of user access, etc., have been tested, reviewed and approved.
- **Mitigation Plans.** Mitigation plans in case of online testing anomalies, such as system outages, device failures, denial of service (DOS) attacks, dropped network connections, broadband disruptions, etc. have been specified, reviewed and approved.
- **Customer Support.** Plans for Call Center support, including capacity, staffing, hours of operation, expectations for response time to phone calls, chat requests, and emails have been specified, reviewed and approved.

Scoring

- **Machine Scoring.** For machine-scored items, accuracy and timeliness of scoring has been verified and approved.
- **Performance Scoring.** For human- or artificial intelligence (AI)-scored items, the performance scoring process (including the scoring center capacity, qualification and training of human raters, training protocols for AI engines, training and validity sets, score resolution procedures) have been specified, reviewed and approved.
- **Scored Data Files.** The expected timelines and process for delivering accurate and consistent scored student data files has been specified and approved.
- **Item Bank Migration.** For RISE, all item statistics and parameters from AIR's SAGE item bank have been accounted for and verified for accuracy.
- **Operational Equating/Linking.** The expected timelines, procedures, and quality control (QC) process for operational calibration, scaling, equating (for RISE) and/or linking (for Aspire Plus) have been specified and approved.
- **Standard Setting/Validation.** The expected timelines, method and process for establishing or validating performance standards have been specified, reviewed and

approved.

- **Field Test Equating.** The expected timeline and procedures for field-test item calibration and/or equating have been specified and approved.

Reporting

- **Summative Data Files.** The expected timelines, format and QC process for the summative data files (i.e., data files that include scale scores and performance levels for all students) has been specified and approved. Ideally, a “practice file” is generated in advance of the live file so that USBE can ensure that it is able to efficiently and accurately read the vendor’s file.
- **Report Format.** The mockup for the various score reports (student, classroom, school, district level etc.) have been reviewed and approved.
- **Interpretive Guides.** The content and format of the interpretive guides or FAQs about the score reports have been reviewed and approved.
- **Reporting Systems.** Any online reporting applications or portal have been tested for stability, verified for security, and approved for public access.

Complete QC Check

- **End-to-End Testing.** All key steps in spring administration process, including online test delivery, generation of scored data files, scoring of student responses, psychometric processes, generation of summative data files, production and publication of score reports, have been tested for accuracy, stability and efficiency.



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22 March 2019

Questar Assessment Inc.
Brad Baumgartner, COO
Elliot Dunn
5550 Upper 147th Street West
Apple Valley, MN 55124
bbaumgartner@questarai.com
edunn@questarai.com

RE: Contract USBE180056MA for computer adaptive testing system for grades 3-8, NOTICE OF DEFAULT and 5-DAY NOTICE TO CURE

Dear Messrs. Baumgartner & Dunn:

Notice of Default and Notice to Cure

The Utah State Board of Education ("USBE") appreciates the efforts of Questar Assessment Inc. ("Questar") to provide the RISE student assessment system in a fully functional format for use in Utah's public schools for the 2019 spring assessment window, and we remain cautiously hopeful that will occur. However, USBE also has a fiduciary duty to protect public assets. With both of those goals in mind, the USBE entered into Contract USBE180056MA (the "Contract") with Questar.

The Contract was clear that time was of the essence and included clear, reasonable, and mutually agreed-upon deliverables, with identified dates. Unfortunately, these deliverables have not been completed timely and, in some cases, at all. USBE and Questar collaborated to develop a delivery timeline that was aggressive but achievable, according to Questar's response to Solicitation #WA17019 and subsequent negotiation discussions, and USBE has been repeatedly assured that we would have a functional assessment to deliver to Utah students, thereby securing continuity in critically important longitudinal assessment data.

However, for a significant portion of the Contract, USBE has been compelled to adjust delivery deadlines to accommodate Questar's delays. Additional time was granted to complete work based upon Questar's representations that a functional assessment would be delivered as soon as possible but no later than March 19, 2019—the start of the spring summative assessment window. Unfortunately, this deadline, too, was missed.



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On March 18, 2019—just one day prior to the implementation deadline—Questar indicated during a 1 pm impromptu phone call that there were 40 unresolved issues preventing the scheduled delivery of the RISE assessment. Included on that list were at least 12 items jointly identified by USBE and Questar as critical. Questar committed to fixing these issues in time to meet a delayed implementation deadline of March 22, 2019. Based on the assurances of Mr. Dunn, USBE notified all school districts on March 21st that the test would be available the next day. Unfortunately, as of the morning of March 22nd, critical issues remained unresolved, and USBE was given no opportunity to perform quality checks on the issues that were addressed. Questar released the RISE assessment, despite the unresolved issues, based on a misunderstood e-mail from USBE, but the assessment ultimately had to be taken off-line later in the day when it became clear that issues persisted.

USBE has appreciated your transparency throughout the term of the Contract in sharing difficulties Questar has encountered in meeting milestones. While USBE has on numerous occasions extended milestone deadlines in order to support your team through these challenges, we have reached a point where such accommodations are no longer feasible. Questar's repeated delays in providing a fully functional system have resulted in unreasonably short quality control and user testing timeframes and have seriously put at risk USBE's ability to provide a student assessment on a statewide basis in the 2018-2019 school year.

Based on Questar's repeated failure to meet milestones, this letter will serve as USBE's Notice of Default, pursuant to Section 28 of Attachment A to the Contract, which states:

Any of the following events will constitute cause for the State Entity to declare Contractor in default of this Contract: (i) Contractor's non-performance of its contractual requirements and obligations under this Contract; or (ii) Contractor's material breach of any term or condition of this Contract. The State Entity may issue a written notice of default providing a ten (10) day period in which Contractor will have an opportunity to cure. Time allowed for cure will not diminish or eliminate Contractor's liability for damages. If the default remains after Contractor has been provided the opportunity to cure, the State Entity may do one or more of the following: (i) exercise any remedy provided by law or equity; (ii) terminate this Contract; (iii) impose liquidated damages, if liquidated damages are listed in this Contract; (iv) debar/suspend Contractor from receiving future contracts from the State Entity or the State of Utah; or (v) demand a full refund of any payment that the State Entity has made to Contractor under this Contract for Services that do not conform to this Contract.



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The following are the prioritized items for which you must provide USBE proof of completion within five (5) calendar days of your receipt of this Notice:

1. Writing reporting/scoring – there are codes that are triggered if a student’s response meets certain criteria. Those codes are “Duplicate Text” and “Prompt Copy Match.” Questar’s system is not currently scoring/reporting those codes accurately.
2. Instant score reporting – when a student finishes testing on the last screen he/she sees an “instant score” of how they performed on the test. This instant score is the Proficiency Level and Scale Score. This score reporting is currently not matching up with the business rules USBE and Questar decided on for student reporting.
3. The student report (ISR) is showing “0” under the “Too Few Items Attempted” which should not be appearing.
4. Possibly still an issue with Writing scoring correctly for “Conventions”.
5. Any other issue preventing Questar from delivering a fully functional assessment and reporting features for the following RISE Summative Assessments that were supposed to go live on March 19:
 - ELA (grades 3-8)
 - Writing (grades 5 and 8)
 - Mathematics (grades 3-8; Secondary Math I)
 - Science (grades 4-5)

While the above list identifies issues that USBE at this time has deemed most critical, all obligations and timelines in the Contract continue to exist, and this Notice is in no way a waiver by USBE of any right, power, or privilege with regard to Questar’s obligations under the Contract.

Please note that authorization by USBE to release the RISE assessment in spite of a rushed delivery timeframe and inadequate time for quality assurance does NOT signify USBE’s acceptance of the deliverables, pursuant to Section 22 of Attachment A, which states:

ACCEPTANCE AND REJECTION: The State Entity shall have thirty (30) days after delivery of the Procurement Item(s) to perform an inspection of the Procurement Item(s) to determine whether the Procurement Item(s) conform to the standards specified in the Solicitation and this Contract prior to acceptance of the Procurement Item(s) by the State Entity.

If Contractor delivers nonconforming Procurement Item(s), the State Entity may, at its option and at Contractor's expense: (i) return the Procurement Item(s) for a full refund; (ii) require Contractor to promptly correct or replace the nonconforming Procurement



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Item(s); or (iii) obtain replacement Procurement Item(s) from another source, subject to Contractor being responsible for any cover costs. Contractor shall not redeliver corrected or rejected Procurement Item(s) without: first, disclosing the former rejection or requirement for correction; and second, obtaining written consent of the State Entity to redeliver the corrected Procurement Item(s). Repair, replacement, and other correction and redelivery shall be subject to the terms of this Contract.

Any issues discovered prior to full acceptance must be remedied by Questar in accordance with the terms of the Contract.

Adequate Assurances requested for April Assessment Date

Additionally, at this time we are requesting assurance that the science portion of the assessment will be fully functional and released on April 15th as scheduled. This includes:

1. Science (grades 6-8)
2. Accommodated tests (Braille, Large Print, and Assistive Technology)
 - Accommodated ELA (grades 3-8)
 - Accommodated Writing (grades 5 and 8)
 - Accommodated Mathematics (grades 3-8)
 - Accommodated Science (grades 4, 5, 6, 7, 8)

This date, which is not in the contract but is the result of an extension agreed to by USBE, is critical. Failure to meet this deadline will result in irremediable harm and consequently will compel USBE to seek liquidated damages in accordance with the terms of the Contract.

Invoices and Payment

As you are aware, we are in receipt of your invoices for the periods of January and February 2019. Section 23-24 of Attachment A requires USBE to make payment only for work which has been completed and for which a correct invoice has been received by USBE. These sections state:

23. INVOICING: Contractor will submit invoices within thirty (30) days of the delivery date of the Procurement Item(s) to the State Entity. The contract number shall be listed on all invoices, freight tickets, and correspondence relating to this Contract. The prices paid by the State Entity will be those prices listed in this Contract, unless Contractor offers a prompt payment discount within its Response or on its invoice. The State Entity has the right to adjust or return any invoice reflecting incorrect pricing.

24. PAYMENT: Payments are to be made within sixty (60) days after a correct invoice is received. All payments to Contractor will be remitted by mail, electronic funds transfer,



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or the State of Utah's Purchasing Card (major credit card). If payment has not been made after sixty (60) days from the date a correct invoice is received by the State Entity, then interest may be added by Contractor as prescribed in the Utah Prompt Payment Act. The acceptance by Contractor of final payment, without a written protest filed with the State Entity within ten (10) business days of receipt of final payment, shall release the State Entity and the State of Utah from all claims and all liability to the Contractor. The State Entity's payment for the Procurement Item(s) and/or Services shall not be deemed an acceptance of the Procurement Item(s) and is without prejudice to any and all claims that the State Entity or the State of Utah may have against Contractor. The State of Utah and the State Entity will not allow the Contractor to charge end users electronic payment fees of any kind.

In reviewing the invoices, it appears that there remains incorrect information on the completion of items for which payment is being requested. When USBE receives a correct invoice, payment will be made in accordance with the terms of the contract.

If you have any questions, please feel free to contact me.

Warm regards,

/s/ Zachary Christensen

Zachary Christensen
Director of Purchasing and Contracts
Zac.christensen@schools.utah.gov

U.S. Mail and Email



April 5, 2019

Mr. Darin Nielsen, Assistant Superintendent of Student Learning
Utah State Board of Education
250 E. 500 S.
P.O. Box 144200
Salt Lake City, Utah 84144-4200

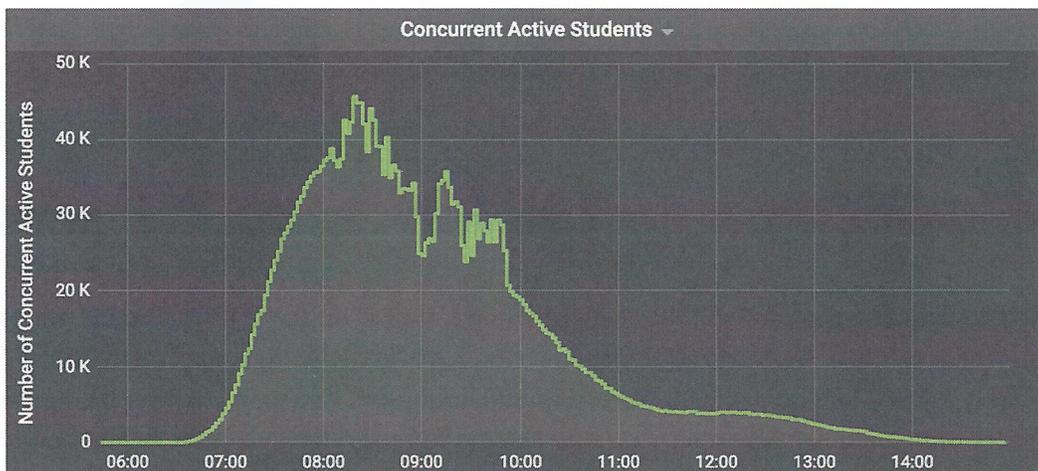
Mr. Nielsen:

On Tuesday, April 2, Questar Assessment Inc. (Questar) became aware of issues with online testing in New York State and was able to identify the cause, validate findings and required corrective action with multiple third-party experts, and implement the changes necessary to resolve the issue. Details regarding the issue and corrective action follow.

Symptoms and Diagnosis

Online testing in New York experienced slowdowns on April 2, 2019, starting at approximately 8:04 a.m. CST. (Note: students were testing in EST, but all charts shown below are in CST, so we will use CST in the description for consistency.). Student testing started at approximately 6:30 a.m., and grew consistently until 8:04 a.m., when load reached approximately 38,800 students testing concurrently (Chart 1). During this time, response times for saving student data were consistent and within expected bounds (Chart 2, prior to 8:04 a.m.).

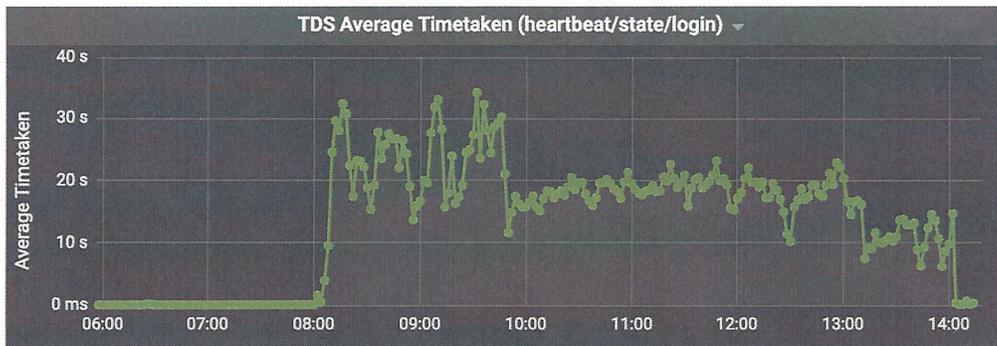
CHART 1: CONCURRENT ACTIVE STUDENTS



Questar Assessment Inc.

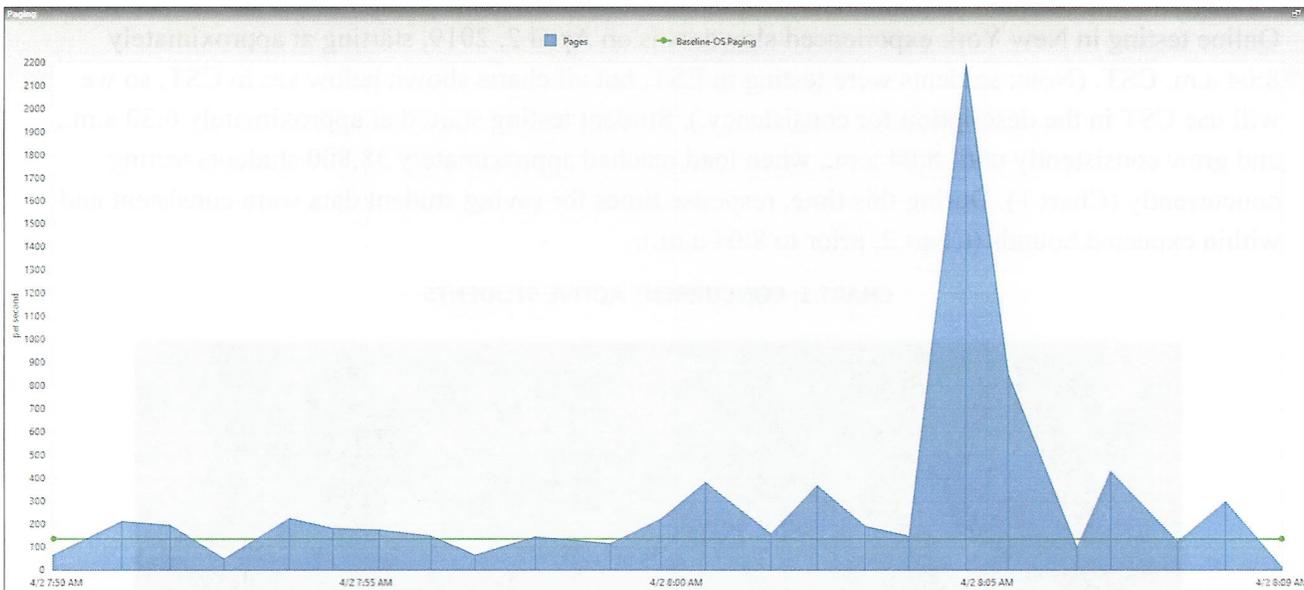
5550 Upper 147th Street West, Minneapolis, MN 55124
(800) 688-0120 | www.questarai.com

CHART 2: HEARTBEAT SAVE RESPONSE TIME (FROM THE WEB SERVER)



At 8:04 a.m., the database server ran out of free memory and began paging, which slowed transactions (Chart 3). Due to the high frequency of the transactions, which save student response data, combined with the tendency of these transactions to queue with page locks in the RDBMS, the transaction response times began to climb from an average of 100ms to an average of ~600ms (with some taking multiple seconds to complete).

CHART 3: DATABASE PAGING



The increase in database transaction times caused request queues on the application and web servers to back up, which resulted in perceived response times in the field averaging between 15 and 32 seconds (Chart 2: 8:04–9:50 a.m.), with some requests timing-out due to the delay. During this time, load balancers were automatically removing web servers from service due to the health checks failing. Between 8:04 a.m. and 9:50 a.m., response times were degraded due to the database transactions taking longer than normal and the resulting queueing issues at the web tier.

At approximately 9:50 a.m., the database began recovering, and transaction times for saving student responses began to trend toward expected values. Lingering issues at the web tier caused some requests to receive slow response times or http 502 errors after this point. These issues persisted until 2:04 p.m., when testing concluded for the majority of the students.

Action Plan

In order to resolve the issues identified, the following steps were taken to prevent recurrence:

- Increased memory for the database server from 146GB to 768GB
- Increased computing power from 16 to 32 CPU cores
- Enabled database server to use para virtualize SCSI connections to the SAN
- Added and extended database files from 8 to 16 for TempDB and 3 to 8 for NexteraDB
- Changed MSSQL Fill Factor setting from 100 to 60 for indexes relating to the student insert transactions

As an additional precaution, all non-essential servers have been removed from the vm farm to prevent any unintended competition with the production environment.

The diagnosis and action plan listed in this memo have been reviewed and confirmed by engineers from Questar, ETS, and Microsoft Professional Services. Questar is confident the actions taken will address the issue we identified.

Sincerely,



Brad Baumgartner, Chief Operating Officer

Telephone: (317) 586-5095/Toll-free (800) 688-0120/Fax (952) 997-0818

Email: bbaumgartner@questarai.com

UT Incident Report 4/25/19

At approximately 10:45 AM CDT on April 25, 2019, the Nextera Test Delivery System platform began exhibiting symptoms of slowness in the scoring service within the Utah instance for the Spring Summative assessment. This slowness persisted until approximately 12:40 PM CDT when service was restored to normal.

Questar engineers in conjunction with Microsoft Professional Services have investigated this issue and produced the following diagnosis:

1. The problem was initiated by a spike in disk latency for the database servers which in turn caused the procedures to save student work to run slower than expected.
2. The slowness in the database procedures in turn caused the web/app servers to drop in and out of service due to their request queues being overrun with outstanding requests.

To prevent recurrence, Questar Engineering is making the following changes this evening:

1. Database log file shipping is being configured to run on a staggered time frame to alleviate potential bottlenecks with Disk I/O.
2. The web/app servers are being configured to have longer queues so that they will be more resilient should database requests take longer than expected.

During the time period students may have been impacted when attempting to submit sessions within a test. If impacted, they may have received errors within the Nextera platform claiming that they could not submit and need to retry. We believe all student work has been correctly recorded, but due to the issue with the scoring service, could not be scored in real-time. The data table below is an attempt to quantify the affected population. This table reflects the status as of 2:00 PM CDT on 4/25/19. Of the 85,559 student test sessions attempted on this day, 64,829 were successfully submitted, 18,429 tests were still in progress, and 2,301 had not yet started session 2 at the time the data was pulled (it is worth noting that over 2,000 students were actively testing when the data was captured, so some of these are healthy testing experiences that were not impacted).

Session	In Progress	Not Started	Submitted	Grand Total
Session	2550		2990	5540
Session 1	6022		41169	47191
Session 2	9857	2301	20670	32828
Grand Total	18429	2301	64829	85559

Impacted student test sessions that were not scored during this period will be scored this evening and students will be able to resume testing on 4/26/19. As stated previously, Questar Engineering believes that all student data is available within the database for scoring, if this

doesn't match the student's experience when resuming testing please call the Questar helpdesk immediately for assistance.

At approximately 10:45 AM CDT on April 22, 2019, the Nextera Test Delivery System platform began exhibiting symptoms of slowness in the scoring service within the Utah instance for the Spring summative assessment. This slowness persisted until approximately 11:40 PM CDT when service was restored to normal.

Questar engineers in conjunction with Microsoft Professional Services have investigated this issue and produced the following diagnosis:

1. The problem was initiated by a spike in disk latency for the database servers which in turn caused the procedures to save student work to run slower than expected.
2. The slowness in the database procedures in turn caused the web/app servers to drop in and out of service due to their request queues being overrun with outstanding requests.

To prevent recurrence, Questar Engineering is making the following changes this evening:

1. Database log file shipping is being configured to run on a staggered time frame to alleviate potential bottlenecks with Disk I/O.
2. The web/app servers are being configured to have longer queues so that they will be more resilient should database requests take longer than expected.

During the time period students may have been impacted when attempting to submit sessions within a test, it impacted they may have received an error within the Nextera platform claiming that they could not submit and need to retry. We believe all student work has been correctly recorded, but due to the issue with the scoring service, could not be scored in real-time. The data table below is an attempt to quantify the affected population. This table reflects the status as of 2:00 PM CDT on 4/22/19. Of the 22,550 student test sessions attempted on this day, 64,839 were successfully submitted, 12,459 tests were still in progress, and 2,301 had not yet started session 2 at the time the data was pulled (it is worth noting that over 2,000 students were actively testing when the data was captured, so some of these are healthy testing experiences that were not impacted).

Session	Submitted	In Progress	Not Started
Session 1	6012	4169	47191
Session 2	3877	1901	31878
Total	9889	6070	79069

Impacted student test sessions that were not scored during this period will be scored this evening and students will be able to resume testing on 4/26/19. As stated previously, Questar Engineering believes that all student data is available within the database for scoring. If this

Utah RISE Incident Report, 4/30/19

At approximately 10:10 a.m. CDT on April 30, 2019, Questar's Nextera assessment platform began exhibiting symptoms of slowness in the scoring service for the Utah RISE grades 3–8 assessments. This slowness persisted until approximately 11:30 a.m. when service was restored to normal.

Questar Engineering, in conjunction with Microsoft Professional Services, have investigated this issue and produced the following diagnosis:

1. The problem was initiated by a scoring process running on the database server, which ran longer than expected and interfered with other processes related to student testing.
2. The slowness in the database procedures in turn caused the web/app servers to drop in and out of service due to their request queues being overrun with outstanding requests.

To prevent recurrence, Questar Engineering has made the following changes:

1. The offending process that created the blocking within the database has been tuned so that it will run within expected timeframes outside of testing hours.
2. The offending process has also been directed to run on a secondary database server so that it will not interfere with student testing.

During the time period noted above, students may have been impacted when attempting to submit sessions within a test. If impacted, they may have received errors within the Nextera platform claiming that they could not submit and need to retry. We believe all student work has been correctly recorded but due to the issue with the scoring service could not be scored in real-time. Questar has identified the population of students whose scores did not complete during this time period and will re-process them the evening of April 30, 2019.

Separately, today (April 30, 2019) Utah schools reported to the USBE and Questar customer support discrepancies between RISE instant scores (provided immediately after submission of Session 2) and RISE school reports. Questar identified the root cause of these discrepancies, which was a scoring task that failed to run the evening of April 29, 2019. Questar is re-running this scoring task the evening of April 30, 2019, and will track reports to ensure fidelity of scores. The instant scores that were previously reported were the correct student test scores.

Utah RISE Incident Report, 5/2/19

At approximately 11:00 a.m. CDT on May 2, 2019, the Nextera assessment platform began exhibiting symptoms of slowness in the scoring service within the Utah RISE grades 3–8 assessments. This slowness persisted until approximately 12:10 p.m. when service was restored to normal.

Questar engineers in conjunction with Microsoft Professional Services have investigated this issue and produced the following diagnosis:

1. Beginning shortly before 11:00 a.m., the scoring database began experiencing a high amount of page locks and transactional rollbacks within the database tier of the application.
2. This resulted in slower than expected transaction times within the database, which in turn caused student score requests to take significantly longer to process than expected.

To prevent recurrence, Questar Engineering is making the following changes this evening:

1. Database parameters for the scoring database will be tuned to reduce page locks and blocking for the scoring procedures.

During the time period, students may have been impacted when attempting to submit sessions within a test. If impacted, they may have received errors within the Nextera platform claiming that they could not submit and need to retry. We believe all student work has been correctly recorded, but due to the issue with the scoring service could not be scored in real-time.

Impacted student test sessions that were not scored during this period will be scored this evening, and students should be able to resume testing on May 3. As stated previously, Questar Engineering believes all student data is available within the database for scoring—if this does not match the student's experience when resuming testing, please call the Questar Customer Support immediately for assistance.

UT Pre-ID Incident Report 5/7/19

At approximately 7:30 p.m. CDT on Tuesday, May 7, 2019, issues were identified in the Admin app pool. These issues occurred for approximately three hours. Pre-ID was running during this time. The Admin tech staff monitored the app pool and resulting jobs during this timeframe. At the end of the event, all activity appeared to be working correctly and the Hangfire job for the Utah Pre-ID showed that it had run successful. This ended up not being the case. The Pre-ID job had actually failed. This failure did not get detected until the morning of Wednesday, May 8, when we received communication from Duchesne district of students not being added to the proper school/class.

As the Pre-ID cannot run while student testing is taking place, a plan was put in place to run the failed Pre-ID file on the evening of Wednesday May 8. The Pre-ID files from May 7 and May 8 were run Wednesday evening. Two errors were identified during the Pre-ID load process. There were several class names that were too long, and there was a small quantity of duplicate teachers. Besides changes associated with these two issues, all other updates were loaded into Nextera Admin.

To address the class name length issues, a code change was required. The duplicate teacher records required a data fix to address the issue. On the evening of Thursday, May 9, a hotfix code deploy took place to address the class name length issue, and the duplicate teacher records were addressed. Pre-ID was rerun for the May 7 and May 8 files. Both files ran successfully. After these files ran we attempted to run the May 9 Pre-ID file. The May 9 file was a complete load of all students for Utah Spring Summative. Due to the late start time of this file and the file size, the job continued to run into the morning of Friday, May 10. To ensure we did not interfere with student testing, the job was stopped at approximately 8:30 a.m. CDT. The full Pre-ID file did not load and will be rerun the evening of May 10.

Ongoing research is continuing around the following area:

1. The Admin development team is working with the Dev Ops team to establish a root cause of the Admin app pool issues that were experienced Tuesday evening.
2. The Admin development team is working to understand why the Hangfire job showed completing the Pre-ID job successfully, when the job actually failed.

The following are process changes and general improvements to allow for more effective and successful Pre-ID updates:

1. A process has been implemented to review the Pre-ID error logs and provide internal communication to Program Management by 8:00 a.m. CDT for any critical errors identified.
2. Additional documentation and training materials will be created associated with defining error conditions that may be generated during the Pre-ID loading process.
3. Additional development work is being evaluated to better handle the duplicate teacher records in the Pre-ID files.

UT Form Assignment Incident Report 5/9/19

Form assignment for Utah RISE Spring Summative is run at 3:00 a.m. CDT every morning. This allows all Pre-ID changes from the previous day to be loaded into the Nextera system prior to form assignment being run. On the morning of Thursday, May 9, form assignment failed. This error was not identified until Duchesne district communicated that their students were loaded in Nextera Admin but not assigned to tests, at approximately 8:00 a.m. CDT on Thursday, May 9.

Questar's Admin development team evaluated the failure condition and identified three student records that had a data condition that caused form assignment to fail. These students had a session reset performed, and their condition was a change that required them to get a new form (accommodation set or class change) prior to resubmitting the original session. The score information from the original submissions was still attached to the original form, and therefore form assignment could not delete the test form to allow the new form assignment. This created an error condition that caused form assignment to fail. To address this condition, a change was made to the stored procedure so that for any students who have a session that was submitted and reset, the score is removed from the form. This eliminates the condition that was the root cause for this error.

The stored procedure was changed and validated by Questar QA and implemented in production on the evening of Thursday, May 9. On the morning of Friday, May 10, the form assignment job ran successfully, including for the three students that the original error occurred.

The following are process changes associated with form assignment:

1. A process has been implemented to review the form assignment job and provide internal communication to Program Management by 8:00 a.m. CDT for any critical errors identified.

IT Incident Report 5/9/19

At approximately 11:05 a.m. CDT on Thursday, May 9, 2019, the Nextera assessment platform began exhibiting symptoms of slowness in the scoring service for the Utah RISE Spring Summative assessments. This slowness persisted until approximately 11:21 a.m. CDT when service was restored to normal.

Questar Operations and Engineering staff have investigated this issue and produced the following diagnosis:

The current problem occurred by an accumulation of temporary data. The level of accumulation has relegated certain database maintenance to be run only on weekends. This resulted in a gradual increase in response times, until they reached a point noticeable by users.

To prevent recurrence, Questar Engineering has made the following changes:

Temporary data has been backed up, in case it is needed. All but the last week of data has been removed from the online system. Nightly maintenance routines have been tuned to ensure the essential maintenance can be completed on a nightly basis.

An automated early warning was in place but can be more specific. The alerting allowed staff to identify and respond quickly. These alerts will be tuned and proceduralized for Operations staff.

During the noted time period, students may have been impacted when attempting to submit sessions within a test. If impacted, they may have received errors within the Nextera platform claiming that they could not submit and need to retry. We believe all student work has been correctly recorded, and students only needed to resubmit to continue testing.



Questar Assessment Inc. storage outage incident report

May 20, 2019

Issue Summary:

On Friday May 10, 2019, Atomic Data detected an issue on the dedicated NetApp storage system for Questar Assessment Inc. A war room was initiated, and Atomic Data engineering engaged NetApp Support to troubleshoot, identify, and resolve the issue. Service interruption affecting Questar and its customers, lasted 2 hours and 20 minutes. The root cause was determined to be a failed I/O Control Module (IOM) within the NetApp storage system on shelf 27.

Timeline:

08:15 AM CDT – Alert notification received
08:33 AM CDT – War Room initiated
08:57 AM CDT – NetApp support case opened
10:20 AM CDT – Reseated IOM A
10:25 AM CDT – Reseated IOM B
10:32 AM CDT – Replaced IOM B
10:35 AM CDT – Services Restored

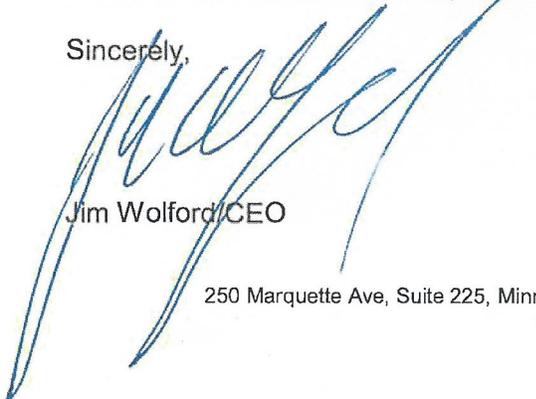
Recovery:

After the new IOM-B was installed and services restored, Atomic Data engineering and NetApp support performed multiple systems validations and health status checks, confirming a healthy storage environment. In addition to the positive health checks and system reports, Atomic Data has submitted a formal request to NetApp for providing a summary of events. As this is a non-standard request of NetApp, it may take multiple days or weeks to receive a response.

Root Cause:

NetApp determined the root cause to be an issue with the I2C-Bus communication protocol on disk shelf 27. A disk recovery request was initiated by the NetApp ONTAP Data Management software at the same time initiating requests to power cycle disk drives on shelf 27. This caused contention between IOM-A and IOM-B on shelf 27 regarding which IOM was the master. Both IOM-A and IOM-B were reseated to clear log errors. While IOM-B was reseated, the IOM reverted its firmware, indicating a physical hardware issue. IOM-B was replaced with new hardware, resolving the issue.

Sincerely,



Jim Wolford/CEO

250 Marquette Ave, Suite 225, Minneapolis, MN 55401 | 612.466.2000 | 1.800.285.5179
atomicdata.com