Application & Website Testing

Release: 1.0   Date: 6/18/12
Owner: Quality Assurance

Service Description

AITS provides a variety of website testing services. Below are listed the different types of testing that AITS can provide.

This service is offered as part of the AITS Service Catalog. The base Service Level Agreement for this service is available for review.

For further information or to request any service, please contact the AITS Service Desk

servicedeskaits@uillinois.edu
 217-333-3102 (Urbana)
312-996-4806 (Chicago)

- Application Function & Business Rule Testing (Requirements Testing) - Quality Assurance Specialists provide and independent evaluation of an application to the adherence of the system specifications and requirements. Test cases and scenarios are developed to execute complete units of work and actual results are measured against expected results. Other areas are also reviewed including screen navigation and both positive and negative testing (testing for failures and incorrect data). Testing is done both manually and through automated testing using tools such as HP Quick Test Pro, and in-house developed products.

- Performance Testing - Performance testing measures response times, transaction rates, and other time sensitive requirements associated with an application. The goal of Performance testing is to verify that the performance requirements have been achieved.

- Volume and Load Testing – Volume testing utilizes automated tools to subject an application to a high volume of transactions or hits as simulated by high user activity. Many times volume testing is used in conjunction with load testing which utilizes the automated tools such as Rational Performance Tester and HP LoadRunner to submit large amounts of data into the application to verify application capacity and infrastructure stability. This testing also identifies the continuous maximum load or volume the system can handle for a given period of time.   The testing is scripted to simulate typical transactions and time based sequencing of user activity during a heavy use period.

- Web Application Security Testing - The QA Team uses industry leading tools to navigate through web applications to search for security vulnerabilities found in both application coding as well as application infrastructure. The Rational AppScan tool receives feeds from the top security organizations in the industry which provide definitions and tests for the latest vulnerabilities that have been uncovered. Applications are scanned both on a recurring basis as well as when significant updates are made to maintain application security. The vulnerabilities identified are rated by the industry based upon their potential to allow data loss, denial of service, or other malicious activities.

- Accessibility Testing – The QA team tests applications for accessibility as mandated by Illinois Information Technology Accessibility Act (IITAA) that went into effect August 2007. The IITAA

requires Illinois agencies and universities to ensure that their web sites, systems, and other information technologies are accessible to people with disabilities. The QA Team has developed a suite of tests that combine both manual and automated testing to ensure that a system meets compliance.   The manual testing process includes a visual review of the application or site for usability and accessibility while also using manual keyboard navigation and page navigation using the JAWS screen reader. The following tools may be utilized in the testing process: JAWS, FAE, Fangs, Wave, Color Contrast Checker, W3C, FireBug, and FireEyes.

- Messaging Infrastructure Testing – The QA team tests the content, format, and events associated with the generation of enterprise JMS messages. The JMS messages are XML based objects which provide synchronization of data across university systems as well as request-reply messages which allow systems to directly communicate with each other. The major components tested are Gateways and the XML based messages. It is vital to data integrity that the messaging components in the applications work reliably and deliver timely accurate data packages end to end.

Hours of Availability

This service is available to customers during normal business hours.   Site-specific and service-specific needs may be coordinated with customers outside of business hours.

Customer Responsibilities

- Identify a primary point of contact to work with AITS in coordinating the activities being performed by the service.
- Support requests relating to the use of the service will be initiated by opening an incident or request ticket with the AITS Service Desk.

How Do We Charge?

This service is offered as part of the Quality Assurance testing set of services. The base Service Level Agreement for this service is available.

**Our Service Catalog is based on material that was developed by The State of North Carolina's Operational Excellence Program's Service Catalog and adapted with their permission. **

DOCUMENT OWNER/APPROVAL

Service Catalog Owner: Nyle Bolliger

Concurrence:

Service Catalog Owner	Date

Computer Operations Engineering	Date

Approval:

Associate Vice President - AITS	Date

REVISION CONTROL

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8-1-12	Rita Bates	Acknowledging North Carolina's work	2

REVIEW/APPROVAL HISTORY

This service catalog shall be subject to a review on an annual basis.

Date	By	Action	Pages
6-3-13	Nyle Bolliger	No changes	