WiTS "Under the Hood": A Technical Overview

Functional Overview

WiTS is a web-based business process management tool that is used to monitor and track HR and HR-related actions, increase customer communications through automated action status notifications, and to provide consistent reporting of workload and performance metrics.

General Specifications

What platform does the software run on?

Server Side: Windows 2008 Server R2, SQL 2008 R2, Apache Tomcat, BizFlow 11.5, Java/J2EE, SQL Server Reporting Services (SSRS)

Client Side: Windows XP and 7 Operating Systems, Internet Explorer 7 and 8 (32-bit) browsers

What is the infrastructure for WiTS?

WiTS is hosted by the Center for Information Technology (CIT) and utilizes a 4-tier server architecture that includes dedicated web, application, database, and reporting servers.

Component Name/Server Name	Hardware Manufacturer	Software (Name/Version)	Location	Primary Function
NIHOHRSQL	HP Proliant BL460c G6 Servers Hard-Drive 536 GB Dual Xeon Quad Core 2.27 GHz 8GB RAM Static IP: 128.231.74.159	Windows 2008 Server R2 (SQL 2008 R2)	Building 12, CIT DataCenter	Production Transactional Database Server MS SQL Server 2008 R2
NIHDEVOHRSQL	HP Proliant BL460c G6 Servers Hard-Drive 536 GB Dual Xeon Quad Core 2.27 GHz 8GB RAM Static IP: 128.231.74.207	Windows 2008 Server R2 (SQL 2008 R2)	Building 12, CIT DataCenter	Production Transactional Database Server MS SQL Server 2008 R2 DEVELOPMENT ENVIRONMENT
NIHOHRSQLRPTS	HP Proliant BL460c G6 Servers Hard-Drive 536 GB Dual Xeon Quad Core 2.27 GHz 8GB RAM Static IP: 128.231.74.180	Windows 2008 (SQL 2008 R2)	Building 12, CIT DataCenter	Production Replicated Reporting Database Server MS SQL Server 2008 R2 from NIHOHRSQL
NIHOHRWEB	HP Proliant BL460c G6 Servers Hard-Drive 336 GB Dual Xeon Quad Core 2.27 GHz 4GB RAM Static IP: 128.231.74.161	Windows 2008 Server R2 (IIS v7.0 and Tomcat v6.0)	Building 12, CIT DataCenter	Production Web Server
NIHDEVOHRWEB	HP Proliant BL460c G6 Servers Hard-Drive 336 GB Dual Xeon Quad Core 2.27 GHz 4GB RAM Static IP: 128.231.74.70	Windows 2008 Server R2 (IIS v7.0 and Tomcat v6.0)	Building 12, CIT DataCenter	Production Web Server DEVELOPMENT ENVIRONMENT
NIHOHRAPP	HP Proliant BL460c G6 Servers Hard-Drive 536 GB Dual Xeon Quad Core 2.27 GHz 4GB RAM Static IP: 128.231.74.164	Windows 2008 Server R2	Building 12, CIT DataCenter	Production Application Server
NIHOHRAPP	HP Proliant BL460c G6 Servers Hard-Drive 536 GB Dual Xeon Quad Core 2.27 GHz 4GB RAM Static IP: 128.231.74.76	Windows 2008 Server R2	Building 12, CIT DataCenter	Production Application Server DEVELOPMENT ENVIRONMENT

Does WiTS interface with other systems?

- *Capital HR (EHRP)* - One way interface to WiTS for initiating recruitment actions and populating data fields related to recruitment requests. Data is received every 15 minutes via XML file.
- *HHS Careers (USA Staffing)* - One way interface to WiTS for obtaining information about certificates and vacancy announcements. Data is received nightly (between 1:00a – 3:00a) via XML file.
- *NIH Enterprise Directory (NED)* - One way interface to WiTS for retrieving employee information such as name, email, office address, phone number, and NIH Badge ID. Data is received within seconds via web services.
- *NIAID's Awards and Recognition Processing System (ARPS)* - Two way interface for submitting monetary awards to HR directly from the National Institute of Allergy and Infectious Diseases (NIAID). Data is sent and received within seconds via XML/web services.

Component Specifications

User Access
> WiTS users are authenticated using NIH Single Sign On (SSO), using CA SiteMinder Web Agent Software in conjunction with the NIH Active Directory user repository.

Workflows
> WiTS workflows are built and maintained using BizFlow's Business Process Studio.

Forms
> Forms are built in Java/JavaServer Pages (JSP) using the Struts framework and Active Server Pages (ASP).

Reports
> WiTS reports are near real-time (within seconds) and have been designed and developed using SQL Server Reporting Services (SSRS). The Parameter pages have been created using JSP.

Dashboards
> WiTS dashboards are housed within WiTS and are built in MS Visual Studio using .NET and SSRS.

Web Components
> A number of WiTS self service components are contained on the OHR website (IntraHR) – these include the HR Requests Page (which allows users to initiate HR Systems Support and Access Requests, Senior Level Pay cases and Retirement Estimates) and the IC Report Lists (which allow users to directly access a number of WiTS reports). These tools are built using MS .NET and ASP pages.

Other Information

WiTS completed its initial Certification and Accreditation process in 2009 and was granted the initial Authority to Operate (ATO) in March of that year – the ATO was renewed in February 2012. WiTS is also subject to periodic vulnerability scans by the Office of Information Technology (OIT). It has successfully passed all Annual Security Assessments, and also undergoes annual Privacy Impact Assessments (PIA). The current System Security Category is 'Moderate'.

WiTS Enhancements for OHR encompass the creation of new/modifications to existing products (workflows, reports, dashboards, organizational units, etc) that are requested based on our OHR customers' business needs. Enhancements that are expected to take longer than 80 hours to complete are reviewed, ranked and prioritized by the Change Control Board [HR Systems Advisory Committee (SAC)] and approved by the OD/OHR. SAC review is conducted at the beginning of each fiscal year, and any emergent enhancements are reviewed at subsequent SAC meetings throughout the year. Enhancements that are expected to take less than 80 hours are reviewed, ranked, prioritized and scheduled by the WiTS Project Manager.