

Transitioning TAIR TO iPLANT

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Objectives

- To maintain the TAIR web site through the end of the current grant
- To provide continued access to TAIR data and software beyond the end of the current grant
- To stabilize the TAIR software
- To enable easier maintenance of the TAIR software, database, and system

Key Technology Factors

- Availability of iPlant as potential host for TAIR
- Upgrades needed to most recent infrastructure (operating systems, application servers, platforms)
- Virtual Machine technology throughout
- Keep Oracle database technology
- Maintain ABRC ordering functionality as is

Virtual Machines

- Separate out components to reduce interdependencies and improve performance
- Enable easy cloning of development systems on demand
- Implement test/staging servers on demand
- Enable performance bottleneck resolution by VM optimization

TAIR Web app

- Upgraded to CentOS operating system (iPlant)
- Upgraded to run under Jboss AS7 (from AS5)
- Upgraded from JavaServer Faces 1 to JSF 2
- Separate out TOAST tool
- Implement as distributed nodes on multiple virtual machines (instead of multiple nodes on one machine)
- Maintain PCI-compliant ABRC ordering system as is

Unchanged Applications

- Oracle database
- ftp server
- Data pipelines (ABRC, GenBank)
- Compute Servers (BLAST, Patmatch)

Upgraded Applications

- TOAST (Tair Online Annotation Submission Tool)
 - JSF 2/RichFaces 4, reworked user interface
 - Separate web application, open source
 - Implementation integrated with PubSearch on Tomcat 6
- SeqViewer (put on a diet, separated from TAIR)
- Gbrowse 2 (upgraded from 1.7)
- PubSearch (cleaned up and migrated to Tomcat 6)
- Pub2tair ETL pipeline (migrated from Perl)

Processes

- Curation
- Site Operations
- Site Maintenance
- Verification and Validation
- Transition and Cutover

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