STUDENT DATA WAREHOUSE
PRODUCT DATA SHEET

KEY FEATURES
• Enterprise Reporting
• Easy to use analysis and reports
• Comprehensive list of dashboards and reports
• Consolidated analytical data view of PeopleSoft Student Records
• Ability to build customizable reports from multiple data sources
• Automated nightly data refreshes from PeopleSoft
• Seamless integration between PeopleSoft and Analytical Visualization
• Reports containing data Customized user groups providing relevant, secure data

Overview
The Student Data Warehouse leverages Oracle Business Intelligence Enterprise Edition to deliver customized dashboards and reports built with student records data stored in Oracle Database. Combining records from PeopleSoft, the enrollment census, and other sources, the Student Data Warehouse facilitates access to student data for analysis and many college and department operational needs. Listed below are some sample topics the Student Data Warehouse can help you explore:

• What are the enrollment numbers in the individual colleges/departments/courses/sections?
• What are the trends in course fill rates/FTE?
• In which courses have students been more/less successful?
• Which student populations/colleges/departments/majors have higher graduation rates?

Application Usage
Faculty and staff can use student data for the following:
• Identifying and interacting with students for degree progress advising
• Analyzing course demand for enrollment planning
• Conducting research informed by student records metrics
• Managing prospective student recruitment and admission
• Using student records information to conduct informational campaigns

Available Dashboards
The product contains several Subject Areas (logical groupings):
• Admissions (application-related information)
• Student Advising
• Course Enrollment
• Course Grade Distribution by Faculty
• Student Degree Audits
• Enrollment Planning
• Student Progress Tracker
• Student Academic Planner
• Student Financial
• Student Profile
• Student Success

KEY BENEFITS
• Reduced query load on PeopleSoft Campus application
• Provides quick access to Analytical Reports in graphical and table format
• Establishes “Single version of the truth”
• Provides consistent, institutionalized definitions and business rules to achieve
• Supports student success by providing meaningful insights, and actionable data to functional stakeholders

User groups (Role-based access)

<table>
<thead>
<tr>
<th>Group Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advisors – Undergraduate</td>
</tr>
<tr>
<td>Advisors – Graduate</td>
</tr>
<tr>
<td>Developers</td>
</tr>
<tr>
<td>Power Users</td>
</tr>
<tr>
<td>Academic Leadership (Provost Office, Deans)</td>
</tr>
<tr>
<td>Department Chairs</td>
</tr>
<tr>
<td>System Administrator</td>
</tr>
</tbody>
</table>
Physical Architecture
- PeopleSoft Campus application and Database servers are hosted at Equinix Data Center, Santa Clara, CA
- Student Data Warehouse ETL and Database servers are hosted by and at CSU Fullerton, CA
- Student Data Warehouse Application Reporting servers are hosted at San Jose State University Data Center.
- Servers are interconnected using VPN and Network Firewall rules.
- Direct Database access requires “Whitelisting” of IP addresses

Technical System Architecture
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<table>
<thead>
<tr>
<th></th>
<th>OBIEE</th>
<th>ETL Server</th>
<th>ETL Client</th>
<th>Database</th>
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</thead>
<tbody>
<tr>
<td><strong>Server</strong></td>
<td>Windows</td>
<td>Oracle Sparc T5-2</td>
<td>Windows</td>
<td>Database Appliance X52</td>
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<tr>
<td><strong>OS</strong></td>
<td>2012 R2</td>
<td>Solaris 11</td>
<td>2012 R2</td>
<td>Linux</td>
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<tr>
<td><strong>Storage</strong></td>
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<td>Internal 6 Disk</td>
<td>100 GB</td>
<td>8 TB</td>
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<tr>
<td><strong>RAM</strong></td>
<td>16 GB</td>
<td>32GB,1 CPU 8 core 64 threads</td>
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<td>256 GB x 2 nodes</td>
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<td>5</td>
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<td>1</td>
<td>2</td>
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<td><strong>Product</strong></td>
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<td>DataStage</td>
<td>Oracle Database</td>
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<td>12.1.0.2.0</td>
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</tbody>
</table>

Database and ETL design
Data Model: Star Schema Dimensional Model
Change Capture: Partial set of tables

- # of daily ETL jobs: ~720 jobs
- Database size: ~500GB
- # of Total tables: ~23,000
- # of Dimension tables: ~100
- # of Fact tables: ~60

# of Dashboards: 21
# of Analytical Reports: ~225