UCF SAS® Visual Analytics: Implementation, Usage, and Performance

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Session Highlights

• UCF – IKM
• SAS® EBI Environment
• VA Environment
• Challenges
• VA Technical Specifications
• Future Directions
University of Central Florida (UCF)
SAS BI Environment

- Over 30 million observations related to student records
- Faculty and staff information
- Data marts and libraries
- Official UCF information repository
- Over 12 years in service
SAS BI Environment

BI Platform Server

Client

- SAS Add-in for Microsoft Office (AMO)
- SAS Data Integration (DI) Studio
- DataFlux (data cleansing)
- SAS Enterprise Guide (EG)
- SAS Information Map Studio
- SAS Management Console
  - Security
  - Stored Processes
  - Libraries
  - Folders
- SAS OLAP Cube Studio
Suite

- SAS® BI Dashboard 4.4
- SAS® Data Integration Studio 4.9
- SAS® Enterprise Guide® 7.1
- SAS® Information Map Studio 4.4
- SAS® Management Console 9.4
- SAS® OLAP Cube Studio 4.4
- SAS® Web Report Studio 4.4
- SAS Visual Analytics 7.1
SAS BI Environment
Enrollment

Preliminary Fall 2015 Enrollment

Enrollment Comparison

Year
2015: 63,373
2014: 60,821

% Difference from Previous Year
2014: 1.78%
2015: 4.20%

Enrollment Snapshot

by Career
Headcount: 64,769, 9,169, 457

by Gender
Headcount: Female, 34,860, Male, 28,493

by Residency
Headcount: Florida, 56,813, Non-Florida, 4,550

by Full/Part Time
Headcount: Full Time, 41,955, Part Time, 21,408
RDS

Provided by Institutional Knowledge Management

RDS Information
RDS data is downloaded nightly from PeopleSoft. The RDS tables contain information for current and future terms, as well as historical data for the preceding three terms. RDS is an enterprise reporting system, administered and maintained for the university by Enterprise Decision Support (EDS) in Institutional Knowledge Management (IKM).

RDS Queries
The queries found on this portal page comprise the RDS Query Library. They provide a wide range of detailed student and curriculum information to support university operations and reporting needs.

Customized RDS queries or reports can be developed to meet specific information needs. Please email iro@ucf.edu with your request, or call the Institutional Knowledge Management office at ext. 3-5051 for more information.

RDS Contact Information
If you have any questions or need assistance with RDS, please email rds@ucf.edu.

Solutions for Pegasus Mine Data Extract Issues
RDS Security Access Information
RDS Query Library Resource Guide

Advising
Click here to refresh collection.

- Advisor List with Details
- Students Active in a Major with Probationary Status
- Students Active in a Major with Advisor Assigned
- Students at Risk of Probation
- Students at Risk of Probation by Group

Scope of Term Information Available in RDS

For Enrollment Information:

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<td>Fall 2016</td>
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For Admissions Information:

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</table>

RDS Query Updates and Changes
11-22-2013

Advising:

RDS Updates History

- Students who Graduated
- Students who Graduated by Group
- Students who Graduated with Minor
- Students who Graduated with Minor - Counts
- Students who Completed a Certificate Program
- Students who Completed a Certificate Program - Counts
Retention / BI Dashboard
Security

- Environment sits behind firewall
- UCF single sign-on
External Data Sources

• Oracle Database 12c Transactional environment
• Microsoft SQL Server 12 environment with a COGNOS RDS overlay
• State vetted Flat Text Data files
SAS VA Environment

- 7.1
- *Cool thing to do!*
Reason / Direction

• Develop NEW report methods for existing Portal reports

• New Dynamic Reporting

• Possible uses:
  – Strategic planning
  – Foundation / Financial
  – Athletics
  – Academic Departmental Explorations
Our Use of VA
Targeted Performance Measure Dashboard
Peer Benchmarking

6 Year Graduation Rate (Minority Women)
- University of Connecticut
- Tulane University of Louisiana
- Temple University
- East Carolina University
- University of Houston
- University of Memphis

6 Year Graduation Rate (Minority)
- University of Connecticut
- Tulane University of Louisiana
- University of Central Florida
- University of Tulsa
- University of Houston
- University of Memphis

6 Year Graduation Rate (Hispanic)
- Southern Methodist University
- Tulane University of Louisiana
- Temple University
- University of Cincinnati-Main Campus
- University of Tulsa
- University of Memphis

6 Year Graduation Rate (Women)
- University of Connecticut
- Tulane University of Louisiana
- University of Tulsa
- University of South Florida-Main Campus
- University of Cincinnati-Main Campus
- University of Memphis

6 Year Graduation Rate (All)
- University of Connecticut
- Tulane University of Louisiana
- University of Central Florida
- University of South Florida-Main Campus
- East Carolina University
- University of Memphis

8 Year Graduation Rate
- University of Connecticut
- Temple University
- University of Central Florida
- East Carolina University
- University of Houston
- Tulane University of Louisiana
Usage

• Original Implementation soft rollout: Executive units on campus approx. 40 users
• Current usage approximately 60 users
• Soft rollout to Expected usage upwards of 400 users including departmental administration
Challenges

• Best practices regarding our own data
• Folder structure (Physical and Metadata)
• Data structures: many tables or single source
• Report Development
• Multiple developers on one project
Technical Environment

- Server sizing
- Distributed vs Non-Distributed implementation
- Security
- Server layout
- Server specifications
- Benchmark
User Estimator Matrix

The graph shows the relationship between data table size (in GB) and the number of heavy users. As the data table size increases, the number of heavy users decreases exponentially.
Distributed vs Non-Distributed

- Linux vs. Microsoft
- Budget
- Linux: Distributed and Non-Distributed
- Microsoft: Non-Distributed
- What makes sense for your unit?
- UCF choose a Non-Distributed environment
Server Layout

Internet  Firewall  Server  Firewall  Server

Firewall

IntraNet
Server Specs

- VM – SAS Webserver
- 2 vCPU
- 4 GB RAM
- 150 GB of disk space
Disk Benchmark

CrystalDiskMark 3.0.1 x64

All
Seq: 466.3 / 265.8
512K: 487.1 / 239.1
4K: 15.69 / 15.40
4K QD32: 182.4 / 140.5
Server Specs

- Dell 715xd – Metadata, Visual Analytics, etc.
- 2 x 10 core Intel CPU
- 256 GB RAM
- 24 x SAS Drives Raid 5
Disk Benchmark

file size

read [MB/s]

write [MB/s]
Future Directions

• We just adopted VA
• At UCF–IKM our decision to go with a non-distributed environment was the right choice
• Looking forward to keep developing and improving the quality of the information and services being provided
Questions / Contact Information

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