

Team: Dan Behun, Chris Nurre, Juan Obes, Mike Yatzkanic

Sponsors: Manny Contomanolis, Jim Bondi

Advisor: Daniel Pedersen

BACKGROUND & PURPOSE

The Office of Cooperative Education and Career Services (OCECS) provides Co-op and career data using an in-house built reporting and retrieval tool.

The office would like to replace its existing system with newer technologies, such as web services, to more effectively organize and analyze employer and job placement information.

REQUIREMENTS & TECHNOLOGY

- Increase performance
- Maintain existing reporting capabilities
- Web Services
 - ◆ Increased extensibility
 - ◆ Has a standard protocol of SOAP 1.2
 - ◆ Wide access to data. (Financial Aid, Housing, etc.)
- .NET Platform
 - ◆ ASP used in current system
- SQL Server 2000
 - ◆ Plans to upgrade to SQL Server 2005



PROCESS - SCRUM

- Frequent customer feedback
- Visibility and transparency with customer
- SCRUM meetings gave a snapshot of project status
 - ◆ What has been done, hindering and needs to be done
- 7 sprints, 2-3 weeks each
- Development done in parallel with OCECS
 - ◆ OCECS doing presentation layer

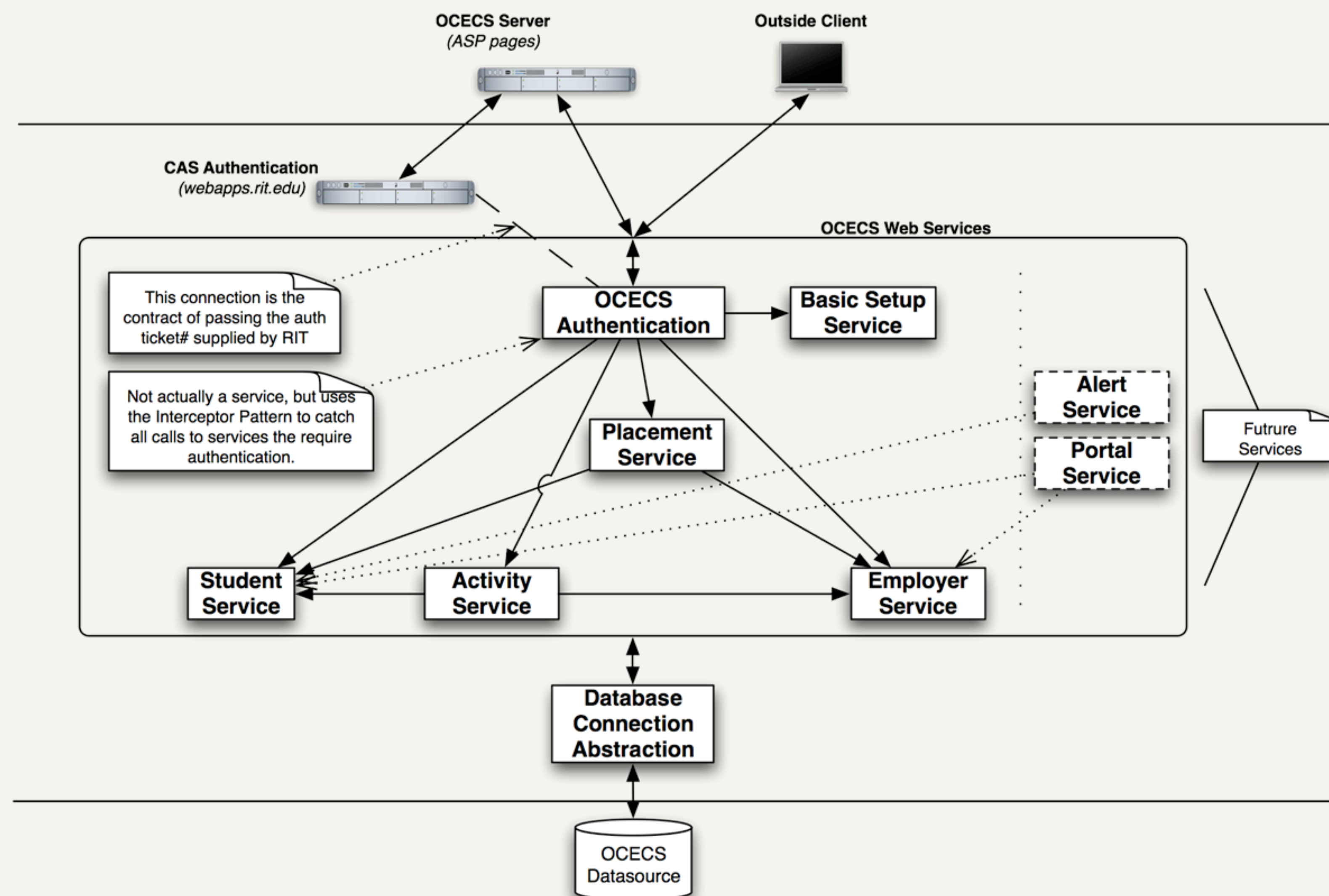
ARCHITECTURE & DESIGN

Four primary services

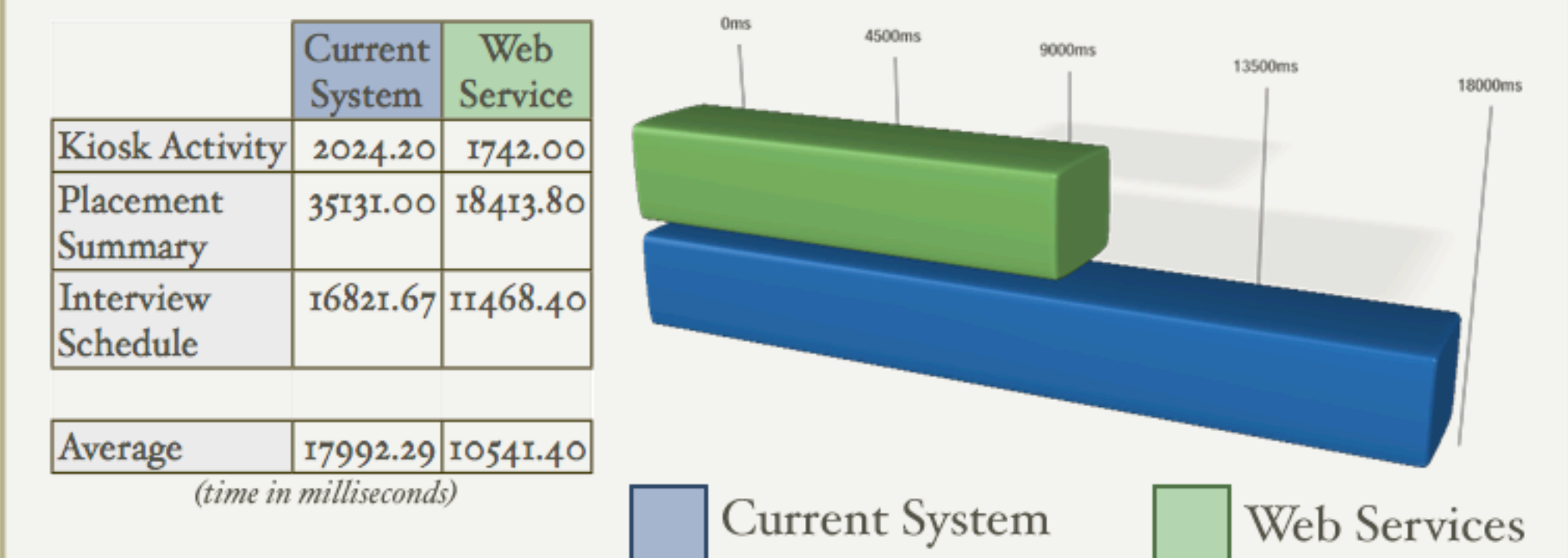
- Student - RIT student or alumni
- Employer - Company providing jobs
- Placement - Hired position of Student
- Activity - OCECS activity by Students and Employers

Security

- SSL - Protects private data
- Authentication module - Intercepts all incoming traffic to ensure user is authenticated and is authorized to access the data requested



PERFORMANCE IMPROVEMENT



Above numbers represent a sample of 3 highest load reports

Over all a 41% increase in average performance

REFLECTION

- Challenging requirements elicitation
- Steep learning curve
- Architecture first design facilitated elicitation
 - ◆ This reinforced the original architecture design
- Frequent meetings held with the customer allowed issues to be quickly resolved.

PREVIOUS SYSTEM

- System was built in 1999
- Two-Tiered architecture with limited extensibility
- Extending system bloated the software and hurt performance

DELIVERED SYSTEM

- SOAP Compliant Web Services
- 41% performance increase
- Secure system using Central Authentication Services (CAS) & SSL encryption

FUTURE WORK

- OCECS will take over development
- Additional services to be added
- Work with outside clients such as Financial Aid & Housing