

Plan for Achieving Required ECS Throughput Performance

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What's in the Plan?

Overview

- ECS Basics
- Potential Performance Bottlenecks
- Performance Requirements, Workloads, Goals

Performance Measurement & Tuning Methodology

Performance-Related Activities

Schedule

Appendices

- Performance modeling, benchmarking, and tuning background through 7/31/97
- Performance Scenario Plan template
- Source-to-Ingest-to-Archive Scenario Plan (completed)

Performance Engineering Methodology



Identify the ECS Performance Concerns:

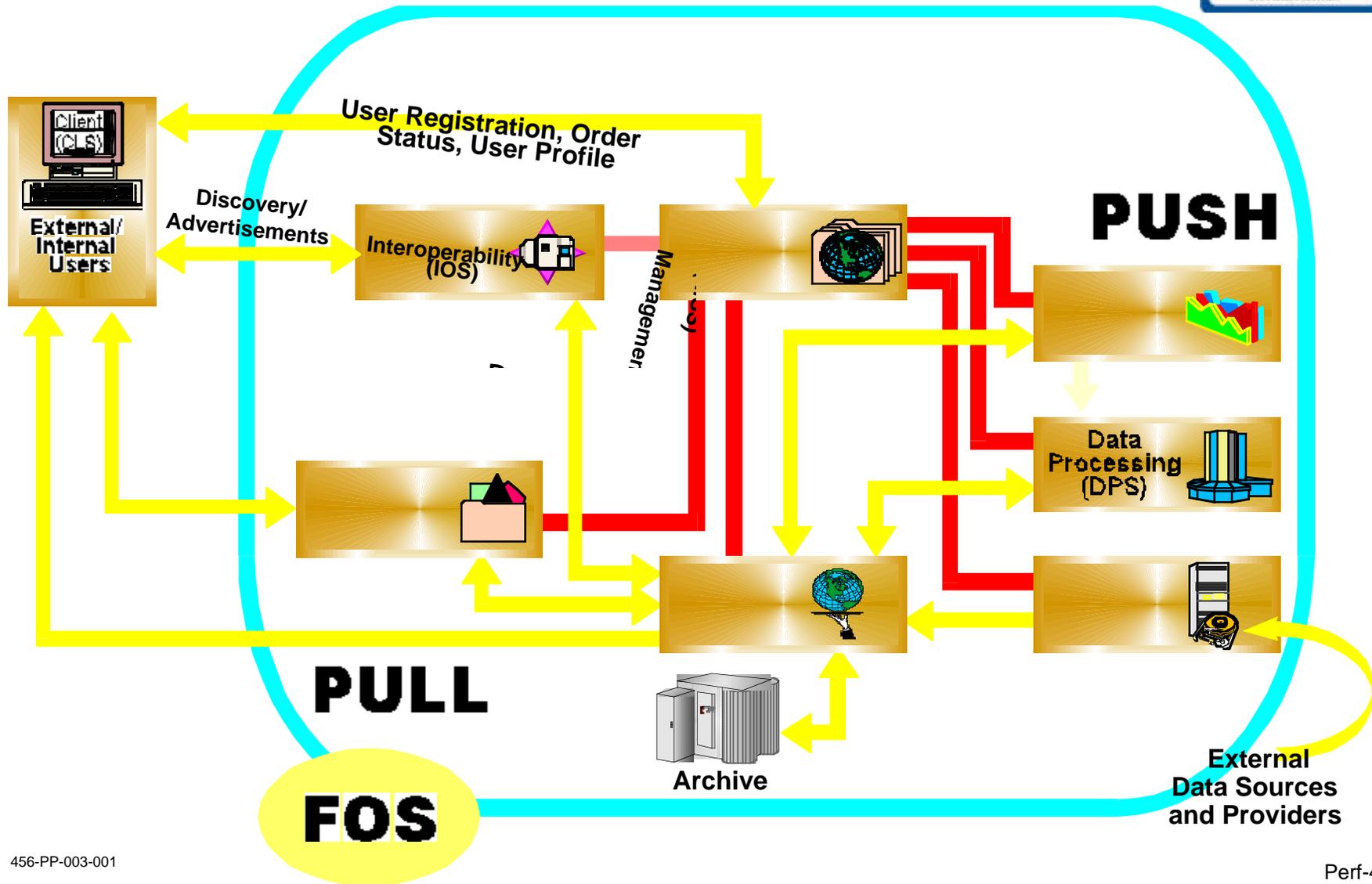
- Data flows
- Archive access
- DBMS Performance
- AutoSys
- DCE

Identify the Functional Threads of Interest::

- Ingest to Archive
- Archive to Production
- Production to Archive
- et al (15 total)



ECS DAAC Subsystems and Data Flows



Performance Engineering Methodology (Continued)



Implement Software Measurement Approaches:

- Log Events in Custom Code
- Capture DBMS Records
- Capture Console Messages

Implement System Measurement Approaches:

- Measure File Sizes vs Time
- Measure Data To Tape vs Time
- Measure CPU Utilization
- Collect NFS Statistics
- Measure Network Utilization
- Capture Sybase Network Activity

Major Performance-Related Activities



Component-Level Measurement and Tuning

- Magnetic disk
- Networks
- Data transfer
- AMASS
- Sybase DBMS

Performance Thread Testing

Endurance and Stress Testing

Other Performance Risk Mitigation Activities

- COTS Software Performance Survey
- Second Release B Procurement
- System and Requirements Analysis

Conclusions



- **The ECS performance data collected to date are consistent with our expectations and indicate that we are on track to meet our launch requirements.**
- **The Performance Plan provides a roadmap to ensuring the required system performance.**
- **The performance activities are scheduled to provide maximum leverage of critical resources -- time, people, and environments.**