



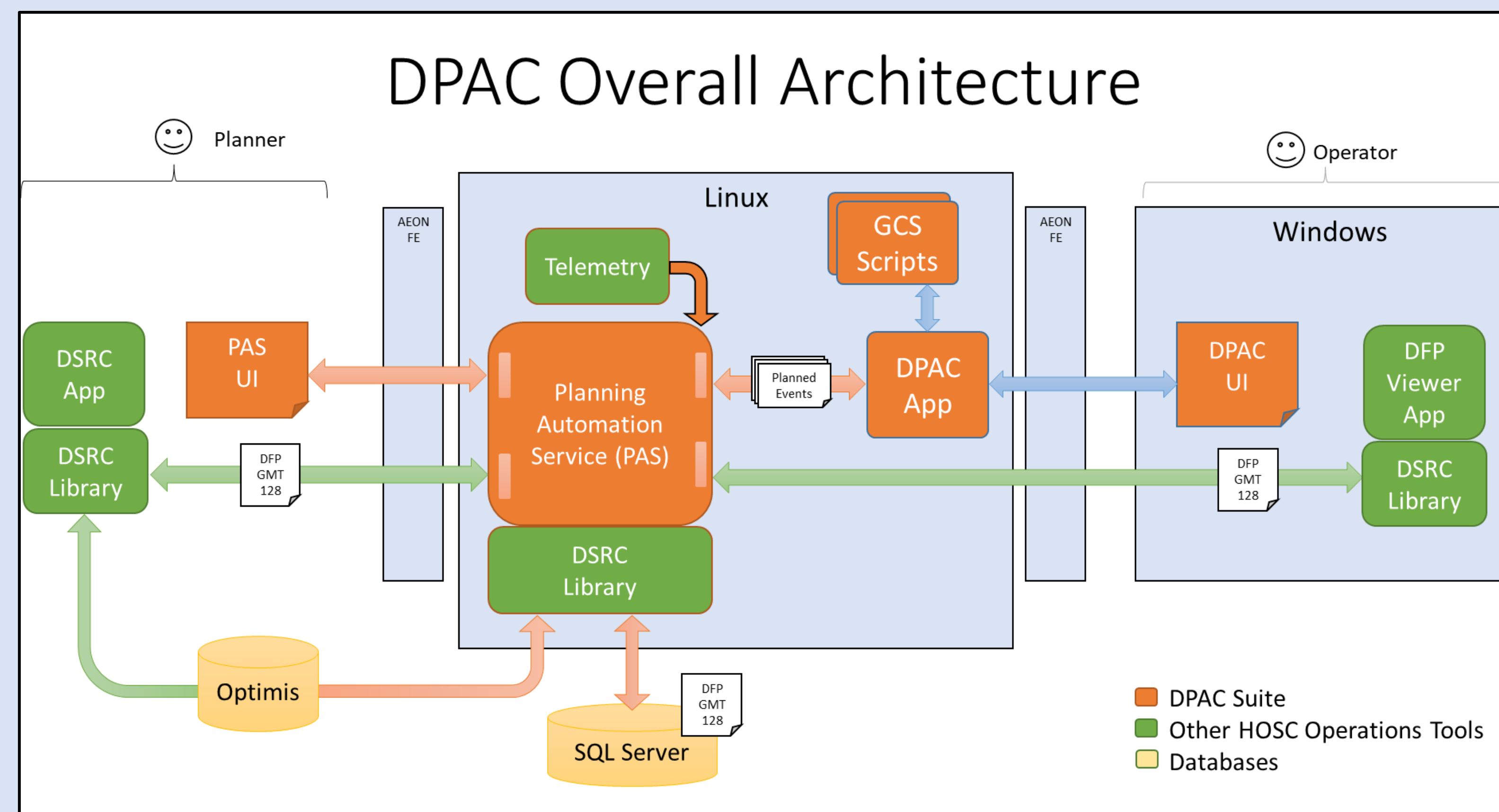
Automating Spaceflight Operations



PMOD's Data Planning and Control Tool (DPAC) is bridging the gap between planning products, schedules, commanding, telemetry, and the operator to execute routine operations automatically in a dynamic human spaceflight environment.

Project Description & Objectives

As NASA missions and technologies evolve, ground operations will move away from 24/7 manual support. There is a need for autonomy within ground operations to support changing NASA operations requirements. The Data Planning And Control (DPAC) tool will automate planning by merging telemetry, flight control, and procedures into a seamless operational interface for the Data Systems Ground Operators. DPAC will reduce workload, lower the risk for human errors, and provide modular interfaces for quick adaptation by other programs such as Gateway, Lunar Surface Ops, small science missions, and other NASA partnership missions.



Key Features:

- Automatic commanding for planned activities
- Telemetry Integration
- Easy scheduling of new activities
- Easy modification of existing activities
- Full operator oversight, control, and override
- Multi-program support via APIs

Mission Benefits:

- Reduced training requirements for operators
- Reduced on-console workload
- Reduced console staffing
- Increase in operator reliability
- Increase in overall team efficiency
- Enables new operations concepts

Planned Users:

- ISS Payload Operations Center (April 2024)
- Huntsville Operations Support Center (TBD)

User Feedback During Development

“This is Awesome!” – ISS DMC Operator

“This tool fills a gap that we’ve had for a very long time” - HOSC Software Architect

“ The DPAC project helps blaze a new trail toward the future of flight control support”
– ISS DMC Tool Lead

