

EPICS Collaboration Meeting – 2023

Data Pool Management Across Multiple Architectures

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Accelerator Directorate/Controls

DPM Design

DPM Core

- Data acquisition job management
- Credentials for role-based parameter settings and logging (Kerberos)
- Scoping interface for analysis

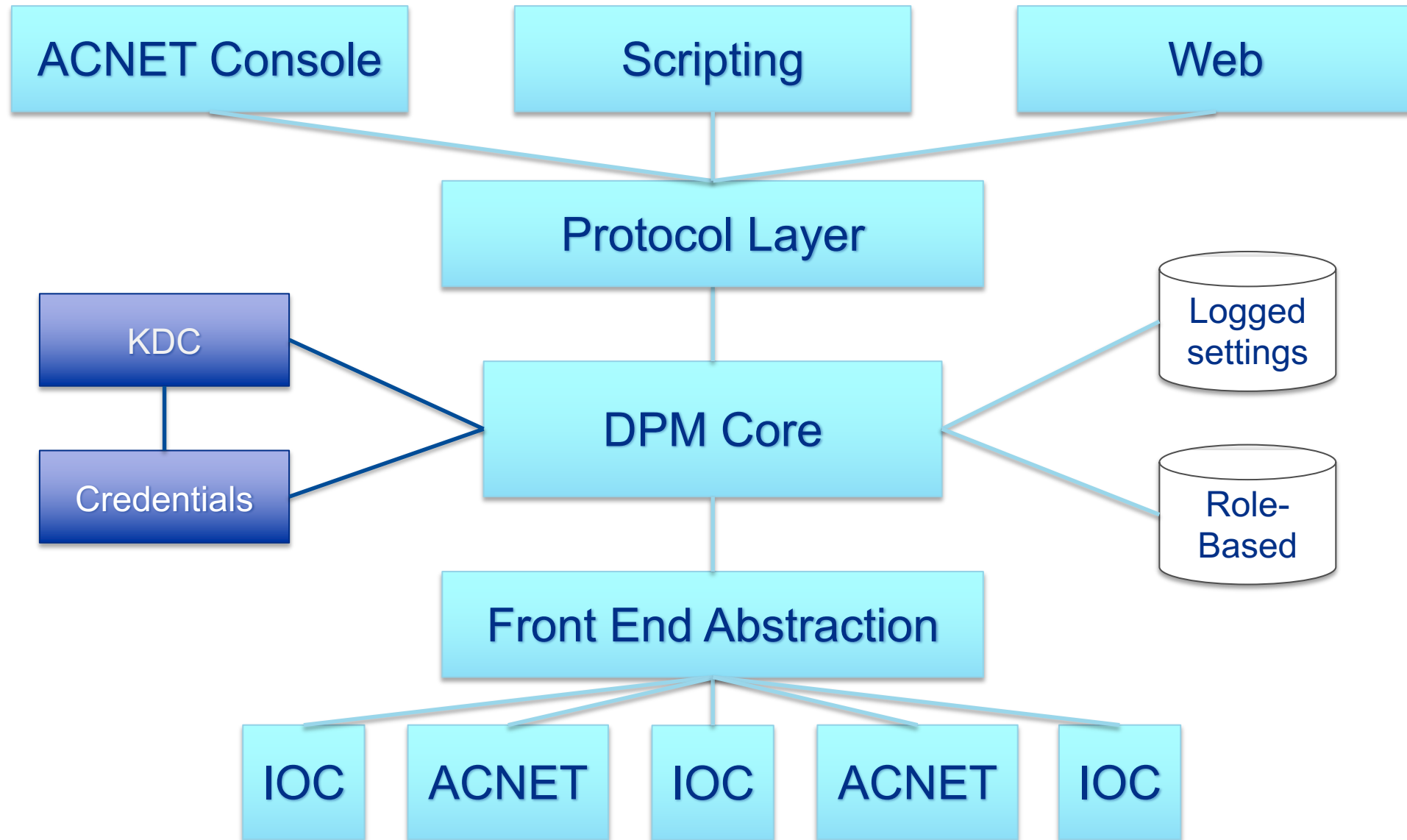
Protocol layer

- Defines interfaces to easily integrate multiple protocols to applications
- Each defined protocol handles the specifics for inbound and outbound communication
- Currently implements ACNET and TCP protocols using Fermilab's protocol compiler, gRPC interface using Google's protocol buffers and JSON.

Front end abstraction layer

- Defines interfaces to easily add conversions from front end specific data to DPM format
- Each defined abstraction handles the specifics for request merging
- Currently implements abstractions for ACNET and EPICS PVA.

Data Pool Manager



DPM Development

Additions

- Currently uses foreign mapping of ACNET devices to “foreign” control system variables. Working on allowing EPICS PVs directly.
- Control system front end implementations are currently not dynamically loadable, but this could be added.
- Investigating using Google RPC (gRPC) as the only protocol access to DPM.