

FERRY

Frontier Experiments RegistRY



Mine Altunay — maltunay@fnal.gov, Joe Boyd — boyd@fnal.gov, Bruno Coimbra — coimbra@fnal.gov,
Kenneth Herner — kherner@fnal.gov, Krysia Jacobs — kjacobs@fnal.gov, Tanya Levshina — tlevshin@fnal.gov,
Rennie Scott — rennie@fnal.gov, Felix Sotres — nsotres@fnal.gov, Jeny Teheran — jteheran@fnal.gov,
Margaret Votava — votava@fnal.gov, Tammy Whited — twhited@fnal.gov • Computing Sector, Fermilab, Batavia, IL

- The Frontier Experiments RegistRY (FERRY) service provides a centralized repository for the access control and job management attributes such as batch and storage access policies, quotas, batch priorities and NIS attributes for cluster configuration:
 - maintains a central repository for currently scattered information related to users' attributes
 - provides a Restful API that allows uniform data retrieval by services
 - enables the use of custom forms using ServiceNow® orchestration so users can request services/changes which will be quickly deployed to services in an automated fashion
 - reduces operational load on support staff while improving end users experience
- Why now:
 - provides a replacement service for decommissioned OSG grid services related to authorization management (VOMS-Admin, GUMS)
 - moves existing tools to a modern, supportable toolset
 - moves toward common solutions for CMS, CMS LPC and Intensity Frontier experiments

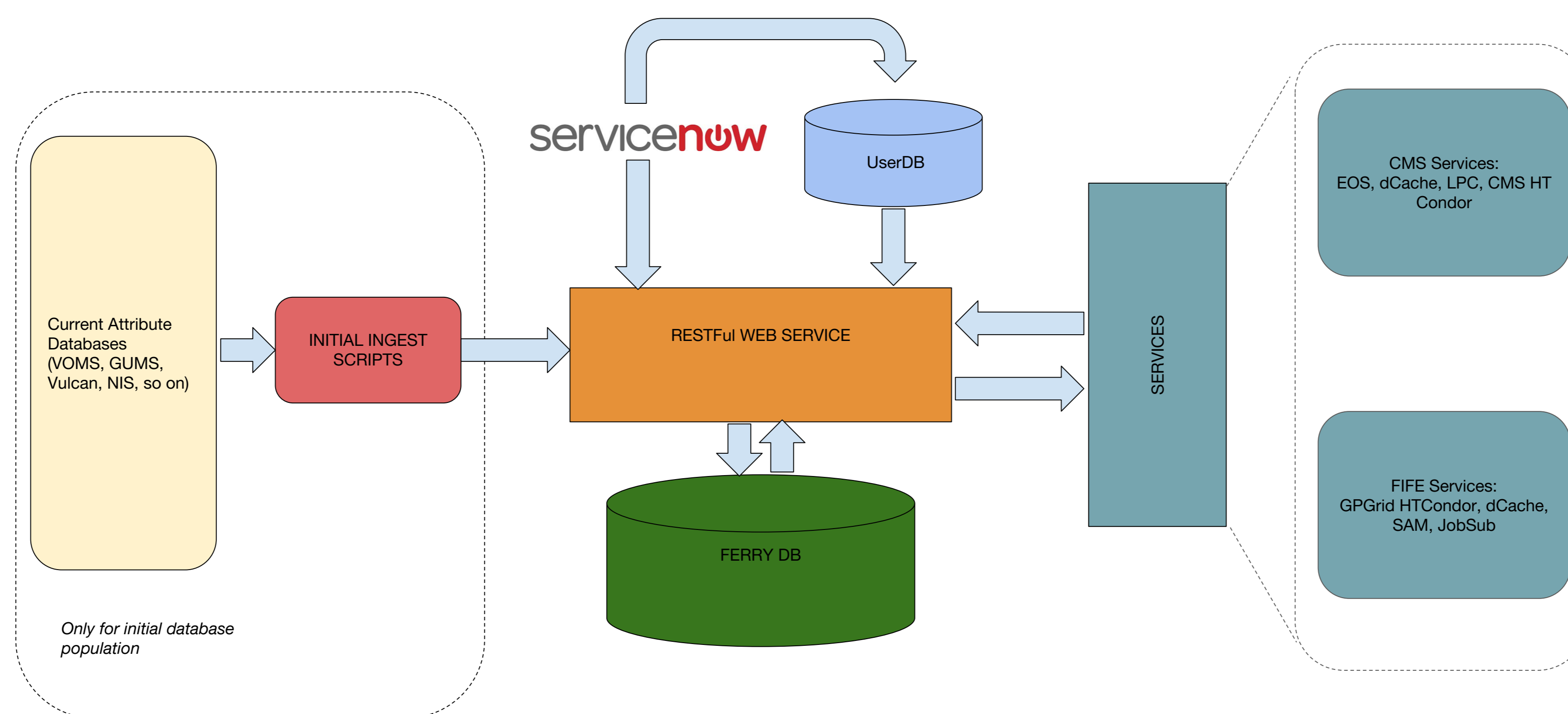
FERRY Overview

- FERRY is an account registry and quota management service for Fermilab experiments.
- Consists of the following components:
 - Data Storage: postgres database
 - Web Server implemented in Golang
 - Extensive Rest APIs
 - User Interface: ServiceNow®
- Used by numerous services to update users mapping to Grid and interactive accounts, and access to batch, interactive and storage resources. The list of services that pull information from FERRY include:
 - dCache, EOS
 - HTCondor Clusters
 - VOMS
 - NIS on worker nodes and interactive nodes

Requirements

- The service must:
 - be flexible, allows easily add/remove/edit attributes
 - provide access via Restful APIs
 - allow for data to be pushed/pulled by consuming services using APIs
- The service should be integrated with ServiceNow®:
 - by adding new experiments and users
 - by allowing users to make requests directly and allowing admins to approve/reject requests.
- The service should be able to handle:
 - people with multiple VO memberships and groups
 - VO- or group-level attributes that can be inherited by everyone in the group
- The service should be able to generate:
 - passwd and group files
 - grid-map file
 - vo-role-map file
 - various user and group quota settings for storage and batch services

Architecture



ServiceNow®/FERRY Integration

- Improved user experience: comprehensive request forms with drop down menus (valid data choices are populated from FERRY)
- Request management: ServiceNow® workflow that allows to request approval/rejection from a specific group of managers
- Push request to FERRY by using ServiceNow® Orchestration mechanism

RESULT: AUTOMATIC TICKET HANDLING!

The USCMS LPC facility at Fermilab enables physics groups to give users access to a special storage environment. This is a form for a person to request to be added to a particular physics group account. The convener(s) of the group must approve the request before the addition can be made. An automated email notification will be sent to the requester when the convener(s) approves the request and another is sent after the addition to the physics group is made.

Requested for:

Add or Remove:

Please choose a group:

Reason:

Submit

Affiliation Subgroups | ServiceNow - TRAINING Instance

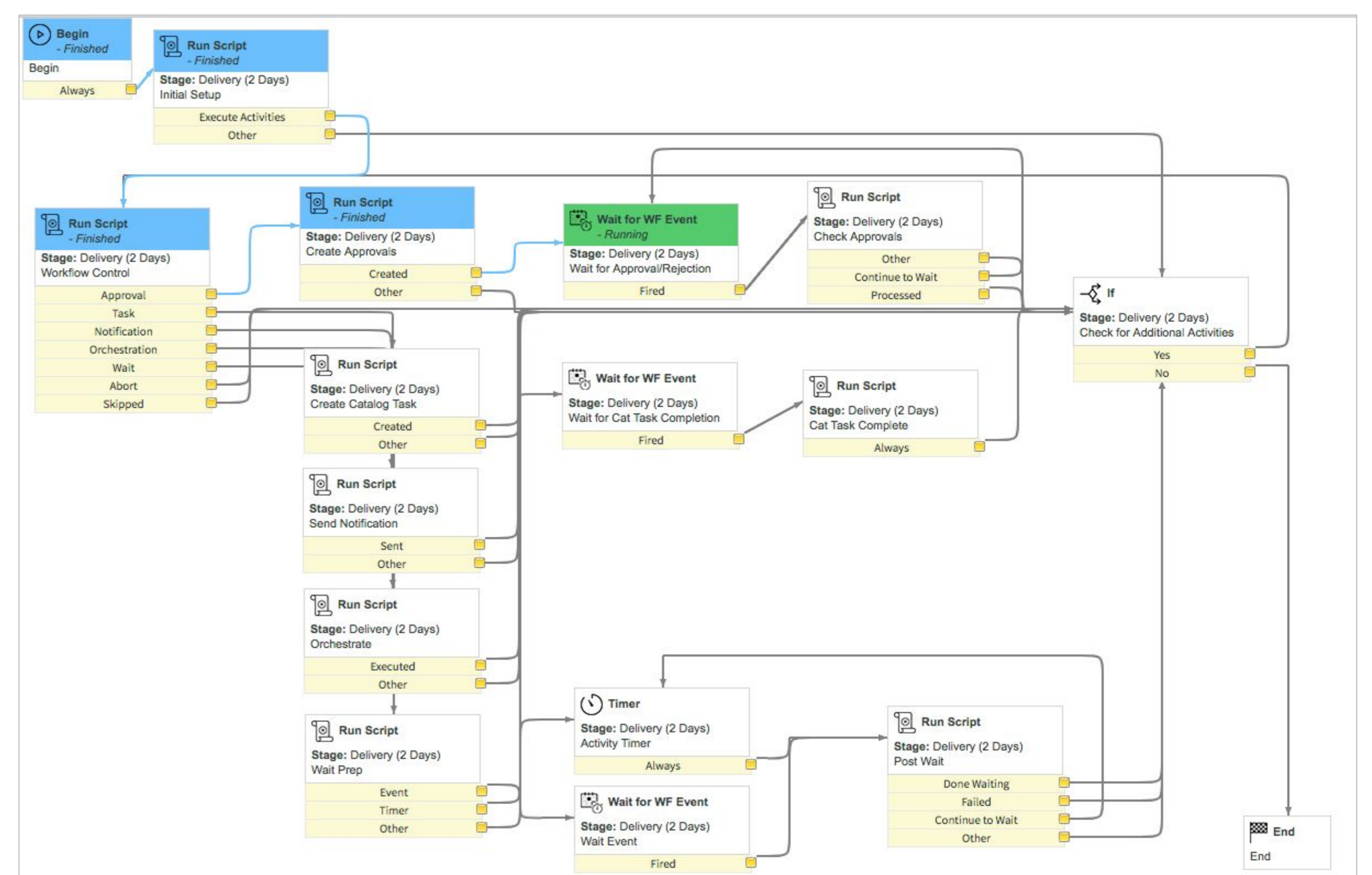
Secure https://fermitn.service-now.com/u_affiliation_subgroup_list.do?sysparm_target=IO:b04cda73dbe45b00a5d...

Affiliation Subgroups Search for text Search

All Keywords = lpc*

Search

- locij
- locisrhad
- locilji
- locitop
- locitop
- locil
- locibbb
- locss



Future Plans

- Data Validation
- Integration testing with all service providers
- Packaging service as a docker container
- Installation on production hardware
- Production: September, 2018
- GUMS and VOMS-Admin shutdown: September, 2018