Edge Services Framework for Grid Environments

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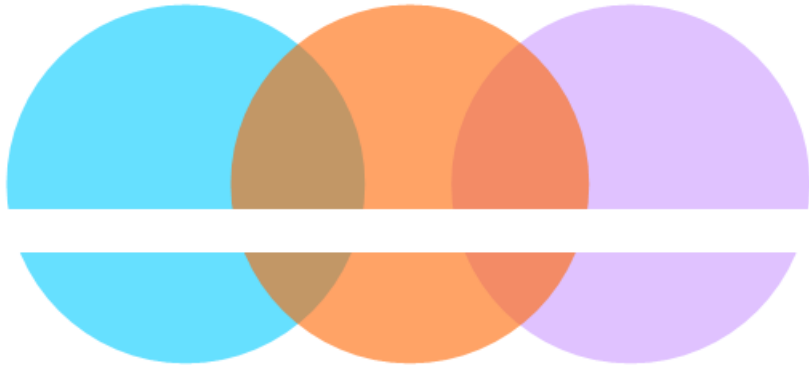

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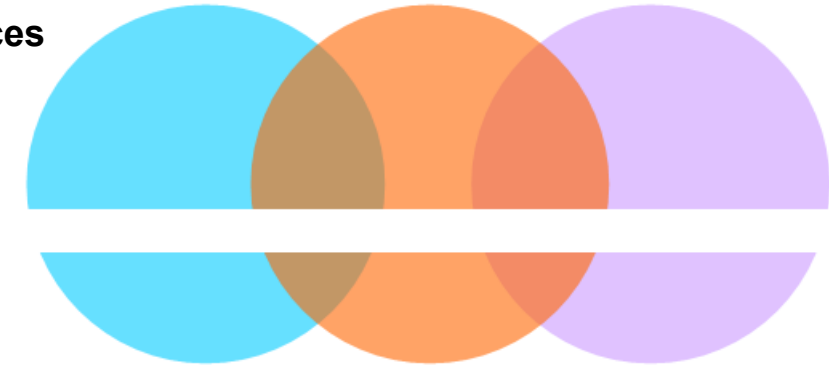
Logo and Activity Theme:

Spheres denoting **Edge Services** with a line **Site's Edge** running asymmetrically across. Overlapping spheres denoting a **Secure, Nonrigid** and **Dynamically Scalable Framework**.



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A Snapshot

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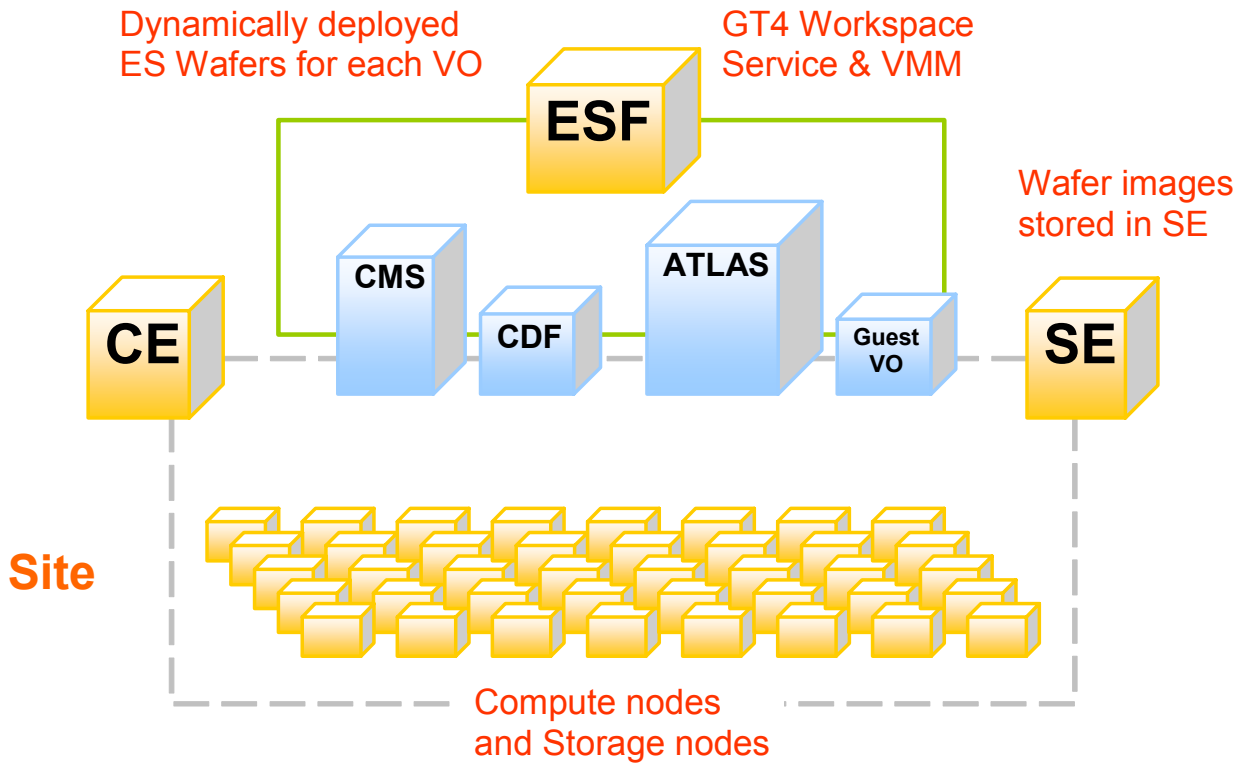

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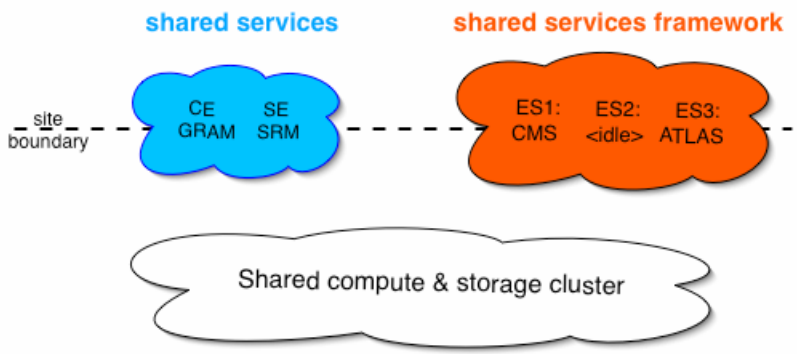
Vision



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Why ESF?
What is ESF?

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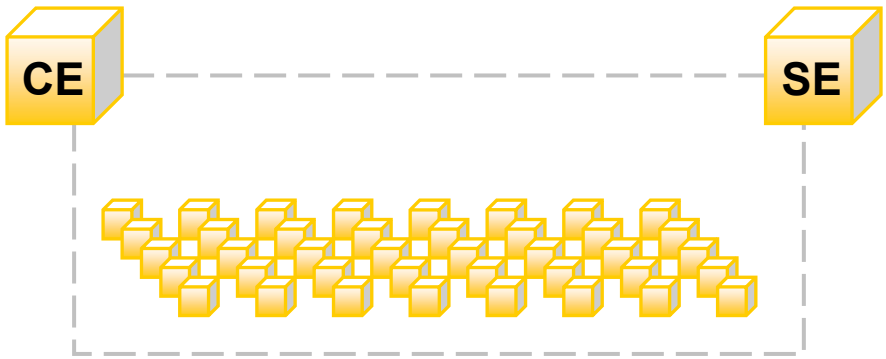
No ESF - Phase 0



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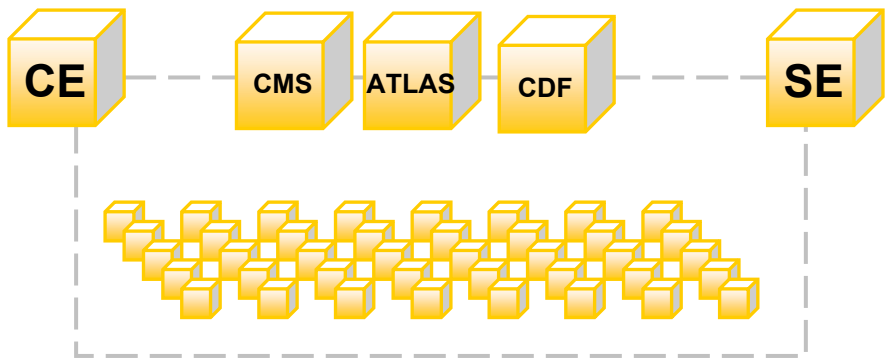
Static Deployment of VO Services on a Site

No ESF - Phase 0



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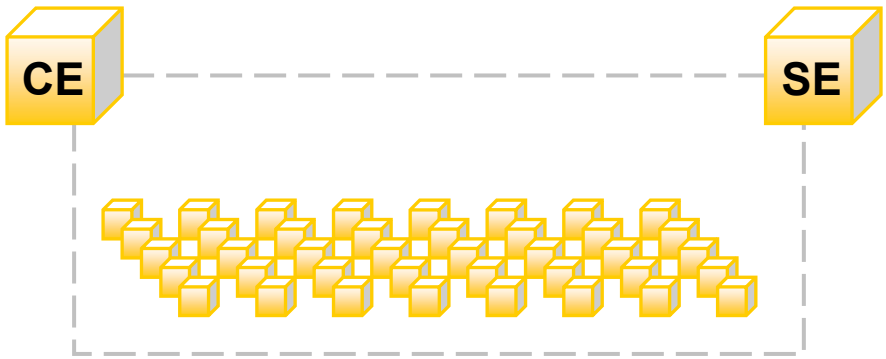
ESF ?



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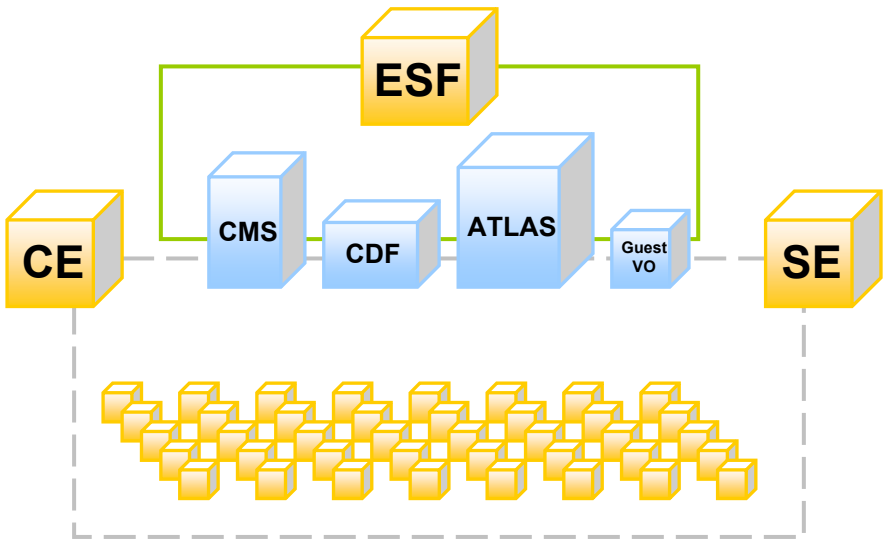
Snapshot of ES Wafers implemented as Virtual Workspaces

ESF - Phase 1



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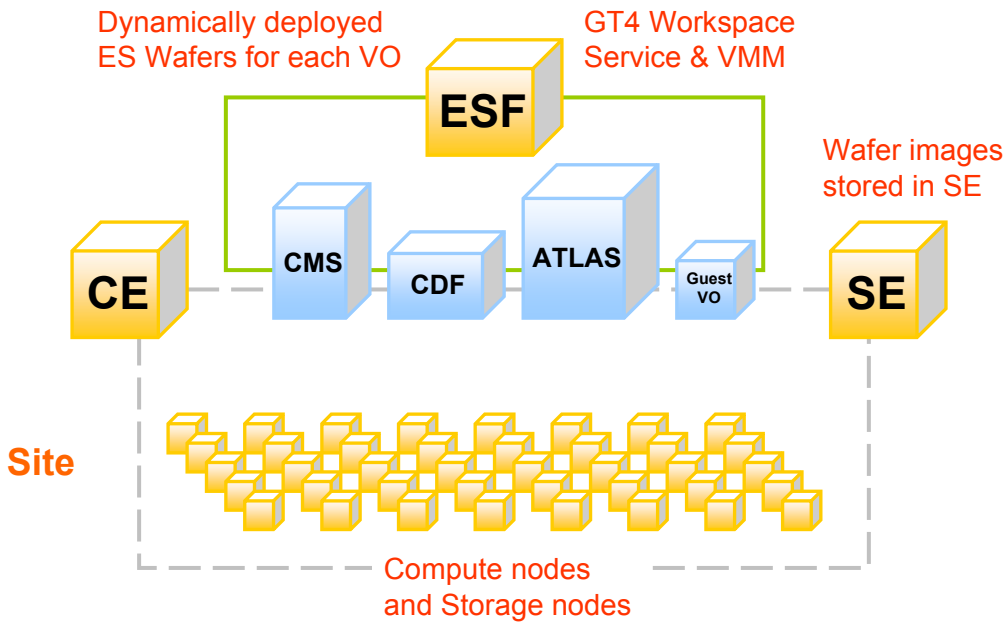

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User Jobs running at Compute Nodes
of a Remote Site on Grid

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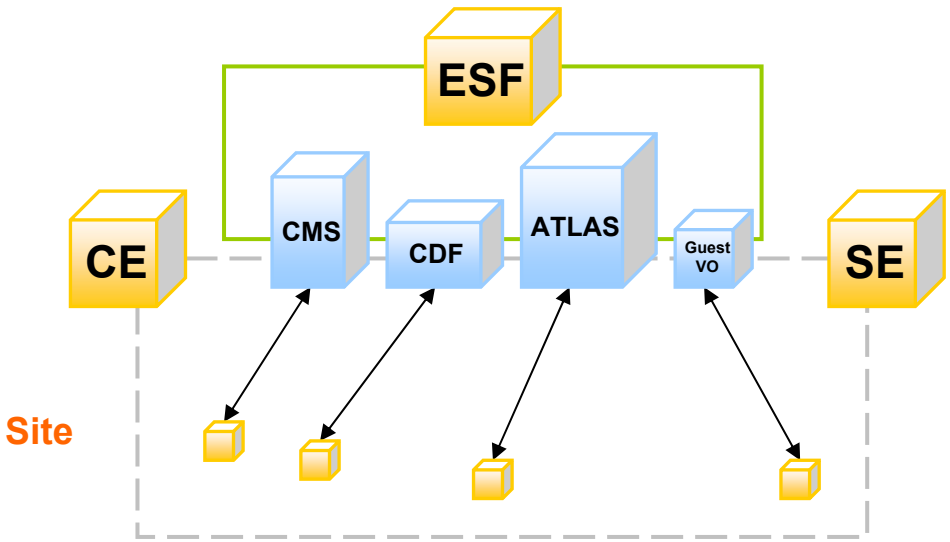
User jobs at Compute nodes using ES Wafers for VO Edge Services



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VO Administrator dynamically launching an ES Wafer Image in a Virtual Workspace

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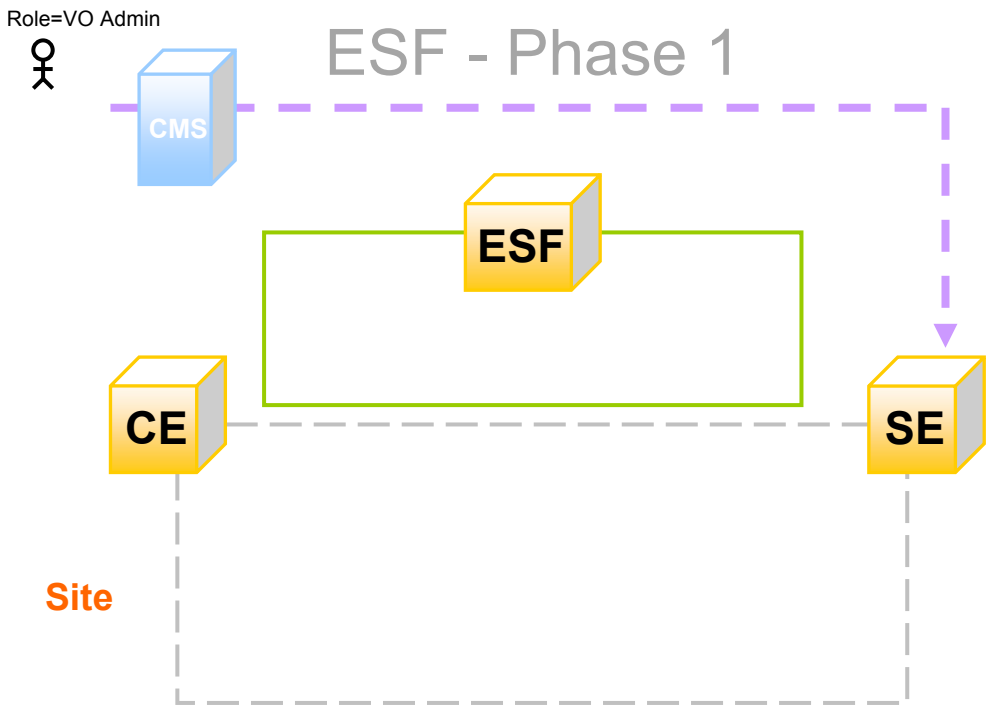

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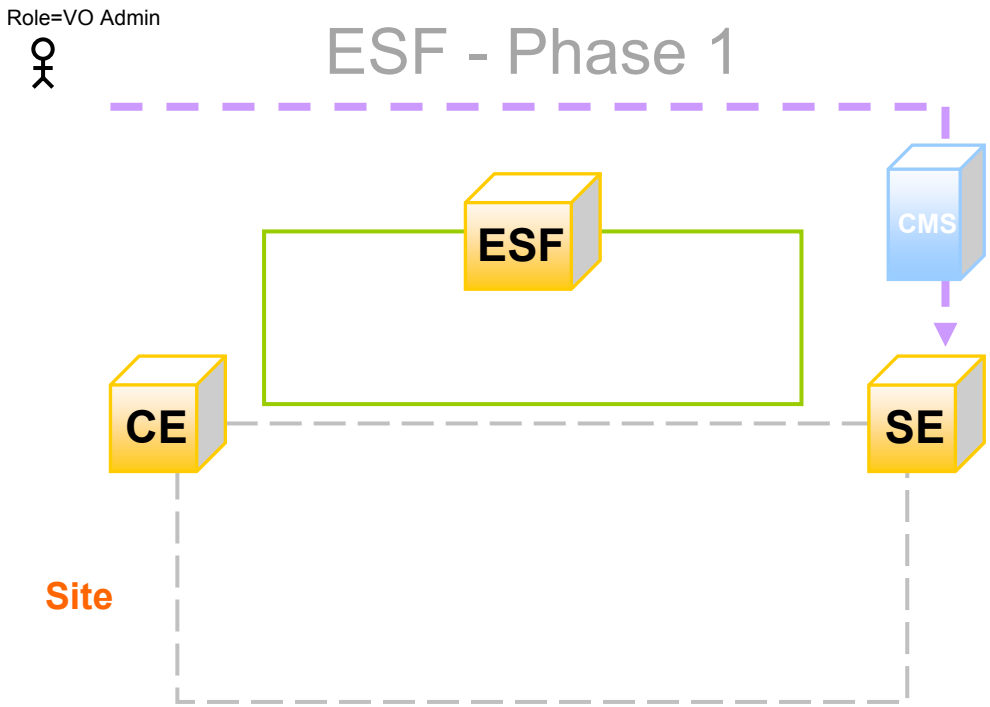

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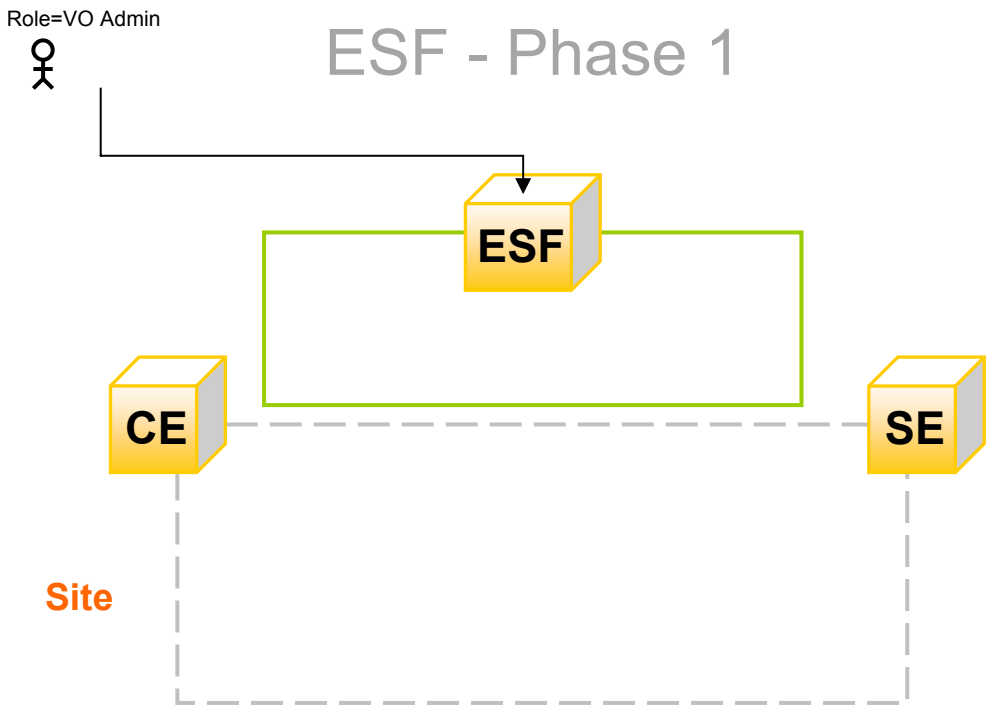

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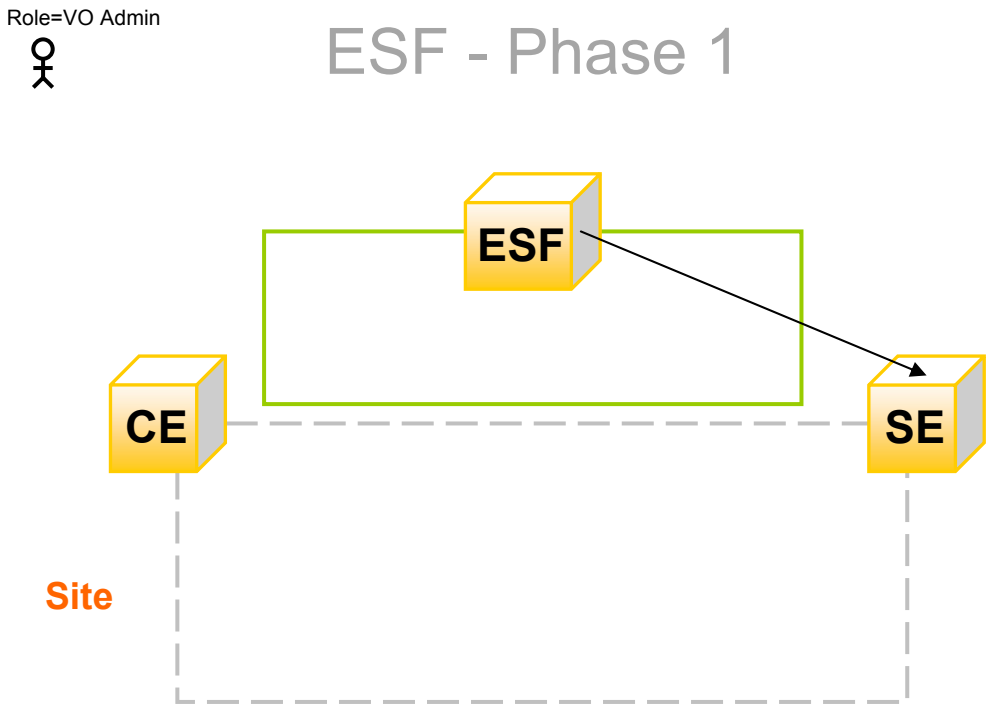

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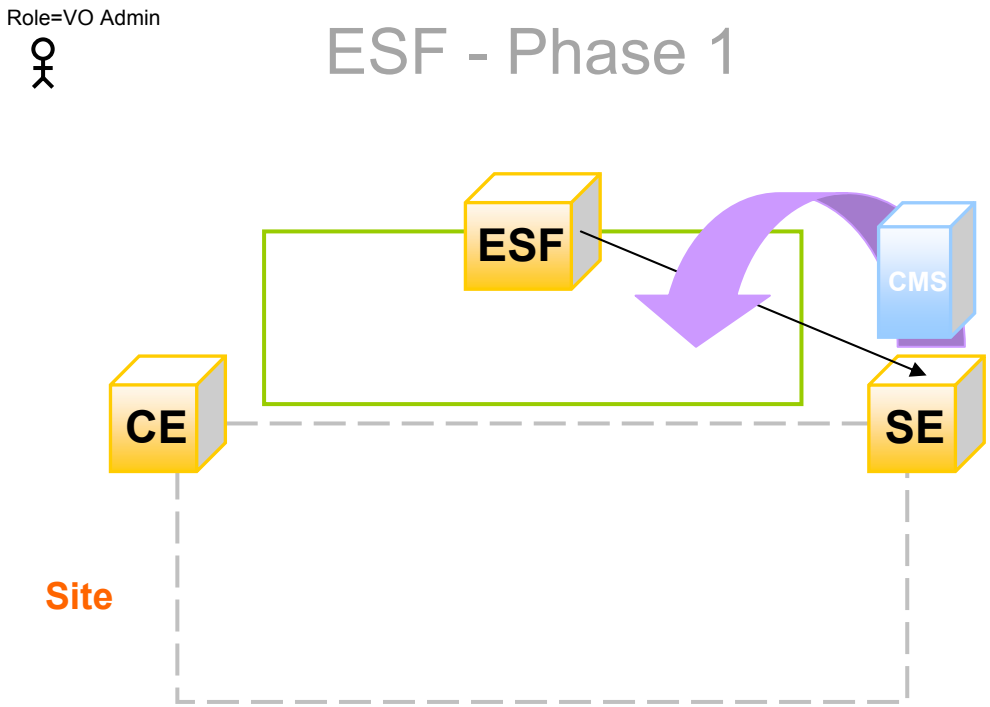

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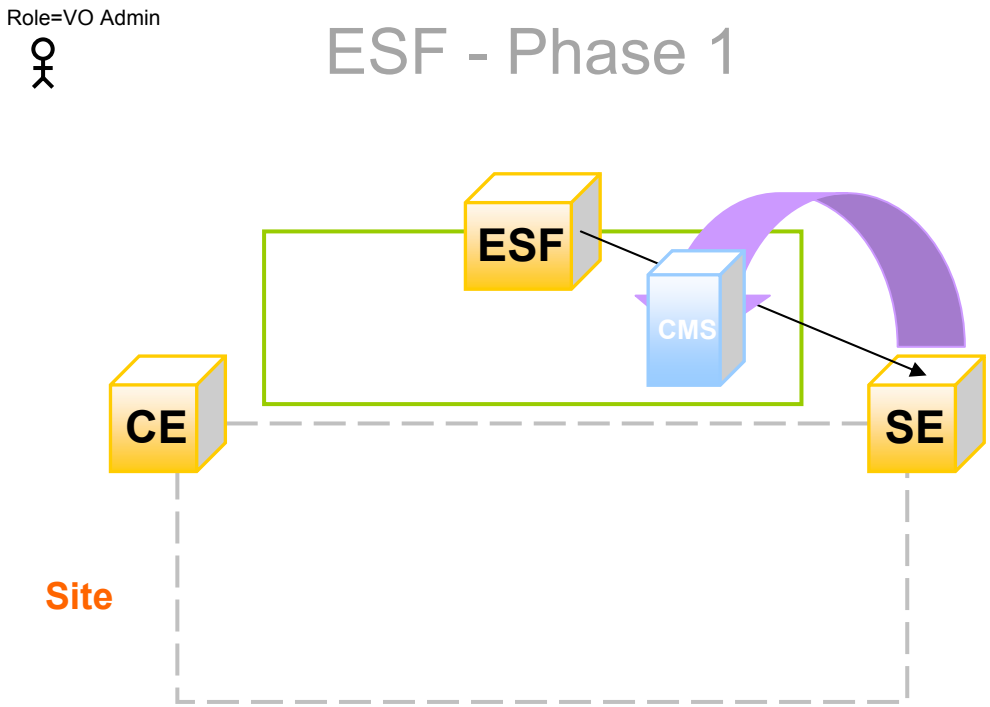

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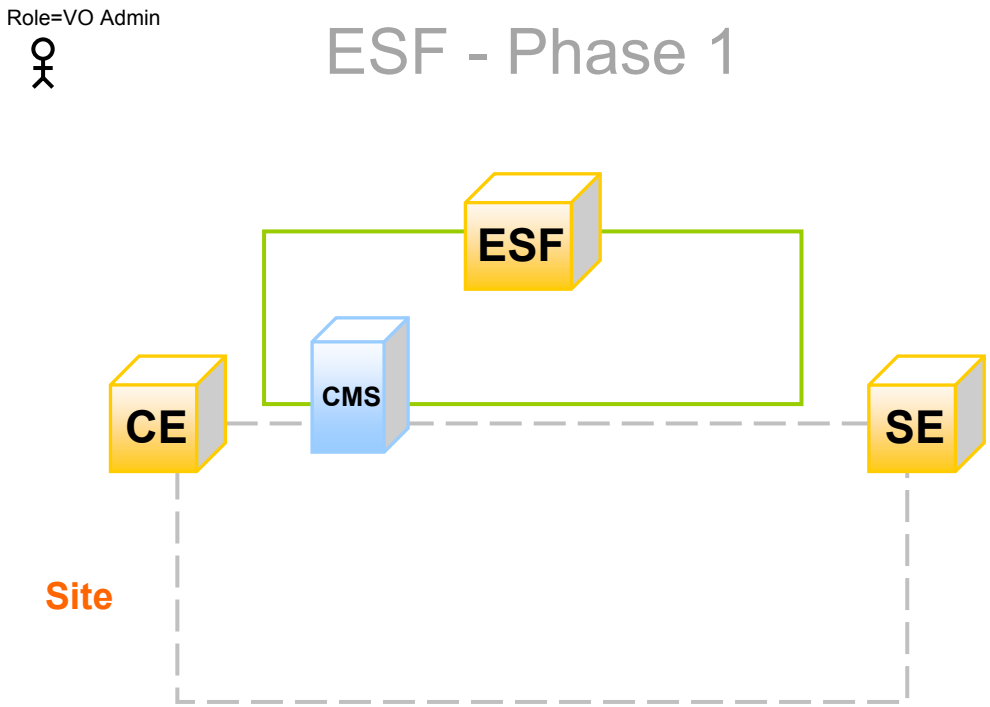

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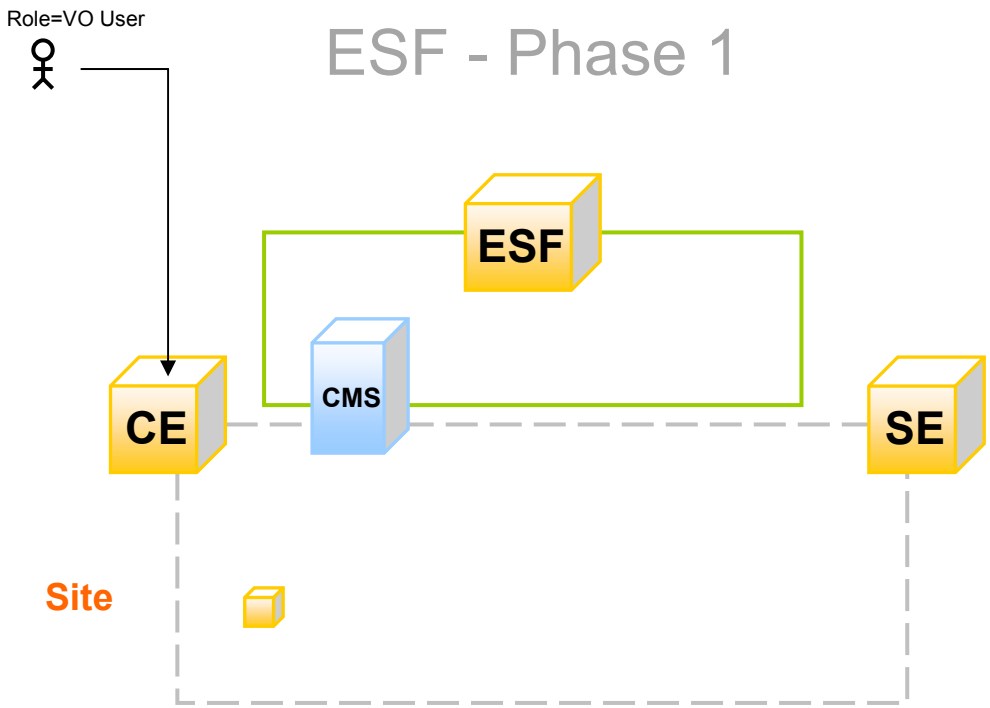

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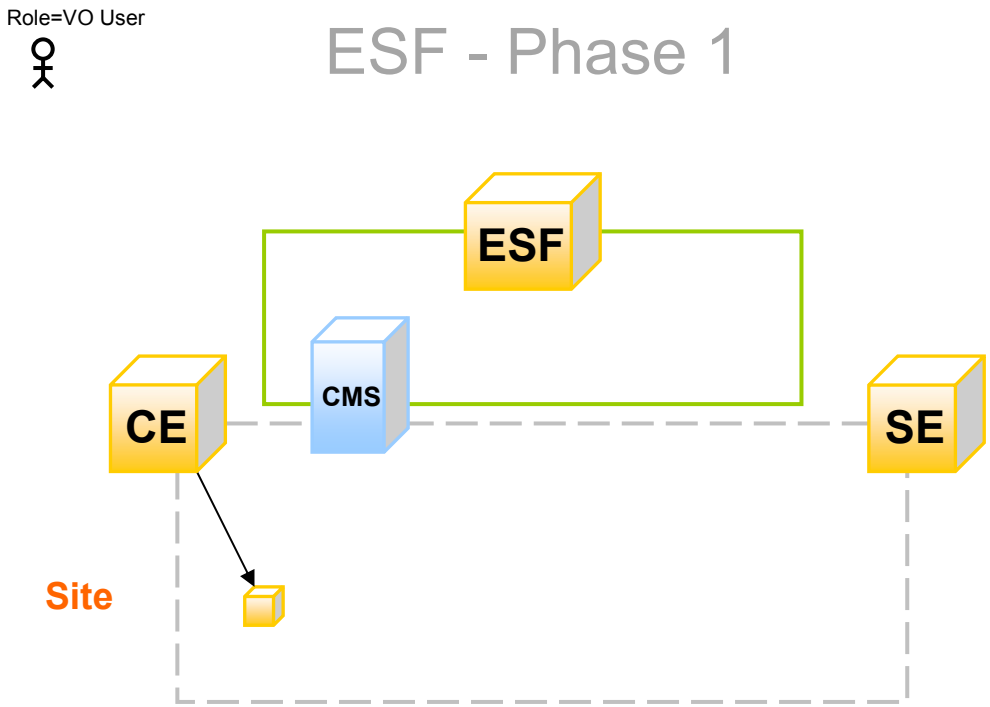

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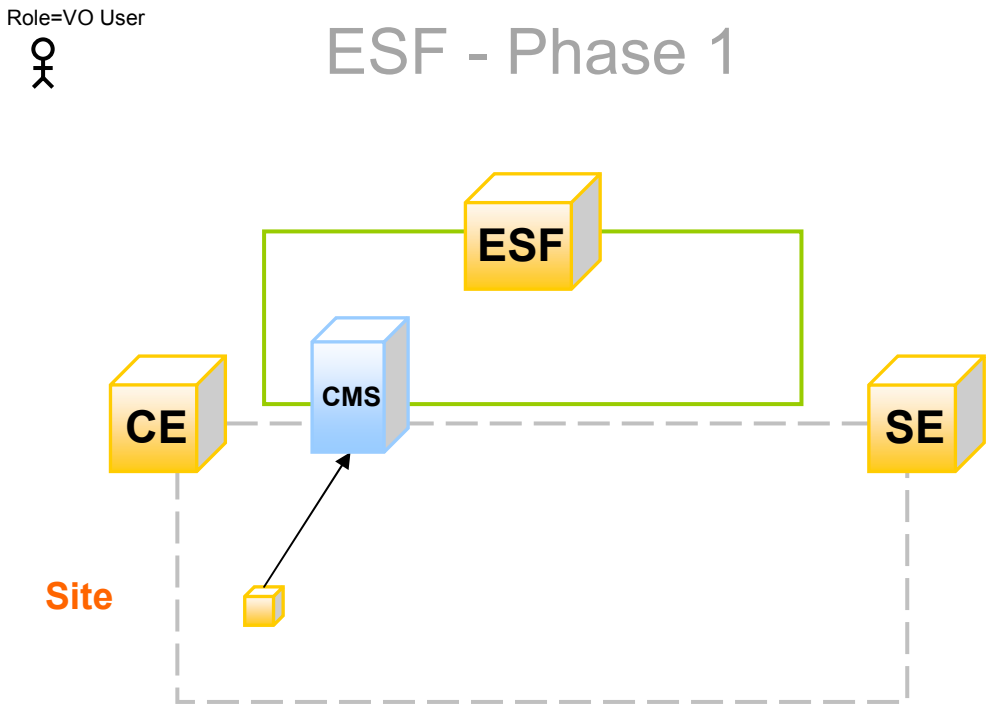

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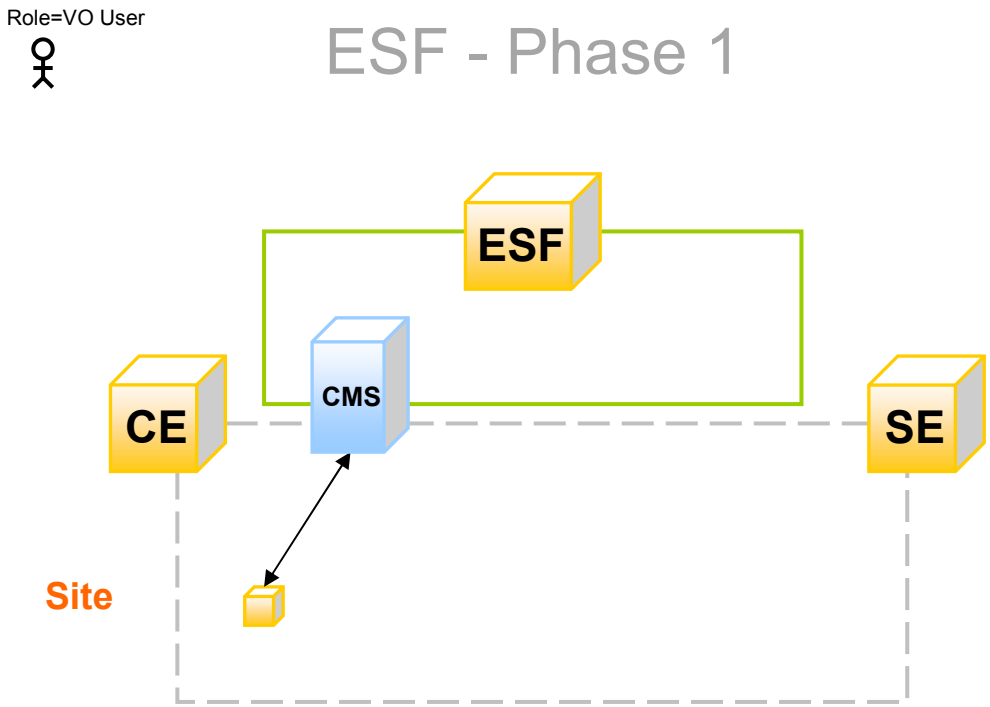

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Future Direction

Edge Services Framework for Grid Environments

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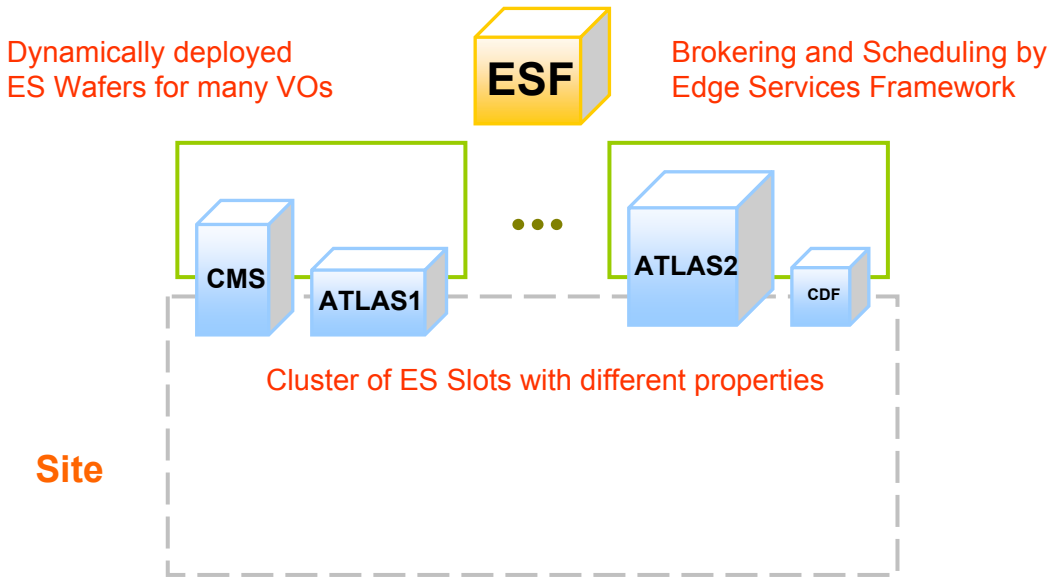
ESF - future direction



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Similar Perspectives

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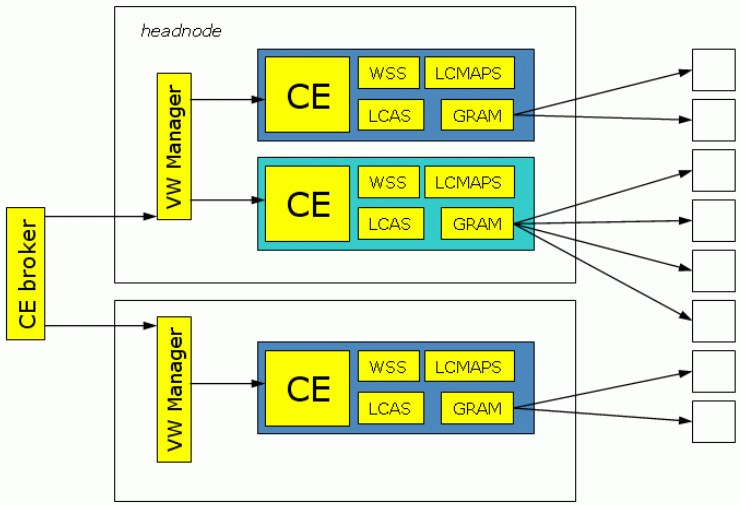
the globus alliance
www.globus.org

Workspace as a CE Environment



06/22/05 EGEE All Hands, Brno

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An Attempt at Terminology

Edge Services Framework for Grid Environments

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- Edge Services Wafer (ES Wafer)
  - A specific instance of a dynamically-created VM (workspace) is called an Edge Services Wafer.
  - An ES Wafer can have several Edge Services running.
  - A VO can have multiple ES Wafers up at a Site.
- Edge Services Slot (ES Slot)
  - An ES Slot has hardware characteristics specified by the Site Admin.
  - An ES Slot can be leased by a VO to host an ES Wafer.
- Edge Service (ES)
  - A VO-specific service instantiated by a VO in a Wafer.
- Workspace Service (WSS)
  - Service at a Site that allows VOs to instantiate ES Wafers in ES Slots.

The Open Science Grid Consortium

Edge Services Framework for Grid Environments

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A Summary

Edge Services Framework for Grid Environments

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Secure VO Environments

Dynamic

VO Edge Services Wafers

Role Based Access Control

GT4 Virtual Workspaces

Images

File Systems RAMdisks Kernels

Hardware Virtualization

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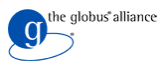
Hardware Virtualization

SC|05 Gateway to Discovery

Washington State Convention and Trade Center Seattle, WA
November 12-18 2005



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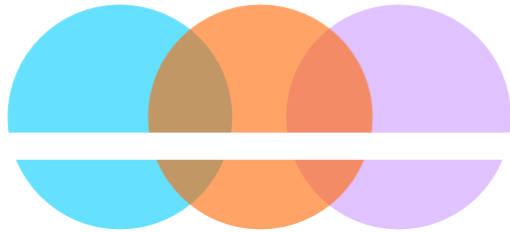
Secure Dynamic VO Environments



ESF

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