TASHI ASF INCUBATOR PROJECT

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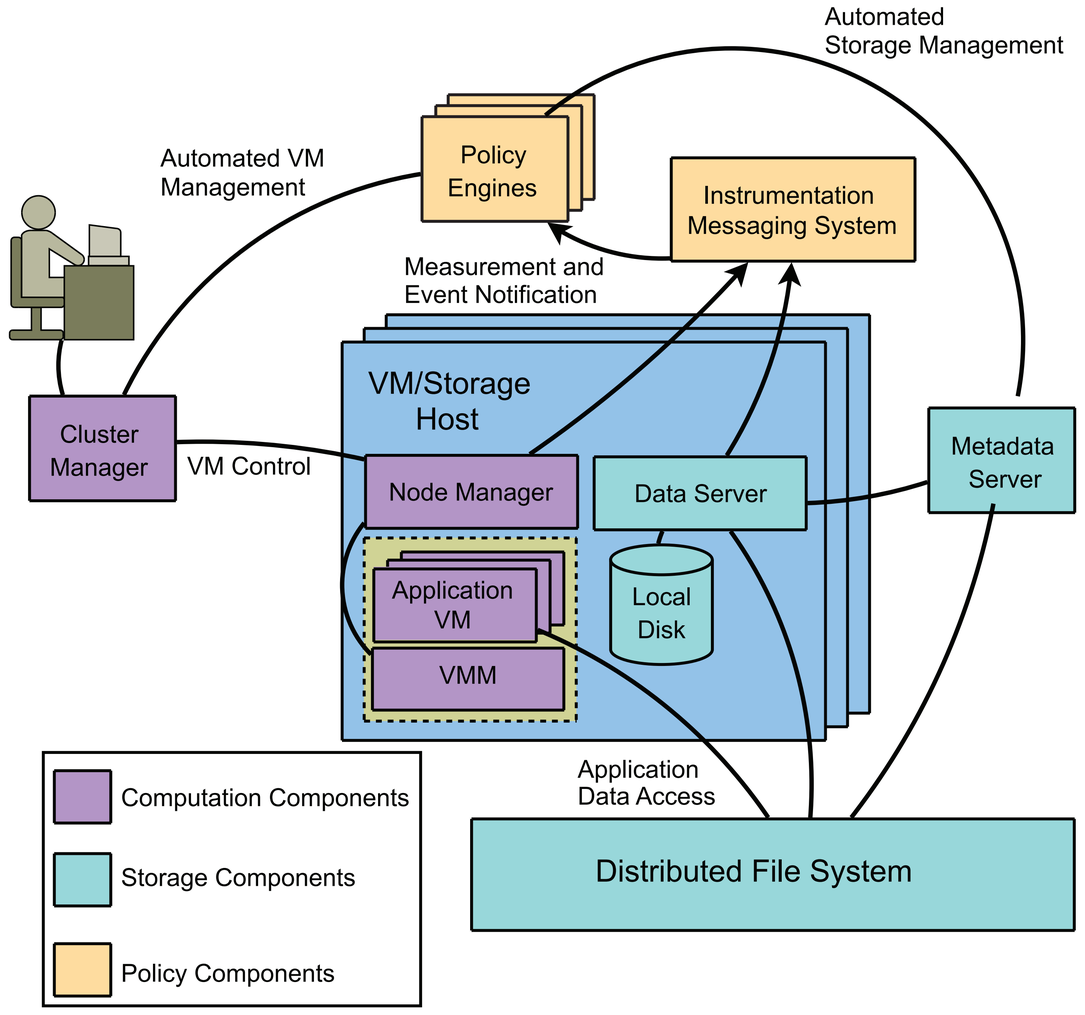
TASHI

Tashi provides:

- **Virtual Machine based cluster management**
- **Quick start up and tear down of clusters**
- **Designed for Big Data**
- **Flexible architecture to enable scheduling research**

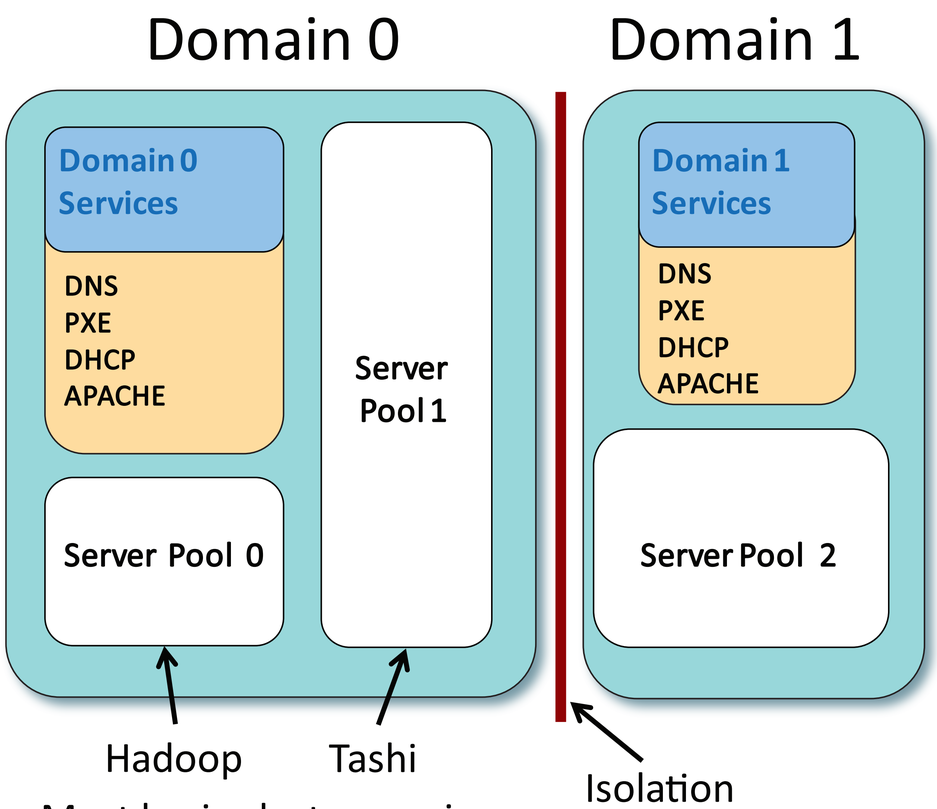
- **Tashi allows shared use of cluster resources (memory, CPU, local disk)**
- **Tashi VMs can be used to easily add additional resources to a Hadoop cluster**
- **Offers free choice of operating system with hardware virtualization support**
- **VMs can be imported from a variety of desktop and server virtualization environments**
- **Pre-made VM images can be copied from a library and edited before scaling up**



ZONI

Zoni enables:

- **Elasticity to the physical layer of the cloud**
- **Efficient use of physical resources through rapid reconfiguration and provisioning**
- **System level research in a safe and controlled way**



Most basic cluster services belong in Domain 0.

ALLOCATION — **Database***

- **Zoni databases track allocation**
- **Future algorithms will schedule resources**

ISOLATION — **VLAN***

- **Domains provide network isolation**
- **Pools denote a set of servers**
- **Pools in the same domain imply trust**

PROVISIONING — **PXE***

- **Provisioning service allows rapid boot of system images**

MANAGEMENT — **IPMI/PDU***

- **Out-of-Band hardware management service allows for console access**

DEBUGGING — **IPMI***

- **Crucial for remote OS boot**

Intel Science & Technology Center for Cloud Computing

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