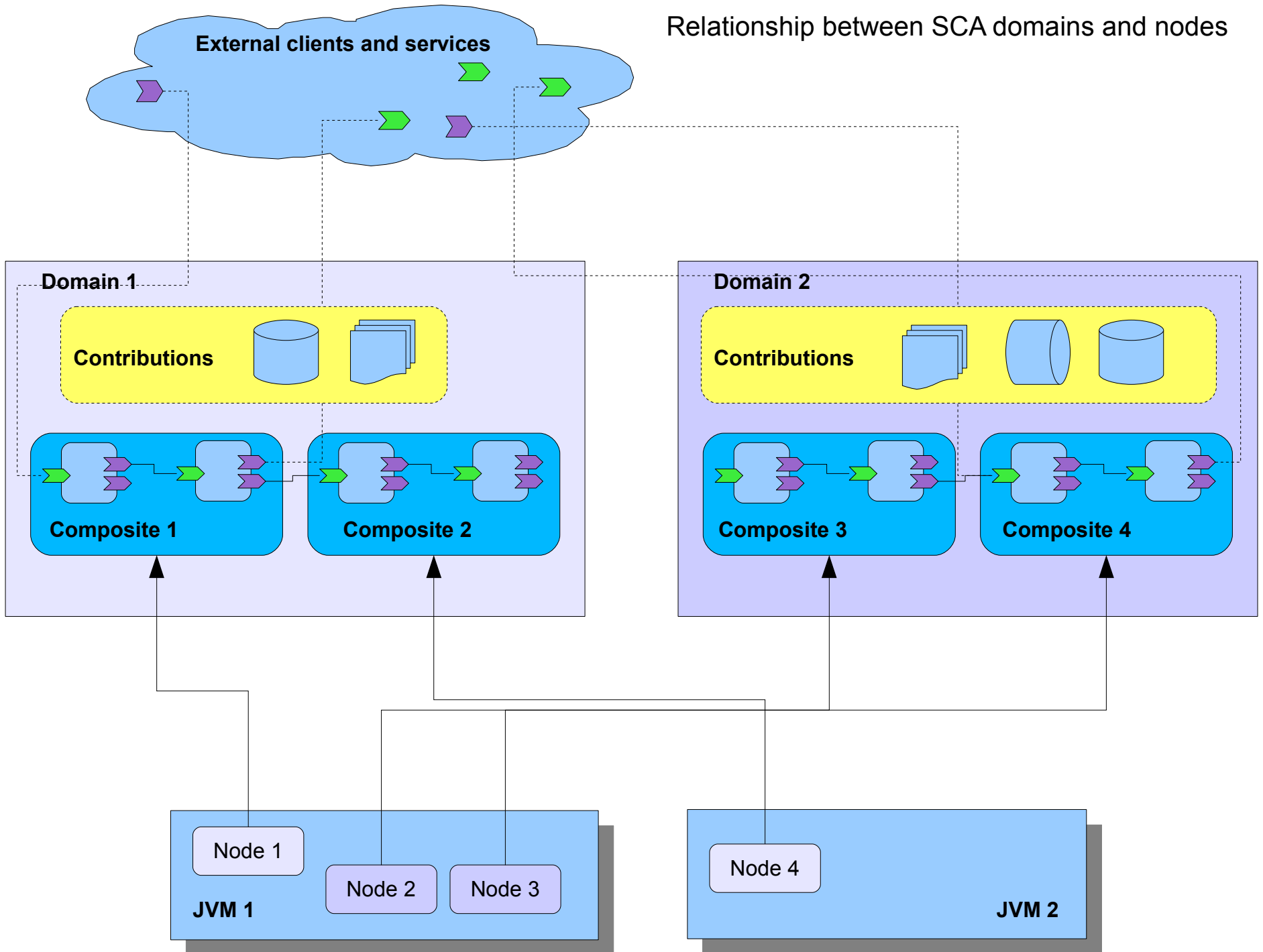
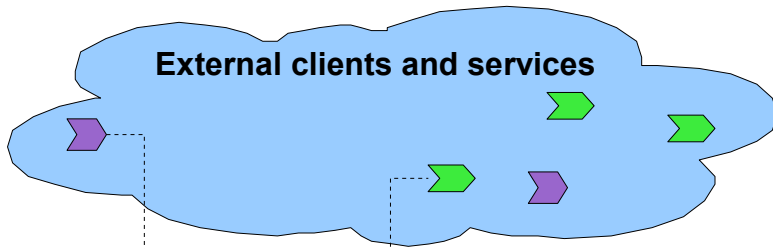
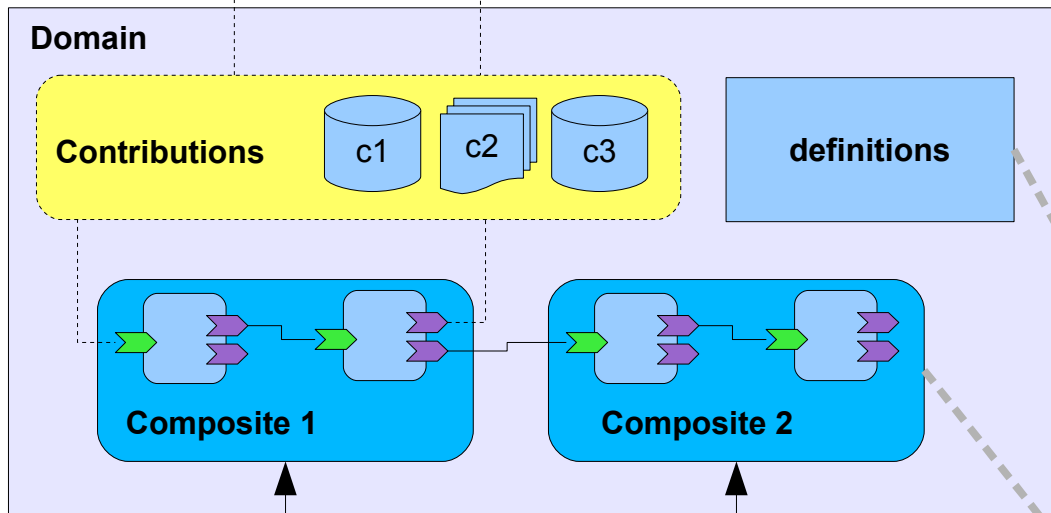


Relationship between SCA domains and nodes

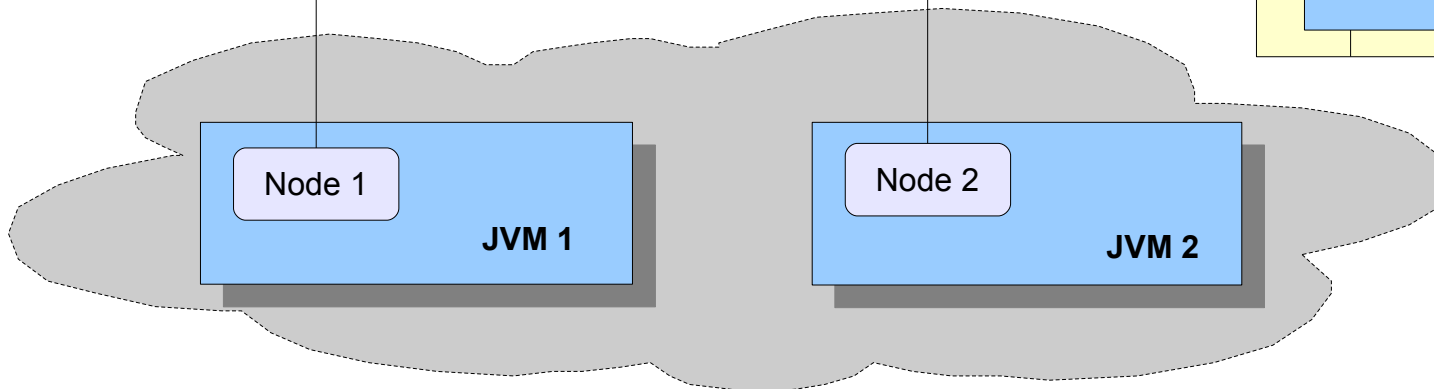
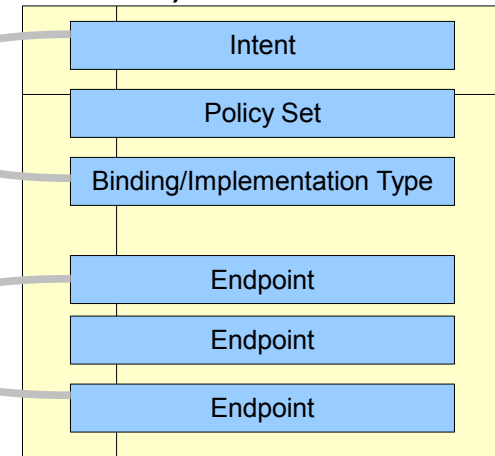




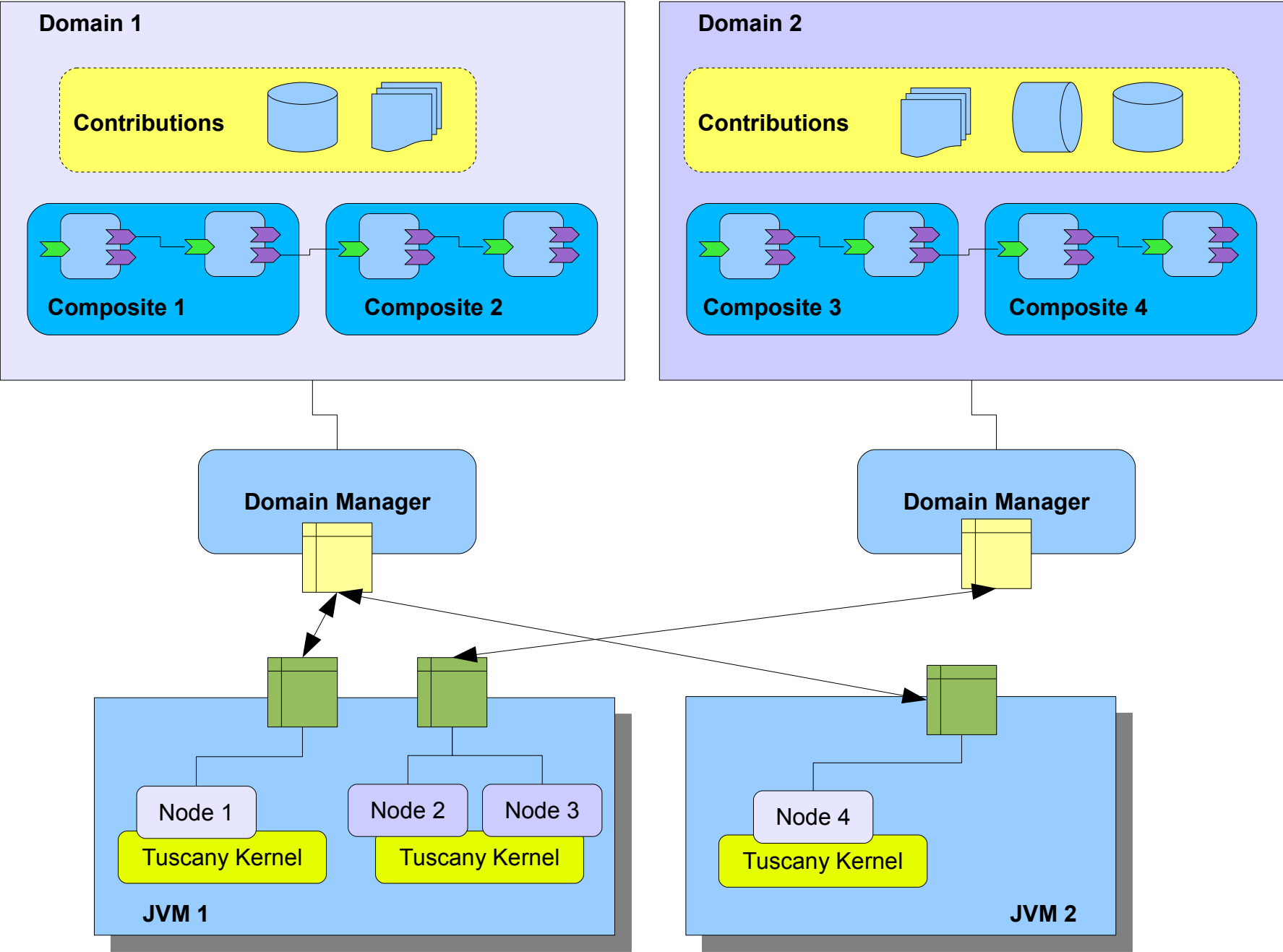
Nodes receive metadata (a view) from the SCA domain via the registry



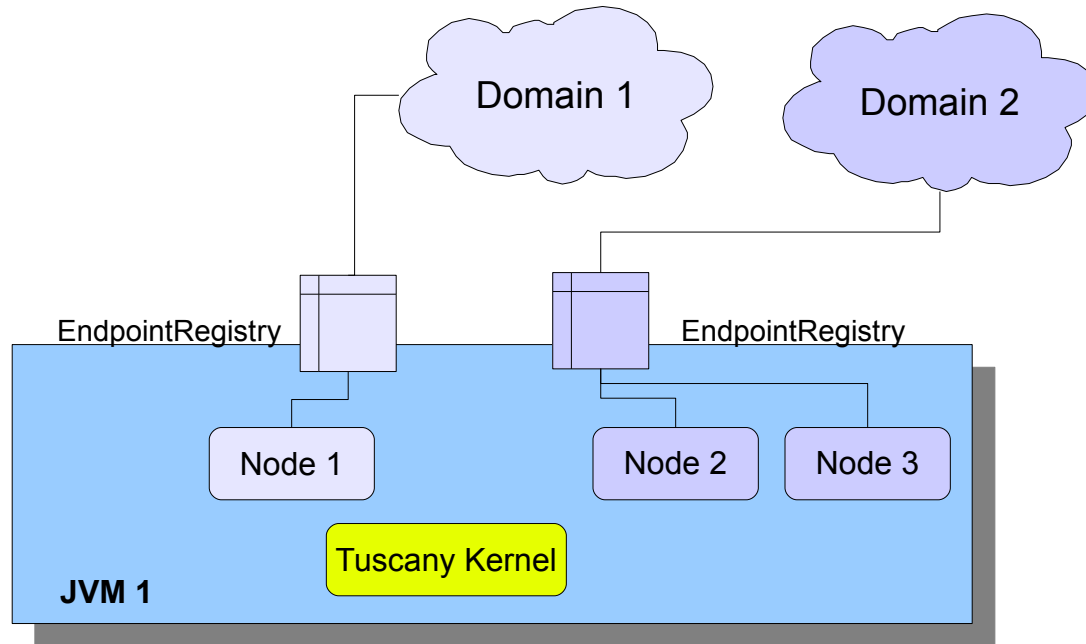
DomainRegistry
(Provide a view to the domain metadata)



SCA domain provisioning via the Domain Manager

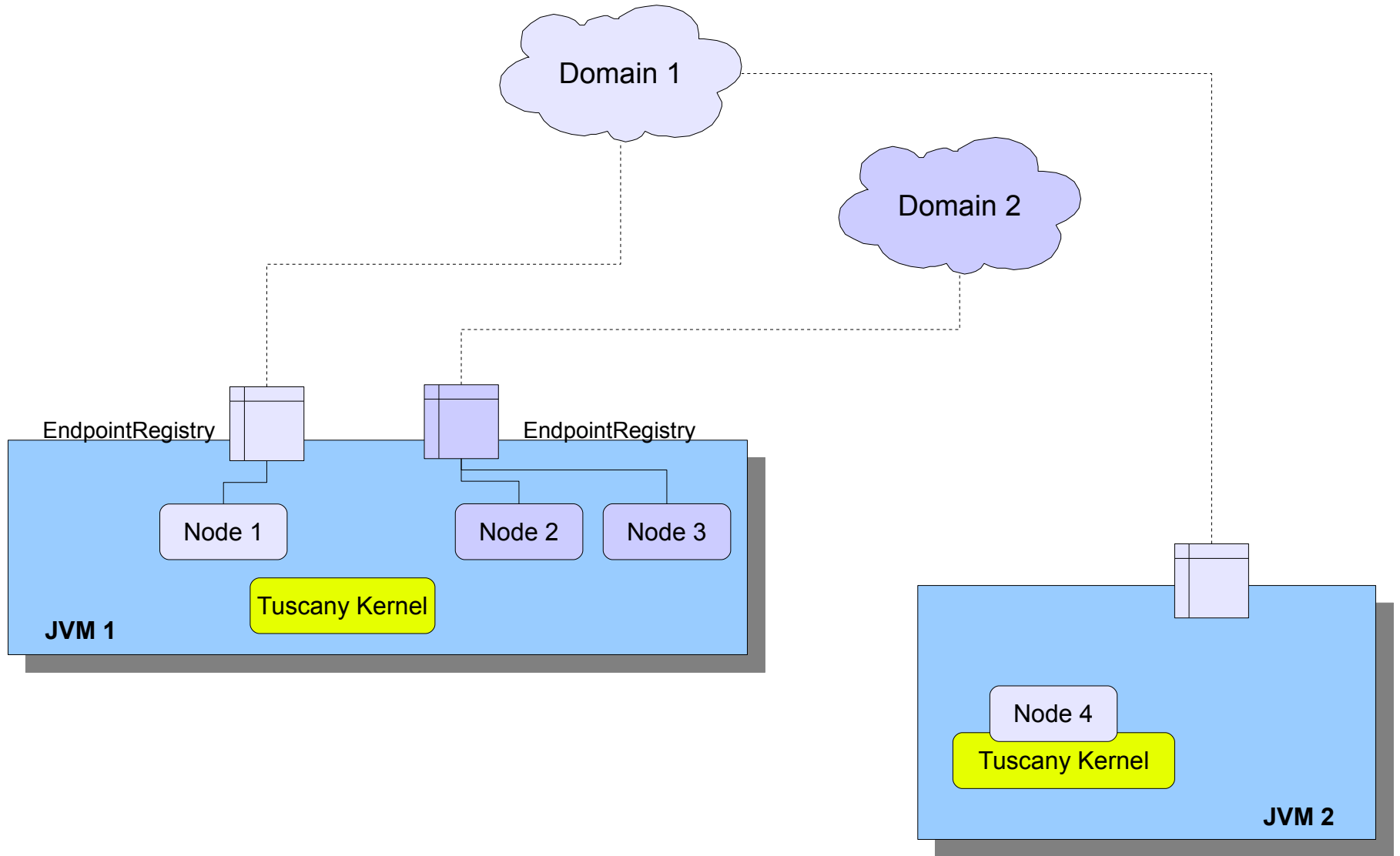


Scheme 1: There is one instance of EndpointRegistry (or its proxy) per domain for the nodes that are managed by the same Tuscany kernel.



Scheme 2: There is one instance of EndpointRegistry (or its proxy) for the nodes that are managed by the same Tuscany kernel. The EndpointRegistry is able to handle multiple domains using the domain URI as the key.

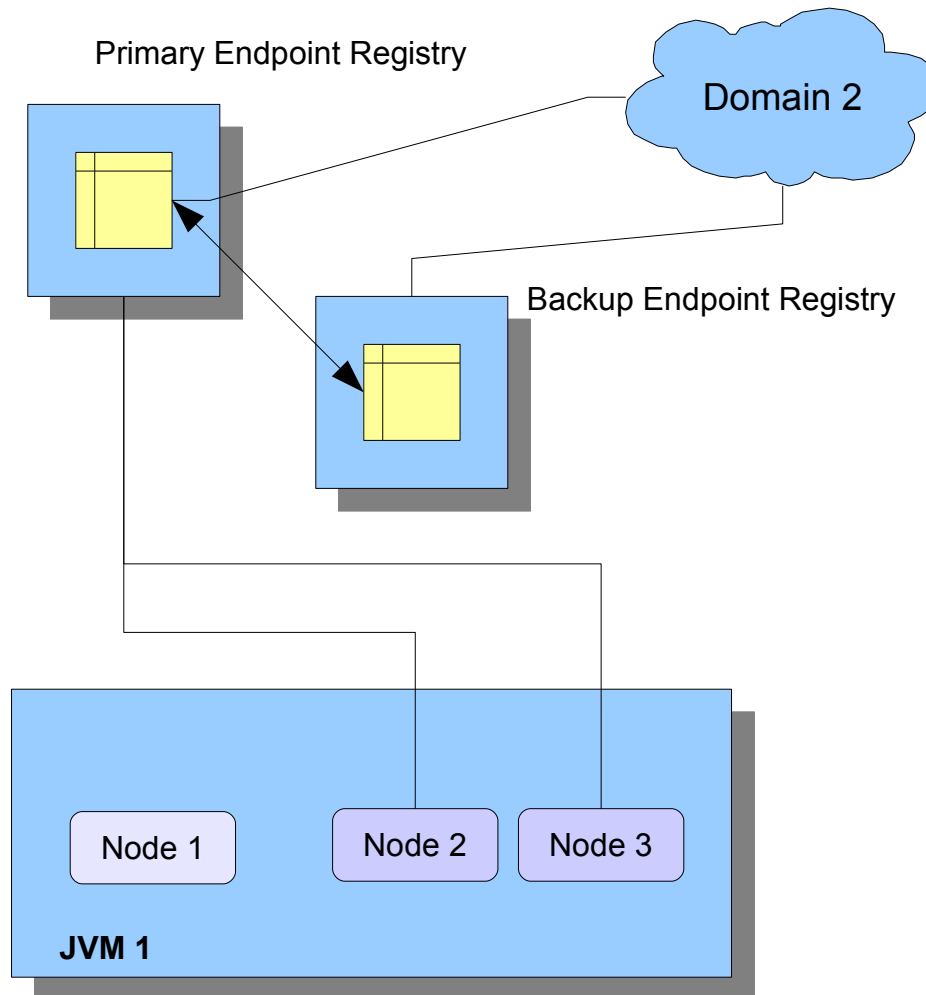
Scheme 1: Distributed Endpoint Registry (via replication)



Scheme 2: Centralized Endpoint Registry

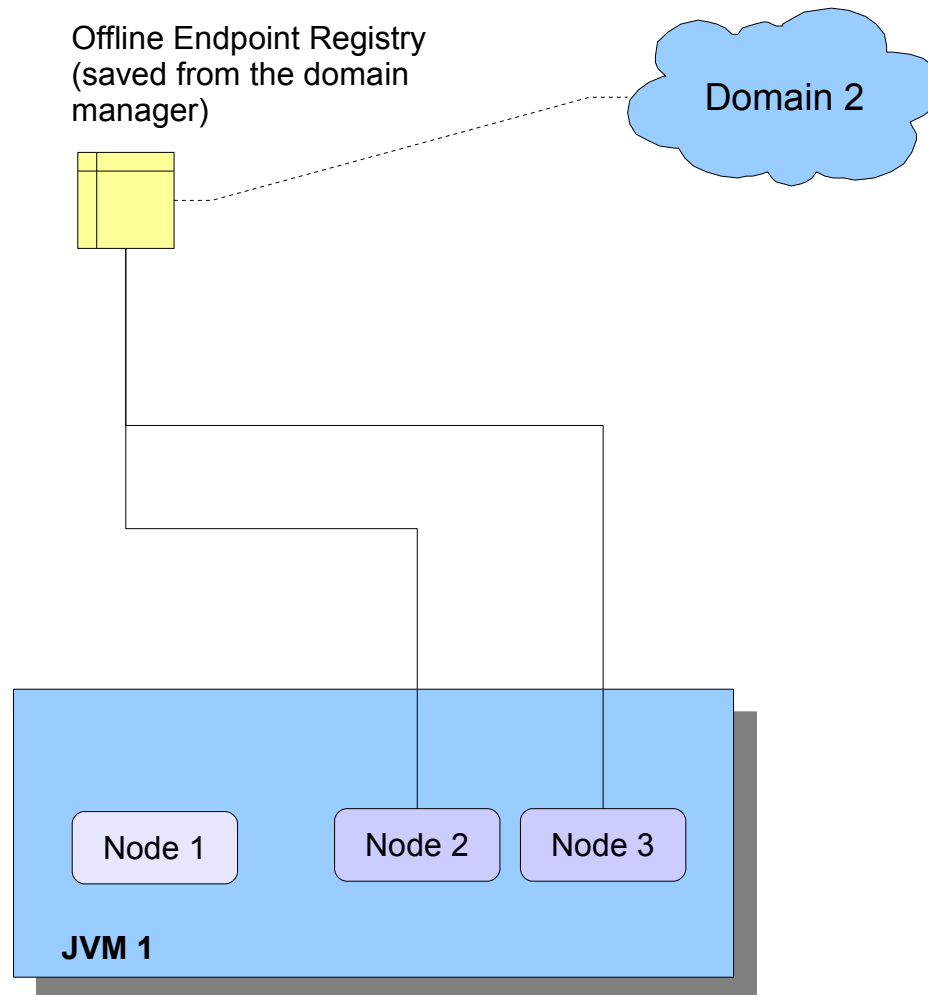
All the nodes in the domain connect to the same EndpointRegistry and share endpoint descriptions, The node publishes its endpoints to the registry and receives endpoints published by other nodes in the domain.

HA technique (such as Apache Hadoop ZooKeeper) can be adopted to remove single point of failure for the registry.

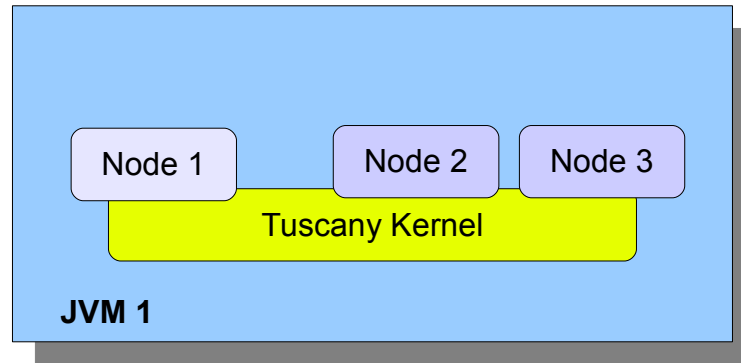


Scheme 3: Static Endpoint Registry

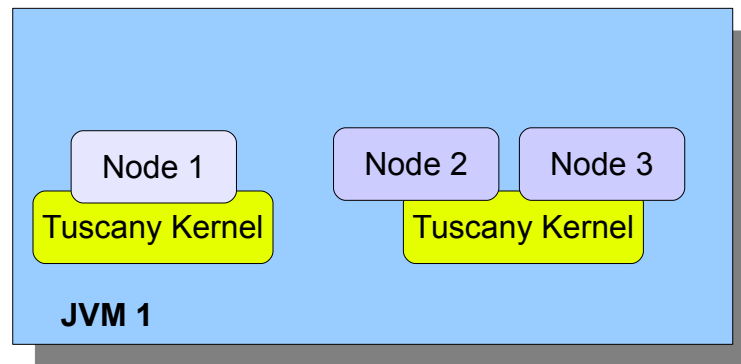
A node takes a snapshot of the endpoint descriptions from the domain manager and uses it locally to resolve domain-level wires. The endpoint registry is dumped into the node configuration. The node is statically resolved by the domain manager.



Scheme 1: There is one single instance of Tuscany kernel in the JVM. It is shared by multiple nodes in the same JVM.

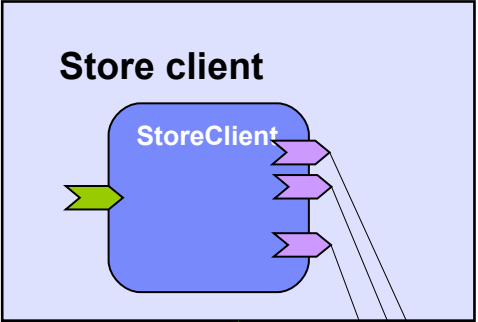
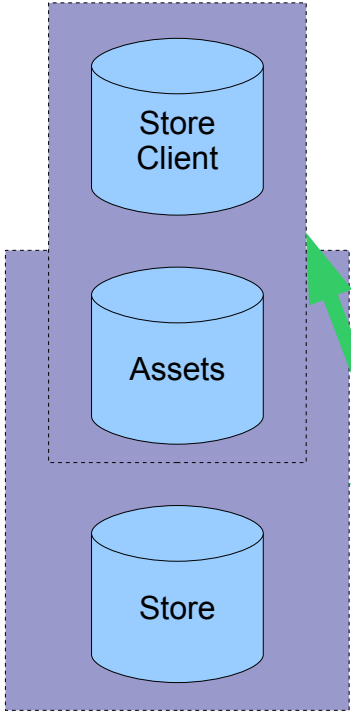


Scheme 2: There are multiple instances of Tuscany kernel in the JVM. Each instance is used by one or more nodes.

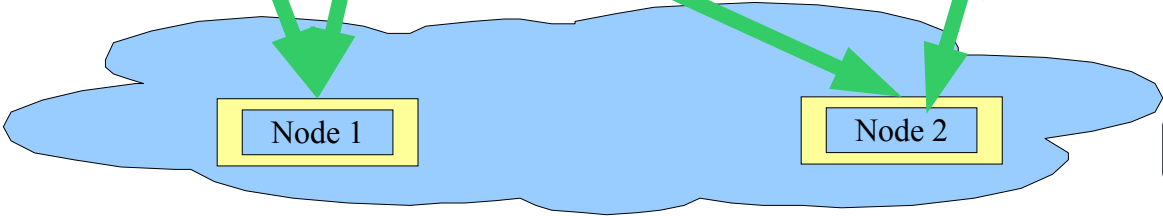
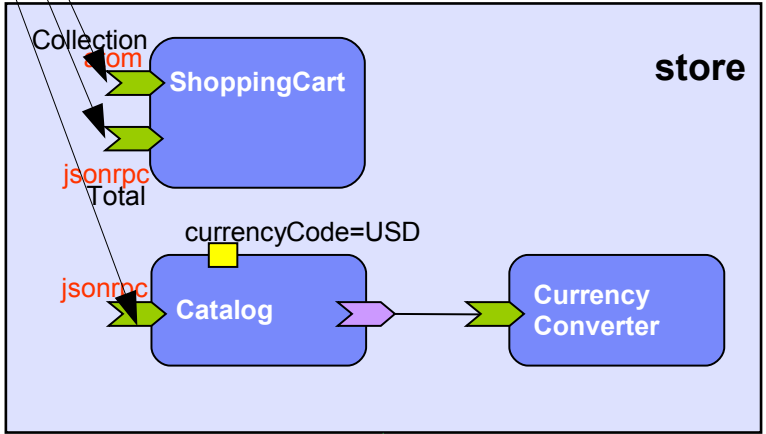


Note: The relationship between the Tuscany kernel and node is a runtime choice. It can be wholly independent of how the nodes are connected to SCA domains. Sharing an instance of Tuscany kernel means sharing the extension point registry. An instance of Tuscany kernel can manage nodes that are connected to the same or different domain.

Contributions



Composites



Nodes

