



# A Seamlessly Federated Multi-Cloud

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# Identity Federation

- Keystone speaks multiple forms of SSO both as a consumer and as a provider
  - Identity Provider(IDP)-Proxy and translation to translate data from an IDP (e.g. ADFS) to a form the Service Providers(SPs) understand
- Keystone can provide virtual-organization mapping on top of data from Identity data
  - Membership in a group can provide access to a subset of the infrastructure (SPs)



# Beyond Identity Federation

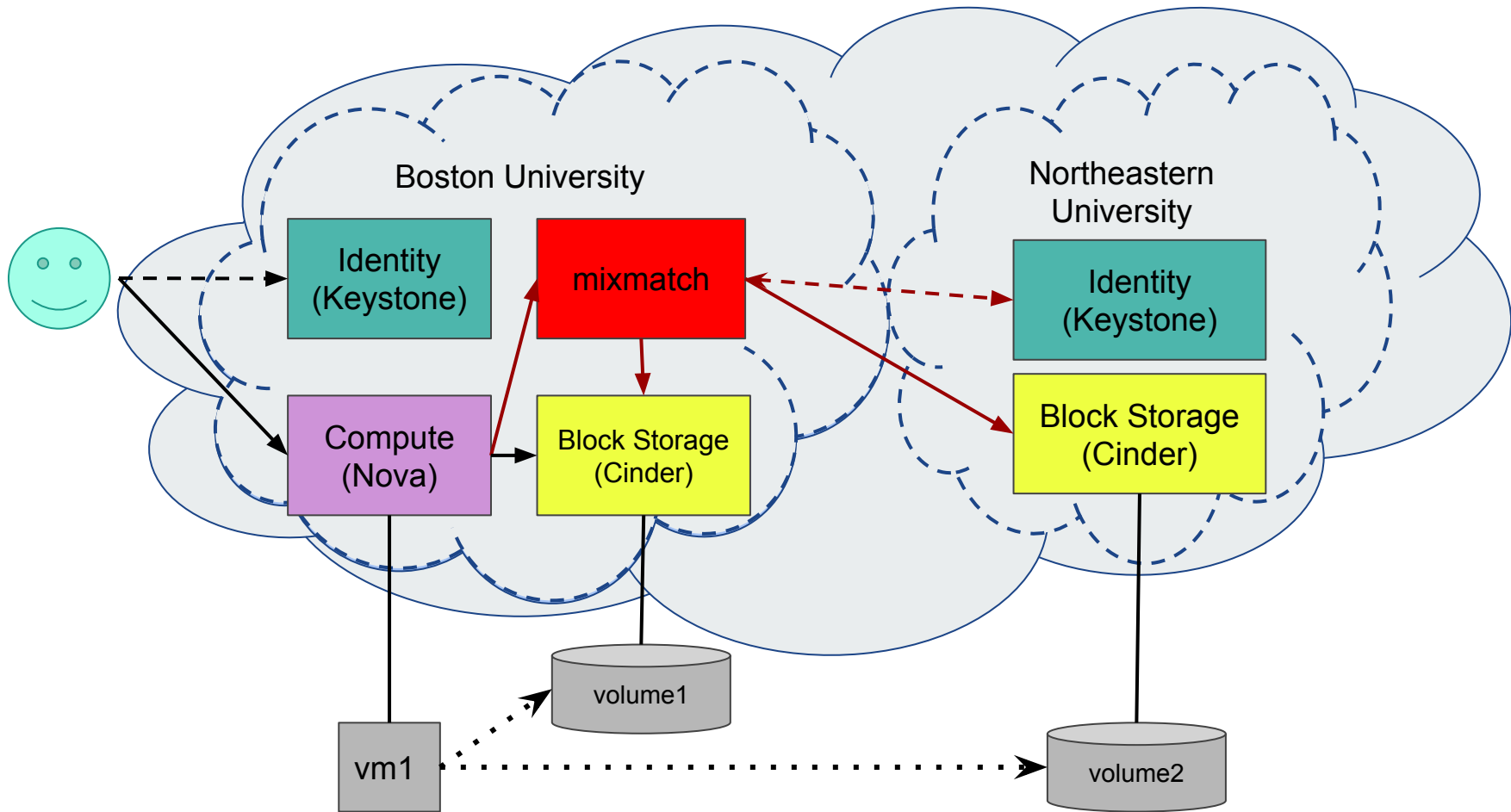
- Even though you can use your identity in multiple cloud, you can't combine resources from the two
- Federate services in one cloud with another cloud
- Federate networks so that VMs in one can talk to VMs in another
  - Neutron-Neutron Interconnect - Spec in flight



# Mix & Match

Allows OpenStack services to consume resources from federated clouds.

- Examples
  - Let the Compute service in cloudA access volumes from the Block Storage service in cloudB.
  - Let the virtual machines in two different clouds sit on the same private network.





# Features

- Proxy service
- Fully compatible with the OpenStack APIs
- Uses Keystone-to-Keystone for federating identities
- Can automatically find the location of the requested resource among multiple clouds
- Extensions to customize behavior



## Next Steps

- Provide identity to VMs and other user-owned services running in the cloud
- Resources (VMs) can speak to services within one of the member clouds



# Thank you

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