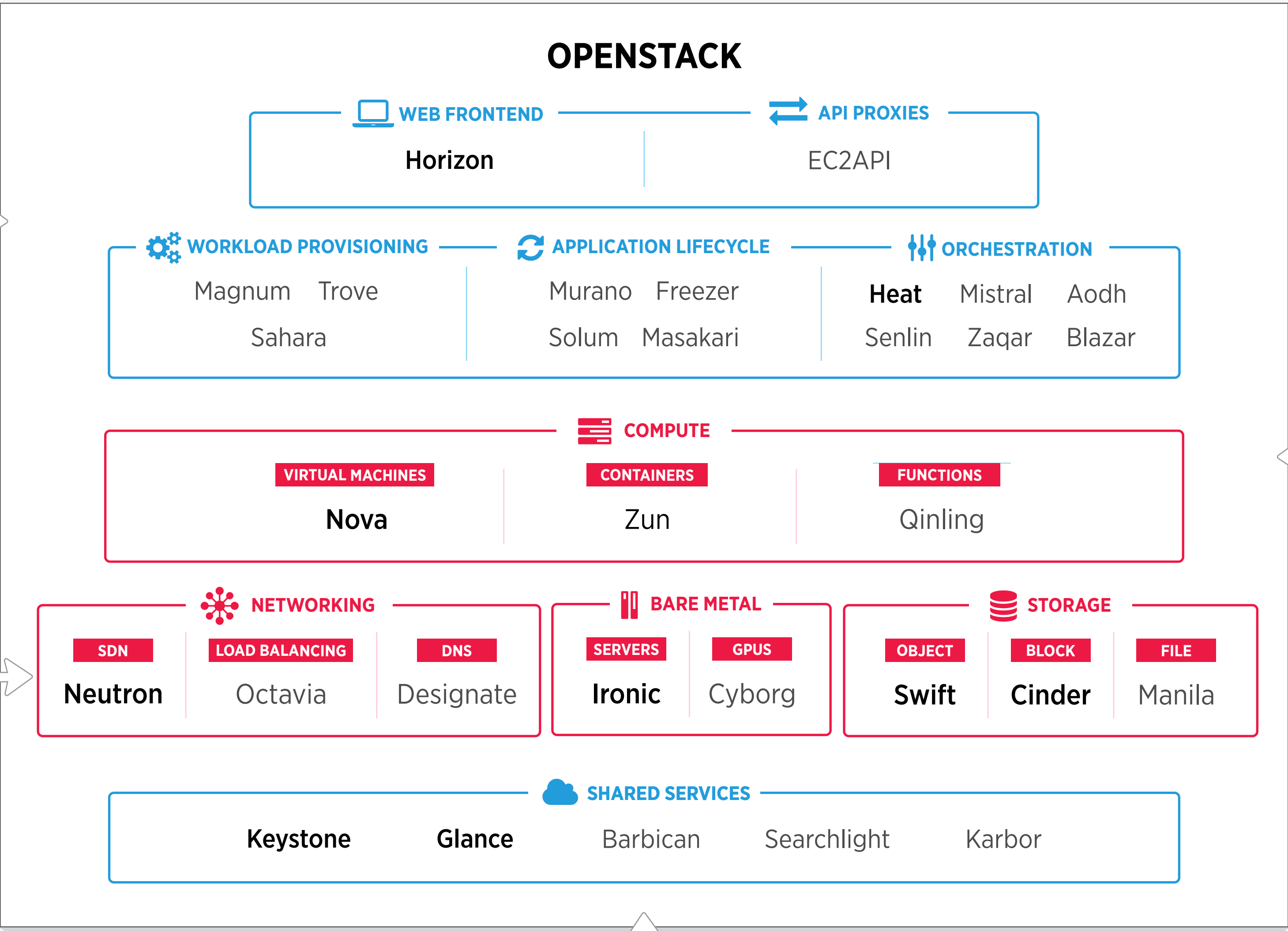


# OPENSTACK

### OPENSTACK-USER

**SDK**

OpenStackClient  
Shade Python SDK



### OPENSTACK-ADJACENTENABLERS

**CONTAINER SERVICES**  
Kuryr Fuxi

**NFV**  
Tacker

### OPENSTACK-OPERATIONS

**MONITORING TOOLS**  
Ceilometer  
Monasca Panko

**OPTIMIZATION / POLICY TOOLS**  
Watcher Vitrage  
Congress Rally

**BILLING / BUSINESS LOGIC**  
CloudKitty

**MULTI-REGION TOOLS**  
Tricircle

### OPENSTACK-LIFECYCLEMANAGEMENT

**DEPLOYMENT / LIFECYCLE TOOLS**  
Kolla-Ansible OpenStack-Charms  
OpenStack-Helm TripleO Bifrost

**PACKAGING RECIPES FOR...**  
RPM Ansible Puppet  
Chef OCI containers

**Bold** represents **Core Functionality**

