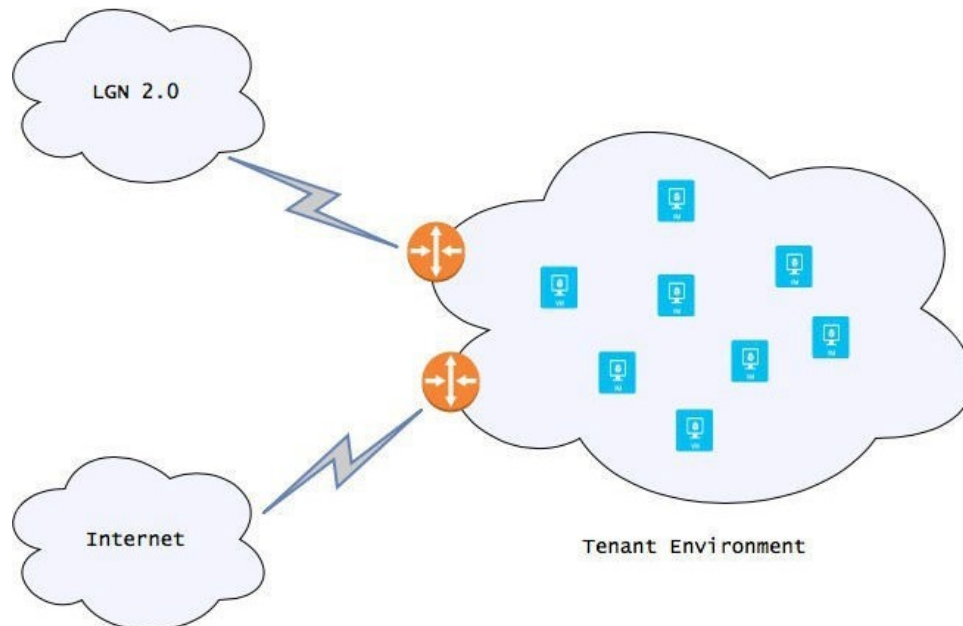# Lanka Government Cloud 2.0
(LGC 2.0)

Tenant Infrastructure

> ➤ **Infrastructure as a Service (IaaS)**

Lanka Government Cloud 2.0 (LGC2.0) is connected to two WAN links, Internet and LGN2.0 MPLS VPN. Tenant environment is including with following features.

- Tenants will be provided with two types of users, generic users and tenant admin.
- Will be provided with two management portals,

    o https://console.lgc.gov.lk
    o https://manageconsole.lgc.gov.lk

- https://console.lgc.gov.lk is for generic users who can order the services via this portal. https://manageconsole.lgc.gov.lk is for tenant admins who can approve generic user request, create users, routers, subnets, volumes etc.
- Tenant peripheral has two virtual routers each connected to the outside via Internet and LGN2.0 VPN routers.
- Users can create sub-networks and routers as per their requirement whether the services need to be published to the Internet, the LGN2.0 or isolated.
- Each tenant allowed to have five (3) floating IPs to which can be attached dynamically to connect the outside.
- Tenant admin can control Ingress and Egress traffic to/from instance within the environment with security groups(more like unix/linux netfilter). Advance version of filtering as a service will be available in future.

- Virtual machines can be created with different pre-configured flavors.
- Users are entitled to have RHEL VMs with support upto 3 years. All other instances need to be supported by principal developers. (eg. Windows server licenses need to be obtained separately)
- Storage volumes can be added separately to the instances.
- If users require high I/O volumes, need to be requested separately as it's not allowed from customer portal.
- Users required HA shall create multiple service instances and handle with application level, Volume snapshot and backup is available. DR is not supported at the moment.

How to expose service? :

- If deployed service need to expose to both Internet(public users) and Goverment Users(LGN) , instance should associate with both public IP(43.224.x.x) and LGN IP(10.250.x.x) from mangeconsole ,then associated public ip and lgn ip should forward to LGII(noc@noc.gov.lk) along with domain name in order to point resource record/s.

- If deployed service need to expose only to Goverment Users(via LGN), instance should associate only with LGN IP(10.250.x.x) , then associated lgn ip should forward to LGII(noc@noc.gov.lk) along with domain name in order to point resource record/s

> **Platform as a Service (PaaS) – Mesosphere**
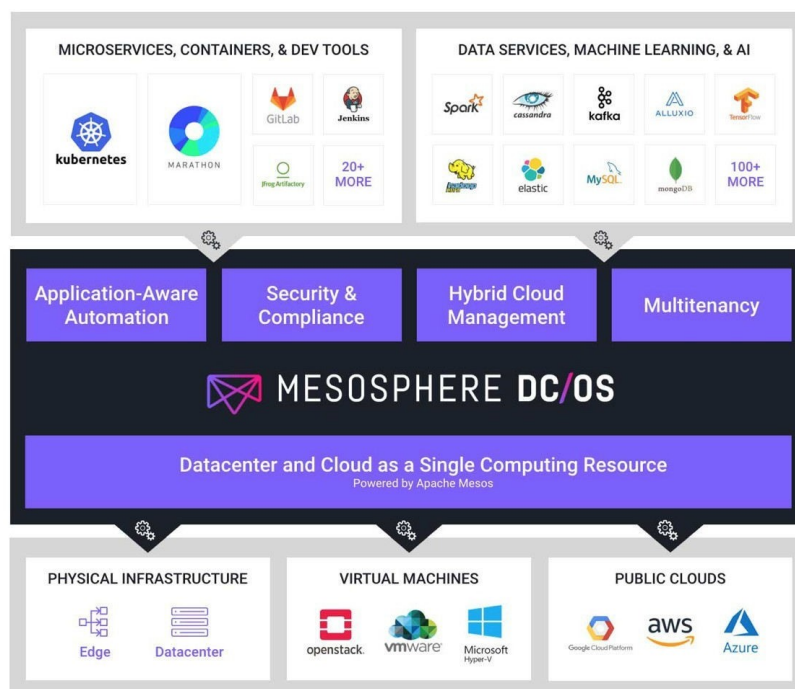
Mesosphere is coming with modern DC/OS which automates rollout and production operations for container and data services. It supports broad workload coverage including traditional JVM containers.

Distributed, highly available architecture with no single point of failure. Lets you easily build and run modern distributed apps and move to a microservices architecture, with high availability, security, monitoring and operations.

Lanka Government Cloud 2.0 (LGC 2.0) PaaS cluster will be provided two portals.

- https://mesop.lgc.gov.lk
- https://gitlab.lgc.gov.lk

Automate the on-demand delivery of Marathon and their container ecosystems with one step provisioning, scaling, upgrading and zero touch self-healing.

Code to container life cycle (CI/CD flow)

User → GitLab → Jenkins → Apache Mesos → Docker Registry → Marathon → HAproxy →

https://mesop.lgc.gov.lk (jenkins, Apache mesos, Docker Registry, Marathon, HAproxy, Metronome,...etc)

https://gitlab.lgc.govlk (GitLab)