**COV Cloud Framework**

**Essential Attributes**

**Broad Network Access**
Capabilities available over the network accessed through standard mechanisms promoting heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations) use.

**Rapid Elasticity**
Elastically provisioned and released capabilities, sometimes automatically, scaling rapidly outward and inward commensurate with demand. Consumer provisioning capabilities often appear unlimited and can be appropriated in any quantity at any time.

**Measured Service**
Automatically control and optimize resources by leveraging a service metering capability (e.g., storage, processing, bandwidth, and active user accounts). Resource usage monitored, controlled, and reported, providing transparency.

**On-Demand Self-Service**
Consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed, automatically, without requiring human interaction with each service provider.

**Resource Pooling**
Provider’s computing resources pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to demand. There is a sense of location independence in that the customer generally has no control or knowledge over the exact location of the provided resources, but may be able to specify location at a higher level of abstraction (e.g., country, state, or datacenter). Examples of resources include storage, processing, memory, and network bandwidth.

**Service Models**

**IaaS**
- **Infrastructure**
  - Servers * Storage * Network

**PaaS**
- **Platform**
  - OS * Software Stack

**SaaS**
- **Applications**
  - OEM / Packaged Software

**Deployment Models**

- **Private Cloud**
- **Public Cloud**
- **Hybrid Cloud**
- **Community Cloud**
COV Cloud-Based Services

Private
On-Premise

Hybrid
Blended

Public
Off-Premise

Community

NIST Definition of Cloud Computing - Special Publication 800-145: Cloud Deployment Models
### Cloud Deployment Models

**Private**
- On-Premise
  - Cloud infrastructure is provisioned for exclusive use by a single organization comprising multiple consumers (e.g., business units). May be owned, managed, and operated by the organization, a third party, or some combination of them, and it may exist on or off premises.

**Hybrid**
- Blended
  - Cloud infrastructure is a composition of two or more distinct cloud infrastructures (private, community, or public) that remain unique entities, but are bound together by standardized or proprietary technology that enables data and application portability (e.g., cloud bursting for load balancing between clouds).

**Public**
- Off-Premise
  - Cloud infrastructure is provisioned for open use by the general public. It may be owned, managed, and operated by a business, academic, or government organization, or some combination of them. It exists on the premises of the cloud provider.

### Community
- Cloud infrastructure is provisioned for exclusive use by a specific community of consumers having shared concerns (e.g., mission, security requirements, policy, and compliance considerations). May be owned, managed, and operated by one or more of the organizations in the community, a third party, or some combination of them. And it may exist on or off premise.
COV IT Solutions Hosting Framework

**Servers**
- Physical | Virtual
- **VITA**
- **Agencies**

**Floor Space**
- **Hybrid Cloud**
- **Community Cloud**

**On-Premise**
- **Private**
- **On-Premise**
- **Private**

**Private**
- VMware ESX
- **Dell EMC Avamar G4 Node Rack Appliance**
- **Teradata Cloud Data Warehouse Appliance 2800**

**Public**
- **Off-Premise**
- **Public**

**Off-Premise**
- **3rd Party Hosting**
- **VITA**
- **Agencies**

**3rd Party Hosting**
- **Servers**
  - Physical | Virtual
  - **VITA**
  - **Agencies**

**Public**
- **Servers**
  - Physical | Virtual
  - **Dell EMC Avamar G4 Node Rack Appliance**
  - **Teradata Cloud Data Warehouse Appliance 2800**

**Ver-3.2: July 25, 2018**