

# CPE Requirements of Baadal for hosting Virtual Labs

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## 1 Introduction

This document describes the 'minimum requirements' of a cloud and in particular Baadal - an offering of cloud by IIT-Delhi- that enables hosting of labs by the central platform engineering (CPE).

## 2 Requirements

2 Virtual machines (VM) are needed to test and set up the Virtual Labs cluster.

Each VM should have the following configuration.

### 1. Hardware

Resource	Fixed (or Minimum)
RAM	16 GB
Disk	1 TB
CPU	16 Cores
I/O throughput	1000 IOPS

2. Operating system : CentOS-6.9
3. IP Addresses One Public IP and Three LAN IPs with Internet access.
  - One LAN IP for Host machine ( VM ) along with Public IP. VM should have two Network Interfaces.
    - One for Public IP ( eth0 )
    - One for LAN IP ( eth1 )
  - One LAN IP for router container and
  - One LAN IP for config/ansible container
4. Firewall rules
  - (a) The following ports should be opened for incoming traffic.  
22(SSH), 80(HTTP), 443(HTTPS), 53(DNS tcp and udp) and 8080
  - (b) Outgoing access on all ports
5. Availability

The VM should be available all times. That means, the server should not go down or shutdown at any time.
6. Internet access

Internet access available at all times.
7. Admin Support from Baadal

In case of any issues with the provided VM, VEAD Team would need support from Baadal to troubleshoot and fix the issues.

### 3 Conclusion

To conclude, the Virtual Labs project needs a cloud provider that caters to all the above cloud requirements and guarantees stability and continuity of service.