



Validated Scaling Summary

Contrail R2005 has been hardened to significantly improve the scale and performance numbers for fabric management use cases. This document provides a summary of the qualified scale and performance that a single Contrail controller can deliver.

The following table summarizes the qualified scale of a single Contrail controller managing physical network devices for fabric management.

# of network devices	128
# of Virtual Port Groups	2,000
# of Physical interfaces	2,560
# of Virtual Machine Interfaces = ~ # of VPG x VLANs/VPG	128,000
# of Virtual Networks	2,000
# of Logical Routers (L3 VRF)	500
# of Security Group / Security Group rules (aka stateless ACLs)	500 security groups 1500 SG Rules
# of Storm Control Profiles	4 profiles on 100% of access VLANs
# of Port Profiles	4 profiles on 100% of access VLANs
# of Unmanaged PNF instances	32

Notes:

- 1) The scale in terms of # of network devices has been validated using a combination of physical switches and software device simulators (emulating a leaf switch with 48 physical interfaces)
- 2) The Test setup is composed of a single 3-tier IP Clos composed of Juniper QFX devices and software device simulators; scale has been tested using a Centrally Routed Bridging NVO topology
- 3) The scale in terms of # of Virtual Machine Interfaces has been achieved by Disabling VLAN-VN uniqueness Check on the test fabric
- 4) The Virtual Networks are non routed Virtual Networks.
- 5) The Contrail controller is deployed in High availability configuration
- 6) Overall , there is a +/- 10% margin of approximation on the scale numbers indicated in this document. Please note that there is no strict enforcement in Contrail of such thresholds hence the expected behavior is a gradual degradation of performance when reaching the indicated scale limits.