

# Vswitch Test List

## VSWITCHPERF Tests to be defined

The test scratchpad (for tests that are WIP/being defined/looked at by the community) can be found here: <https://etherpad.opnfv.org/p/vSwitchTestsDrafts>

## Performance tests to be defined list

Test	Priority	JIRA
Scalability Tests adding More VMs in succession and building a performance profile as we add more VMs.	1	238
OverlayNetworking Tests: VXLAN performance testing, encap, decap, encap and decap	1	241
Matchaction performance testing? The cost of the different actions supported by a vSwitch	1	242
VM2VM Tests (PHY-VNF-vSwitch-VNF-PHY), with scaling number of VMs in path (combines two tests in the list)	1	243
Classifying L2, L3 and L4 traffic Profile Tests, Flows, new flows/sec, L2/L3/L4 etc. entries in "fast" path tables, ...	2	
Stream/bulk Data transfer "unidirectional stream" performance request& response /transaction rate tests		
Performance testing with Mirroring enabled on the switch	2	
TCP Max connections per second, Max # of active sessions, Max transactions per second		
IPv6 Support and Testing		
Best of N and Worst of N Tests	2	
Measuring how many instances of a vSwitch would be required to support 1 million simultaneous flows	2	
Resilience tests		
Performance characterization runs vs. number of "x". Tests with Restricted Resources (Host with X Cores, vSwitch with Y Cores?)		
Flows, new flows/sec, L2/L3/L4 etc. entries in "fast" path tables, ...	2	
Tests to evaluate vSwitch contribution to 3GPP performance objectives (3GPP TS 23.203 Policy and Charging Control Architecture)		
Programming rate of Forwarding_table /flow_table	2	

SOAK tests (using RFC 2889 Max Forwarding Rate, not RFC 2544, to collect intermediate results)	2	
Tests suggested by OVS developers (there were a few)		
Box-full tests, where all CPU cores are doing useful work: vNet4 vSwitch with Nx VNFs, vNet6 vSwitch with Nx VNF chained topologies	2	
LatencyAndLatencyVariation with dedicated latency measurement streams		
Tests with Restricted Resources (Host with X Cores, vSwitch with Y Cores, ? overlap with 14, ... vs number of "X")	2	
Spanning Tree/Rapid Spanning Tree integration testing	2	

## Testing Topologies

Topology	Priority	JIRA
vNet vComp2 for VM2VM virt interface testing		

## Integration Tests

<https://etherpad.opnfv.org/p/vSwitchIntegrationTests>

## Other

We should consider recommending a minimum number of iterations to repeat the test and either average out the result or calculate the variance across trials