



# F10wer

## Supported Device Matrix

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This document is an almost comprehensive (but obviously incomplete) matrix of devices and softwares capable to export Netflow/IPFIX data suitable for F10wer processing. The softwares and devices listed are actively (or have been) tested with the latest version of F10wer (currently is 3.0).

Netflow V1, Netflow V5 and sFlow V5 protocols are fixed record format standard, so they are supported on all devices claiming their support. This includes all Cisco IOS versions, Juniper and all other vendors. If it does not work, it is likely a device issue, but, upon request, analysis can be performed issuing a request to [support@f10wer.ch](mailto:support@f10wer.ch) providing a pcap file with some Netflow1/NetflowV5/sFlowV5 data.

Netflow V9 and IPFIX are protocols using dynamic templates, but several vendors have their own P.E.N. (Private Enterprise Numbers) Netflow/IPFIX fields that they often do not publish and that are proprietary, so in these cases, these fields are simply ignored. Most Netflow 9/IPFIX devices and fields are supported, please issue a request to [support@f10wer.ch](mailto:support@f10wer.ch) to check and/or verify compatibility with a specific device (a pcap file with some Netflow/IPFIX data including Netflow/IPFIX templates will be requested).

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## Routers

<b>Platform</b>	<b>Firmware Version</b>	<b>Protocol</b>
Cisco 887	>= IOS 15.2-4 Advanced Enterprise	IPFIX
Cisco 1721	>= IOS 12.3(23)	Netflow 5, Netflow 9
Cisco 1751V	>= IOS 12.4(10)	Netflow 5, Netflow 9
Ubiquiti ERLite3	EdgeOS 2.0.3	IPFIX
Mikrotik	RouterOS 6.45.3	Netflow 1, Netflow 5, Netflow 9, IPFIX
Huawei AR157VW	VRP 5.160	Netstream (Netflow 9)



## Firewall/UTM

Platform	Firmware Version	Protocol
Cisco ASA 5505	>= 9.2(4)33	Netflow 9
Fortinet 60D	>= 5.2.11 (*1)	Netflow 9
Palo Alto PA-500	>= PanOS 7.1	Netflow 9
StormShield	3.9.0	IPFIX
Huawei Eudemon E8000-X3	V500R002C20SPC300 (*2)	Netstream (Netflow 9)
OpnSense	>= 19.7.2	Netflow 9
CheckPoint "Gaia"	>= R76	Netflow 9
Juniper SRX	>= JUNOS 12.1X46-D40.2	Netflow 9
Sophos XG Firewall	>= 17.5.7 MR-7	Netflow 5
Watchguard	12.4	Netflow 9

### Notes:

\*1 This combination does not fill properly the TCP Flags field in Netflow 9.

\*2 This combination does not fill properly the field 89 (forwardingStatus) with IPFIX conforming values (<https://www.iana.org/assignments/ipfix/ipfix.xhtml>). The vendor support, contacted, never provided any clarification.



## Virtualization Platforms

Platform	Firmware Version	Protocol
VMWare ESX distributed vSwitch	6.7	IPFIX
VMWare NSX distributed vSwitch	6.7	IPFIX
KVM/libvirt	Host sFlow Agent	sFlow V5
Nutanix AHV	Host sFlow Agent <a href="https://blog.sflow.com/2017/03/nutanix.html">https://blog.sflow.com/2017/03/nutanix.html</a>	sFlow V5
Microsoft Hyper-V	Host sFlow Agent <a href="https://inmon.com/products/sFlowHyperV/index.php">https://inmon.com/products/sFlowHyperV/index.php</a>	sFlow V5
Xen/XCP/XenServer	Host sFlow Agent <ul style="list-style-type: none"> <li>• XenServer 7.0</li> <li>• XenServer 6.5</li> <li>• XenServer 6.2</li> <li>• XenServer 6.1</li> <li>• XenServer 6.02:</li> <li>• XenServer 6.0</li> <li>• XenServer 5.6 FP2</li> <li>• XenServer 5.6 FP1</li> <li>• Xen Cloud 1.0</li> </ul>	sFlow V5
Proxmox VE 5.x/6.x	Softflowd >= 0.99	Netflow V5/V9/IPFIX



## Software Exporters

Platform	Firmware Version	Protocol
Softflowd	>= 0.99.1	Netflow 9, IPFIX
ipt_NETFLOW	<a href="https://github.com/aabc/ipt-netflow">https://github.com/aabc/ipt-netflow</a>	Netflow 9, IPFIX
OpenVSwitch	>= 2.6.2	Netflow 9, IPFIX
FLOWer Agent	Not yet released	IPFIX
sflowtool	>= 5.0.2	Netflow 9
Cisco nvzFlow	Cisco AnyConnect 4.2	Netflow 9
Hsflowd	2.0.11-cl3u7	sFlow V5



## Switches

<b>Platform</b>	<b>Firmware Version</b>	<b>Protocol</b>
Cisco SG-350	2.3.5.63	sFlow V5
HP Procurve 2610-24	R.11.07	sFlow V5
Cumulus VX	3.7.9 (hsflowd 2.0.11-cl3u7)	sFlow V5
Dell OS-10 Open Edition	Hsflowd for openvswitch	sFlow V5
Dell OS-10 Enterprise Edition	Starting in OS10 release 10.4.1, hsflowd is included in the installation.	sFlow V5

A more complete list of sFlow capable devices is available at: <https://sflow.org/products/network.php>



## Systems

Platform	Firmware Version	Protocol
Linux RedHat/CentOS 6/7	Hsflowd >= 2.011	sFlow V5
Debian/Ubuntu 12/14/16	Hsflowd >= 2.011	sFlow V5
Linux Any	Softflowd >= 0.99	Netflow V5, Netflow V9, IPFIX
Windows 64 bit (>= Vista)	Hsflowd >= 2.011	sFlow V5
Windows 32 bit (>= Vista)	Hsflowd >= 2.011	sFlow V5
Windows XP/Windows Server 2003/Windows 2008 R1	Hsflowd >= 2.011	sFlow V5
IBM AIX 7.1	Hsflowd >= 1.28	sFlow V5

A more complete list of sFlow capable systems is available at: <https://sflow.net/downloads.php>

Note: Cisco, Palo Alto, Juniper, Intel, MaxMind, Oracle, Netflow, Citrix, PcEngines, SPARC, Ubiquiti, Huawei NETSTREAM, Checkpoint GAIA, Sophos, VMWARE and all other names are properties and trademarks of their respective owners.