

The SDN, NFV & Network Virtualization Bible: 2015 – 2020 – Opportunities, Challenges, Strategies & Forecasts

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Abstracts

While the benefits of Software Defined Networking (SDN) and network virtualization are well known in the enterprise IT and data center world, both technologies also bring a hosts of benefits to the telecommunications service provider/carrier community.

Not only can SDN and network virtualization help address the explosive capacity demand of mobile traffic, but they can also reduce the CapEx and OpEx burden faced by service providers to handle this demand by diminishing reliance on expensive proprietary hardware platforms.

SDN and network virtualization solutions have been widely deployed in data center and enterprise environments, and many service provider deployments are already underway.

Network Functions Virtualization (NFV) is service provider led initiative aimed at virtualizing network components in a service provider network. While NFV is still a developing technology, many vendors have already developed commercial-grade solutions that align well with the NFV initiative.

Driven by the thriving ecosystem, SNS Research estimates that the SDN, NFV and network virtualization market will account for nearly \$10 Billion in 2015 alone. Despite barriers relating to standardization and co-existence with legacy networks, SNS Research estimates further growth at a CAGR of 37% over the next 5 years.

This report presents an in-depth assessment of the global SDN, NFV and network virtualization market. In addition to covering underlying technology, key market drivers,

challenges, future roadmap, value chain analysis, use cases, deployment case studies, company profiles, product strategies and strategic recommendations, the report also presents comprehensive forecasts for the market from 2015 till 2020. The forecasts and historical revenue figures are individually segmented for 10 individual submarkets, 2 user base categories, 7 use case categories, 6 geographical regions and 34 countries.

The report comes with an associated Excel datasheet covering quantitative data from all figures presented within the report.

Contents

1 CHAPTER 1: INTRODUCTION

- 1.1 Executive Summary
- 1.2 Topics Covered
- 1.3 Forecast Segmentation
- 1.4 Key Questions Answered
- 1.5 Key Findings
- 1.6 Methodology
- 1.7 Target Audience
- 1.8 Companies & Organizations Mentioned

2 CHAPTER 2: AN OVERVIEW OF SDN, NFV & NETWORK VIRTUALIZATION

- 2.1 What is Network Virtualization?
- 2.2 What is SDN (Software Defined Networking)?
- 2.3 SDN Protocols
 - 2.3.1 OpenFlow
 - 2.3.2 BGP-TE (Border Gateway Protocol - Traffic Engineering)
 - 2.3.3 PCEP (Path Computation Element Protocol)
 - 2.3.4 I2RS (Interface to the Routing System)
 - 2.3.5 VxLAN (Virtual Extensible LAN)
 - 2.3.6 ALTO (Application Layer Traffic Optimization)
 - 2.3.7 IETF Software Driven Networks
- 2.4 SDN Implementation Approaches
 - 2.4.1 Network Virtualization Approach
 - 2.4.2 Evolutionary Approach
 - 2.4.3 The “Central Control” Approach
- 2.5 What is NFV (Network Functions Virtualization)?
- 2.6 NFV Enabling Technologies
 - 2.6.1 Cloud Computing and Network Virtualization
 - 2.6.2 Open Management and Control Protocols
 - 2.6.3 Industry Standard High-Volume Servers
- 2.7 NFV Implementation Architecture
 - 2.7.1 NFVI (NFV Infrastructure)
 - 2.7.1.1 Hardware Resources
 - 2.7.1.2 Virtualized Resources
 - 2.7.2 VNFs (Virtualized Network Functions)

- 2.7.3 NFV-MANO (NFV-Management and Orchestration)
 - 2.7.3.1 VIM (Virtualized Infrastructure Manager)
 - 2.7.3.2 Orchestrator
 - 2.7.3.3 VNF Manager
- 2.8 How SDN and NFV Differ from Each Other
 - 2.8.1 Similarities and Differences
 - 2.8.2 Can Both Technologies Complement Each Other?
 - 2.8.3 How Are Vendors Positioning their Solutions?
- 2.9 Market Drivers
 - 2.9.1 Leveraging Generic Low-cost Hardware
 - 2.9.2 Multi-tenancy on Same Hardware
 - 2.9.3 Reduced Power Consumption
 - 2.9.4 Faster TTM (Time to Market)
 - 2.9.5 Improved Operational Efficiency & Performance
 - 2.9.6 Centralized Provisioning and Network Control
 - 2.9.7 Ability to Launch New Services & Virtual Networks Quickly
 - 2.9.8 Dynamic Scaling of Services
 - 2.9.9 Opening the Door to Multi-vendor Interoperability
 - 2.9.10 CapEx and OpEx Reduction
 - 2.9.11 Fast Troubleshooting and Improved Diagnostics
 - 2.9.12 Vendor Support
- 2.10 Market Barriers
 - 2.10.1 Lack of Standardization & Technology Maturity
 - 2.10.2 Uncertain Cost-Benefits Tradeoffs
 - 2.10.3 NFV May Slow/Delay Traffic
 - 2.10.4 Will Multi-vendor Interoperability Really Work?
 - 2.10.5 Co-Existence with Legacy Networks: Integration Challenges

3 CHAPTER 3: SDN/NFV USE CASE SCENARIOS

- 3.1 Enterprise, Data Center & Generic Use Cases
 - 3.1.1 Network Virtualization
 - 3.1.2 Network Virtualization Case Study: Scalable Data Centers
 - 3.1.3 Tap Aggregation
 - 3.1.4 Dynamic WAN Re-Routing
 - 3.1.5 Network Exchange: Interconnecting Physical Networks
 - 3.1.6 Improved Traffic Engineering
 - 3.1.7 Converged Storage
- 3.2 Service Provider Use Cases

- 3.2.1 RAN (Radio Access Network) Virtualization
- 3.2.2 C-RAN (Cloud RAN)
- 3.2.3 Wireline Fixed Access Network Virtualization
- 3.2.4 EPC (Evolved Packet Core)/Mobile Core Virtualization (Including IMS)
- 3.2.5 Mobile Backhaul Virtualization
- 3.2.6 CPE/Home Network Environment Virtualization
- 3.2.7 Service Chaining
- 3.2.8 SDN/NFV IaaS (Infrastructure as a Service)
- 3.2.9 Other VNFs
- 3.2.10 VNF Case Study: DPI (Deep Packet Inspection)
- 3.2.11 VNFaaS (Virtual Network Function as a Service)
- 3.2.12 VNPaaS (Virtual Network Platform as a Service)
- 3.2.13 Virtualization of CDNs
- 3.2.14 Bandwidth on Demand
- 3.2.15 Bandwidth on Demand Case Study: QoS Management for Video
- 3.2.16 Packet-Optical Integration

4 CHAPTER 4: SDN/NFV DEPLOYMENT CASE STUDIES

4.1 Service Provider Deployment Case Studies

- 4.1.1 AT&T
- 4.1.2 BT
- 4.1.3 China Mobile
- 4.1.4 DT (Deutsche Telekom)
- 4.1.5 KDDI
- 4.1.6 KT (Korea Telecom)
- 4.1.7 Mobily Saudi Arabia
- 4.1.8 NAKA Mobile
- 4.1.9 NTT Communications
- 4.1.10 NTT DoCoMo
- 4.1.11 PT (Portugal Telecom) /Oi
- 4.1.12 SingTel
- 4.1.13 SK Telecom
- 4.1.14 SoftBank
- 4.1.15 Telekom Austria
- 4.1.16 Telstra
- 4.1.17 Telefonica
- 4.1.18 Verizon
- 4.1.19 Vodafone

4.2 Enterprise & Data Center Deployment Case Studies

- 4.2.1 Equinix
- 4.2.2 Fidelity Investments
- 4.2.3 Google
- 4.2.4 Kanazawa University Hospital
- 4.2.5 Nippon Express

5 CHAPTER 5: INDUSTRY ROADMAP AND VALUE CHAIN

5.1 The SDN, NFV & Network Virtualization Value Chain

- 5.1.1 Silicon & Server OEMs
- 5.1.2 Pure-play SDN/NFV Specialists
- 5.1.3 Network Infrastructure Vendors
- 5.1.4 IT Industry Giants
- 5.1.5 Mobile Infrastructure Vendors
- 5.1.6 BSS/OSS & Software Vendors
- 5.1.7 Enterprises
- 5.1.8 Service Providers
- 5.1.9 Data Center Operators

5.2 The SDN, NFV & Network Virtualization Industry Roadmap: 2015 - 2020

- 5.2.1 Enterprise & Data Center SDN Rollouts: Pre-2015
- 5.2.2 NFV Trials and Vendor Consolidation: 2015 - 2017
- 5.2.3 Large Scale Proliferation in Service Provider Networks: 2018 - 2020

6 CHAPTER 6: STANDARDIZATION BODIES & ALLIANCES

6.1 3GPP (3rd Generation Partnership Project)

6.2 ETSI (European Telecommunications Standards Institute)

6.3 Cloud NFV

6.4 IETF (Internet Engineering Task Force)

6.5 IRTF (Internet Research Task Force)

6.6 ITU (International Telecommunications Union)

6.7 MEF (Metro Ethernet Forum)

6.8 ONF (Open Networking Foundation)

6.9 OpenDaylight

6.10 OpenStack Foundation

6.11 ONRC (Open Networking Research Center) and ON.Lab (Open Networking Lab)

6.12 OPNFV (Open Platform for NFV)

6.13 OVA (Open Virtualization Alliance)

- 6.14 OMG (Object Management Group)
- 6.15 TM Forum
- 6.16 Vendor Led Initiatives & Ecosystem Programs
 - 6.16.1 CloudBand NFV Ecosystem Program (Alcatel-Lucent Led)
 - 6.16.2 Blue Orbit Ecosystem Program (Cyan Led)
 - 6.16.3 OpenNFV Application Partner Program (HP Led)
 - 6.16.4 Network Builders Program (Intel Led)
 - 6.16.5 OpenContrail (Juniper Led)
 - 6.16.6 FlowForwarding (Infoblox Led)

7 CHAPTER 7: COMPANY PROFILES

- 7.1 6WIND
- 7.2 A10 Networks
- 7.3 Accedian Networks
- 7.4 Active Broadband Networks
- 7.5 ADARA Networks
- 7.6 Adax
- 7.7 ADLINK Technology
- 7.8 ADVA Optical Networking
- 7.9 Aeroflex (Cobham)
- 7.10 Affirmed Networks
- 7.11 Airvana
- 7.12 Akamai Technologies
- 7.13 Alcatel-Lucent/Nuage Networks
- 7.14 Altiostar Networks
- 7.15 Alvarion Technologies
- 7.16 Allot Communications
- 7.17 Altera Corporation
- 7.18 Amartus
- 7.19 AMD (Advanced Micro Devices)
- 7.20 Amdocs
- 7.21 Argela (Turk Telekom Subsidiary)
- 7.22 Aricent
- 7.23 Arista Networks
- 7.24 ARM Holdings
- 7.25 Artesyn Embedded Technologies
- 7.26 ASOCS
- 7.27 AudioCodes

- 7.28 Avaya
- 7.29 Big Switch Networks
- 7.30 Blue Coat
- 7.31 Broadcom
- 7.32 Brocade/Vyatta
- 7.33 Calsoft Labs/ALLEN Group
- 7.34 Canonical
- 7.35 Catbird Networks
- 7.36 Cavium
- 7.37 Cedexis
- 7.38 Cellwize
- 7.39 Centec Networks
- 7.40 Ceragon Networks
- 7.41 Certes Networks
- 7.42 Check Point Software Technologies
- 7.43 Ciena
- 7.44 Cisco Systems
- 7.45 Citrix Systems
- 7.46 Clavister
- 7.47 ClearPath Networks
- 7.48 CloudScaling (EMC Subsidiary)
- 7.49 CohesiveFT
- 7.50 Colt
- 7.51 Compass-EOS
- 7.52 Comptel
- 7.53 Connectem
- 7.54 ConteXtream
- 7.55 Coriant
- 7.56 Corsa Technology
- 7.57 Cumulus Networks
- 7.58 Cyan
- 7.59 Dell
- 7.60 Dorado Software
- 7.61 Embrane
- 7.62 EMC Corporation
- 7.63 EnterpriseWeb
- 7.64 Ericsson
- 7.65 EXFO
- 7.66 Extreme Networks

- 7.67 EZchip Technologies
- 7.68 F5 Networks / LineRate Systems
- 7.69 Flash Networks
- 7.70 Flextronics
- 7.71 Fortinet
- 7.72 FRAFOS
- 7.73 Freescale
- 7.74 Fujitsu
- 7.75 GENBAND
- 7.76 Gencore Systems
- 7.77 Gigamon
- 7.78 GigaSpaces Technologies
- 7.79 GoGrid
- 7.80 Guavus
- 7.81 H3C Technologies
- 7.82 HP (Hewlett-Packard)
- 7.83 Hitachi
- 7.84 Huawei
- 7.85 IBM
- 7.86 Infinera
- 7.87 Infoblox
- 7.88 Inocybe Technologies
- 7.89 Intracom Telecom
- 7.90 Intel Corporation
- 7.91 Intune Networks
- 7.92 IP Infusion
- 7.93 Ipgallery
- 7.94 ISC8
- 7.95 Itatel
- 7.96 Ixia
- 7.97 JDSU
- 7.98 Juniper Networks
- 7.99 KEMP Technologies
- 7.100 Lancope
- 7.101 Lemko
- 7.102 Lumeta Corporation
- 7.103 Luxoft Holding
- 7.104 Lyatiss
- 7.105 Marvell

- 7.106 Mavenir
- 7.107 MediaTek
- 7.108 Mellanox Technologies
- 7.109 Metaswitch Networks
- 7.110 Microsoft
- 7.111 Midokura
- 7.112 Mirantis
- 7.113 Mojatatu Networks
- 7.114 MRV Communications
- 7.115 Napatech
- 7.116 Nakina Systems
- 7.117 NCLC (NCL Communication)
- 7.118 NEC
- 7.119 NetCracker Technology Corp (Part of NEC)
- 7.120 Netgear
- 7.121 Netronome
- 7.122 Netrounds
- 7.123 NetScout Systems
- 7.124 Netsocket
- 7.125 NetYCE
- 7.126 Nokia Networks
- 7.127 Nominum
- 7.128 NoviFlow
- 7.129 Omnitron Systems
- 7.130 Openet
- 7.131 Openwave Mobility
- 7.132 Optelian
- 7.133 Oracle Corporation
- 7.134 Orchestral Networks
- 7.135 Overture Networks
- 7.136 Pantheon Technologies
- 7.137 Palo Alto Networks
- 7.138 PeerApp
- 7.139 Pertino
- 7.140 Pica8
- 7.141 Piston Cloud Computing
- 7.142 Plexxi
- 7.143 PLUMgrid
- 7.144 Pluribus Networks

- 7.145 Polaris Networks
- 7.146 Polatis
- 7.147 PowerDNS
- 7.148 Procera Networks
- 7.149 PureWave Networks
- 7.150 Qosmos
- 7.151 Qualcomm
- 7.152 Quobis
- 7.153 Quortus
- 7.154 Rackspace
- 7.155 Radisys Corporation
- 7.156 Radware
- 7.157 RAD Data Communications
- 7.158 Red Bend Software
- 7.159 Red Hat
- 7.160 RightScale
- 7.161 Riverbed Technology
- 7.162 Ruckus Wireless
- 7.163 Saisei Networks
- 7.164 Sandvine
- 7.165 Samsung
- 7.166 SanDisk Corporation
- 7.167 ServiceMesh
- 7.168 SevOne
- 7.169 Silver Peak Systems
- 7.170 Skyfire/Opera Software
- 7.171 Sonus Networks
- 7.172 SpiderCloud Wireless
- 7.173 Spirent Communications
- 7.174 StackIQ
- 7.175 SunTech Business Solutions
- 7.176 Svarog Technology Group
- 7.177 Symantec Corporation
- 7.178 Telchemy
- 7.179 Telco Systems
- 7.180 Telcoware
- 7.181 Telum
- 7.182 Tellabs
- 7.183 TI (Texas Instruments)

- 7.184 Tieto
- 7.185 TorreyPoint
- 7.186 Transmode
- 7.187 TrendMicro
- 7.188 UBIqube Solutions
- 7.189 vArmour Networks
- 7.190 Vello Systems
- 7.191 Versa Networks
- 7.192 Virtela (NTT Owned)
- 7.193 VMware/Nicira (EMC Subsidiary)
- 7.194 VSS Monitoring
- 7.195 WatchGuard Technologies
- 7.196 Wavenet
- 7.197 WebNMS (Zoho Corporation)
- 7.198 Websense
- 7.199 Wedge Networks
- 7.200 WiPro
- 7.201 Xpliant
- 7.202 Zhone Technologies
- 7.203 ZTE Corporation
- 7.204 Others

8 CHAPTER 8: MARKET ANALYSIS & FORECASTS

- 8.1 Global Outlook of the SDN, NFV & Network Virtualization Market Revenue: 2015 - 2020
- 8.2 User Base Segmentation
 - 8.2.1 Data Centers & Enterprises
 - 8.2.2 Service Providers
- 8.3 Submarket Segmentation
 - 8.3.1 SDN Hardware & Software
 - 8.3.2 NFV Hardware & Software
 - 8.3.3 Other Network Virtualization Software
 - 8.3.4 Service Provider Submarket Segmentation
- 8.4 SDN Submarket Revenue: 2015 – 2020
 - 8.4.1 User Base Segmentation
 - 8.4.2 Service Provider SDN
 - 8.4.3 Enterprise & Data Center SDN
- 8.5 NFV Submarket Revenue: 2015 – 2020

- 8.5.1 Hardware Appliances
- 8.5.2 Orchestration & Management Software
- 8.5.3 VNF Software
- 8.6 Service Provider SDN Submarket Revenue: 2015 – 2020
 - 8.6.1 SDN-Enabled Hardware Appliances
 - 8.6.2 Orchestration & Management Software
 - 8.6.3 SDN Controller Software
 - 8.6.4 Network Applications Software
- 8.7 Enterprise/Data Center SDN Submarket Revenue: 2015 – 2020
 - 8.7.1 SDN-Enabled Hardware Appliances
 - 8.7.2 SDN-Enabled Virtual Switches
 - 8.7.3 SDN Controller Software
- 8.8 Functional Area Segmentation for Service Provider Deployments
 - 8.8.1 Radio Access Networks
 - 8.8.2 Mobile Core, EPC, Policy & IMS Services
 - 8.8.3 OSS/BSS
 - 8.8.4 Service Provider Data Center
 - 8.8.5 Mobile Backhaul
 - 8.8.6 Wireline Fixed Access Networks
 - 8.8.7 CPE/Home Environment
- 8.9 Regional Outlook
- 8.10 Asia Pacific SDN, NFV & Network Virtualization Revenue: 2015 - 2020
 - 8.10.1 Country Level Segmentation
 - 8.10.2 Australia
 - 8.10.3 China
 - 8.10.4 India
 - 8.10.5 Japan
 - 8.10.6 South Korea
 - 8.10.7 Pakistan
 - 8.10.8 Thailand
 - 8.10.9 Indonesia
 - 8.10.10 Malaysia
 - 8.10.11 Taiwan
 - 8.10.12 Philippines
 - 8.10.13 Singapore
 - 8.10.14 Rest of Asia Pacific
- 8.11 Eastern Europe SDN, NFV & Network Virtualization Revenue: 2015 - 2020
 - 8.11.1 Country Level Segmentation
 - 8.11.2 Czech Republic

- 8.11.3 Poland
- 8.11.4 Russia
- 8.11.5 Rest of Eastern Europe
- 8.12 Latin & Central America SDN, NFV & Network Virtualization Revenue: 2015 - 2020
 - 8.12.1 Country Level Segmentation
 - 8.12.2 Argentina
 - 8.12.3 Brazil
 - 8.12.4 Mexico
 - 8.12.5 Rest of Latin & Central America
- 8.13 Middle East & Africa SDN, NFV & Network Virtualization Revenue: 2015 - 2020
 - 8.13.1 Country Level Segmentation
 - 8.13.2 South Africa
 - 8.13.3 UAE
 - 8.13.4 Qatar
 - 8.13.5 Saudi Arabia
 - 8.13.6 Israel
 - 8.13.7 Rest of the Middle East & Africa
- 8.14 North America SDN, NFV & Network Virtualization Revenue: 2015 - 2020
 - 8.14.1 Country Level Segmentation
 - 8.14.2 USA
 - 8.14.3 Canada
- 8.15 Western Europe SDN, NFV & Network Virtualization Revenue: 2015 - 2020
 - 8.15.1 Country Level Segmentation
 - 8.15.2 Denmark
 - 8.15.3 Finland
 - 8.15.4 France
 - 8.15.5 Germany
 - 8.15.6 Italy
 - 8.15.7 Spain
 - 8.15.8 Sweden
 - 8.15.9 Norway
 - 8.15.10 UK
 - 8.15.11 Rest of Western Europe

9 CHAPTER 9: CONCLUSION & STRATEGIC RECOMMENDATIONS

- 9.1 Will SDN & NFV Disrupt the Network Infrastructure Value Chain?
- 9.2 Is There a Ring Leader in the SDN & NFV Ecosystem?
- 9.3 SDN & NFV: Building the Mobile Cloud

- 9.4 Buyers Will Maintain Focus on Business Agility & CapEx Reduction
- 9.5 Avoiding the Proprietary Trap
- 9.6 Will Service Providers Continue to Utilize Proprietary Hardware Platforms?
- 9.7 Making the VoLTE and RCS Business Case Work
- 9.8 How Much CapEx Can Service Providers Save with SDN & NFV Investments?
- 9.9 Prospects of SDN & NFV Orchestration
 - 9.9.1 Different Vendors, Different Approaches
 - 9.9.2 Future Prospects of Harmonization
 - 9.9.3 How Big is the Orchestration Opportunity?
- 9.10 Strategic Recommendations
 - 9.10.1 Recommendations for Silicon & Server OEMs
 - 9.10.2 Recommendations for Network & Mobile Infrastructure Vendors & IT Giants
 - 9.10.3 Recommendations for Pure-play SDN/NFV Specialists
 - 9.10.4 Recommendations for Enterprises and Data Center Operators
 - 9.10.5 Recommendations for Service Providers

List Of Figures

LIST OF FIGURES

Figure 1: The NFV Concept

Figure 2: A Comparison of SDN and NFV

Figure 3: C-RAN Architecture

Figure 4: Virtualized and Non-Virtualized Mobile Core Networks

Figure 5: The SDN, NFV & Network Virtualization Value Chain

Figure 6: The SDN, NFV & Network Virtualization Industry Roadmap: 2015 - 2020

Figure 7: Global SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 8: Global SDN, NFV & Network Virtualization Revenue by User Base: 2015 - 2020 (\$ Million)

Figure 9: Global Data Center/Enterprise SDN & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 10: Global Service Provider SDN & NFV Revenue by User Base: 2015 - 2020 (\$ Million)

Figure 11: Global SDN, NFV & Network Virtualization Revenue by Submarket: 2015 - 2020 (\$ Million)

Figure 12: Global SDN Hardware & Software Revenue: 2015 - 2020 (\$ Million)

Figure 13: Global NFV Hardware & Software Revenue: 2015 - 2020 (\$ Million)

Figure 14: Global Other Network Virtualization Software Revenue: 2015 - 2020 (\$ Million)

Figure 15: Global Service Provider SDN & NFV Revenue by Submarket: 2015 - 2020 (\$ Million)

Figure 16: Global SDN Revenue by User Base: 2015 - 2020 (\$ Million)

Figure 17: Global Service Provider SDN Hardware & Software Revenue: 2015 - 2020 (\$ Million)

Figure 18: Global Enterprise/Data Center SDN Revenue: 2015 - 2020 (\$ Million)

Figure 19: Global NFV Revenue by Submarket: 2015 - 2020 (\$ Million)

Figure 20: Global NFV Hardware Appliance Revenue: 2015 - 2020 (\$ Million)

Figure 21: Global NFV Orchestration & Management Software Revenue: 2015 - 2020 (\$ Million)

Figure 22: Global NFV VNF Software Revenue: 2015 - 2020 (\$ Million)

Figure 23: Global Service Provider SDN Revenue by Submarket: 2015 - 2020 (\$ Million)

Figure 24: Global Service Provider SDN-Enabled Hardware Appliance Revenue: 2015 - 2020 (\$ Million)

Figure 25: Global Service Provider SDN Orchestration & Management Revenue: 2015 - 2020 (\$ Million)

Figure 26: Global Service Provider SDN Controller Software Revenue: 2015 - 2020 (\$ Million)

Figure 27: Global Service Provider SDN Network Applications Software Revenue: 2015 - 2020 (\$ Million)

Figure 28: Global Enterprise/Data Center SDN Revenue by Submarket: 2015 - 2020 (\$ Million)

Figure 29: Global Enterprise/Data Center SDN-Enabled Hardware Appliance Revenue: 2015 - 2020 (\$ Million)

Figure 30: Global Enterprise/Data Center SDN-Enabled Hardware Appliance Revenue: 2015 - 2020 (\$ Million)

Figure 31: Global Enterprise/Data Center SDN Controller Software Revenue: 2015 - 2020 (\$ Million)

Figure 32: Global Service Provider SDN & NFV Revenue by Functional Area: 2015 - 2020 (\$ Million)

Figure 33: Global Radio Access Networks SDN & NFV Revenue: 2015 - 2020 (\$ Million)

Figure 34: Global Mobile Core, EPC, Policy & IMS Services SDN & NFV Revenue: 2015 - 2020 (\$ Million)

Figure 35: Global OSS/BSS SDN & NFV Revenue: 2015 - 2020 (\$ Million)

Figure 36: Global Service Provider Data Center SDN & NFV Revenue: 2015 - 2020 (\$ Million)

Figure 37: Global Mobile Backhaul SDN & NFV Revenue: 2015 - 2020 (\$ Million)

Figure 38: Global Wireline Fixed Access Networks SDN & NFV Revenue: 2015 - 2020 (\$ Million)

Figure 39: Global CPE/Home Environment SDN & NFV Revenue: 2015 - 2020 (\$ Million)

Figure 40: SDN, NFV & Network Virtualization Revenue by Region: 2015 - 2020 (\$ Million)

Figure 41: Asia Pacific SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 42: Asia Pacific SDN, NFV & Network Virtualization Revenue by Country: 2015 - 2020 (\$ Million)

Figure 43: Australia SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 44: China SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 45: India SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 46: Japan SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 47: South Korea SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 48: Pakistan SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$

Million)

Figure 49: Thailand SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 50: Indonesia SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 51: Malaysia SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 52: Taiwan SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 53: Philippines SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 54: Singapore SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 55: SDN, NFV & Network Virtualization Revenue in the Rest of Asia Pacific: 2015 - 2020 (\$ Million)

Figure 56: Eastern Europe SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 57: Eastern Europe SDN, NFV & Network Virtualization Revenue by Country: 2015 - 2020 (\$ Million)

Figure 58: Czech Republic SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 59: Poland SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 60: Russia SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 61: SDN, NFV & Network Virtualization Revenue in the Rest of Eastern Europe: 2015 - 2020 (\$ Million)

Figure 62: Latin & Central America SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 63: Latin & Central America SDN, NFV & Network Virtualization Revenue by Country: 2015 - 2020 (\$ Million)

Figure 64: Argentina SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 65: Brazil SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 66: Mexico SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 67: SDN, NFV & Network Virtualization Revenue in the Rest of Latin & Central America: 2015 - 2020 (\$ Million)

Figure 68: Middle East & Africa SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 69: Middle East & Africa SDN, NFV & Network Virtualization Revenue by Country: 2015 - 2020 (\$ Million)

Figure 70: South Africa SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$

Million)

Figure 71: UAE SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 72: Qatar SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 73: Saudi Arabia SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 74: Israel SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 75: SDN, NFV & Network Virtualization Revenue in the Rest of the Middle East & Africa: 2015 - 2020 (\$ Million)

Figure 76: North America SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 77: North America SDN, NFV & Network Virtualization Revenue by Country: 2015 - 2020 (\$ Million)

Figure 78: USA SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 79: Canada SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 80: Western Europe SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 81: Western Europe SDN, NFV & Network Virtualization Revenue by Country: 2015 - 2020 (\$ Million)

Figure 82: Denmark SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 83: Finland SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 84: France SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 85: Germany SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 86: Italy SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 87: Spain SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 88: Sweden SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 89: Norway SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 90: UK SDN, NFV & Network Virtualization Revenue: 2015 - 2020 (\$ Million)

Figure 91: SDN, NFV & Network Virtualization Revenue in the Rest of Western Europe: 2015 - 2020 (\$ Million)

Figure 92: SDN & NFV Induced Service Provider CapEx Saving Potential by Region: 2015 - 2020 (\$ Million)

Figure 93: Orchestration as a Percentage of Service Provider SDN & NFV Spending: 2015 - 2020 (%)

Figure 94: Management & Orchestration Software Revenue by Submarket: 2015 - 2020 (\$ Million)

LIST OF COMPANIES MENTIONED

21 Vianet Group
3GPP (3rd Generation Partnership Project)
6connect
6WIND
A10 Networks
Accedian Networks
Accton
Acme Packet
ActionPacked Networks
Active Broadband Networks
ADARA Networks
Adax
ADLINK Technology
ADTRAN
ADVA Optical Networking
Advantech
AEPONYX
Aeroflex
Affirmed Networks
Airvana
Akamai Technologies
Alcatel-Lucent
Algar Telecom
Alibaba
Allot Communications
Altaro
ALTEN Group
Altera Corporation
Altiostar Networks
Alvarion Technologies
Amartus
Amazon
AMD (Advanced Micro Devices)
Amdocs
Amethon
Anuta Networks
Apple

Argela
Aricent Group
Arista Networks
ARM Holdings
Arnold Consulting
Artesyn Embedded Technologies
Aruba Networks
ASOCS
AT&T
aTAC Initiatives
AudioCodes
Avago Technologies
Avaya
Beijing Telecom
Bell Canada
Benu Networks
Big Switch Networks
BII (Beijing Internet Institute)
BII Group
Blue Coat
Boundary
Broadcom
Brocade
Browan Communications
BSkyB
BT
BTI Systems
CableLabs
Calient Technologies
Calsoft Labs
Canonical
Cariden Technologies
Carmel Ventures
Catbird Networks
Cavium Networks
Cedexis
Celestica
Cellcom
Cellwize

Centec Networks
CenturyLink Corporation
Ceragon Networks
Certes Networks
Cetan Corporation
Check Point Software Technologies
China Mobile
China Telecom
ChipStart
Ciena
CIMI Corporation
Cisco Systems
Cisco WebEx
Citrix Systems
Clavister
ClearPath Networks
CloudFX
CloudNFV
Cloudscaling
CloudSense
CMRI (China Mobile Research Institute)
Cobham
CohesiveFT
Colt
Comcast
Compass-EOS
Comptel
Connectem
ConteXtream
Contrail Systems
Coraid
Coriant
Corsa Technology
Cplane
CSC (Computer Sciences Corporation)
Cumulus Networks
Cyan
Dell
Delta Electronics

DESS GmbH and Co. Consulting
Dialogic
DirecTV
Dorado Software
DT (Deutsche Telekom)
ECI Telecom
Ecode Networks
Edgenet
Edgewater Networks
Elbrys Networks
Elisa Oyj
Embrane
EMC Corporation
Emerson Network Power
Emulex
Enterasys Networks
EnterpriseWeb
Equinix
Ericsson
EstiNet Technologies
ETRI (Electronics and Telecommunications Research Institute)
ETSI (European Telecommunications Standards Institute)
EXFO
Extreme Networks
EZchip
EZchip Technologies
F5 Networks
Facebook
Fiberhome Technologies
Fidelity Investments
Firemon
Fishnet Security
Flanagan Consulting
Flash Networks
Flextronics
Force10 Networks
Fortinet
FRAFOS
Fraunhofer FOKUS

Freescale
FTW - Telecommunications Research Centre Vienna
Fujian Telecom
Fujitsu
GE Intelligent Platforms (GE Energy)
Gemtek Technologies
GENBAND
Gencore Systems
Gigamon
GigaSpaces Technologies
GlimmerGlass
Glue Networks
GoGrid
Goldman Sachs
Google
Guavus
H3C Technologies
Hitachi
Hitachi CTA (Hitachi Communication Technologies America)
HP (Hewlett-Packard)
Hrvatski Telekom
HTC
Huawei
IBM
IBS Group
iCent
IETF (Internet Engineering Task Force)
III (Institute for Information Industry)
Indiana University
IneoQuest Technologies
Infinera
Infinetics
Infoblox
Inktank
Inocybe Technologies
INRIA (French Institute for Research in Computer Science)
Insieme Networks
Intel Corporation
Interphase

Intracom Telecom
Intune Networks
IP Infusion
Ipgallery
IRTF (Internet Research Task Force)
ISC8
Iskratel
Italtel
Itatel
ITU (International Telecommunications Union)
Ixia
Jara Networks
JDSU
JumpGen Systems
Juniper Networks
Kanazawa University Hospital
KDDI
KEMP Technologies
Kloudspun
KT (Korea Telecom)
Kulcloud
Kyocera
L3 Communication Systems – East
Lagrange Systems
Lancope
Lanner
Lanscope
Layer123
Lemko
Level 3 Communications
LG Electronics
LineRate Systems
Linux Foundation
Locaweb
LSI Corporation
Lumeta Corporation
Luxoft Holding
Lyatiss
M2Mi

Macnica Networks
Mainline Information Systems
Marist College
Marvell
Mavenir
McAfee
MeadowCom
MediaTek
MEF (Metro Ethernet Forum)
Mellanox Technologies
Mentor Graphics
Metaswitch Networks
MetraTech Corporation
Microsoft
Midokura
Mirantis
MKI USA
Mobily Saudi Arabia
Mojatatu Networks
MontaVista
Motorola
MRV Communications
Mtel
NAKA Mobile
Nakina Systems
Napatech
Nari Networks
Narinet
NASA (National Aeronautics and Space Administration)
NCLC (NCL Communication)
Nebula
NEC
Nephos6
Net Optics
NetApp
NetCracker Technology Corporation
NetFlow Logic
Netgear
NetNumber

Netronome
Netrounds
NetScout Systems
Netsocket
NetStructures
NetYCE
NICE
Nicira
Nicira
Nippon Express
Nissho Electronics
Nokia
Nokia Networks
Nominum
NoviFlow
NTT Communications
NTT Corporation
NTT Data
NTT DoCoMo
Nuage Networks
Nuage Networks
Nutanix
OMG (Object Management Group)
Omnitron Systems
ON.Lab (Open Networking Lab)
One Convergence
ONF (Open Networking Foundation)
ONRC (Open Networking Research Center)
OpenDaylight
Openet
OpenStack Foundation
Openwave Mobility
Opera Software
Opera Software
OPNFV (Open Platform for NFV)
Opscode
Optelian
Optus
Oracle Corporation

Orange
Orchestral Networks
Orient Logic
OVA (Open Virtualization Alliance)
Overture Networks
PacketFront Software
Pacnet
Palo Alto Networks
Pantheon Technologies
Paxterra Solutions
PayPal
PeakColo
PeerApp
Pertino
Phillips Technology Solutions
Pica8
Piston Cloud Computing
Pivotal
Plexxi
PLUMgrid
Pluribus Networks
PLVision
PMC Sierra
Polaris Networks
Polatis
PowerDNS
Poznan Supercomputing and Network Centre
Procera Networks
PT (Performance Technologies)
PT (Portugal Telecom) /Oi
PureWave Networks
Qosmos
Qualcomm
Quanta
Quobis
Quortus
Rabobank
Rackspace
RAD Data Communications

RadiSys Corporation
Radware
Real Status
Red Bend Software
Red Hat
RightScale
Riverbed Technology
Rogers Communications
RuahTao
Ruckus Wireless
Saisei Networks
Samsung
Sanctum Networks
SanDisk Corporation
Sandvine
Scalr
SCLID Innovations
SDNSquare
ServiceMesh
Seven Principles
SevOne
Sharp
Shenick Network Systems
Sichuan Unicom
Silver Peak Systems
SingTel (Singapore Telecommunications Limited)
SK Telecom
Skyfire
Snabb
SoftBank
Solarflare Communications
SolarWinds
SolidFire
SonicWALL
Sonus Networks
SpiderCloud Wireless
Spirent Communications
Splunk
Sprint Corporation

StackIQ
Stanford University
Stateless Networks
Stork Lab
Stratosphere
Sunbay
SunTech Business Solutions
Super Micro
Svarog Technology Group
Swisscom
Symantec Corporation
SYS Software
Tail-f Systems
Tallac Networks
Tata Consultancy Services
Tech Mahindra
Tekelec
Tektronix
Telchemy
Telco Systems
Telcaware
Telecom Italia
Telefonica
Telekom Austria
TeliaSonera
Tellabs
Telstra
Telum
Telus
Tencent
Tervela
Thales
The Gap
TI (Texas Instruments)
Tieto
Tilera Corporation
TM Forum
T-Mobile
TorreyPoint

Transmode
Traveling GmbH
TrendMicro
Tucana
Turk Telekom
Turk Telekom
TW Telecom
Ubicity Corporation
UBIqube Solutions
United Nations
University of California, Berkeley
UPRC
vArmour Networks
Vello Systems
Verisign
Verizon Communications
Verizon Wireless
Versa Networks
Veryx Technologies
Vipnet
Virtela
Virtela (NTT Owned)
Virtual Open Systems
VirtualLogix
Visionael Corporation
VMware
Vodafone
VSS Monitoring
Vyatta
Vyatta
WatchGuard Technologies
Wavenet
WebNMS
Websense
Wedge Networks
Wind River Systems
Windstream Communications
WiPro
Wiretap

WVNET
xFlow Research
XIUS
Xpliant
Xsigo
Yahoo
Yokogawa
Zhone Technologies
Zoho Corporation
ZTE Corporation

About

SDN (Software Defined Networking) is new networking model where control of the network is decoupled from the physical hardware allowing a logically centralized software program to control the behavior of an entire network. This results in reduced reliance on proprietary networking hardware, increased network efficiency, centralized traffic engineering, faster time to troubleshooting and new feature deployment. SDN also complements network virtualization by facilitating the creation of multiple virtual networks running over a common physical network fabric.

NFV (Network functions virtualization) is a service provider initiative that is often linked to SDN. NFV aims to virtualize and effectively consolidate many network equipment types onto multi-tenant industry-standard servers, switches and storage to lower cost, improve efficiency and increase agility.

While the benefits of SDN and network virtualization are well known in the enterprise IT and data center world, both technologies also bring a hosts of benefits to the telecommunications service provider/carrier community.

Not only can SDN and NFV help address the explosive capacity demand of mobile traffic, but they can also reduce the CapEx and OpEx burden faced by service providers to handle this demand by diminishing reliance on expensive proprietary hardware platforms.

SDN has been widely deployed in data center and enterprise environments, and many service provider deployments are already underway. While NFV is still a developing technology, many vendors have already developed commercial-grade solutions that align well with the NFV initiative.

Driven by the thriving ecosystem, SNS Research estimates that the SDN, NFV and network virtualization market will account for nearly \$10 Billion in 2015 alone. Despite barriers relating to standardization and co-existence with legacy networks, SNS Research estimates further growth at a CAGR of 37% over the next 5 years.

This report presents an in-depth assessment of the global SDN, NFV and network virtualization market. In addition to covering underlying technology, key market drivers, challenges, future roadmap, value chain analysis, deployment case studies, company profiles, product strategies and strategic recommendations, the report also presents

comprehensive forecasts for the market from 2015 till 2020. The forecasts are individually segmented for 10 individual submarkets, 2 user base categories, 7 use case categories, 6 geographical regions and 34 countries.

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