

WTF is SDN?

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Software Defined Networking

Cloud routing?

OF

- OpenFlow

- <https://www.opennetworking.org/standards/intro-to-openflow>

“OpenFlow enables networks to evolve, by giving a remote controller the power to modify the behavior of network devices, through a well-defined ‘forwarding instruction set’.”

Potential Results

- Commodity switching hardware
- Interface directly with applications
- Create new software on-demand
- Global view of the entire network

IRS

- Interface to the Routing System

- <https://tools.ietf.org/html/draft-atlas-irs-problem-statement>
- <https://tools.ietf.org/html/draft-ward-irs-framework>

“a standard, programmatic interface for full-duplex, streaming state transfer in and out of the Internet’s routing system.”

SDNP

- Software Driven Network Protocol
 - <https://tools.ietf.org/html/draft-stiliadis-sdnp-framework-use-cases-01> (expired)

“The goal of SDNP is to define a method where applications can request services from the network and these services can be automatically deployed.”

NFV

- Network Functions Virtualisation

- Being announced today at SDN & OpenFlow World Congress in Darmstadt, Germany

“NFV aims to consolidate many network equipment types onto industry standard high volume servers, switches and storage, thus providing a new network production environment which lowers cost, raises efficiency and increases agility. The IT and Telecom industries are invited to contribute their complementary expertise and resources to encourage common approaches for NFV.”

AVNMP

- Active Virtual Network Management Protocol
 - <http://www.research.ge.com/~bushsf/AVNMP.html>

“facilitates the management of an active network by allowing future predicted state information within an active network to be available to network management algorithms”

But wait, there's more!

- [SNMP](#) – Simple Network Management Protocol
- [NETCONF](#) – Network Configuration
- [ForCES](#) – Forwarding and Control Element Separation
- [PCE](#) – Path Computation Element
- [CDNI](#) – Content Delivery Networks Interconnection
- That script you wrote

SDN is not

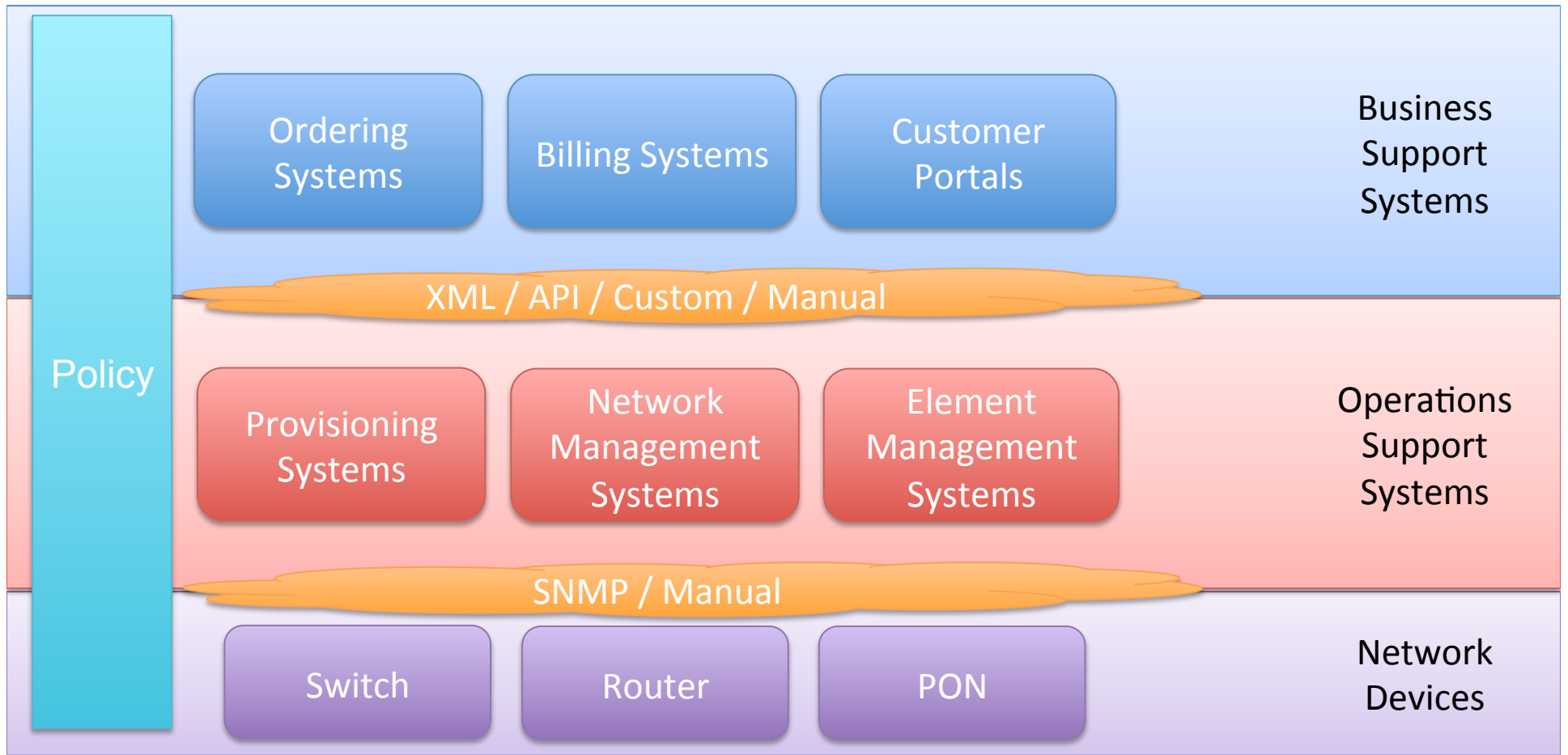
- **SDN *is not* OpenFlow**

- While OpenFlow appears to have great potential, SDN is not any one protocol. It's bigger than that.

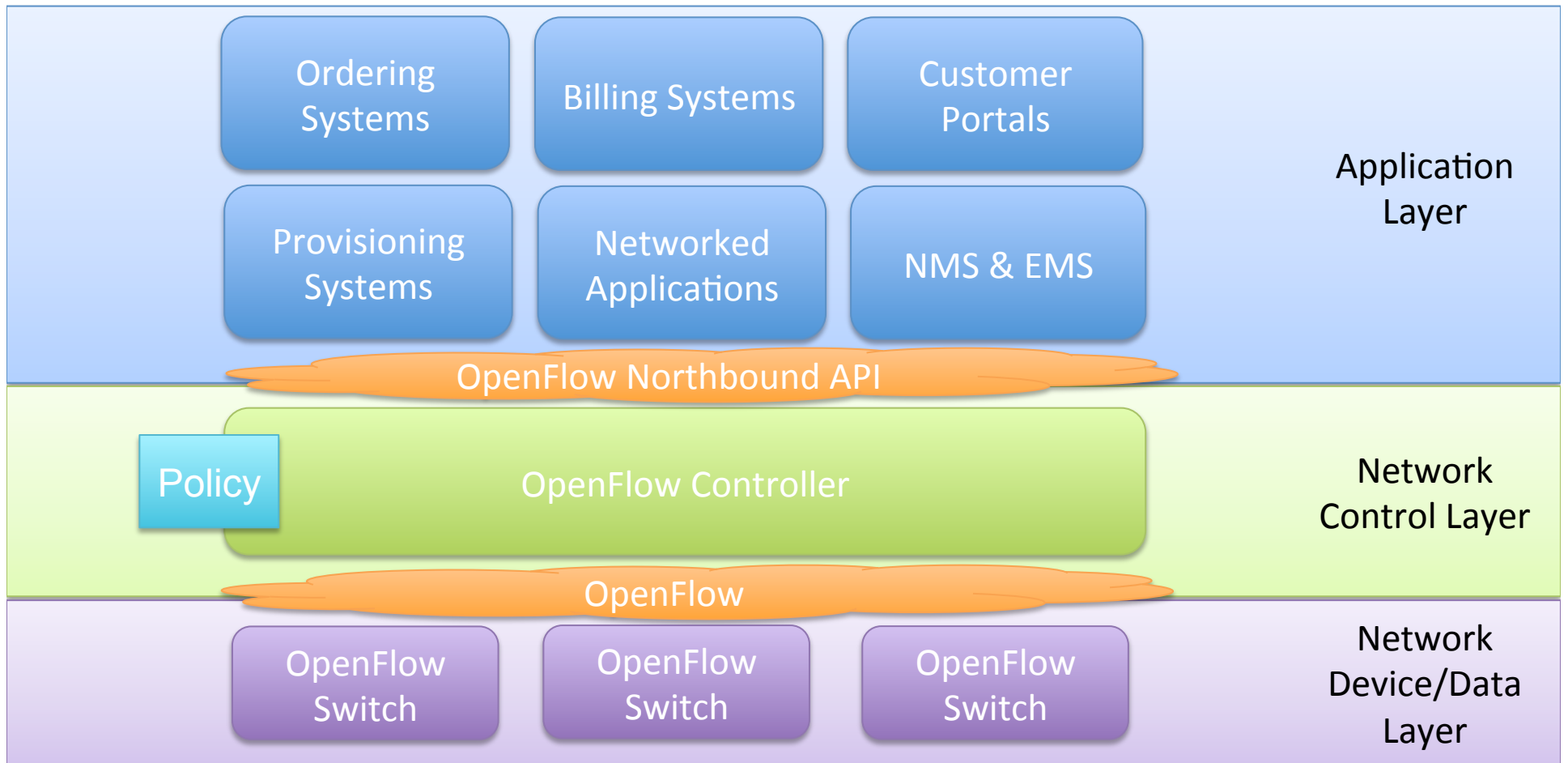
- **SDN *is not* new**

- SNMP was first defined by RFC 1067 in August of 1988 (yes, 24 years ago).

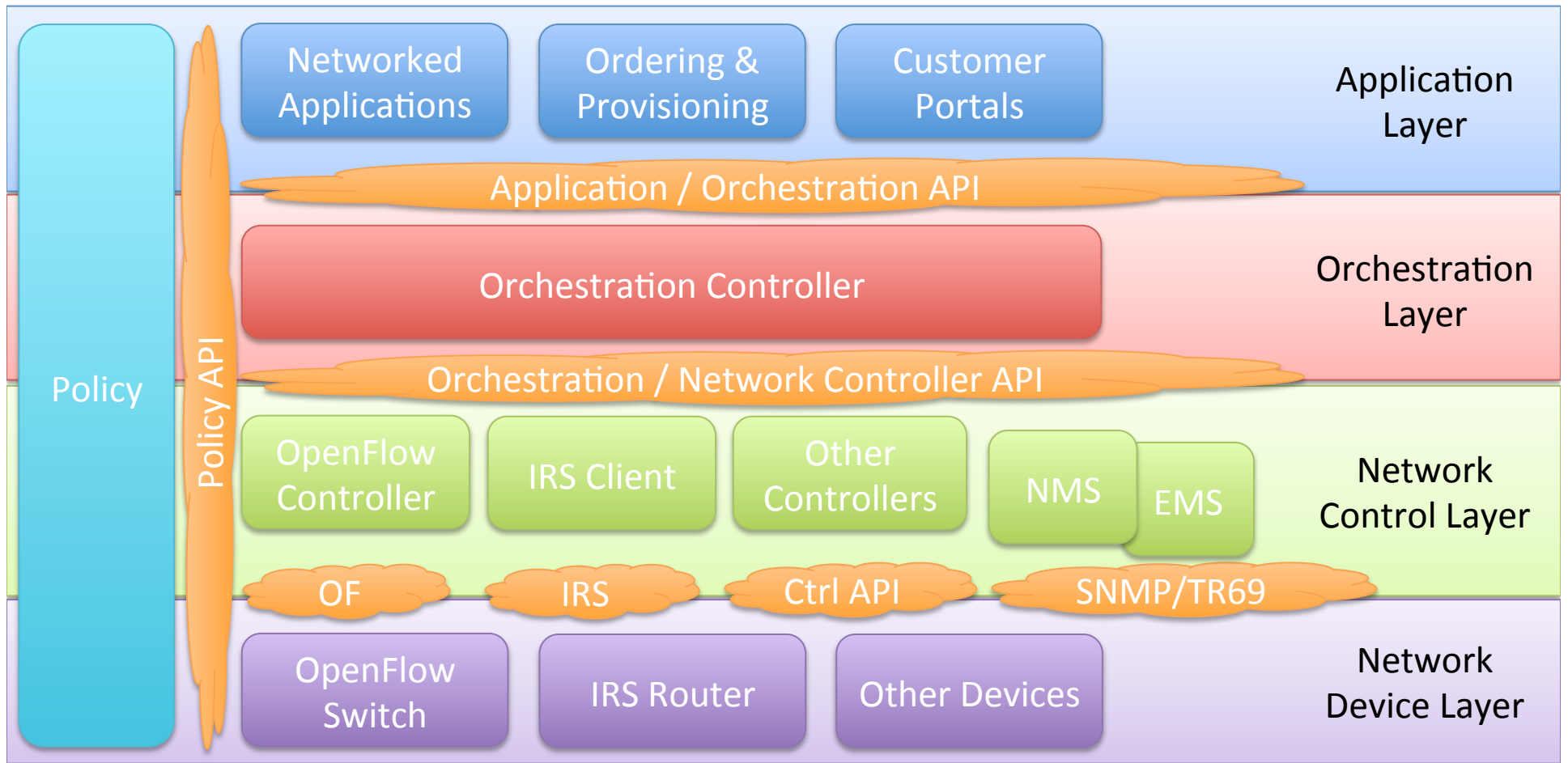
Yesterday's "SDN"



The OpenFlow Model



The Emerging SDN Ecosystem



So, WTF is SDN?

the current name for a continuing trend towards greater network virtualization through software abstraction