

# Software defined networking

Your path to an agile hybrid cloud network



# Is your enterprise network ready for the latest business and consumer trends?



## ■ **Cloud**

How easily can your users connect to cloud resources?



## ■ **Big data and analytics**

Can your network scale to support big data and deliver insights fast?



## ■ **Security**

Is your network effectively serving as the first line of defense?



## ■ **Social business**

Can your network handle the explosion of social media inside and outside the enterprise?



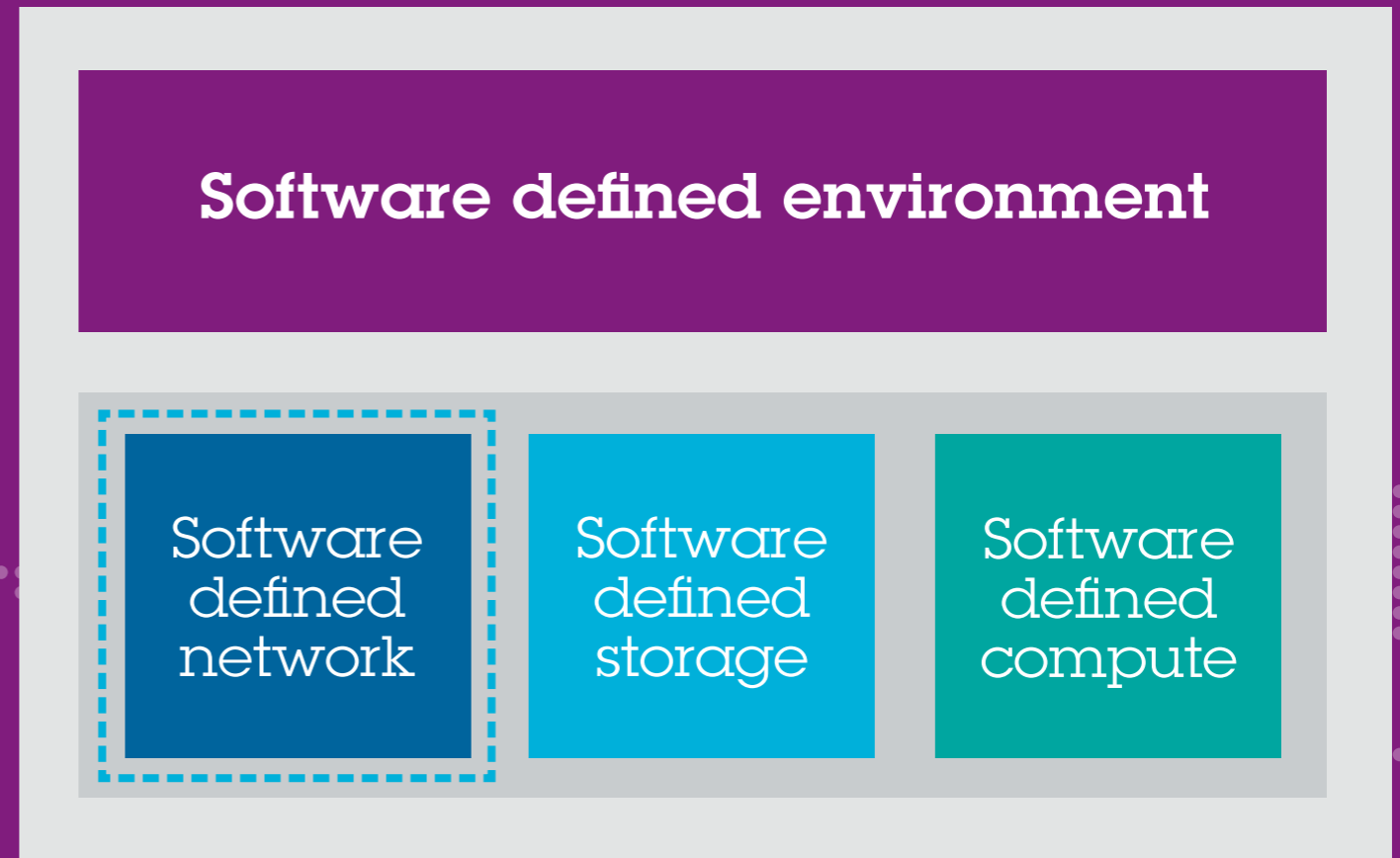
## ■ **Mobility**

Can you provide high quality of service and anytime, anywhere access on any device?

# Prepare for a changing world with a software defined environment (SDE)

## What is an SDE?

An environment that incorporates flexibility, automation, high availability and open standards into your IT landscape





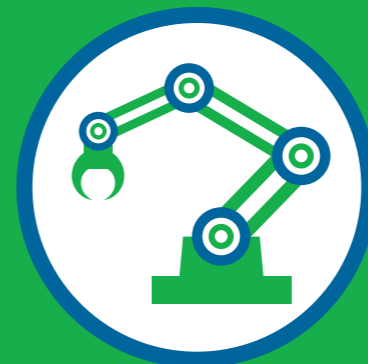
# Maximize agility with software defined networking (SDN)

To make the most of an SDE, virtualize the network just as you've virtualized servers and storage.

SDN offers:



- **Flexible** network traffic routing



- **Automation** of network operations



- **Programmable** network controls



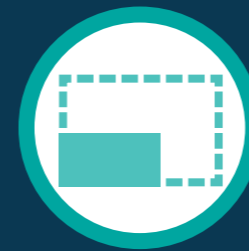
- **Centralized** network management

# The benefits of SDN



## Faster time to value

- Implement new services and applications in minutes
- Deploy applications and network functions together



## Easy scalability

- Scale capacity rapidly to meet changing needs
- Connect and leverage cloud resources



## Reduced operating expenses

- Automate and centralize operations
- Optimize network investments



## Enhanced security

- Conduct micro-segmentation of network, applications and users for higher security
- Deploy consistent security policies across services and locations

# Use case: Enhance agility

## Accelerate provisioning

**Need:** Deploy new applications and services quickly

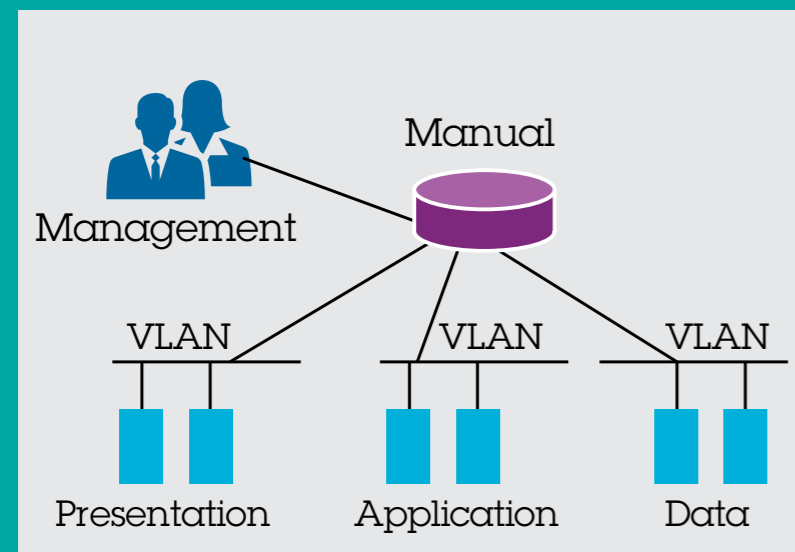
**Solution:** Provision in minutes with reusable network templates that deploy virtualized networks with all requisite capabilities (switches, firewalls, load balancing and more) already automated and orchestrated.

## Rapidly scale resources

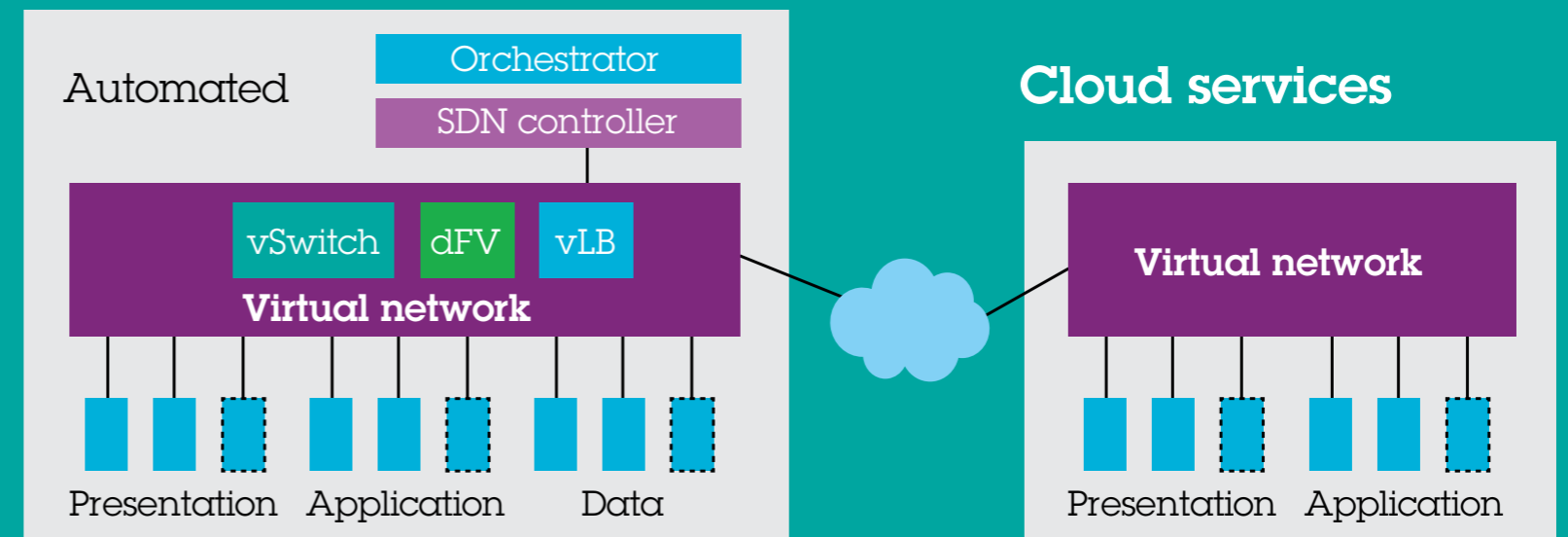
**Need:** Accommodate demand spikes

**Solution:** Adjust network and security configurations to scale with demand spikes.

### On-premises data center



### On-premises data center with SDN



# Use case: Tighten security

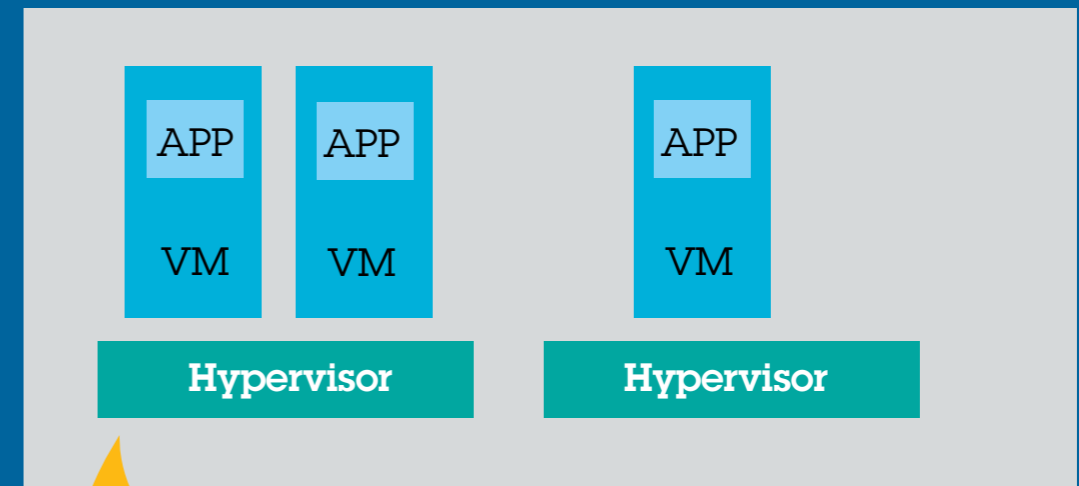
## Tailor security to applications

**Need:** Provide distinct levels of security to each application

**Solution:** Leverage micro-segmentation capabilities with distributed virtual firewalls to supplement your conventional perimeter firewall for data center protection.

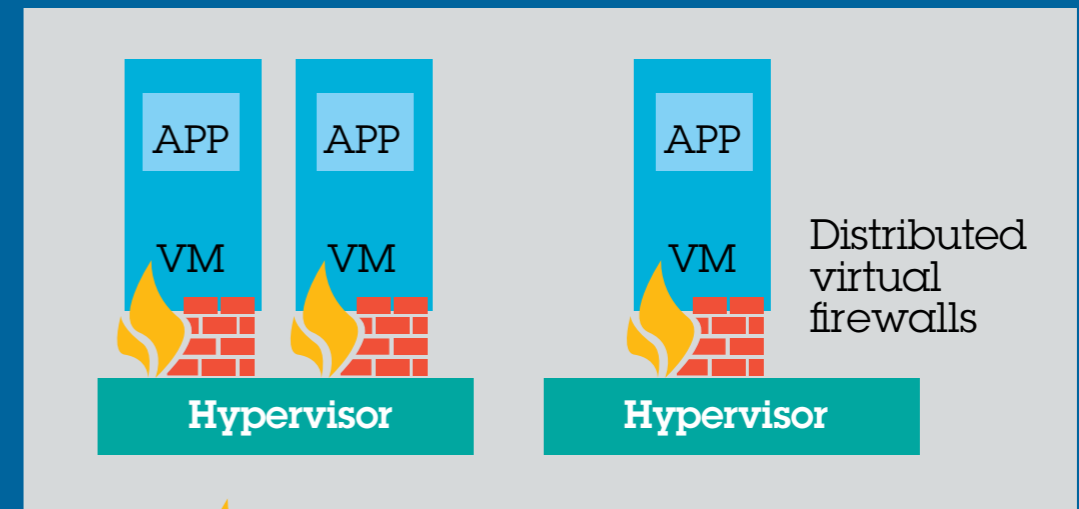


## On-premises data center



Main data center firewall

## On-premises data center



Perimeter firewall

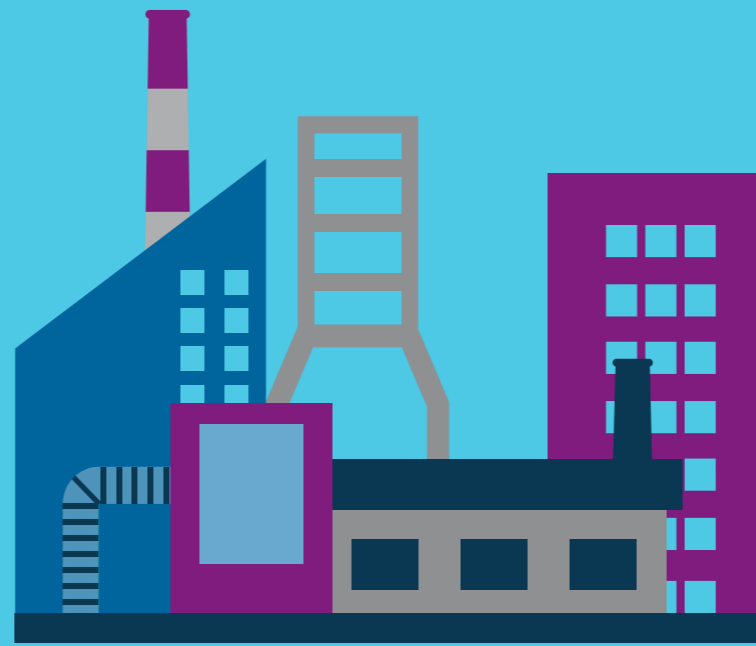
Distributed virtual firewalls

# Across industries, organizations are benefiting from SDN implementations



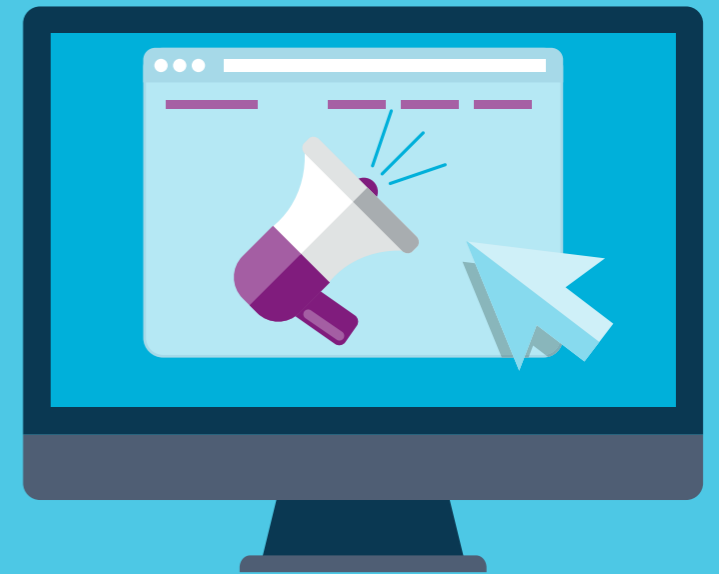
## International banking

Distributed firewall capabilities help deploy a secure private cloud designed to speed application development and deliver financial products to market faster.



## Electronics manufacturing

Network virtualization and distributed firewalls enable a simplified development and production environment that reduces developer cycle time and maintains separation of business units.



## Media firm

SDN with OpenStack integration helps a global media firm accommodate rapid growth and increase agility with effective network orchestration for a cloud environment.



# Steps to start integrating SDN capabilities into your existing infrastructure



## Plan

- Develop a network strategy and architecture based on an SDN
- Identify issues, prioritize enhancements



## Consolidate and virtualize

- Simplify and optimize the network architecture
- Design and deploy virtualized network services



## Optimize

- Leverage analytics and automation to optimize performance

# Learn more about software defined networking



Ready to learn more?

[ibm.co/1MmqSEQ](http://ibm.co/1MmqSEQ)

SDN video:

Nothing Works without the Networking

[youtu.be/WVtrT7pXp7E](http://youtu.be/WVtrT7pXp7E)