Future of Networks, Networking, and Networkers

Driving Workforce Demands

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The World is CHANGING
And it’s changing fast

Market Transitions

Technology Transitions

Economic Transitions

PACE OF CHANGE ²
Agenda

- Job Role Evolution
- Technology Evolution
- Career Evolution
Job Role Evolution
Preparing for the Jobs of The Future

Are you Ready?
Orchestrate Roles for Business Outcomes
Networker Responsibilities Are Growing

- Innovate
- Operate
- Design
- Deploy
- Optimize

WAN  NETWORK  WLAN
Routers  Switches  UC  L4-7

Internet Of Things
- Big Data
- Cloud
- SDN
- Mobile
- Threats
- Data Center
- Users
- Speeds

Compute/Storage  Orchestators  Analytics
Controllers  Hypervisors  Automation  Transformation  NFV

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Job Roles Are Shifting for the Networker

**Do LESS of...**
- Device configurations
- Continuous operations
- Box deployments
- Monitoring and reporting
- CLI entries and scripting
- Hands-on repairs/deployments
- Reactive management tasks

**Do MORE of...**
- Business/IT innovation
- Architectural (End-to-End) design
- Network analytics & optimization
- Programming – API versus CLI
- Comprehensive policy mgmt
- Systems Integration/validation
- Proactive management tasks
So Are Requirements for IT Hiring Managers

Looking for **LESS**…

- Low end silo tech positions
- Strict operational focus
- Network-only interests/intelligence
- Hardware-centric expertise
- Limited integration/test skills
- Constrained private network view
- Reactive management approach

Looking for **MORE**…

- Business-IT-network analysis
- “System” design expertise
- Network optimization focus
- Top-down application perspective
- Technology innovation
- Software best practice experience
- Cloud integration or provisioning
Technology Evolution
Digitization Is Changing The World

- Bookstore (amazon.com)
- Taxi (UBER)
- Music (SOUNDCLOUD)
- Hotel (airbnb)
- Print (Google)
- Car (TESLA MOTORS)
- Point-of-Sale (Square)
Mindset: How do I Stay Competitive and Relevant

Consumer Demands and Speed of Change Are Pushing Companies into New Business Models
The Network is Changing and Growing in Importance
Software is the Path Toward Orchestration and Outcomes

- Policy Based Networking
- Automated Operations
- New Network Services

Invest in Your Talent

Connected Devices
Mobility
Apps
Cloud
Data
Threats

2013
2015
2020
A Broad Perspective Is Required…

IoT and Business Outcomes

Infrastructure

Applications

SaaS

PaaS

IaaS

IoT and Business Outcomes

Security Everywhere
Technology Changes Are Accelerating…

- Internet of Things
  - Spending $3.05T in 2020 ($1.5T in 2014)
  - 2018 Services-$287B
  - IoT skill shortages multiplied by big data, mobility, and security skill shortages
  - Connected objects to reach 29.5B by 2020

- Software Defined Networking
  - Spending $8B in 2018 ($960M in 2014)
  - 2018 Services-$2.1B
  - Software skills drive future job growth in networking
  - Spending on SDN and linked technologies is 5 times SDN spending

- Cloud
  - Spending $128B in 2018 ($57B in 2014)
  - 2018 IaaS - $24.5B
  - By 2020, there will be 7M cloud-related jobs worldwide
  - By 2020, cloud spending will grow to 67% of the IT budget

- Cyber-Security
  - Spending $89B in 2018 ($67B in 2014)
  - 2018 Services-$46B
  - Ten-year job growth projected to be 36.5%
  - Exposed records grew to 823M in 2013 (264M in 2012). 97% of exposures caused by outsiders

- Big Data
  - Spending $41.5B in 2018 ($16.5B in 2014)
  - 2018 Services-$10.8B
  - By 2018, the Big Data talent gap is expected to be 50-60%
  - Business Analytics spending is 5 times Big Data spending
...And the Business Skills are Critical

- Project management
- Business/Industry analysis
- Best practice adoption
- Stakeholder satisfaction
- Communication/Collaboration
- Financial management
Career Evolution
We have entered a global economy where talent and skills shortages challenge world economic and business growth around the world.

Klaus Schwab
Chairman, World Economic Forum
Knowledge and Skills Gaps are Constraining LoB Results

Current Approaches to Developing Digital Skills are Broken

Companies realize the **digital skills gap** and its importance

- Over **90%** of companies **lack digital skills**
- 87% of companies feel digital transformation is a **competitive opportunity**

Yet, they are **not investing** in digital skills

- Only **46%** are investing in developing digital skills

Source: Capgemini and MIT Center for Digital Business

<table>
<thead>
<tr>
<th>Global Rank</th>
<th>Challenges</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Human Capital</td>
<td>2.44</td>
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<tr>
<td>2</td>
<td>Operational Excellence</td>
<td>2.10</td>
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<tr>
<td>3</td>
<td>Innovation</td>
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<td>4</td>
<td>Customer Relationships</td>
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<td>5</td>
<td>Global Political/economic Risk</td>
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<tr>
<td>6</td>
<td>Government Regulations</td>
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<tr>
<td>7</td>
<td>Global Expansion</td>
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<td>8</td>
<td>Corporate Brand and Reputation</td>
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<tr>
<td>9</td>
<td>Sustainability</td>
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<tr>
<td>10</td>
<td>Trust in Business</td>
<td>0.46</td>
</tr>
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Source: Gartner
The Hybrid Engineer

Networking Skills

Software Skills
Questions to ask yourself...

☐ Do I have a complete and honest view of my talent?

☐ Is my talent moving in lock-step with technology advancements? And ahead of customer IT and business requirements?

☐ Are my customer interactions, contributions and projects expanding inside of IT? Outside of IT?

☐ Am I accelerating my skills, solutions, and services towards hot technology and business areas?
Thank you.