



Business Transformation One Step at a Time

IPv6 ASSESSMENT



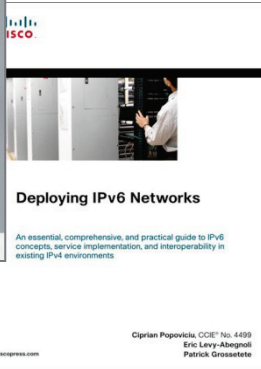
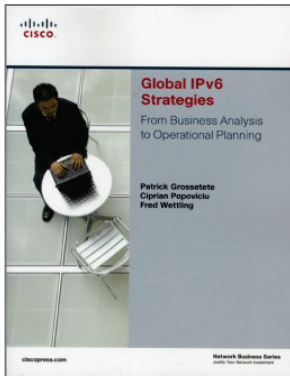
- Yurie Rich, COO of Nephos6
- Working with IPv6 since 2000
- Nephos6?
 - Team of v6 and cloud expertise
 - Professional Services
 - Education

Nephos6 Expertise and Experience



Expertise

Co-Authored Books and Standards



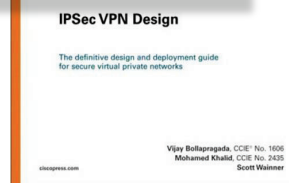
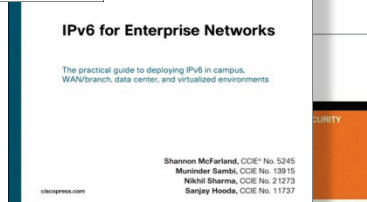
- RFC 4779
- RFC 5180
- RFC 5375
- RFC 5741
- RFC 6105

Certifications



CISSP
CSCI

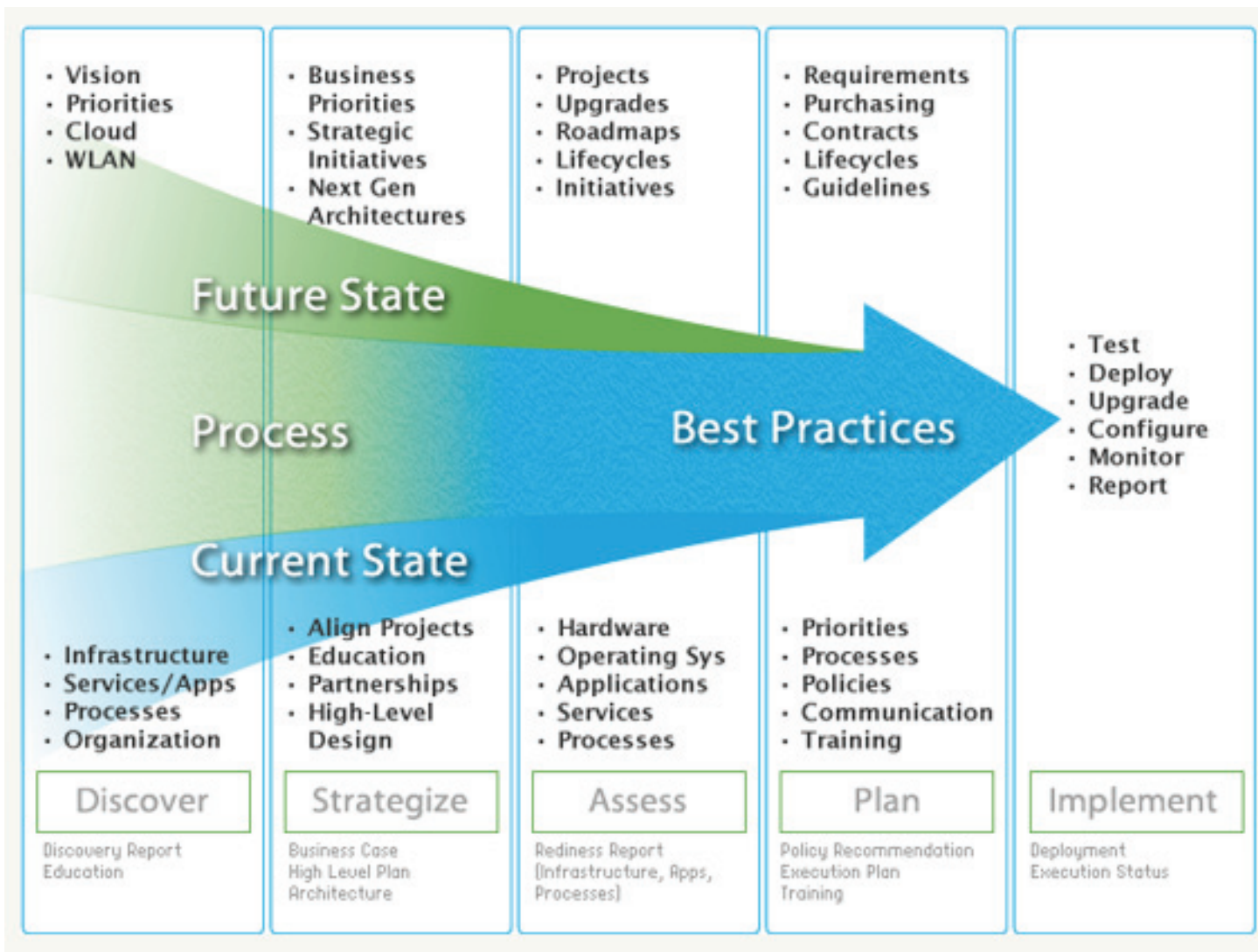
CCSK
VCP
PMP



Experience



Five Steps to IPv6 ... and Cloud

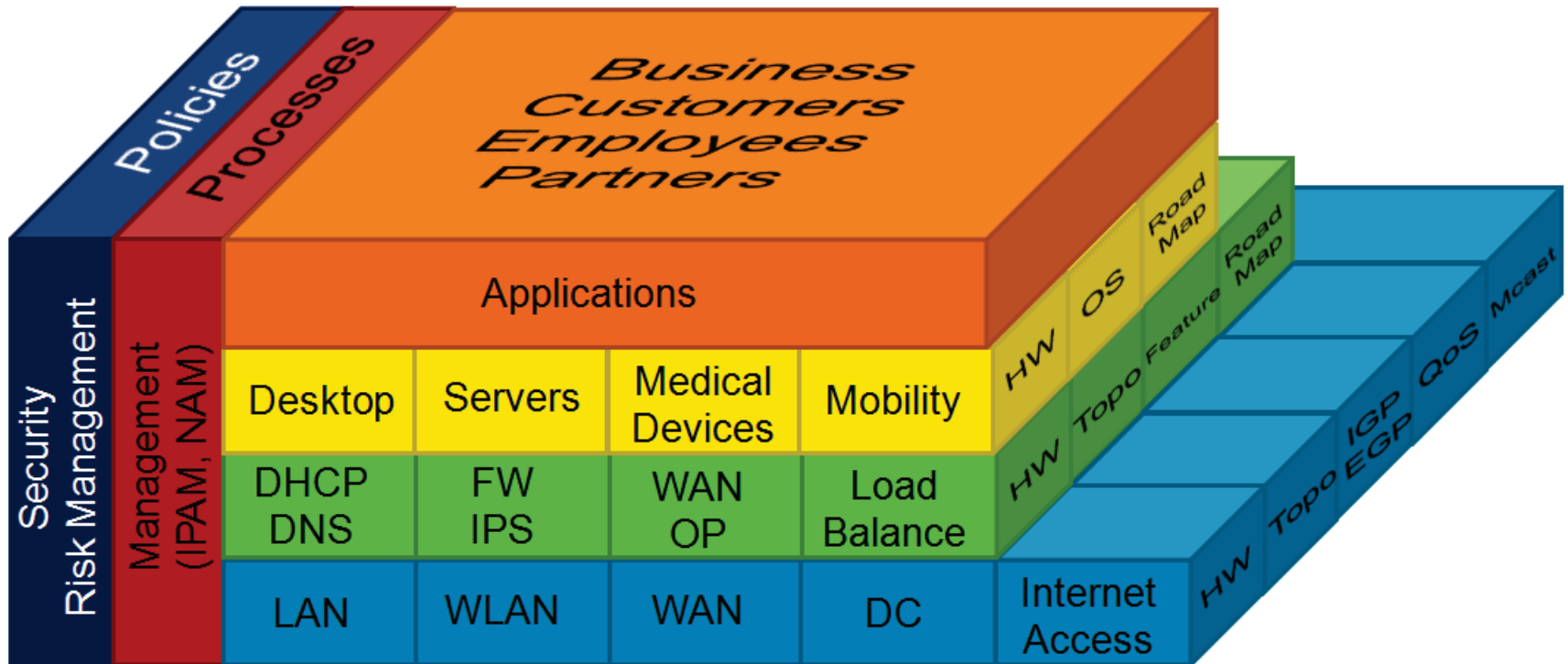


Assessment is more than just equipment!



- Infrastructure
- Technical Skills & Knowledge
- IT-related process & procedures
- Security policies and practices
- Operational Support Systems
 - Billing, provisioning, CRM
- Applications
 - COTS, COTS modified, Custom built
- Your IT ecosystem:
 - Suppliers (IT vendors, suppliers with whom you interact over the Net)
 - Services (transport, managed services, cloud)
 - Partners
 - Customers
- IT Initiatives

The IT Environment is Complex





- IPv6 readiness is a concept that applies to applications just as much as it applies to the networking infrastructure
- The Assessment process helps to:
 - Compare the IPv6 readiness of IT environment components against the requirements defined in the next generation design
 - Evaluate the IPv6 readiness of the operational processes and policies
 - Test the IPv6 capabilities of assessed elements
 - Translate the conclusions into planning

Criteria for Assessment - Infrastructure



- Must develop profiles for various categories of IT infrastructure
 - Not enough to simply say “IPv6-enabled”
- Don’t have to reinvent the wheel. Baseline sources available
 - IPv6 Ready Logo Program
 - NIST IPv6 Standards Profile
 - Others....
- Need feature parity – what are the dials & knobs you use to fine tune your environment?
- Your environment is unique – need to make your evaluation criteria unique



Driving Criteria into Procurement



- Baseline Criteria
- Functional Criteria
- Unique Requirements
- Drive this mix of needs into specific procurement language
 - Reference RFCs
 - Reference Logo
- Require certification

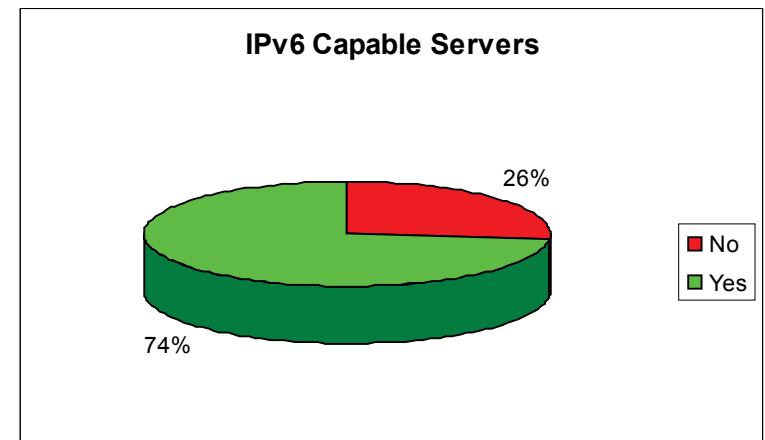
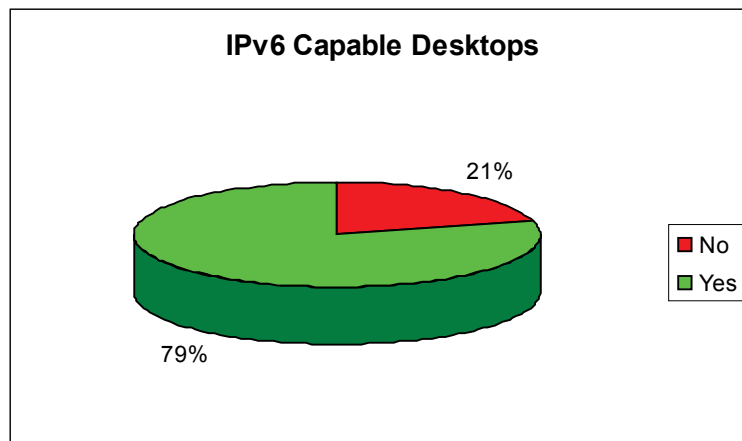
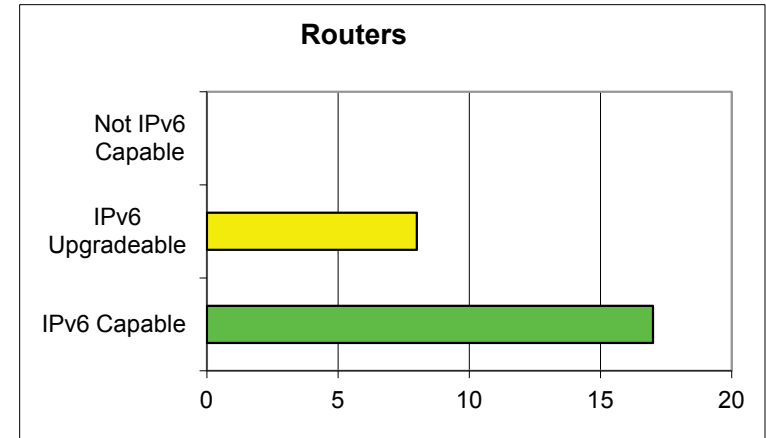
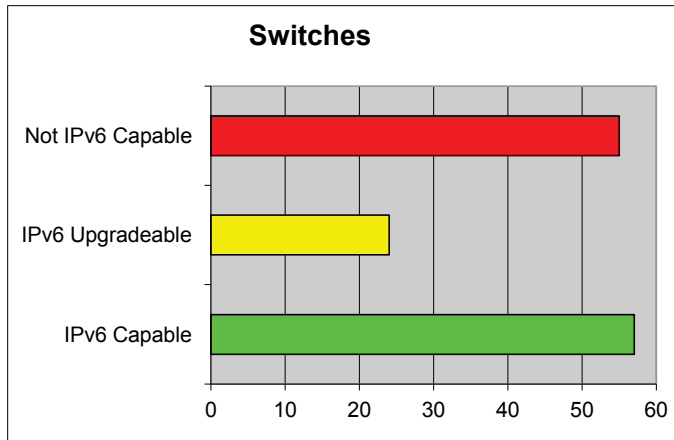
USGv6-V1 Host Requirements Template:

- [M] – **IPv6 Basic Requirements** – see section 6.1.
 - [O:1] – **SLAAC** – require support of stateless address auto-configuration.
 - [O:1] – **DHCP-Client** – require support of stateful (DHCP) address auto-configuration.
 - [Y/N] – **PrivAddr** – require support of SLAAC privacy extensions.
 - [Y/N] – **SEND** – require support of neighbor discovery security extensions.
- [M] – **Addressing Requirements** – see section 6.6.
 - [Y/N] – **CGA** – require support of cryptographically generated addresses.
- [O] – **Application Requirements** – see section 6.11.
 - [Y/N] – **DNS-Client** – require support of DNS client/resolver functions.
 - [Y/N] – **SOCK** – require support of Socket application program interfaces.
 - [Y/N] – **URI** – require support of IPv6 uniform resource identifiers.
 - [Y/N] – **DNS-Server** – require support of a DNS server application.
 - [Y/N] – **DHCP-Server** – require support of a DHCP server application.
- [M] – **IP Security Requirements** – see section 6.7.
 - [M] – **IPsec-V3** – require support of the IP security architecture.
 - [M] – **IKEv2** – require support for automated key management.
 - [M] – **ESP** – require support for encapsulating security payloads in IP.
- [O] – **Transition Mechanism Requirements** – see section 6.4.
 - [Y/N] – **IPv4** – require support to enable interoperation with IPv4-only systems.
- [O] – **Network Management Requirements** – see section 6.8.
 - [Y/N] – **SNMP** – require support of network management services.
- [M] – **Multicast Requirements** – see section 6.9.
 - [Y/N] – **SSM** – require full support of multicast communications.
- [O] – **Mobility Requirements** – see section 6.10.
 - [Y/N] – **MIP** – require support of capability for this host to be a mobile node.
- [O] – **Quality of Service Requirements** – see section 6.3.
 - [Y/N] – **DS** – require support of Differentiated Services capabilities.
- [M] – **Link Specific Technologies** – see section 6.5.
 - [O:1] – **Link** – require support of 1 or more link technologies.
 - [Y/N] – **ROHC** – require support of robust packet compression services.

Tracking Progress



Assessment is not a one time event – Establish your baseline, set goals against your integration plan, track progress



What are the right Steps?



- Become knowledgeable
- Develop your assessment criteria
- Find the tools/resources to expedite your assessment process
- Assess
- Understand your integration plan and adapt your procurement plans accordingly
- Put your vendors on notice – we want “real” IPv6 support
- Track your progress – you will have some IPv6 capability already



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THANK YOU