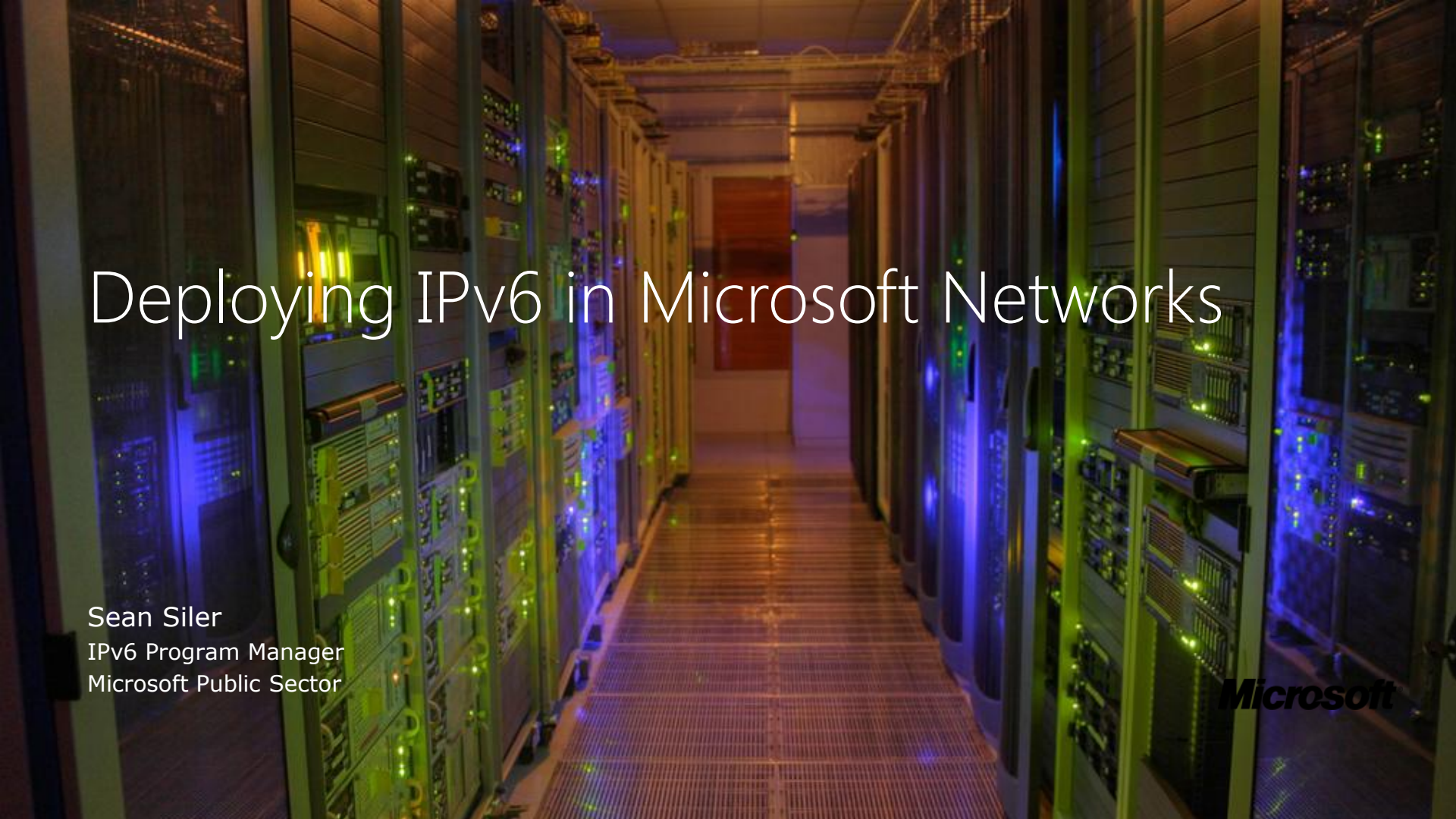
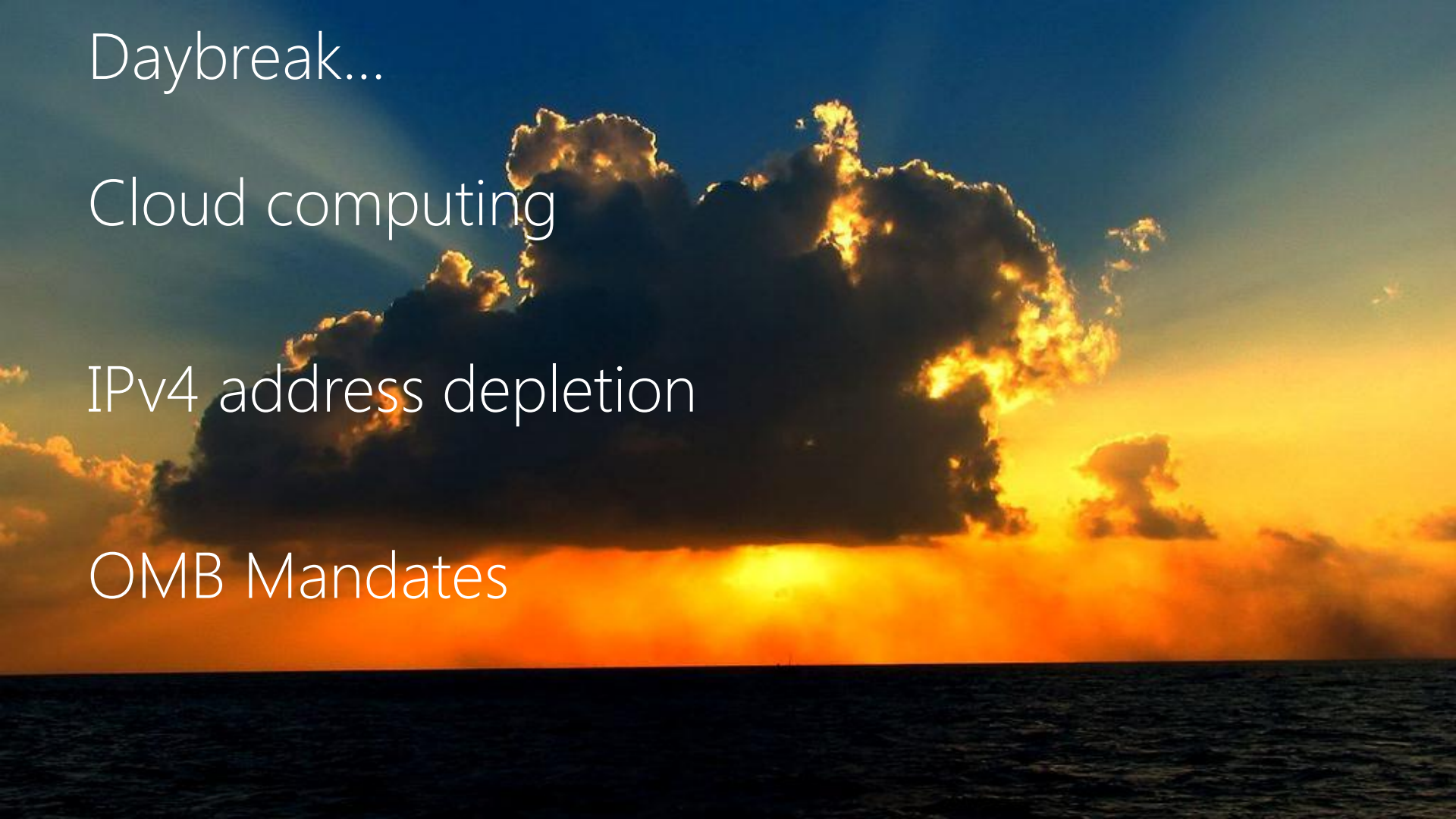


Deploying IPv6 in Microsoft Networks

Sean Siler
IPv6 Program Manager
Microsoft Public Sector

Microsoft


Daybreak…
Cloud computing
IPv4 address depletion
OMB Mandates

Where do I start?

Guideline for the Secure Deployment of IPv6

"One of the key tasks…is to conduct an extensive inventory of the IP equipment and services. RFC 4057, IPv6 Enterprise Network Scenarios, covers the types of questions that an organization needs to answer to plan a successful IPv6 transition."

http://csrc.nist.gov/publications/nistpubs/800-119/sp800-119.pdf

What does IPv6 compatible mean?

According to the Microsoft Common Engineering Criteria:

"All Microsoft server products are required to support both IPv6 and IPv4. In addition, all server products are required to be configurable to run in dual-stack (IPv4 and IPv6) or IPv6-only modes."

http://www.microsoft.com/cec/en/us/cec-overview.aspx#data-ipv6

Additionally:

*"The goal is **feature parity**. Whatever a customer can do using IPv4, they should be able to do using IPv6, with the same level of security, performance, and scalability."*

Microsoft Products That Support IPv6

Supports IPv6 (latest version)	
Windows	Microsoft Office Suite
SharePoint	System Center Suite
SQL Server	Hyper-V
Dynamics	Internet Explorer
Exchange	Failover Clustering
Just about all enterprise class products	

Windows IPv6 compatibility

Windows XP, Windows Server 2003, Windows Server 2003 R2	TCP/IP Stack support only
Windows Vista, Windows 7 Windows Server 2008, Windows Server 2008 R2 DHCPv6 DNSv6 Active Directory Printing File sharing Domain Join IIS	Fully Supported

Microsoft Products That Do Not Support IPv6

Does not support IPv6
Forefront Threat Management Gateway (TMG)
Office Communications Server/Lync

"Microsoft has informed Gartner that it does not plan to ship another full version of…Forefront Threat Management Gateway (TMG). The product is effectively in sustaining mode, with Microsoft continuing to ship Service Pack (SP) updates…for the standard support life cycle — five years of mainstream support and five years of extended support."

Magic Quadrant for Secure Web Gateway, 25 May, 2011

Best Practices

- Leave Windows in the default configuration (IPv6 enabled)
- Block IPv6, IP Protocol 41, and Teredo at the perimeter
- Set up a test lab to test and learn IPv6
  - Use ISATAP for a low cost test lab deployment
- Monitor Production DNS Servers for AAAA records
  - The presence of AAAA records prior to rollout probably indicates Public IPv4 addresses are in use
- Document and test broadcast domains
- Link planned IPv6 subnets to existing Active Directory Sites
- Set High Priority on genuine Router Advertisements (RFC 4191)
- Use 802.1x when possible

Thank you!


Microsoft