

***Managed Security  
Services Provider (MSSP)***

IPv6

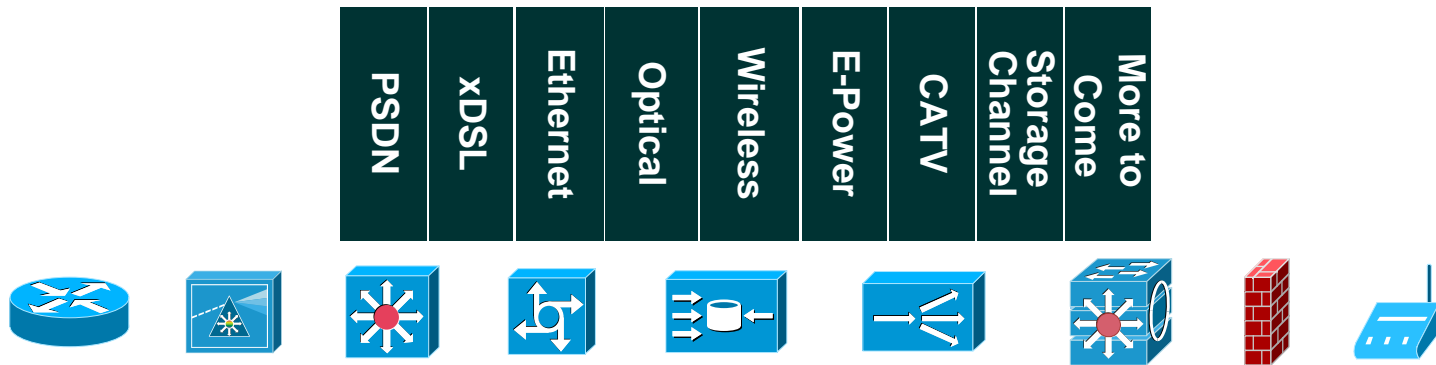


connet

# application convergence



## IP Version 6



# IPv6 drivers

## O.S. and Applications



Restoring  
an Environment  
for Innovation

## Mobile Networking



The Ubiquitous  
Internet



Manufacturing

Higher  
Education/  
Research

Agriculture/Wildlife

Medical

Transportation

e-Nations

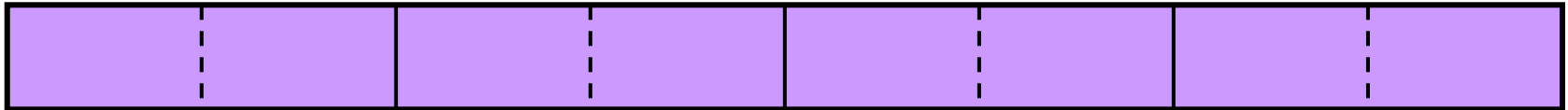
Government  
(Federal/Public Sector)

# 128 bits

IPv4 uses 32 bits of address space  
~4.2 billion possible addresses

IPv6 uses 128 bits of address space  
~340 undecillion possible addresses

= 340,282,366,920,938,463,463,374,607,431,768,211,456 (for those not familiar with the “-illion” scale)



**128 = 340,282,366,920,938,463,463,374,607,431,768,211,456**

# 128 bits mean



The Earth's population is  
~6.5 billion

$$\frac{2^{128}}{6.5 \text{ billion}} = \sim 52 \text{ octillion IPv6 addresses per person}$$

(52,351,133,372,452,071,302,057,631,912)



If each IP address weighed one gram, the IPv6 address space would weigh more than 56 planet Earths



A typical brain has ~100 billion brain cells (your mileage may vary)

$$\frac{52 \text{ octillion}}{100 \text{ billion}} = \sim 523 \text{ quadrillion IPv6 addresses per brain cell}$$

(523,511,333,724,520,713)