

Server Virtualization

Tina Simcich

WA State Department of Ecology



DEPARTMENT OF
ECOLOGY
State of Washington



Carbon Reduction through IT Procurement

- Problem: Many servers run at 10% to 30% capacity
- Solution: Virtualization means more efficient use of server resources enabling multiple applications to run on a single system.
- Reduces
 - data center footprint to 25% of former space
 - # of servers purchased
 - power to run devices
 - cooling costs through more sophisticated sensing and localized air conditioning.



Consolidation and Virtualization

- Agency started server consolidation (2007)
 - 74 active and 20 inactive physical servers
 - Server numbers up to 115, now 33
 - 80% of agency servers virtualized now
 - In 2011, purchased blade server which stores equivalent of 150 physical servers



Financial Benefits (main driver)

- Estimated savings over 5 years = \$1.2 million
- Large initial investment = \$400,000
- ROI expected in 20 months



2011 Global Reporting Initiative Report

- Identified 425 MTCOe reduction from server virtualization
 - About 78 homes annual
- Identified 897 MTCOe in GHG reductions overall for agency
- Opportunity to reduce the climate impact in the use phase, and embodied energy from upstream manufacturing phase



EPEAT Server Standard Development

- Environmental leadership standard
- Key criteria include:
 - energy efficiency
 - reduction of substances of concern
 - preferred materials
 - design for end of life, packaging, longevity, and responsible end of life management



Questions/Contact

Tina Simcich

Waste 2 Resources Program

Washington State Department of Ecology

Tina.simcich@ecy.wa.gov

www.ecy.wa.gov/programs/swfa/epp/