#### SDN Problem Statement and Scenery

draft-nadeau-sdn-problem-statement-01

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#### Yes we need to change the name!

## What is SDN

- Enables network applications to request and manipulate services provided by the network, and allow the network to provide feedback to the network applications.
- Common Network control point(s)
  - Location, discovery and availability of network capabilities, resources and their topology.
  - multi-layer, inter and intra-domain, bi-directional
  - Model and Schema of the objects that are to be manipulated
  - Exposing the model using a schema and interface that is application-friendly

### What SDN is NOT

• Defining a new data plane programming protocol

- Openflow HAL, ForCES

- Defining a new controlling software (control plane)
  - Openflow controller, ForCES
- A bottom-up solution



# Relationship to relevant IETF Working Groups/Work

- ALTO
- PCE
- NetConf, Netmod
- Existing control planes
  - L2 VPN, L3 VPN, MPLS, CCAMP, etc...

### Actions and Goals

- Formally (and clearly) define the problem to be solved.
- Define a common framework that can interface with applications and network elements that applies to wan-lan and data center environments.
- The framework needs to support basic functionalities such as service discovery, service redundancy, security and policy interface
- The framework needs to be flexible to accommodate a wide range of applications in the form of plug-in's. Some of the immediate solutions would be the ones for BoD and VM.

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#### Actions and Goals

- This framework will support a standard schema, and common object models
- Define interfaces and operations on those interfaces between components in framework
- Define and specify protocols between components
  - Re-use, re-use, re-use!