

Requirements and Framework of VPN-oriented Cloud Services

<http://datatracker.ietf.org/doc/draft-so-vpn-o-cs/>

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What Is VPN-o-CS

- ✚ VPN-Oriented Cloud Services are the extensions to the existing L2 and L3 VPN services into cloud data centers and to control the virtual resources sharing functions
 - ✚ Strictly maintaining the secure, reliable, and logical isolation characteristics of VPN
 - ✚ Making the data center resources as additional attributes to VPNs
 - ✚ Allowing end-to-end VPN-based service management
 - ✚ VPN having the control on how and what data center resources to be associated with the VPN

VPN-oriented Cloud Service is for those VPN customers who want to offload some dedicated user data center operations to the shared cloud centers.

DC Requirements Supporting VPN-o-CS

- ✚ Requirements for automatic VPN customers provision and reconfiguration of VPN-attached DC resources
- ✚ Requirements for automatic VPN customer management of the VPN-storage, contents, their access and mobility control
- ✚ Requirements for ensuring end-to-end traffic separation per VPN (from user to VM)
- ✚ Requirements for managing VPN-o-CS using VPN gateway as solution
- ✚ Requirements for managing VPN-o-CS using internal data center VPNs

DC Requirements Supporting VPN-o-CS

- ⊕ Requirements for VPN-oriented data center resource management system
 - ⊞ Resource partition
 - ⊞ Disk space assignment
 - ⊞ Physical resources treatment
 - ⊞ DC network traffic engineering: BW, QoS, and etc
- ⊕ Security requirements
 - ⊞ Securing DC resources' tenancy per VPN
 - ⊞ VPN controlled automatic security configuration
- ⊕ Requirement for end-to-end OAM per VPN

Next Steps

- ✚ Welcome the feedbacks
- ✚ This draft will progress in OPSAWG, L2/3
VPNWG will be posted on the progress

Where Should We Work on these?

- ✿ Potential protocol extensions to support a composite link and its applications spread in many IETF WGs
 - ✦ RTG, OSPF, IS-IS, MPLS, CCAMP, PWE, IPPM, PCE, etc
 - ✦ More than 10 RFCs
- ✿ Where should the CL protocol extension drafts reside?
 - ✦ Rtgwg?
 - ✦ Like to hear the suggestions