

# Introduction

The CCDE Practical exam, to a large extent focuses on the mindset (how to think like a network designer, identify business, technical, applications and functional requirements, how to achieve the desired result taking into account the explicit and implicit design constraints, etc.)

The CCDE practical exam is not different from the real life practical designs, where you deal with multiple technologies and a change to the design of one technology might break the design of others. Similarly adding a new service or application may impact other services or applications. You as a design expert must identify, recommend and optimize based on the different requirements and priorities.

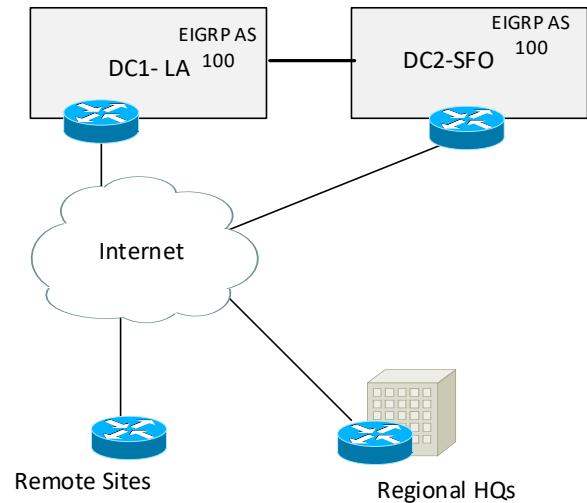
The CCDE is not a greenfield design exam where you can always apply best practices that you read in many books and white papers. Instead you will deal with large scale networks and you are expected to redesign, optimize and integrate to meet the customers' business and supporting design objectives.

This CCDE Practical Exam, Practice Scenarios leverages one of the best and most proven ways to prepare your mindset, design approach and logic. As part of these practice scenarios you will:

- Identify your study and knowledge gaps
- Shape your design mindset capabilities and approach.
- Familiarize yourself with practical design scenarios in a CCDE style (without breaching the exam NDA)
- Learn the different information analysis and question answering techniques.

The design scenarios are authored by the “CCDE Study Guide” and “CCDP ARCH 4th edition” CiscoPress Author and reviewed by experienced CCDE certified engineers. Furthermore, these scenarios are designed to help you build the required mindset and to understand the approaches necessary to be qualified enough for the CCDE practical exam.

Q: Using the diagram below, draw the proposed WAN connectivity with the redundant paths based on CILR's requirements. you can use as much links, routers and VRFs as required.

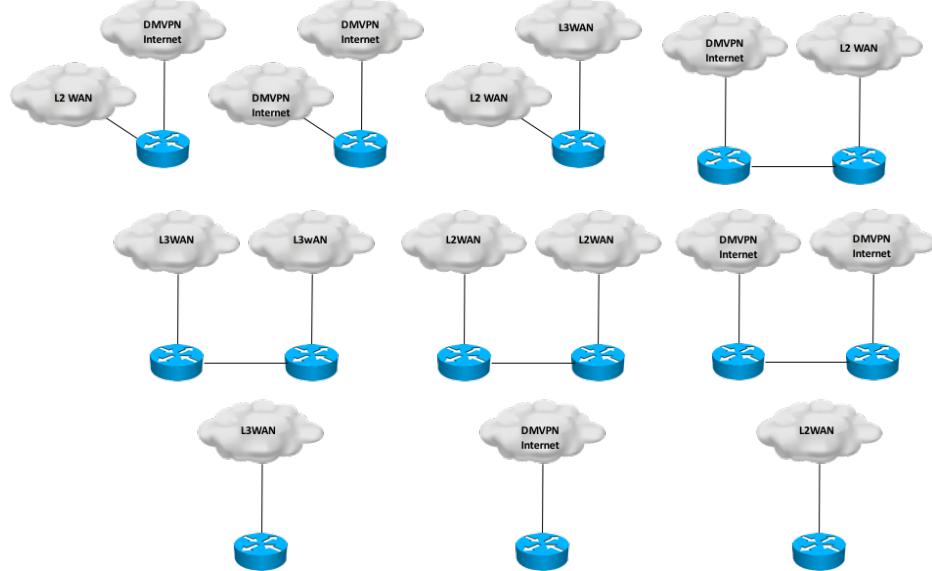


Front door VRF A	■	mGRE + EIGRP AS 100	.....
Front door VRF B	■	mGRE + EIGRP AS 200	.....
Tunnel VRF	■	mGRE + OSFP	-----
Physical link	—	P2P GRE + iBGP	-----
WAN Router		P2P GRE + EIGRP	-----
		mGRE + eBGP	.....
		mGRE + iBGP	-----

Q) Use the table below to recommend TG a resilient multicast design.

	Solution elements
PIM SSM	
PIM SM	
PIM DM	
Embedded RP	
Static RP	
MSDP	
PIM Anycast RP	
BSR	

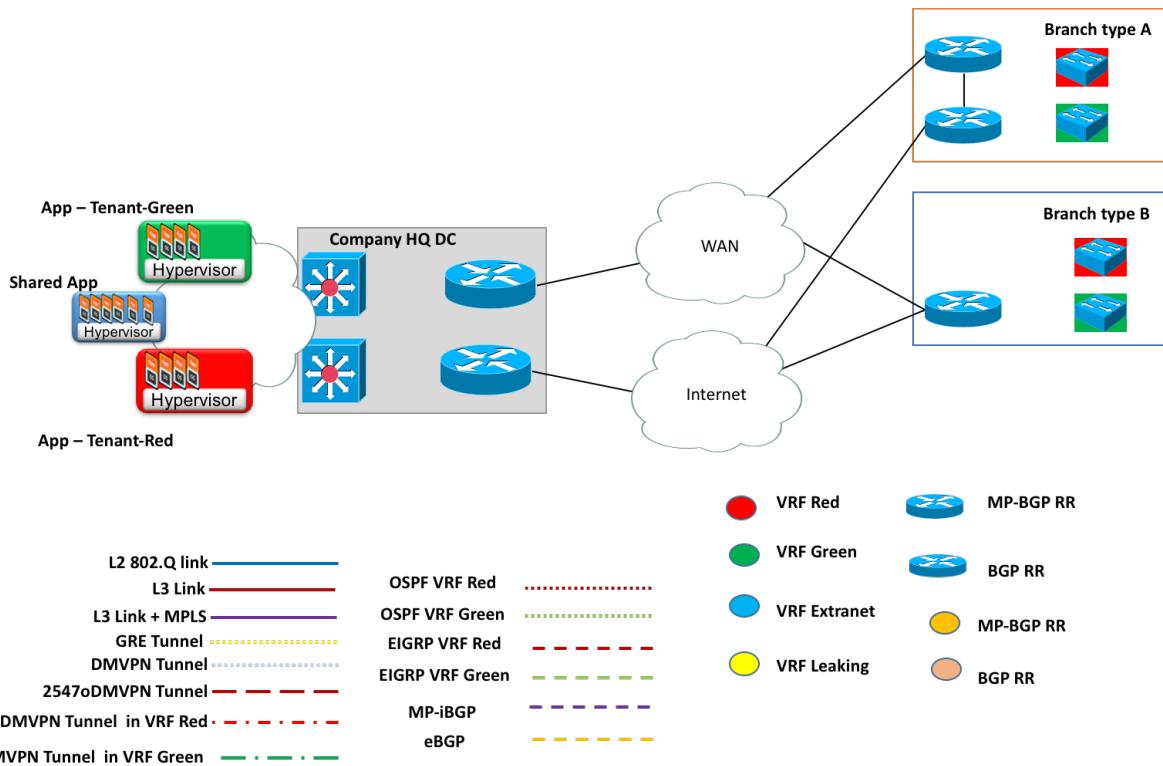
Q) Based on the provided information, what remote site connectivity model do you recommend MA to consider? Drag and drop



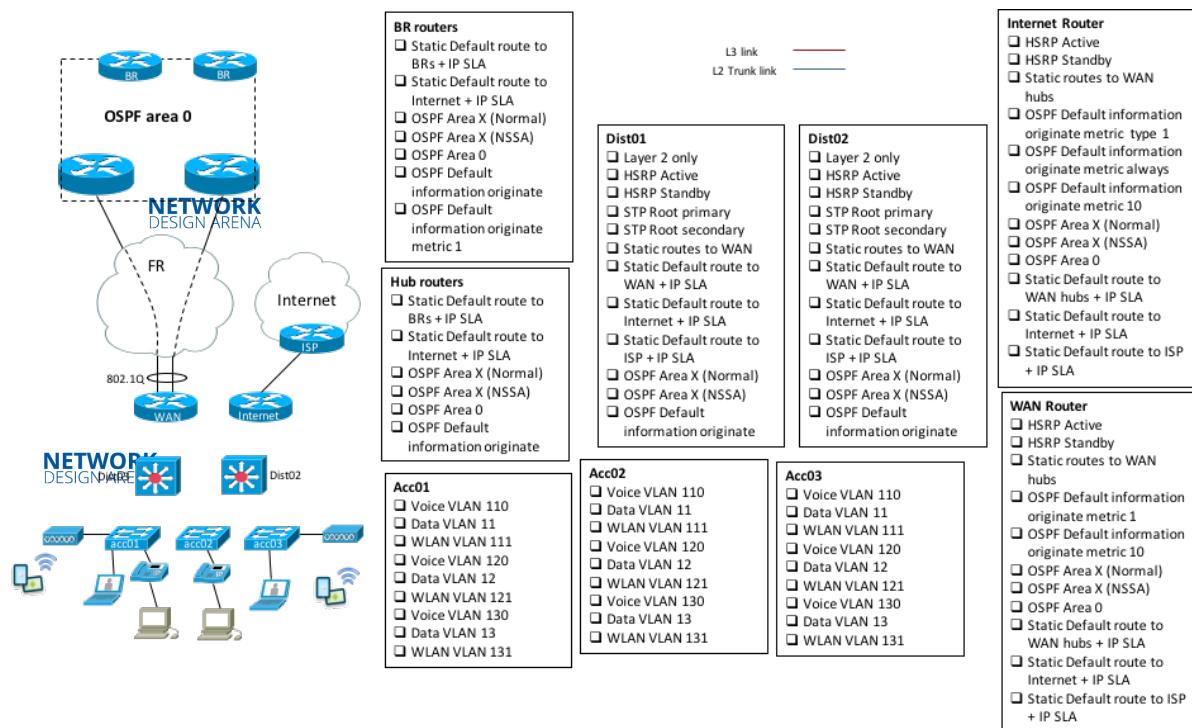
Q) MA IT team wants to know what do you recommend for them, to re-architect their network to create a design that supports multi-tenant environment taking into considerations the following requirements:

- The design should be scalable and flexible enough to add and remove tenants' networks without introducing major change to the design or configurations
- Provide end to end path separation
- Provide services access separation
- Reduce control plane complexity and load, on the hub routers as much as possible
- Avoid any fate-sharing where possible

Use the diagram below, to recommend the most optimal design that satisfies the aforementioned requirements.



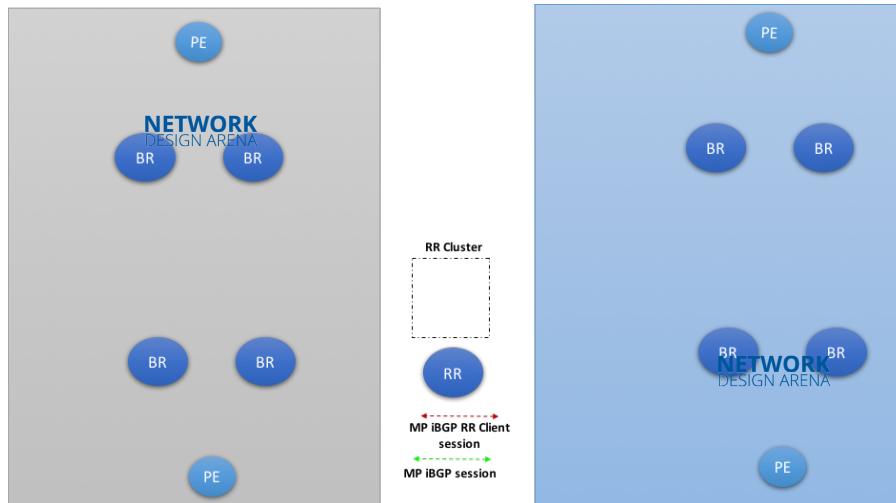
Q) Using the diagram below, build the detailed design of remote site Type-A to meet TG requirements.



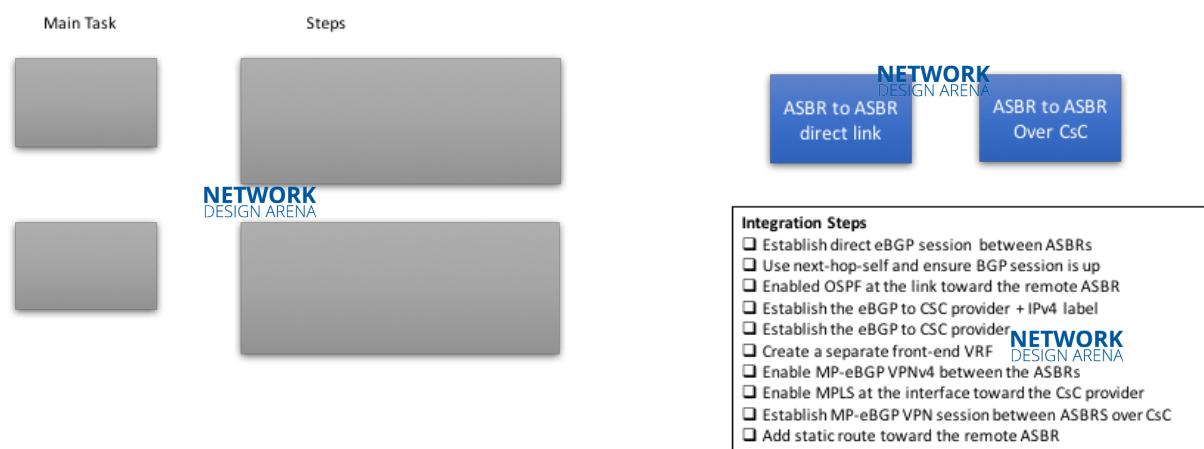
Q) What other information do you need to produce an HLD document in order to help NGNTel with the acquisition and integration project? (Choose all that apply)

- A. IGP Design of NGNTel and IPTel
- B. BGP Design of NGNTel and IPTel
- C. Available connectivity options
- D. Number of European customers who require connectivity in the US
- E. Security policy requirements
- F. COS SLA

Q) After NGNGlobal migrated IPTel to be part of its BGP ASN, what BGP RR design you recommend NGNGlobal to consider? You can add maximum of 8 Additional RR routers.



Q) Use the below layout to build the integration and implementation plan, “in order”



Q) Which of the following mechanisms technically can be used to optimally achieve NGNGlobal traffic routing requirements? (Select one)

- A. BGP community
- B. BGP Local\_Prefrence
- C. BGP AIGP
- D. BGP AS\_PATH

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- E. MPLS-TE + DS-TE
- F. MPLS-TE DiffServ Aware (DS-TE)
- G. Policy based routing (PBR)
- H. MPLS-TE + CBTS