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有线无线一体化的扁平校园网设计

Cable and wireless integrated flat campus network design

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中文摘要:

分析了高校校园网拓扑结构现存的问题, 依据扁平化的大二层网络设计思路, 提出了一种以BRAS设备为网络核心的有线无线一体化网络拓扑结构。该拓扑结构能够最大限度地保护现有投资, 只需在核心层增加BRAS设备, 将原有交换机全部作为二层设备上联至BRAS即可。利用BRAS设备的性能和特性完成了内外网用户的隧道建立、隔离、流控、故障定位、精细化管理; 利用大二层结构特性实现网内IPv4/IPv6双栈及多播业务, 各种品牌有线无线设备的统一管理。该拓扑结构应用在实际网络环境中时BRAS设备必须进行热备, 无线AC需要本地转发。

英文摘要:

The campus network topology of the existing problems was analyzed, and according to a large flat layer 2 network design ideas, a device for the network core BRAS wired and wireless integrated network topology was proposed. The topology can maximize the protection of existing investments, simply increasing the core layer BRAS device, and all of the original switches can be linked to BRAS as a layer 2 device. BRAS equipment performance and characteristics were used to finish tunnel network users inside and outside the establishment, isolation, flow control, fault location and fine management; large two-story structure features were used to achieve net IPv4/IPv6 dual and multicast services, various brands the unified management of wired and wireless devices. The topology used in the actual network environment BRAS equipment must be hot standby, wireless AC needs to support local forwarding.

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