

# Introduction of Post Office System Solution

## Part I Project analyze

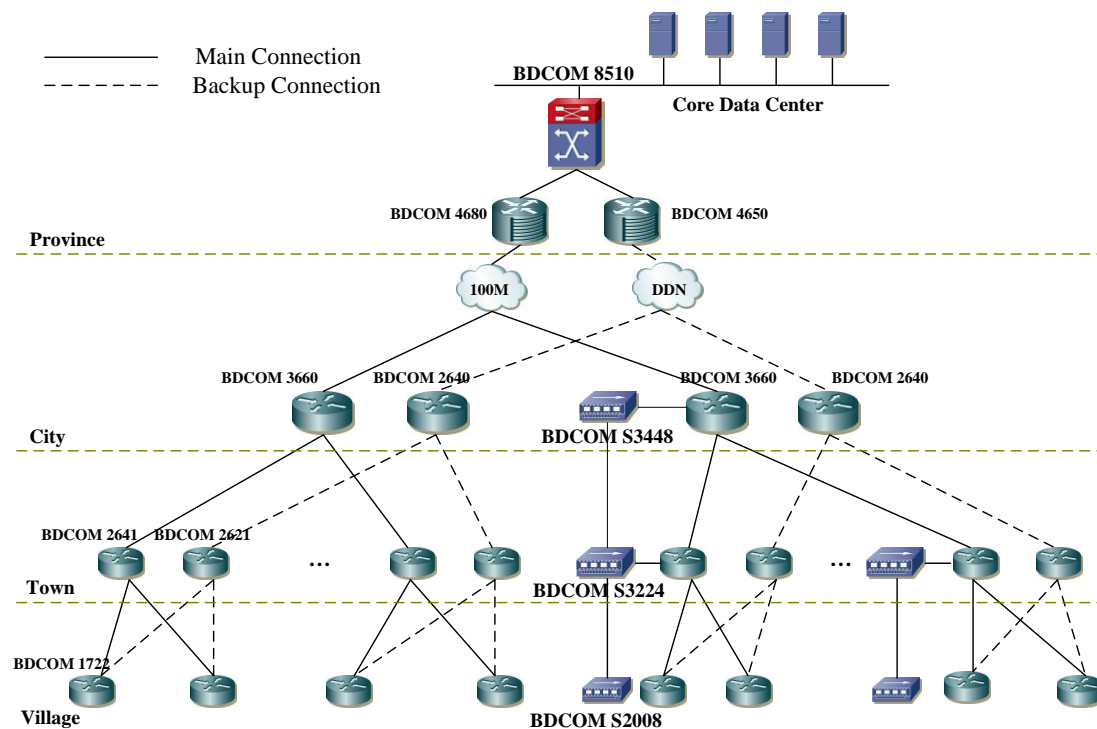
The network of Post office system is a nationwide huge network and needs to be divided into logical layers, such as a typical L3(at least) structure. And the main business of system should make redundant backup to ensure its security and stability. Usually DDN is master line and dial is backup line. If post office system needs to cooperate with finance channels, the solution should offer terminal service function to support ATM. Besides, the project using VoIP in system will reduce much expenditure.

Security is the most important factor in network layout, especially relating to finance. So we should divide VLAN to separate different department first and make them not influence each other. Second, some powerful visitors are permitted to visit different VLAN through Radius authentication. Third, as the huge network scale and a great amount of devices, static routing in this situation will bring many inconveniences. But if all were dynamic routing would result in long convergence time. Hence, the solution configures dynamic routing in center layer (province level) and large branches (city level), static routing in small branches (town and country level).

Considering network products, high performance price ratio is the most important factor. BDCOM is just the one providing low-price and excellent products for users. Powerful function, high performance-price ratio, high compatibility, easy-management and high security all are attractive.

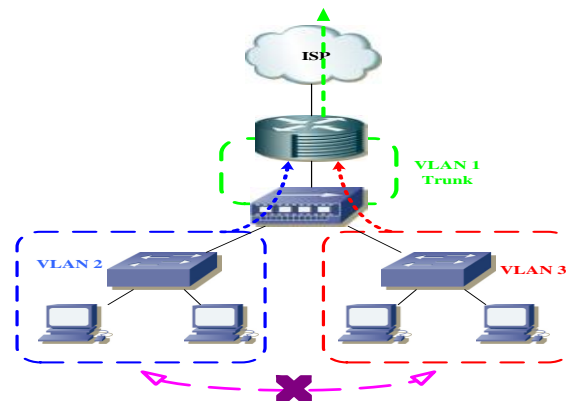
## Part II Topology

### A Total sketch map



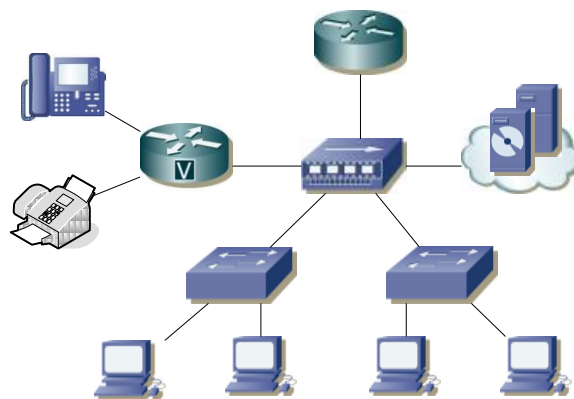
In the whole layout, we choose S8500 core switches as center switches, 4680 as access routers and 4650 as backup routers in province network. In city level, we choose 3660 as master router and 2640 as backup, S3448 as master switch with 48\*100-M ports. In town level, 2641 is the master router and 2621 is the backup one, matching with S3224 high performance switch. In village level, we choose 1722 router and do not have to backup. S2008 is enough for needs.

### B VIAN sketch map



After VLAN division, irrelevant departments only can visit particular external network through exit switches and routers. But they can not visit each other. If departments want to realize mutual visit, router authentication and routing in VLAN can satisfy the requirement.

### C Institution Network sketch map



There is L2 network structure in system network. L3 switches are used in core layer. The division of VLAN makes every section be able to choose independence or not in terms of its needs. Server groups connecting to the core switch can satisfy every VLAN member visiting network when they want to. We use L2 switch in visiting layer and need no other configuration. The installation of voice gateway can make VoIP phone available in the whole network and cut down expenditure. And it supports Fax over IP, too. Last, Access routers with Radius authentication can permit relevant person visit external net and different VLAN.