

# Full Network Design Report

```
{
  "design": {
    "existingNetworkDetails": {
      "currentIssues": [],
      "currentDevices": []
    },
    "requirements": {
      "bandwidth": {
        "upload": 100,
        "download": 100,
        "symmetric": true
      },
      "services": {
        "cloud": [
          "saas",
          "storage"
        ],
        "onPremise": [
          "fileserver",
          "email"
        ],
        "network": [
          "dhcp",
          "dns",
          "vpn"
        ]
      },
      "ipScheme": {
        "private": "192.168.0.0/16",
        "publicIPs": 2,
        "ipv6": false
      },
      "securityRequirements": {
        "firewall": "enterprise",
        "ids": true,
        "ips": true,
        "contentFiltering": true,
        "remoteAccess": "vpn"
      },
      "redundancy": {
        "internet": true,
        "coreSwitching": false,
        "power": true
      }
    }
  }
}
```

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},
"totalUsers": "51-200",
"wiredUsers": 120,
"wirelessUsers": 80,
"networkSegmentation": true,
"segments": [
  {
    "name": "Finance",
    "type": "department",
    "users": 25,
    "bandwidthPriority": "high",
    "isolationLevel": "vlans",
    "_id": "67f18464d713d3421f6966c2",
    "id": "67f18464d713d3421f6966c2"
  },
  {
    "name": "Guest",
    "type": "guest",
    "users": 15,
    "bandwidthPriority": "low",
    "isolationLevel": "full",
    "_id": "67f18464d713d3421f6966c3",
    "id": "67f18464d713d3421f6966c3"
  }
],
"budgetRange": "high"
},
"_id": "67f18464d713d3421f6966c1",
"userId": "67f14d4f4990ca7ad8f6ef10",
"designName": "Corporate Office Network",
"description": "Primary network design for headquarters with 200+ users",
"isExistingNetwork": false,
"designStatus": "draft",
"version": 2,
"isTemplate": false,
"devices": [],
"reports": [],
"createdAt": "2025-04-05T19:28:36.351Z",
"updatedAt": "2025-04-05T19:28:36.351Z",
"lastModified": "2025-04-05T19:28:36.352Z",
"__v": 0,
"deviceCount": 0,
"id": "67f18464d713d3421f6966c1"
},
"network": {
  "ipScheme": [
```

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{
  "network": "192.168.0.0/24",
  "range": "192.168.0.1 - 192.168.0.240",
  "gateway": "192.168.0.1",
  "broadcast": "192.168.0.241",
  "subnetMask": "255.255.0.0"
},
{
  "network": "192.168.0.254/24",
  "range": "192.168.0.255 - 192.168.1.238",
  "gateway": "192.168.0.255",
  "broadcast": "192.168.1.239",
  "subnetMask": "255.255.0.0"
},
{
  "network": "192.168.1.252/24",
  "range": "192.168.1.253 - 192.168.2.236",
  "gateway": "192.168.1.253",
  "broadcast": "192.168.2.237",
  "subnetMask": "255.255.0.0"
},
{
  "network": "192.168.2.250/24",
  "range": "192.168.2.251 - 192.168.3.234",
  "gateway": "192.168.2.251",
  "broadcast": "192.168.3.235",
  "subnetMask": "255.255.0.0"
},
{
  "network": "192.168.3.248/24",
  "range": "192.168.3.249 - 192.168.4.232",
  "gateway": "192.168.3.249",
  "broadcast": "192.168.4.233",
  "subnetMask": "255.255.0.0"
}
],
"vlanScheme": [
  {
    "name": "Finance",
    "vlanId": 100,
    "type": "department",
    "recommendedConfig": {
      "trunk": true,
      "nativeVlan": false,
      "allowedVlans": [
        100
      ]
    }
  }
]
```

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    ]
  }
},
{
  "name": "Guest",
  "vlanId": 101,
  "type": "guest",
  "recommendedConfig": {
    "trunk": true,
    "nativeVlan": false,
    "allowedVlans": [
      101
    ]
  }
}
],
"publicIPs": {
  "availableIPs": 2,
  "usedIPs": 2,
  "allocations": [
    {
      "purpose": "Firewall/NAT",
      "ip": "203.0.113.1",
      "services": [
        "security"
      ]
    },
    {
      "purpose": "VPN Endpoint",
      "ip": "203.0.113.2",
      "services": [
        "ipsec",
        "openvpn"
      ]
    }
  ]
}
},
"equipment": {
  "routers": [
    {
      "model": "Cisco ISR 4300",
      "quantity": 1,
      "purpose": "Core routing for medium office"
    }
  ]
},

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```
"switches": [
  {
    "model": "Cisco Catalyst 9200",
    "quantity": 6,
    "purpose": "Access layer switching"
  }
],
"accessPoints": [],
"securityDevices": []
},
"implementation": [
  {
    "name": "Core Infrastructure",
    "tasks": [
      "Install and configure core routers",
      "Set up primary switching infrastructure",
      "Implement basic network segmentation"
    ],
    "duration": "2 weeks",
    "dependencies": []
  }
],
"summary": {
  "totalUsers": "51-200",
  "bandwidth": "100/100 Mbps",
  "securityLevel": "enterprise",
  "estimatedCost": {
    "range": {
      "low": 20400,
      "high": 30600
    },
    "currency": "USD",
    "notes": "Estimate includes hardware and basic configuration"
  }
},
"generatedAt": "2025-04-07T15:40:31.577Z"
}
```