Introducing the Cisco Unified Communications Sizing Tool

The Cisco Unified Communications Sizing Tool (Unified Communications ST) builds on earlier sizing and capacity planning tools to size the servers required to implement various Unified Communications deployments.

In this tutorial, a new Unified Communications solution is sized for an imaginary company called Bonjour Networks, which is a European company that manufactures semiconductors, with its head office in Paris (see Figure 1-1).

Figure 1-1 Bonjour Networks

Unified Communications Deployment Types

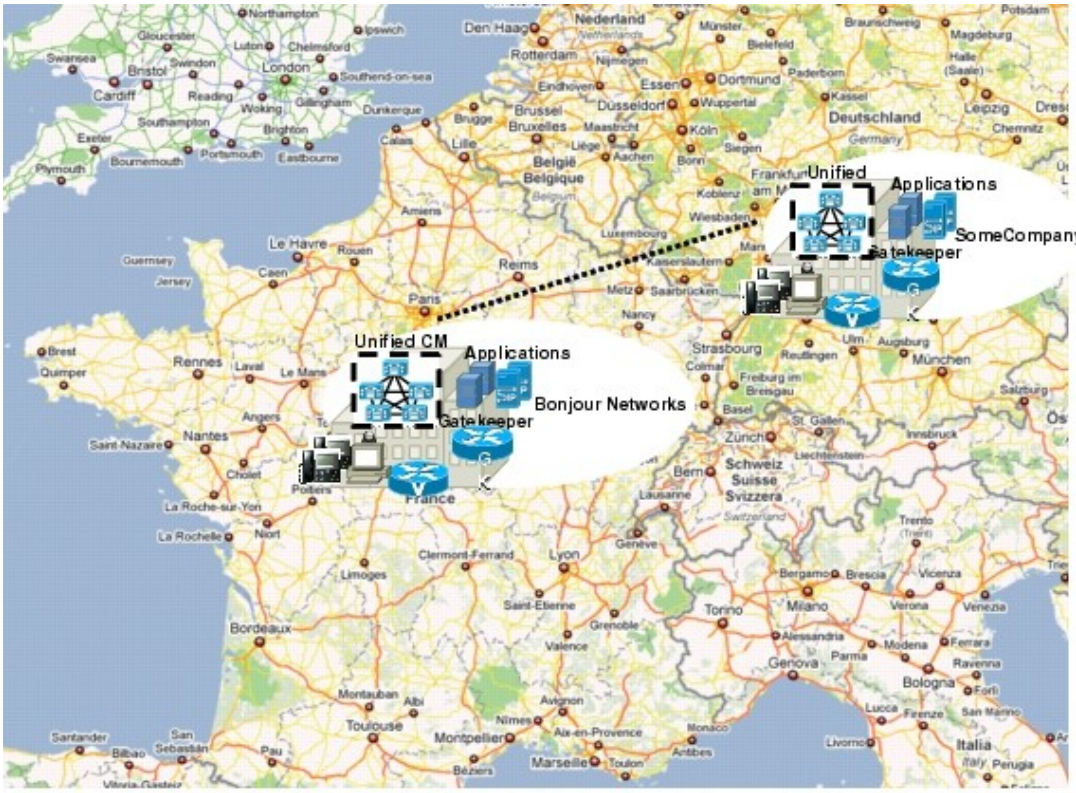
The first step is to assess the geographical distribution of customer offices and the overall architecture that the customer plans to implement for their Unified Communications solution. There are various deployment types, each of which requires a slightly different application of the Unified Communications ST (see Table 1-1).

Table 1-1 Unified Communications Deployment Types

Deployment Model	How to Size the System
Single site	Create a single system with all users located in the same physical location.
Multi-site with centralized call processing	Create a single system that satisfies the needs of users at the central headquarters site as well as the requirements of users at branch sites.
Multi-site WAN with distributed call processing	Create a system using multiple clusters, with each cluster located at a different site and interconnected using IP-based trunks.
Clustering over the IP WAN	Create the components of a single cluster distributed geographically and interconnected through the IP WAN. This helps achieve geographical diversity and supports business continuance when one of the sites is unavailable.

Bonjour Networks is growing fast and becoming an international company. Last year, they merged with SomeCompany, located in Germany (see Figure 1-2).

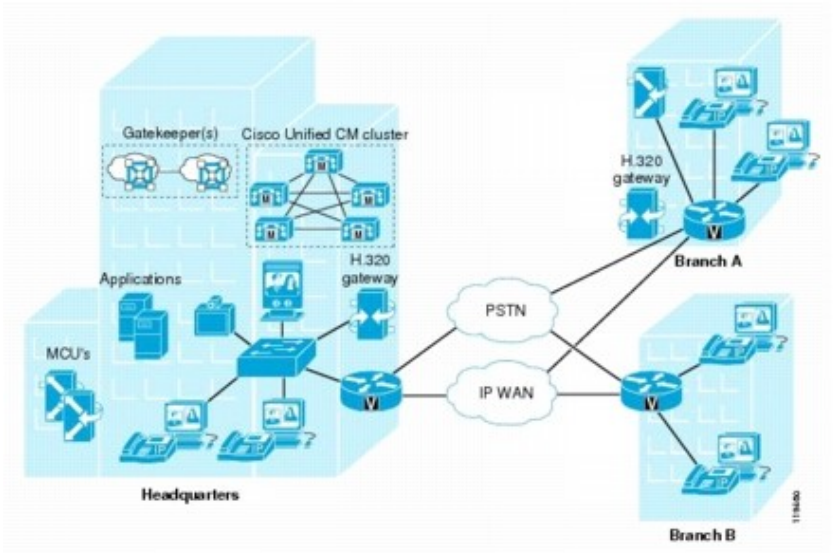
Figure 1-2 Bonjour Networks Merging with SomeCompany



SomeCompany is already supported by a single Unified Communication Manager cluster. Rather than supporting Bonjour Networks on the same cluster, Bonjour Networks has decided to implement a new cluster at their Paris headquarters and to use their network to interconnect the two clusters.

Therefore, the new cluster to be deployed in Paris must be sized, including the inter-cluster links to the existing cluster in Frankfurt. Paris is a multi-site deployment with centralized call processing. With the addition of Frankfurt, Paris becomes a multi-site deployment with distributed call processing. For the purposes of this exercise, this implementation is treated as a multi-site deployment with centralized call processing (see Figure 1-3).

Figure 1-3 Multi-site Deployment with Centralized Call Processing



The main office of Bonjour Networks is located in Paris, with 16 branches located across France. The three closest branch offices are located in Reims, Rouen, and Orleans (see Figure 1-4).

Figure 1-4 Bonjour Networks?Three Closest Branch Offices

The branch offices are connected to the main office through a wide area network (WAN). Voice traffic carried by the corporate IP network is referred to as "on-net" traffic.

Bonjour Networks also has a large branch office in New York with 500 employees, and it requires Cisco Emergency Responder to satisfy local emergency calling requirements (see Figure 1-5).

Figure 1-5 Bonjour Networks?New York Branch Office

All intra-cluster traffic within the headquarters site, within each branch site, and between branch and headquarters will be on-net to reduce PSTN tariffs. Traffic between the Paris cluster and the cluster in Frankfurt is called inter-cluster traffic, and is also on-net. Other traffic to locations outside the company is over the PSTN, and is called "off-net".

This cluster will support roughly 13,000 employees. Because of the recent merger, the depreciation of equipment, and the need for increasing modes of communication, Bonjour Networks will replace their multiple PBX system with a centralized call processing and voice messaging system, and will add mobility and conferencing.

Six months from now, Cisco Unified Contact Center will be added to support their technical support and order processing departments.

Using the Cisco Unified Communications Sizing Tool

Adding Cisco Unified Contact Center Enterprise