

## NRENum.net Course - Section 2 - Typical network

Before NRENum.net

During the old ELCIRA project, a global network of Gatekeeper servers interconnected hierarchically was developed. This consisted of making a request of localization of the dial number; the Gatekeeper had defined rules to search in the internal table of records, and if the terminal was associated with an H.323 alias, which was the number dialed, then the application was transferred to the adjacent Gatekeepers. In this way, tours and jumps between the Gatekeepers were made to find the record.

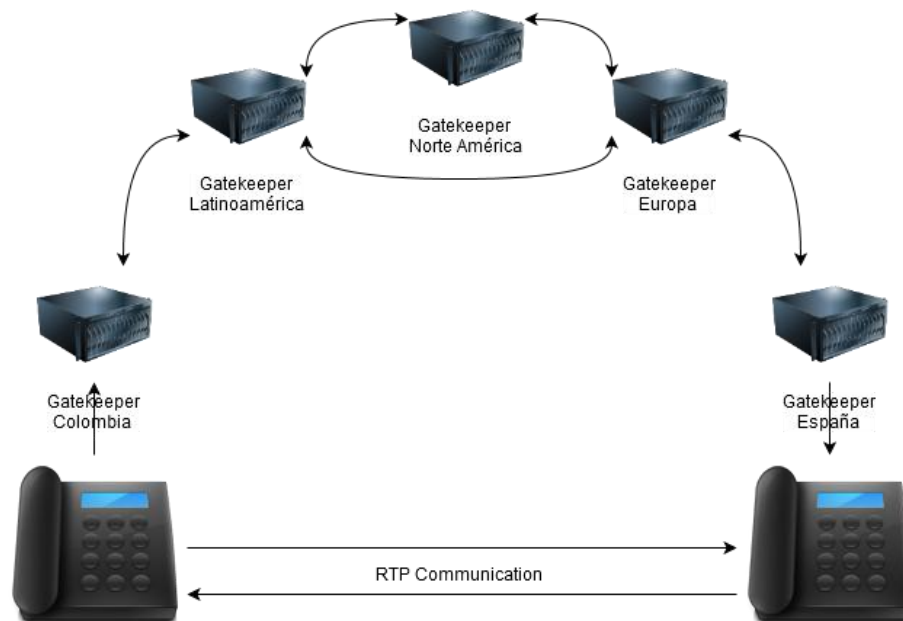


Figure 1. Call setup with Global Network Gatekeepers

1. The dialing of the number is performed
2. The H.323 / SIP Gateway communicates with the adjacent Gatekeepers seeking the terminal
3. Finally, the terminal registered is found in the destination Gatekeeper
4. The transmission is done through *Real Time Protocol (RTP)*

Document developed by [RENATA®](#) as WP4 leader with the support of MAGIC Project partners.

After NRENum.net

By using ENUM, the terminals make the query to H.323 / SIP Gateways, which, in turn, consult the information on the ENUM tree. The ENUM server responds the URI address associated with the telephone number dialed, then the DNS servers are queried for information of a direct connection with the service responsible for establishing communication with the terminal. After the negotiation of the call, the communication is established by using a *Real Time Protocol* (RTP).

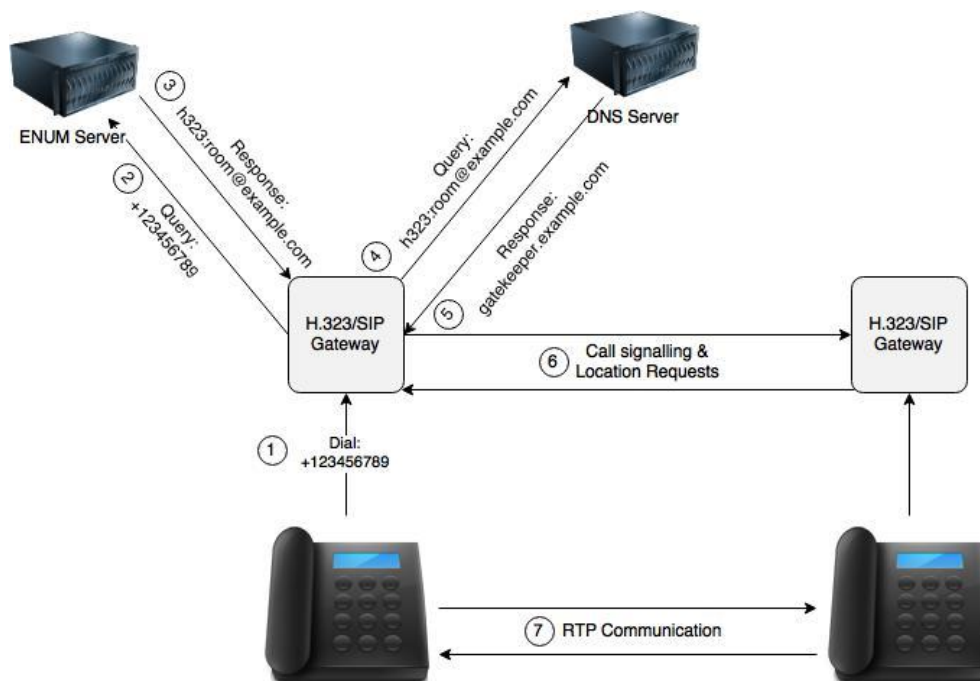


Figure 2. Establishing a call with NRENum.net

1. Dialing of the number
2. The H.323 / SIP Gateway queries the number of the ENUM server
3. The ENUM server responds the associated URI
4. The H.323 / SIP Gateway queries the URI to the DNS server
5. The DNS responds with the domain name and server port responsible to make the connection
6. Between the Gateways make signalization and search of the terminal
7. Communication is made via *Real Time Protocol* (RTP)