White paper

WANOPT
The Wide Area Network Optimizers

WIDE AREA NETWORK STRUCTURAL ANALYSIS -APPLICABILITY FOR CALL CENTERS OPERATORS

Many call-centers operators outsource their transport services, relying entirely into carriers to provide the interconnection between theirs client's and their attendance sites. This strategy, although practical in operational terms, very often implies in higher transport costs. The reason for that is the fact that outsourcing the calls' transport entirely, deprives the call-centers operators of two fundamental possibilities of reducing operational costs:

- Usually the 0800 contracts don't discriminate the origin of the calls, defining a flat rate per spoken minute (very often with discount per quantity) regardless from where the call was placed. Not having a distributed traffic capitation structure makes impossible to the call-center operator to take advantage of the tariff system exploring different interconnection costs associated with the users geographical distribution. For example: In Canada the calls within the same area code are not charged, that means if you only have a 0800 number and are locked in a flat rate contract you will pay for the call even if most of your clients are calling from the same area code of your attendance site.

- Secondly if a call-center operator doesn't have any capitation node, it cannot distribute its IVRs and therefore cannot take advantage (In terms of transport costs) of the services whose process can be addressed by these devices, obligating all calls, including the ones to the IVRs, to be transported all the way to the attendance sites.

Therefore, if the call-center operator decides to implement its own transport network there is plenty of room for optimizations. But not any design will bring savings. An over engineered and badly designed transport structure may becomes even expensive than an outsourced one. Consequently, the challenge is to design a structure, which minimizes the costs involved with transporting the calls while maintaining the same high levels of service the clients have become accustomed to.

The magnitude of the savings achievable implementing this strategy varies and is directly related to the geographical dispersion of the users. However, through the careful analysis of traffic flows, interconnection costs and tariff rules, it isn't unusual to find over 50% savings in real dollar terms over today's transport costs. The gains obtained through these optimizations can either be transferred to the clients increasing the company competitiveness or be kept increasing the company profitability.

Although the identification of an ideal structure to transport a given traffic volume is in itself already a huge benefit further analysis can be done. The same process, which allows the calculation of these structures quickly, opens the door to work through many calculations using several traffic volumes. Through this analysis is possible to establish the correlation between volume and cost.

Through this process is possible to identify the correlation between traffic volumes, infrastructure cost and revenues as they relate to the services offered by the call centers. For example, assume that a new service is being considered by the business as an additional service offering from one or all of the call centers in a country. The analysis enables the modeling of business cases identifying the correlation between each new call-center service and the associated cost involved in implementing it effectively.

Since in most cases is possible to perform a very quick and accurate analysis, the automation of this process allows for the simulations and results to be compiled within very short time frames. This enables the business to consider several scenarios with clear definitions and documentation of the costs and benefits of each service before implementing it.

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By providing such elaborate and accurate information to the business, this process becomes a powerful decision support tool. It makes it possible to generate simulations where the break-even points are identified and shows how different volumes, topologies, technologies or interconnection service providers influence the overall cost of the structures analyzed.

WANOPT provides the services/resources to implement this process. Through its exclusive analytical tool (Ariete®) it empowers its clients allowing them to achieve the utmost in network optimizations and traffic analysis.

Solutions for analyzing call-centers (Ariete®)

Ariete® is an advanced tool for analyzing call-centers; designed to help cal-centers operators analyze their telecommunications needs. This is achieved through establishing the optimal correlation between the users geographical dispersion, its traffic volumes/flows and the tariff system. The tool itself (Ariete®) is the core of a methodology for identifying the ideal call-center structure. The process follows the following three stages:

- Data gathering/files preparation
- Ariete® deployment
- Results refining

Data gathering/Files preparation – phase 1

The first phase consists of identifying and formatting the data necessary to perform the analysis. The required information is grouped into seven categories:

- Services provided by the call-center (Including their traffic profile)
- Sources of traffic (Clients' geographical distribution)
- Attendance sites (intended ones or the tool can chouse them automatically)
- Interconnections
- Interconnection costs
- Hardware modularity and costs
- Potential clustering nodes.

Ideal structure identification –phase 2

The second phase consists of deploying the tool. Based on the data identified in the previous phase, the tool identifies all possible clustering scenarios (traffic capitation topologies) and calculates all possible combinations of access, backbone and hardware for each scenario and set aside the more cost effective ones.

Refining the results – phase 3

The third and last phase of the analysis refines the results, allows verification and client specific considerations. In this phase changes are implemented and the models adjusted, setting several scenarios taking in consideration several levels of services (adjusting parameters such as utilization rate, tolerable latency, tolerable queue time etc).

The calculation process produces all the project details: Topology, equipment, trunks, backbone circuits, IVRs distribution, paths, service providers and number of attendants per shift. Consequently, having this clear view of what needs to be implemented and/or changed we are able to construct the whole project plan, including phases and schedules. With a clear view of the effort necessary to adjust/implement the call-center structure we are ready to decide how, when or if the project will be implemented.

Having a dynamic model enables us to analyze how the variables involved influence each other and verify how changing each one of them affects the overall cost of the structure.

These correlations allow the company to make decisions with respect to a wide range of issues, from the purely technical to strategic. For example:

Market strategies

- The minimum amount of users necessary to make the services feasible
- Services provided.
- How much is charged by each service

Operational strategies

- Who pays for the Access (availability or not of 800 access)
- Whether or not the company provides local numbers
- If services are provided only through the IVRs, only by live attendants or both.
- In or out source of transport

Technical strategies

- Whether or not to use traffic caption nodes
- Whether or not Distribute the IVRs.
- Voice compression rate
- Acceptable quality of Service
- Hardware and interconnection providers
- Interconnection technologies

Decisions as the ones above mentioned are very hard to make without an automated tool that analyzes all aspects of the issue. It becomes even harder when varying the demand that the call-center is suppose to handle.

Using this tool to perform this analysis we can establish the correlation between all variables involved. In other words we can model the problem.

The capacity to analyze the structure dynamically allows us to verify the cost associated in implementing each new service, assuming different percentage of the users population will be using it. Therefore if we have an income or revenue associated with the transactions performed by the call-center we can even produce a return over investment analysis and show where the breakeven point is as with respect to an individual service.

As mentioned before the analysis provides the ability to make well-educated decisions such as who pays for the access, which services will be offered only through the IVRs or only through live attendants. For instance, if we verify that 90% of our users are located inside the area codes of our nodes we may consider the alternative of not providing 800 services for these areas at all.

If for instance we have an infrastructure already in place we should compare the costs of the new call-center with the actual one. At this point it will become clear which cost factors in the actual structure could be reduced and we can produce a very straightforward, High-level managerial report, comparing the actual expenditures with the proposed ones. Typically we state as clearly as possible the potential real of savings and the investment necessary to implement the proposal. With the results of this calculation we can identify the cost of the proposed infrastructure and compare it with the actual cost. We can also calculate the savings and return over investment of the project.

Then, having a clear view of how much it would cost to build its own infrastructure the organization gets a better understanding of how much would be reasonable to pay for a complete outsourced solution. In addition, when soliciting bids for an outsourced solution, the process is again simplified since the parameters around the requirements are predefined and constant. This gives the organization the ability to compare apples to apples when reviewing the proposals and so make the evaluation process simple in this respect.