



IP-Telephony monitored by central CapMon solution

" Our main task is to ensure that the more than 40,000 employees in the region get better service for less money - also when it comes to telephony systems. We invested in a monitoring solution from CapMon to keep a very high voice quality of the more than 20,000 IP phones that are in use with us," says Martin Milbrat Petersen of Region Hovedstaden CIMT.

Martin Milbrat Petersen, who has more than 15 years of management experience from the telecommunications industry, now works as a telecommunications specialist in the CIMT department of the Capital Region (Region Hovedstaden).



Telecom Specialist Martin Milbrat Petersen: "We can now discover problems with the IPT before the users do."

650 employees are responsible for operating, monitoring and developing the majority of the region's IT, medical and telecommunications equipment.

One of the CIMT department's main tasks is to ensure the quality of the hundreds of thousands of conversations taking place each day from more than 20,000 IP phones, which are available for the region's employees. They are used particularly in regional hospitals where they are essential to the patient treatment, especially in life-threatening situations.

Therefore, in autumn 2013 a new monitoring system was put into operation, performing continuous measurements of the quality of each single IP Telephony (IPT) conversion carried out in the 125 buildings that belong to the region. CapMon A/S was chosen as supplier and project advisor.

MOS quality measurement

The IPT monitoring solution is an extension of the existing CapMon solution that has been used for many years to monitor the region's IT equipment, network, and medical equipment. The output from the new solution is detailed statistics compiled every five minutes for each IP server in the region.

Statistics include, among other things, figures of MOS or Mean Opinion Score, a well known unit of measurement in the telecommunication world, that is used to measure the quality of each call from IP phones in the region.

The MOS figure is read on a scale from 1 to 5. If it drops below 3,5 an automatic workflow is initiated. The CapMon solution starts identifying the device or devices causing the problems. It may be a server, a segment of a WAN or a VLAN, a single IP phone, or a combination of several elements which are causing the problems.

Proactive solution

The solution gives us very clear benefits, explains Lars Falk Hansen, head of the telecommunicatins section of CIMT:

"This was the main idea of the project - and we have achieved a proactive solution so that we can discover any problems with the IP telephony before the users are impacted.

>>

cap:mon
THE MONITORING COMPANY



Section Manager Lars Falk Hansen: "CapMon provides better service for less money."

Our service center can now identify the devices causing problems and immediately start replacing or repairing them."

The new IPT monitoring solution is a good example of an investment that meets the target of the CIMT department, i.e. to provide better service for less money, adds Lars Falk Hansen.

"The new CapMon solution is an expansion of the surveillance of the region's IT and medical equipment. But before it was selected, we were looking at several alternative solutions from other vendors,

We requested alternative offers to the CapMon solution. However, the other solutions we looked at were expensive and complex standard solutions. It would be much more complicated and expensive to adapt the systems to our needs than it was with CapMon's solution - if at all possible."

Consequently, the CapMon solution was chosen and implemented in autumn of 2013. The project met both budget and timeframe and worked as desired from day 1.

Martin Milbrat Petersen explains:

"We have used a solution from CapMon to monitor our IT systems and network for many years, and we have seen them as highly competent people. Not only in technical terms but also because they are good at converting our ideas and wishes into smart and reliable solutions - primarily because they themselves have developed the system from the start, making it easier for them to adapt to specific customer requirements. Moreover, you can clearly see that the CapMon developers are passionate about delivering what we want and are always making sure that our technical requirements are fully met.

Who is CIMT?

CIMT is a department in the Capital Region of Copenhagen, responsible for operating, supporting and developing the region's IT, medical and telecommunications equipment. This ensures an equally high performance level on all 125 locations in the region.

The aim of the CIMT systems is to improve work processes for the region's 40,000 employees and ensure high quality and efficiency in patient care

The majority of the region's IT, medical and telecommunications equipment and associated LAN and WAN is monitored from one central service/call center in the region's core technical department, CIMT, in Copenhagen, with a total of 650 employees.

CapMon solution at CIMT

Monitoring of some 20,000 IP phones in the Capital Region is done with an IPT module with three primary functions:

- Continuous collection of quality data on all calls over the IP network. The measurements include bandwidth, Jitter, Latency, Packet Loss and MOS.
- Troubleshooting tool that helps identifying calls of poor quality.
- Graphical presentation of statistics on a large screen in the CIMT Servicecenter. The average MOS figures are shown on the screen for each individual location.

