How network monitoring is keeping you in the dark

If your business is a global enterprise with a complex set of contact centres, you can have complex systems in place for monitoring your telecom networks. With that in mind, you could be forgiven for thinking that you have things under control and will know if anything has gone wrong with your contact numbers. But is there a blindspot?

What's happening outside your network? If one of your numbers failed, would you necessarily know about it?

If you're only monitoring your network, any number of customer-impacting issues can happen outside of your network and you won't know about it until a customer complains...If they complain. Long-established research has shown that only 4% of customers complain[1]. The other 96% won't voice their unhappiness, may switch their business to another provider, and tell others about their poor experience. More recent research on today's switching economy confirms this - finding that 64% of customers switched providers due to poor service[2].

What can you tell by monitoring your network?

Monitoring your network can provide assurance that:
- MPLS services are connecting
- All endpoints are reachable
- There is network performance data for throughput

And provide data on:
- Error rates
- Bandwidth, packet loss, latency and jitter
- Downtime/uptime
- Use-time percentages

'Only 4% of customers complain. The other 96% won't voice their unhappiness'.
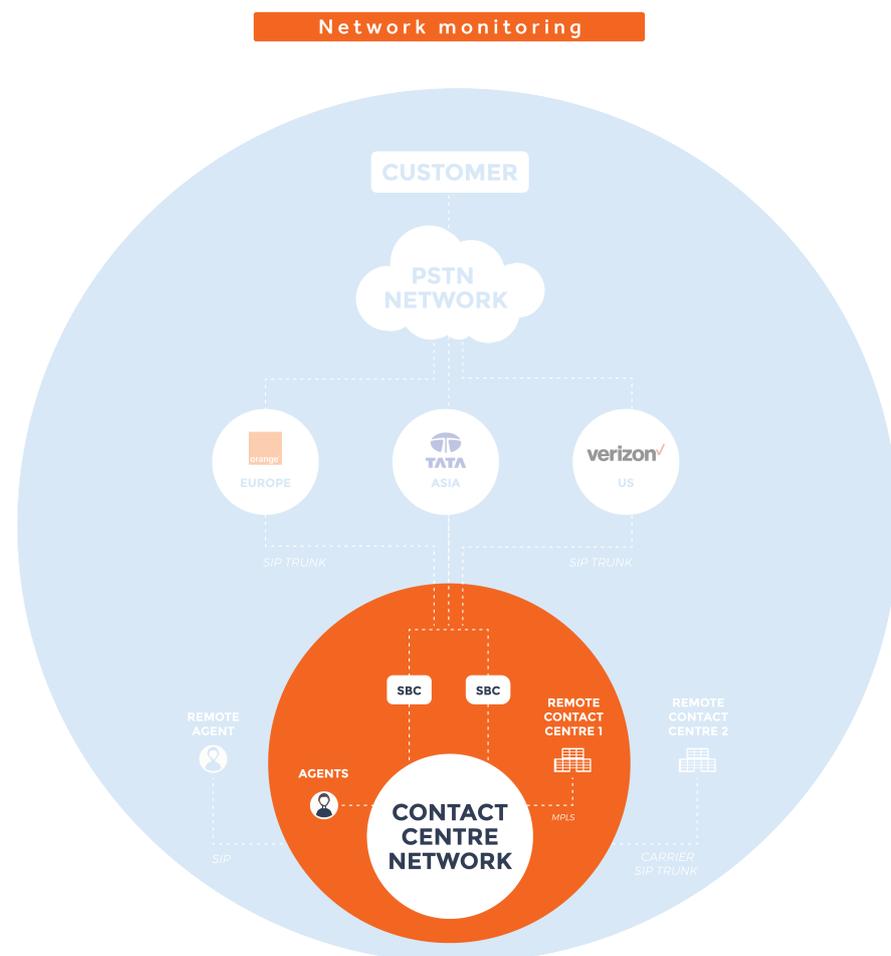
Network monitoring

Diagram 1: Network monitoring alone leaves a huge blind spot on the route between your customer and you. It gives no visibility of the grayed-out area above.

1   1st Financial Training Services
2   Accenture Global consumer pulse research

The reality: 1 in 25 calls fail, despite network monitoring

However useful network monitoring may be internally, the reality is that it won't pick up any of the issues that can occur on the external network. We've conducted 50 million test calls globally, using in-country servers and phone lines that replicate customers' experiences from wherever they are. This gives us a wealth of data on the size of the issue.

Over those 50 million tests, we've found that 1 in 25 calls fail to connect, or suffer critical customer-impacting audio quality, DTMF or IVR (touch tone) failures.

What network monitoring CAN'T tell you

No matter how sophisticated your network monitoring systems are, they won't alert you to issues happening outside your network:

- Intermittent or total toll free number outages

- DTMF failures

- Incorrect carrier routing

- Audio quality issues (silence, one way audio, noise/interference)

- Transcoding

- DTMF failure

- Post dial delay (PDD)

If you're only monitoring your network, and not your numbers, then you have no line of sight through to your customer - you're in the dark about their end-to-end experience with you. With no idea what is happening outside your network, numbers could be failing, or a drop in quality outside your network will impact the audio quality on your lines.

'1 in 25 calls fail to connect, or suffer other critical customer-impacting failures'.

A bit about audio quality codecs

Audio quality is very similar to the quality of images or video. If you want to send an image or video, you can downgrade the quality to take up less data, but once downgraded, you can't get that higher resolution image back.

Similarly, carriers can downgrade the quality of your audio to save bandwidth. Your network may be set up for the highest quality codecs such as G711 or G722. But if any one of the carriers operating the path from your customer to you uses a lower quality codec, the premium network codecs you're paying for are redundant. Low quality audio coming in to a high quality network will still be low quality audio.

What can you tell by testing your numbers?

Number testing tests connectivity and audio quality before and after it reaches your domain network, allowing you clear sight of your customers' experience.

In-country servers place automatic calls in to your local number. This tests that all your numbers globally are connecting. The call is also recorded to give an objective measure of audio quality.
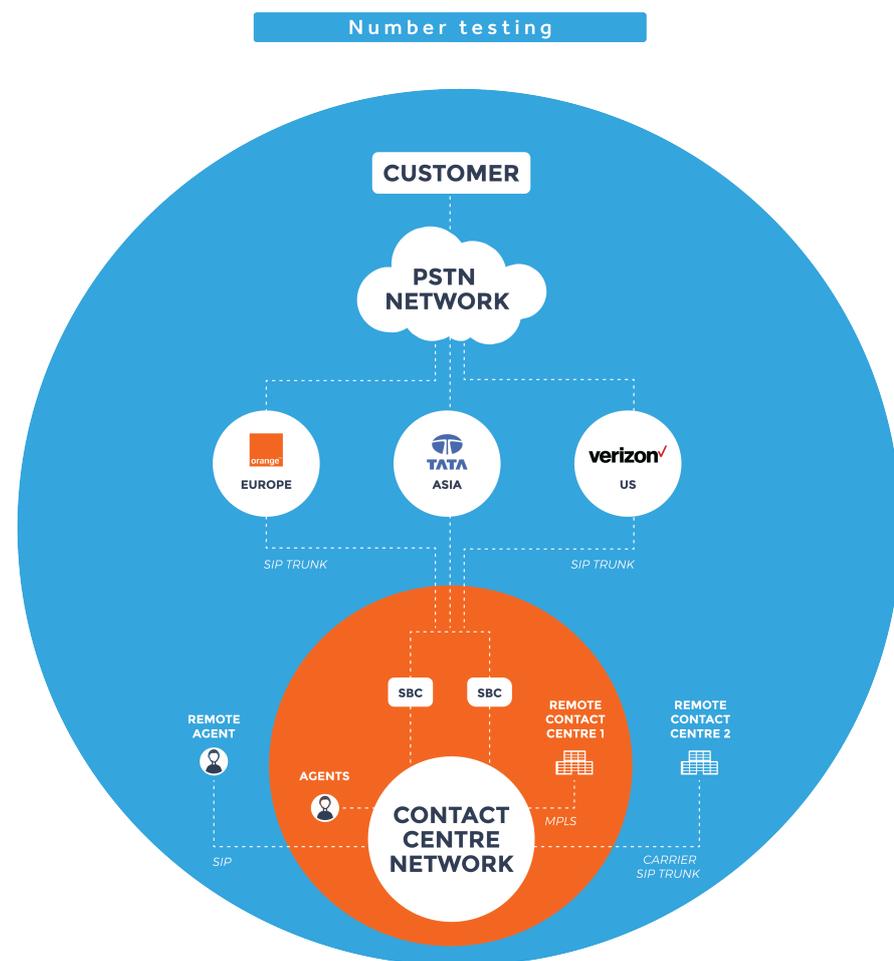

Diagram 2: Number testing allows you clear sight of your customers experience by testing the entire call route, including via all carriers operating outside your network.

The impact of numbers failing

- Customer frustration, having a negative effect on your net promoter score (NPS) and your customer effort score (CES)

- Increased average handling time (AHT) and lower first call resolution (FCR) rates, impacting on cost and reducing margins

- Increased mean time to resolution (MTTR), with technical staff spending time troubleshooting rather than working on more valuable developments.

'A drop in quality outside your network could be impacting the audio quality on your lines'.

Number testing allows you to see your call centre the way your customer sees it - and gives you all the information you need to fix any problems before they impact on the customer:

- Identify issues in real time by replicating the customer experience from the outside in.

- Hold carriers to their SLAs. By building up a picture of repeated testing, you will be able to identify when there is a pattern of loss of audio quality, allowing you to pinpoint where and when carriers aren't maintaining agreed levels of audio quality.

- Have all the data you need in detailed call logs to troubleshoot any issues immediately. Going to a carrier, or colleagues, with detailed call logs showing where calls have failed, puts you in a completely different position to having delayed and partial information collected from customer complaints.

Where could number testing take your organisation?

Number testing lets you see yourself the way your customers do. If you're focused on improving your customer metrics for NPS and CES, then you can't afford to be in the dark about losing calls and quality on your lines. And if you want to free up your technical staff to work on valuable improvements to your systems, then you need to reduce your MTTR when issues arise.

Either way, testing your numbers, as well as monitoring your network, will give you the business intelligence you need to achieve your goals.

'Testing your numbers will give you the business intelligence you need'

Case study - you can't rely on customer complaints to alert you to things going wrong

Following a load balancer issue which caused one in five calls to our customer's contact center to suffer dead air, a review of customer reports took place. Despite the issue lasting over 30 hours, and an estimated 4,000 customer calls impacted, only one customer complaint reached the telecoms team.

That complaint was 13 hours after Spearline Testing first reported the issue. If 4,000 failed customer calls results in just one complaint reaching the telecoms team, you need other methods of finding out what your customers are experiencing when they call your numbers.