Case Study

Total
A Clustre Case Study

The Client

Total employs over 100,000 people worldwide

Many working in remote parts of the world.

With operations in more than 130 countries, Total are a leading international oil and gas company. They produce, refine and market oil and manufacture petrochemicals. They are also a major player in natural gas and, through their distinctive brand 'Sunpower', they are now ranked second in the global solar energy industry.

The creation of a robust platform for reliable and consistent global communications has always been a key priority. But providing customers and employees with fast, accurate, up-to-the-minute information was proving immensely challenging…

The Need

Total's global challenges crystallised into three key imperatives:

- *Turn a fragile and fragmented patchwork of sites into an integrated global network.*

  Total had a system of disconnected and inconsistent sites that were subject to wildly fluctuating connectivity and performance.

- *Centralise global control whilst optimising the user experience with locally targeted use of CDNs.*

  Consistent global messaging and shared corporate values had always been a core management priority.

However, so also was the need to optimise the user experience by adopting a flexible approach to targeted local data. Senior executives bought into the need to make strategic use of CDNs and so make the content real and relevant to local communities.

- *Guarantee fail-safe connectivity through real-time performance analysis and instant CDN switching…*

  The third of Total's major priorities – and one that is shared by most global companies – was the need to absolutely guarantee connectivity. Drop-offs and, worse still, total drop-outs in connectivity are a deeply worrying reality of life. These concerns had always been compounded by an absence of end-user performance data. Without such data, how in the world can companies monitor performance, identify anomalies and take critical switching decisions in real-time?

The Solution

Total turned to a Clustre member firm to find the instant solutions…

This company has developed a unique cloud-brokering software product that captures and acts upon user performance data from around the globe. It shows precisely what response times and availability is being experienced by end-users around the world by service providers such as CDNs and Cloud vendors. Billions of such readings are taken each day and they are used by this innovation firm to dynamically switch end-users from one service provider to another. This real-time analysis and dynamic switching guarantees consistently fast access and 100% availability, at all times.

The Result

Total have deployed this unique software centrally to control the experience being achieved around the world. The impact has been immediate and impressive. Using a single corporate version of the website, installed at two different data centres, they have achieved:

• *Much greater control; much greater flexibility*

This innovation company provided Total with an instant solution to this contradictory priority. It ensured that global control would be vested in France whilst giving discretionary data targeting to different regions of the world. Using CDNs to provide local data hosting, Total are able to optimise the user experience by delivering local content to different regional communities.

Furthermore, the advanced analytics built into the software went on to provide added insights. Focusing on the end-user experience, Total are now able to monitor the viewing behaviours… information preferences… and even the devices of choice (PCs, tablets or smart phones) of users. This enables them to finesse content and deploy resources with much greater accuracy.

• *Elimination of new site launch risks*

Most global site launches are high-risk activities. Normally, when a new site goes live, there is little or no chance to reverse out of problem, at least not quickly. But the risk landscape has suddenly and dramatically changed…

By restricting the release of a site to a limited number of users at any one time – effectively beta testers – Total can guarantee real-time, risk-free testing of new sites. If a problem surfaces, the site can be pulled back in two seconds for changes to be made (using more traditional methods would take at least four elapsed days!). The fear of wrecking the Total brand and consumer reputation has been instantly eliminated.

• *30x performance improvement*

The time it takes to make simple but essential setting changes is one of the biggest frustrations for Comms Managers. And this problem is not confined to third world nations where infrastructures are still in the early stages of development. Even in technologically advanced nations, such as China, it can take days to switch basic DNS settings!

However, since adopting this software, Total have radically enhanced performance. Today, as a result of using multiple local CDNs in China under the control of this innovation team, end-users have received a massive 3,000% performance improvement.

"It was like losing your left leg and continuing to walk as if nothing has happened."

• *Resource swapping delivers seamless efficiencies… and economies*

The ability to switch resources not only optimises connectivity but it also enhances efficiency…

An organisation's hosted cloud services could be split between several rival suppliers. The new software can not only swap suppliers to optimise connectivity but it can also switch seamlessly between providers to exploit the most economic tariffs.

For example, it can recognise when contractual thresholds are being reached with one supplier and instantly shift to a lower-cost provider with spare capacity.

• *Creation of an active-active data centre architecture…
an intuitive and instant life-saver*

Total uses the new software to deliver an active-active
data centre analysis and switching service. Recently, this
had an immediate and very positive impact when one of
Total's two data centres suddenly went offline…

The software identified there was an issue and instantly
switched users and customers to the second data centre
before anyone even knew there was an issue.

As Alexandre Le-Kim – Head of Global
Communication IT Solutions at Total – observed:

"It was like losing your left leg and continuing
to walk as if nothing has happened."

• *Investment costs recovered within 1 month*

The most remarkable revelation of all, though,
must be the payback statistics…

Many companies worry about the exponential cost of
technology and the difficulty of obtaining accurate ROI
metrics. However, as Alexandre Le-Kim explained, these
concerns proved academic at Total…

"In reality, it took just one month to recoup the costs of
implementing the software and co-ordinating our web
presence across 30 countries… that's some ROI record."

It's certainly a stat that speaks volumes.

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Alexandre Le-Kim
Head of Global Communication IT Solutions at Total