Local Clouds and Data Sovereignty

The benefits of a localised vs. a global cloud network

If your view of a cloud service is a single homogenous network with no geographic or national boundaries, then you may have concerns with shifting your key business processes from in-house to the cloud around data security.

This document sets out to outline an architecture for a cloud communications platform as a service (CPaaS) that brings all the benefits of scalability and elasticity of a cloud system but using a localised, highly secure architecture.

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Background

When the architecture of Aculab Cloud was being considered back in 2011, Aculab's engineers were able to put to good use a deep understanding of communication systems gained from over 20 years of selling hardware and software communications 'building-blocks'. It was clear in the design phase that in order to support a global customer base, the system would need to be regionalised to avoid call latency issues when, for example, a user in Europe wanted to place a voice or fax call to Australia or the US.

This architecture decision is now providing further benefits to users with data security and compliance concerns, as the Aculab Cloud service can be operated in a fully-regionalised way. To date we have rolled out Aculab Cloud instances in the EU (Ireland), the US (west and east). We are, however, able to spin up Aculab Cloud regions in many other territories and countries on a case-by-case basis, in a matter of weeks.

Regional legislation

When it comes to data protection measures, each region or country will have its own requirements and legislation. These may govern both data sovereignty (rules for cross-border data transit), and data localisation (rules governing the location where citizens data can be collected, processed and stored).

For example, in the European Union (EU), the member states use legislation such as the General Data Protection Regulations (GDPR) to lay out the ways and means to protect the data of EU residents. On top of that, each country may have further country-specific rules for data protection, an example being the UK and its Data Protection Act (2018). The GDPR requires that all data collected on citizens must be either stored in the EU, so it is subject to European privacy laws, or within a jurisdiction that has similar levels of protection.

aculabcloud
A true cloud telephony platform

Key features for local cloud deployments

In order to meet the data protection and localisation rules, Aculab Cloud provides the following:

Local data storage

The regions of Aculab Cloud are fully self-contained. All the data processing and media storage for a region will stay in that region. Note here that when we use the term region it can mean a continent or group of countries (e.g., the EU region), or a specific country that has very tight data protection requirements.

You can be sure that your data (and your customers' data) will stay within the region that you choose – we do not need to transit that data to a centralised point, for example.

Encrypted storage

If you choose to store your media files on the Aculab Cloud servers, we offer full encryption capabilities. You can use 128, 192, or 256 bit AES encryption for media files (WAV voice recordings for example) and fax files.

The choice to store your media files on your own server is, of course, another option. Either way, protection for potentially sensitive data such as health records is guaranteed.

Local carrier partners

Integration with a wide range of telco carriers has been carried out for Aculab Cloud to provide a global reach for voice call, SMS and fax delivery. In some cases, a local partner is sourced to provide country-specific benefits. In other cases, a global partner is used to give the widest coverage. As part of our offering for customers requiring a localised cloud, we will make sure a local telco is used wherever possible so that all data surrounding the call or message (data records, billing records) are kept within country or region.

A side benefit of using local carriers is, of course, low latency calls. If the call doesn't have to transit half the world to reach its destination then the end-user will notice the benefits in the form of low-latency and call reliability/speech quality.

What Next?

By now, we hope to have removed some of your concerns that a cloud-based communications system could meet your business needs, and that Aculab could achieve the levels of data security and privacy that you need.

Aculab Cloud runs on Amazon AWS infrastructure, so we are able to build a local cloud wherever AWS can offer the servers:

America and South America
- US East
- US West
- Brazil

Europe
- Ireland
- Germany
- Sweden
- France
- Italy
- Spain*
- UK

Africa
- South Africa

Middle East
- Bahrain

APAC
- India
- Singapore
- China
- Korea
- Japan*
- Indonesia*
- Australia

* coming soon

We are continually evaluating the regions that we offer; if you wish to utilise cloud communications services in any of the locations above, and want to find out more about a system for your country/region, get in touch with one of our telecom experts today.

About Aculab

Aculab provides deployment proven telephony products to the global communications market

Whether you need telephony resources on a board, on a host server processor or from a cloud-based platform, Aculab ensures that you have the choice. We are an innovative, market leading company that places product quality and support right at the top of our agenda. With over 35 years of experience in helping to drive our customers' success, our technology is used to deliver multimodal voice, data and fax solutions for use within IP, PSTN and mobile networks – with performance levels that are second to none.

For more information

To learn more about Aculab Cloud and Aculab's extensive telephony solutions visit:

www.aculab.com

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