

# IPC

## Transforming Finance with Containers

6,000

customers

600,000

calls processed pcm

200%

capacity doubled

### Who is IPC?

IPC is one of the best-known names in the UK finance industry - providing banks, hedge funds and trading floors all over the world with high-performance network services. It develops innovative ways of connecting financial institutions and leads the development of secure and compliant recording services that can be inserted into any mobile messaging platform, such as WhatsApp and Skype for Business.

IPC is the sole mobile voice recording provider to EE in the UK and Orange France Telecom in France. A truly global company, IPC is present in over 60 countries, across six continents and has more than 6,000 customers in 700 cities.

**“Availability and resilience are of paramount importance in finance. Our customers require reassurance that we are innovating rapidly, with their interests in mind. Our move into containers is bringing that reassurance.”**

Jonathan Gill, Manager, Cloud Engineering, IPC Technium



# The journey to containers

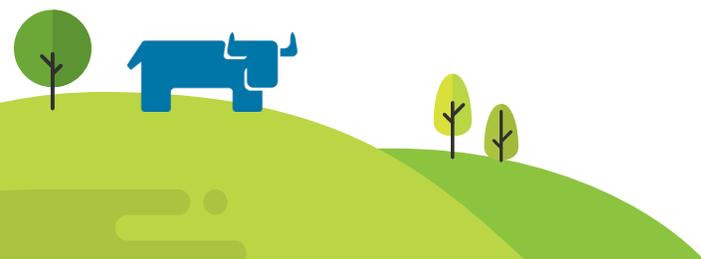
IPC has two flagship products. Firstly, Unigy 360, a cloud-based connectivity platform that compliantly, reliably and securely connects 70 of Europe's largest banks and financial institutions. Secondly, IPC's pioneering Mobile Voice Recording System (MVRS), running on Rancher, captures over 600,000 calls a month. It is used by 40 financial institutions and 4000 subscribers in the UK alone. This service ensures regulatory compliance by recording every relevant communication, regardless of the platform.

Before IPC discovered containers, it was running its core services via 145 dedicated servers, hosted in data centres in Paris and London. IPC's legacy infrastructure had been reliable for many years but Cloud Engineering Manager, Jonathan Gill, and his team were spending much of their time managing and maintaining the physical estate, rather than innovating.

**“Unigy 360 and our MVRS are such mission-critical services, we needed a way to build scalability and resilience into our architecture. Rancher's platform and support provided the answer.”** Jonathan Gill, Manager, Cloud Engineering, IPC

IPC's legacy systems were reaching the end of their lives - now attracting less support and updates. Investing in new versions would prove costly, difficult and time-consuming. Migrating and testing in the traditional way would take vital resources out of play for extended periods, which wasn't acceptable. The team knew, too, the existing infrastructure couldn't support IPC's move to a more modern microservices and cloud-centric architecture. Crucially, IPC's legacy infrastructure wouldn't allow them to innovate around new messaging methodologies such as Whatsapp, Skype for Business and WeChat. With these becoming increasingly popular with traders, IPC started looking for a solution.

Since 2017, Jonathan and his team had been looking at how various containers and orchestration methods could benefit different parts of the business. An early OpenShift PoC gave way to experimentation with Rancher and then, in June 2018, IPC started running the MVRS in Rancher. Now, gradually, the team has started to migrate Unigy 360 to Rancher.



## What were the problems IPC was trying to solve?

### Improving Availability and Resilience

Regulatory compliance within the finance industry has changed dramatically over the last few years, particularly in Europe. New legislation such as GDPR, the Markets in Financial Instruments Directive (MiFID II) and the FCA's recent ruling on the 'requirement to record obligation' - SYSC 10A - has significantly increased the burden on financial institutions to keep accurate records of all financial transactions.

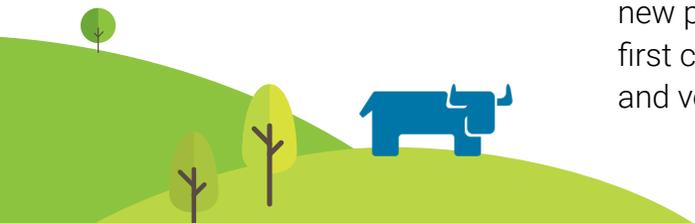
IPC's MVRS was created to help financial organisations be compliant by default; seamlessly integrating call and message recording into any communications platform. Due to the sensitive nature of the service, availability and resilience are crucial. IPC handles in excess of 600,000 conversations per month, each conversation ranging from a couple of minutes to hours, all processed by the MVRS running on Rancher.

The team looked to Rancher to provide an agile environment to run and update MVRS. Specifically, they wanted to dramatically reduce the time it would take to update, test and deploy. Migrating the MVRS into Rancher, the team has seen significant economies. While, historically, it would have taken two to three days in a staging environment to update and test, the team can now run automated tests within containers whilst stringing in live calls. Because testing is managed live, it takes minutes to move into production compared to hours.

### Pioneering Modern Messaging Methods

Unigy 360 was created to serve the distinct needs of the financial industry. The sector needed its own, highly secure private cloud infrastructure and dedicated communications framework to isolate, record and archive sensitive conversations.

IPC's focus has been to allow messaging and recording over any messaging platform. WhatsApp, in particular, has transcended consumer use - becoming a favourite way for traders to negotiate. Jonathan wanted to find a way to add new messaging platforms quickly to Unigy. The speed at which he was able to spin up new services in Rancher meant he could experiment with new platforms rapidly and at scale. As a result, IPC is one of the first companies to offer secure and compliant communication, and voice recording, over WhatsApp.



Regardless of the platform, every conversation leading to a transaction must be captured and stored to ensure compliance. Working within Rancher, Jonathan and his team are able to capture a wider range of communications methods.

## New Services and Global Growth

One of IPC's main objectives is to adopt a microservices-centric approach to development; embracing containers is a major way to achieve this. Why? IPC recognises the speed and agility with which they can innovate depends directly on how flexible the architecture is.

In this new, containerized environment, IPC will be able to innovate at a much faster rate and is preparing to roll out of a number of new projects. Firstly, IPC is working with Green Key to develop a new speech-to-text transcoding service which can run on Rancher, hosted in the cloud. Next, the team plans to introduce a wave of ID-centric solutions designed to make interaction between bankers and traders easier and more dynamic. In addition, containers are hastening experimentation with new communications platforms in a bid to embrace future advances in messaging.

**“Working with Rancher means we’re not limited by geography. Regardless of where our customers need connectivity and voice capture, where we’re linked to local networks, we can launch a service instantly.”** Jonathan Gill, Manager, Cloud Engineering, IPC

Finally, working in a more flexible, containerised environment is enabling IPC to grow internationally. In Hong Kong, the team is migrating its MVRS to the cloud, and onto Rancher, working with a local telecoms network operator to provide recording services to millions of Chinese businesses. By virtue of using containers, the team can spin up a new instance in seconds, regardless of location.



## What were their requirements from their chosen platform vendor?

IPC needed a microservices-centric approach which would allow them to innovate and facilitate the company's migration to the cloud. More importantly, it needed an infrastructure that would allow them to innovate at speed and scale, as the unique needs of the finance industry evolve. Above all, IPC was looking for a way to maintain the high availability of its core services, whilst being able to experiment in the background. Something they couldn't do before.

Rancher lends itself to a microservices requirement, capable of managing multiple projects concurrently without affecting performance. Since starting to work with Rancher, Jonathan has been able to develop cross-platform recording capabilities in days rather than months, trialling and testing new ideas at a moment's notice, in isolation from the main infrastructure.

Rancher allows the team to swap features in and out quickly and easily, testing and routing traffic elsewhere as needed. The team is now looking at migrating its operational systems to Kubernetes, supported by Rancher, as a way to rapidly scale and build its growing cloud infrastructure.

**“We knew about the benefits of containers before we came across Rancher but the real value, for us, is in the collaborative way we work with the Rancher team. We're innovating together for our customers and for the future.”**

Jonathan Gill, Manager, Cloud Engineering, IPC



# How did they plan their migration to Rancher?

# What have been the benefits?

## Journey

1. December 2017 started looking at containers
2. OpenShift trials underway early 2018
3. March 2018, plans developed and test cases started with Rancher
4. Officially started working with Rancher June 2018; moved MVRS into Rancher
5. Now migrating Unigy 360 into Rancher

## Benefits

- New instances created in minutes; working with microservices is allowing IPC to spin up new systems to test ideas on the fly. It's much easier to create a new pod for a new possible service than find and provision new hardware to run one
- Capacity doubled in minutes; if IPC needs new capacity to handle volume/load, Kubernetes can be instructed to increase the replica set number - Rancher takes care care of the rest. The result? A perfect duplicate of an existing, tested system, thats configured to run as needed within a few minutes
- 600,000 calls processed per month in Rancher, recorded and archived per month; by MVRv2 running on Kubernetes in Rancher

For more information about IPC or other public reference customers in production with Rancher, please contact us at [sales@rancher.com](mailto:sales@rancher.com).

