

O2 Case Study

Client	O2 Czech Republic
Industry	Telecommunications
Key issues	Resource Intensive Infrastructure Management High Performance Computing Requirements Scalability Issues
Solution	Taikun's managed Open Compute Platform

O2's partnership with Taikun highlights the power of expert insight in mastering cloud technologies. Together, they offer clear solutions in a tech world that's always changing.

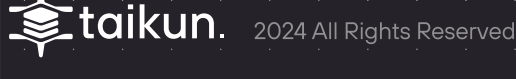


1	Executive Summary	→
2	Requirements	→
3	Challenges	→
4	Solution	→
5	Outcomes	→

Executive Summary

O2 Czech Republic, the premier telecommunications operator in Czechia, serves a broad spectrum of customers: from households and SMEs to large corporations. The company provides its users with state-of-the-art technology, consistently introducing the latest innovations. O2 remains at the forefront of technological advancement, offering its mobile customers HSPA, LTE, and 5G solutions. To sustain its growing core telecommunications business, O2 operations teams provide internal infrastructure platforms to support business application requirements. It provides a comprehensive suite of cloud infrastructure services hosted within its

expansive data centers covering 78,000 square feet. As internal computing requirements grew, O2 explored private infrastructure options for their Deep Packet Inspection (DPI) application. The DPI application was incredibly compute intensive so it was concluded that a Private Cloud environment was required to run all the necessary workloads. Two alternative private cloud solutions were evaluated during the engagement. These solutions were expensive and resource-intensive and couldn't fulfill the Deep Packet Inspection (DPI) application's requirements. After careful consideration, O2 chose Taikun Open Compute Platform for their Private Cloud infrastructure platform.



1	Executive Summary	→
2	Challenges	→

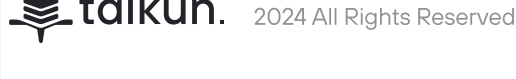
Requirements

High Performance Computing Requirements

The DPI (Deep Packet Inspection) application required high performance capabilities that other private cloud solutions could not offer.

The Key Requirements:

- Private Cloud infrastructure capable of supporting instant analysis of tens of millions of data packets.
- The network architecture should support high data throughput to accommodate large volumes of data.
- The infrastructure should be able to process millions of I/O operations per second.



2	Requirements	→
3	Challenges	→

Challenges

Complex & costly infrastructure management

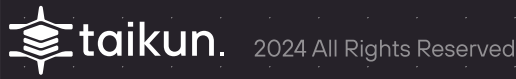
Challenge #1

Solution	Fully managed Private Cloud based on the best Open Source technologies available on the market
Outcomes	O2 Czech saved 60% of the financial resources usually spent on operational expenses

Competing solutions failed to meet both the functional and performance requirements for their Deep Packet Inspection solution.

Challenge #2

Solution	A highly scalable and advanced computing platform, engineered to fulfill the sophisticated functional and performance demands of modern telco operations
Outcomes	An advanced open-source private cloud platform which met the high-performance requirements for O2's Deep Packet Inspection application at scale, delivering significant CAPEX and OPEX savings compared to other solutions.



2	Challenges	→
3	Solution	→

Challenges

Resource Intensive Infrastructure Management

Challenge #3

Challenge	Managing O2's Deep Packet Inspection application required a high performance Private Cloud, which would be resource-intensive to support. As a prominent Czech telco, O2 typically operates its own servers to comply with legal requirements. Introducing an additional Private Cloud would necessitate expanding the team and hiring expensive specialized senior infrastructure specialists.
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Scalability Issues

Challenge #4

Challenge	Due to the substantial data processing volumes demanded by their DPI application, scalability was one of the core requirements for a new infrastructure solution. Their current cloud infrastructures were insufficient, necessitating excessive management to enhance scalability. Their main objective was to be able to accommodate the high data volumes without the intensive manual oversight their existing systems required.
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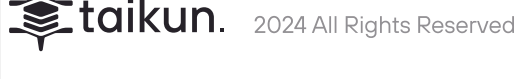


4	Solution	→
4	Outcomes	→

Solution

After thorough performance, scalability, and cost analysis O2 chose to partner with Taikun to deploy their Open Compute Platform solution. The OCP platform not only met but exceeded their expectations and technical requirements.

Taikun's highly experienced team behind the OCP solution was one of the deciding factors as this environment was going to be constantly evolving due to their high growth predictions for their data intensive workloads. The Taikun Open Compute Platform has been running the DPI application since 2019 with over a hundred servers and one hundred terabytes of storage under management.



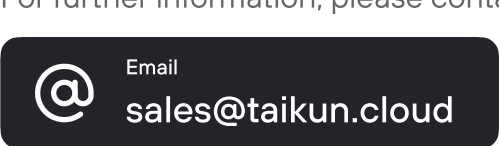
Outcomes

The implementation of Taikun's managed Open Compute Platform was a pivotal decision for O2, enabling them to run a key software application with confidence and efficiency. Leveraging the Open Compute Platform, O2 optimized their private cloud operations while reducing costs.

The partnership with Taikun's specialized team ensured seamless cloud management, and optimized performance of O2's DPI application.

With the upsurge in data throughput, O2's investment in the Open Compute Platform demonstrated its value, as they seamlessly scaled their operations to meet increased data processing demands. By 2023, the scalability of the system had already been tested as the compute and storage capacity had tripled. In conclusion, the system's demonstrated scalability not only affirmed the value of O2's strategic foresight in partnering with Taikun but also highlighted the advantages of leveraging specialized expertise in navigating the complexities of cloud ecosystems amidst a rapidly evolving tech landscape.

For further information, please contact us:



We look forward to hearing from you!



4	Solution	→
4	Outcomes	→