Building out AI Infrastructure and Cloud Compute for Enterprise ISP Clients

By Diemas Sukma Hawkins | Kuartal Institute

From bandwidth to compute

For most of the internet's history in Indonesia, an internet service provider sold one thing: connectivity. A business signed up for a dedicated line, received a fixed amount of bandwidth, and built everything else on top of it somewhere else. Increasingly, that "somewhere else" is a cloud platform or an AI service hosted far from the customer, and often outside the country.

That model is changing. Enterprises and public institutions now want their connectivity, their compute and their AI to sit close together, under rules they understand. For regional ISPs, this is both a threat and an opportunity: the customer relationship they already hold can grow into a broader infrastructure relationship, or it can shrink to a commodity pipe.

Kuartal has committed to building a Mini IXP (internet exchange point) and an AI data center for **PT Cubiespot Pilar Data Nusantara (Cubiespot)**, an Indonesian ISP. The aim is to let Cubiespot expand beyond dedicated internet bandwidth into cloud computing, AI solutions and related services. This article explains what that build is meant to achieve, and why it matters. The work is planned and committed; it is not yet complete.

Who Cubiespot is

Cubiespot operates as autonomous system AS141126, registered on PeeringDB as "Cubiespot Pilar Data Nusantara", an ISP with an Asia Pacific scope and an open peering policy. Hurricane Electric's BGP toolkit lists the network as PT Cubiespot Pilar Data Nusantara.

According to its self-reported PeeringDB record, Cubiespot is present at seven internet exchange points, including IIX-Jakarta, IIX-Jawa Timur, JKT-IX, BIX Surabaya, sumIX, ODIX Omadata and OpenIXP / NiCE. It lists six facilities, among them NTT Jakarta 2, neuCentrIX sites in Jakarta, Surabaya and Semarang, OMADATA in Surabaya and DBN Data Center Blitar, and a traffic range of 20–50 Gbps. These figures are self-reported by the network and are to be verified by a named human researcher.

In other words, Cubiespot already peers widely. What it does not yet offer, according to the founder's description of the project, is a compute and AI layer to match its connectivity.

Why local exchange points matter

An internet exchange point is a place where networks meet and swap traffic directly, instead of paying an upstream carrier to carry it, sometimes abroad and back. The Internet Society's study of Kenya and Nigeria shows what this can mean in practice: in Kenya, local exchange cut average latency from 200–600 milliseconds to 2–10 milliseconds and saved ISPs almost US$1.5 million a year on international connectivity. The study also found that a successful exchange attracts content providers and business, academic and government users, becoming the centre of a local internet ecosystem.

Indonesia learned this early. In 1997, ISPs could no longer afford to wait for a government-led solution, and the Indonesian ISP association APJII formed a task force; in August 1997 it launched the Indonesia Internet Exchange (IIX), connecting the country's ISPs at a shared exchange. APJII's own membership terms describe IIX as a relatively cheaper route, an alternative path when international links fail, and an incentive for content providers to place their data in Indonesia.

A Mini IXP applies the same logic at a smaller, more local scale. For AI and cloud services, where latency and data movement matter, keeping traffic between an ISP's enterprise customers and its compute close to home is not a luxury. It is part of what makes the service usable.

The rules: where data is allowed to live

Indonesian regulation is an equally important driver. Under Article 20 of Government Regulation 71 of 2019 (PP 71/2019), public-scope electronic system operators, meaning government institutions and the bodies they appoint, must manage, process and store their electronic systems and data within Indonesia. Offshore storage is allowed only where the storage technology is not available domestically, a judgement made by a cross-ministry committee rather than the operator. Private-scope operators have more flexibility, but must keep their systems open to supervision and law enforcement.

On top of this sits Law No. 27 of 2022 on Personal Data Protection (UU PDP), Indonesia's first overarching data-protection law, which took effect on 17 October 2022. It introduces the roles of data controller and data processor and places duties on anyone processing personal data. When an AI service processes documents, conversations or records that contain personal data, those duties follow the data.

For a regional enterprise or local government, the practical question is simple: where does my data go when I use this AI tool, and who is responsible for it? Infrastructure that is in-country, and operated by an accountable local provider, makes that question far easier to answer.

Demand for sovereign compute

The market is moving in the same direction. The Indonesia Data Center Provider Organization (IDPRO) projects data-center capacity needs to grow by about 35–45% in 2026 compared with 2025, driven by generative AI, industrial automation and real-time data processing. IDPRO also points to the hard constraints: power, cooling and low-latency connectivity.

Demand is not limited to private business. In a mapping exercise reported by Telkom Indonesia with Danantara, more than 70 state-owned enterprise respondents indicated significant data-center needs, framed explicitly around sovereign AI for Indonesia.

Most of this new capacity is concentrated in large hubs. That leaves a gap for regional ISPs and their enterprise clients, who need compute and AI that is close to their networks, compliant by design, and offered by a provider they already know.

What Kuartal is building

Kuartal's position is that Indonesia needs sovereign, self-hosted AI and digital infrastructure: services that run in the country, under Indonesian law, on systems their operators control. Kuartal Cloud is the platform for that approach, bringing together single sign-on (SSO), servers, a mini IXP and an AI Lab.

The Cubiespot project applies that platform to an ISP. As described by the founder, it has two committed components:

- **A Mini IXP**, to exchange traffic locally between Cubiespot's network, its enterprise customers and the new compute services.
- **An AI data center**, to host cloud computing and AI workloads for Cubiespot's customers.

Together, these are intended to let Cubiespot offer cloud computing, AI solutions and similar services alongside its dedicated internet bandwidth, so that an enterprise client can buy connectivity, compute and AI from a single accountable provider. Specific capacities, locations, hardware and timelines have not been published and are to be verified by a named human researcher before any are reported.

What this means for enterprise clients

For an enterprise or institution, the promise of this model is straightforward:

- **Lower latency**, because traffic between the client and its compute can stay on a local exchange rather than travelling to distant hubs.
- **Clearer compliance**, because data can be processed and stored in Indonesia, aligned with PP 71/2019 and the PDP Law.
- **One accountable relationship**, because the provider of the line is also the provider of the cloud and the AI.

For regional ISPs, it points to a future where they are not only carriers of other people's services, but hosts of their own.

Looking ahead

The build for Cubiespot is a commitment, not yet a finished facility. Its value will be measured once it is live: in latency, in uptime, and in whether enterprise clients choose to bring their data and their AI workloads home. Kuartal will report on that progress as it happens, using verified figures.

Methods note. This article was AI-assisted and human-led. Research drafting used an AI assistant working only from sources it opened, including public routing registries (PeeringDB and Hurricane Electric), regulatory texts and summaries, and the industry and news sources linked above. Project details come from Kuartal's founder. A search of Kuartal's code repositories returned no public documentation of this project. Figures marked for verification are being checked by a named human researcher. The author directed the work and is responsible for its content.