TECH BRIEF

Time as a Service (TaaS)

Accuracy and compliance in a reliable time syncing service.

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TaaS: what is it?

Time as a Service (TaaS) is a time syncing service created by Aruba in collaboration with TOP-IX (TOrino Piemonte Internet eXchange), characterized by high levels of guaranteed accuracy.

The reference time signal is provided by **INRIM** (the National Institute of Metrological Research) and sent via TOPIX to the **Aruba Data Center in Bergamo (IT3)** via a **completely fiber optic infrastructure**.

The service is **available in two different modes**:

TaaS PTP (Precision Time Protocol)
Ideal for achieving a highly accurate syncing. It also comes with a high reliability configuration suitable for production environments.

TaaS NTP (Network Time Protocol)
Offers a resilient, stable temporal signal distribution, without touching the public network, ensuring security and continuity of service.

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TaaS PTP: features

The **TaaS PTP** (Precision Time Protocol) service is based on a point-to-point fiber optic connection between the customer's equipment and the first device to access the TaaS service. Also available with redundancy.

UTC time accuracy
The accuracy of the time signal is assessed with respect to UTC (Coordinated Universal Time), which is an essential requirement for certain standards (e.g. MiFID II)

Managed entirely within the EU
The service architecture is based and managed in the EU;

Stability
Performance is not affected by any external interference, as it does not use GNSS systems as reference sources, which can be exposed to disruption from various fronts.

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TaaS NTP: features

The **TaaS NTP** (Network Time Protocol) service is based on a fiber optic connection between the customer's equipment and the Aruba transport infrastructure for access to an Aruba virtual private network dedicated to carrying the service.

Guaranteed continuity
Service continuity is guaranteed according to predetermined KPIs.

Security
The reference source is not accessible via the internet and therefore is not exposed, for example, to DDoS attacks that can inhibit syncing processes.

Resilience
The service is provided by 2 NTP servers, accessible via a private subnet assigned to the customer and associated with the Aruba VPN dedicated to the service

TaaS: the benefits

In addition to ensuring extremely precise time syncing, **Time as a Service** offers a wide range of other benefits.

Focus on the core
Purchasing a time syncing service means that you can avoid paying infrastructure and management costs, allowing you to concentrate resources on your business.

Regulatory compliance
The accuracy of the time signal is evaluated in relation to UTC, a fundamental requirement when it comes to complying with certain regulatory obligations such as MiFID II.

Security
The time signal is distributed securely, without any exposure on public networks, protected from typical risks such as possible DDoS attacks.

Stability
Service performance is not affected by external transmission interference: the time signal is provided by INRIM and made available within Aruba Data Centers using fiber optic connections.

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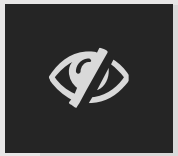
TaaS: use cases

Time-sensitive applications
Make sure that applications that require strict time syncing function properly, such as gaming, streaming, financial transactions and the IoT.

Network Operation
Having accurate timestamps is essential when it comes to facilitating network monitoring and troubleshooting activities, which are crucial to ensuring the optimal performance of your network infrastructure.

Scheduled Operations
Make sure that processes are executed properly, especially in distributed environments, by safeguarding the order and scheduling of operations.

Auditing
The ability to track events accurately, such as logs, document changes and logins, is also essential when it comes to investigation incidents or verifying activities, as required by internal or judicial authorities.



Security
Time syncing makes it easier to analyze data related to threats and suspicious behavior from different data sources, allowing you to identify hidden patterns or anomalies.

Internet of Things (IoT)
When it comes to the IoT, it is important to sync devices to allow optimal resource management and make sure that applications work properly, including monitoring, automation and sensor alignment.

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