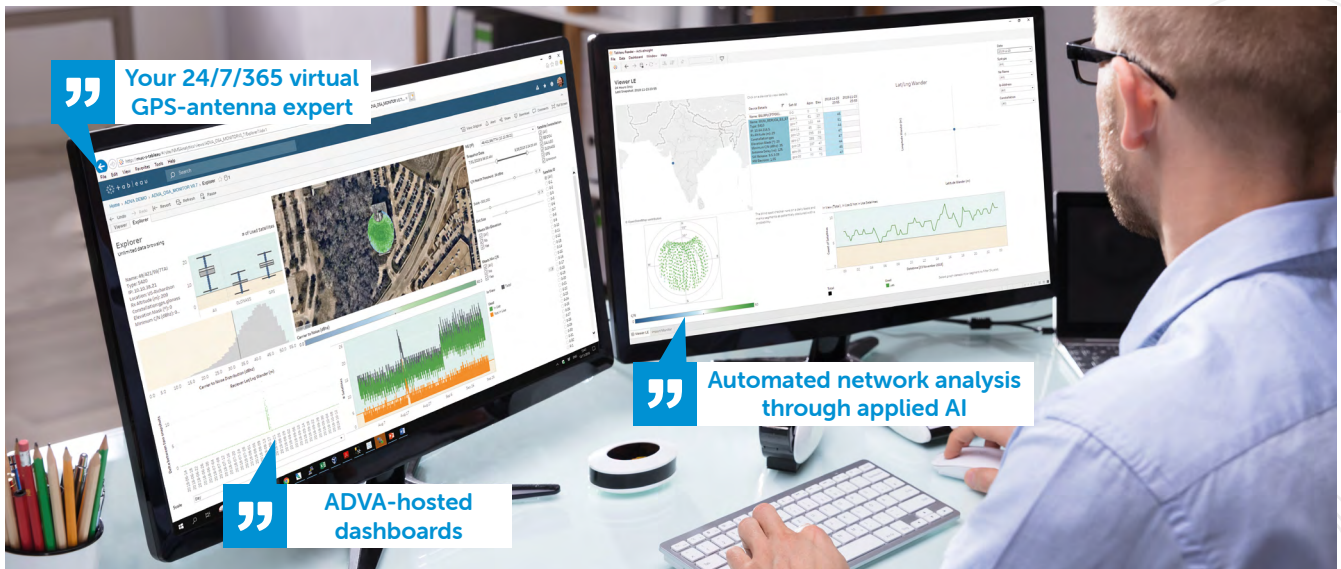# Hosted analytics SatAware™ services

Assuring satellite-based timing with active insight

Getting antenna placement right for optimal GNSS reception conditions can be a challenge. Yet even a marginal error can cause synchronization problems leading to network outages. Each site is different and conditions change over time. Powered by artificial intelligence (AI), our SatAware™ service provides real-time insight. It offers advance notice of any issues and enables you to take immediate action.

Physical environments change over time. New buildings/walls are constructed, trees grow bigger and the site owner may decide to install a new air conditioner next to your rooftop antenna. How do you ensure that your GNSS timing network performs well when you can't predict or control changes to the physical site that affect your antenna? Our SatAware™ services will help you visualize and evaluate satellite reception by building a complete picture of signal strength for each individual satellite in the sky. They will also automatically identify potential antenna blind spots using machine learning technology.

> Your 24/7/365 virtual GPS-antenna expert

> ADVA-hosted dashboards

> Automated network analysis through applied AI

Your complete solution

✓ **Non-intrusive data collection engine**

Our lightweight remote data collection software routinely collects performance indicators from both ADVA and third-party GNSS devices. The data is stored and analyzed by our AI engine to determine the most up-to-date status and detect changes in reception patterns.

✓ **SatAware™ Viewer (ADVA hosted)**

This gives you a dashboard view of your timing network including:
– Geo map of your GNSS network
– Satellite sky view plot
– Carrier-to-noise ratio for each satellite
– Summary of visible vs. tracked/not-tracked satellites and trouble indicators

✓ **SatAware™ Explorer (ADVA hosted)**

Explorer delivers enhanced functionality and features such as detailed status for individual sites, carrier-to-noise spectrogram visualizing reception quality and potential antenna blind spots as well as historical satellite performance and trend analysis.
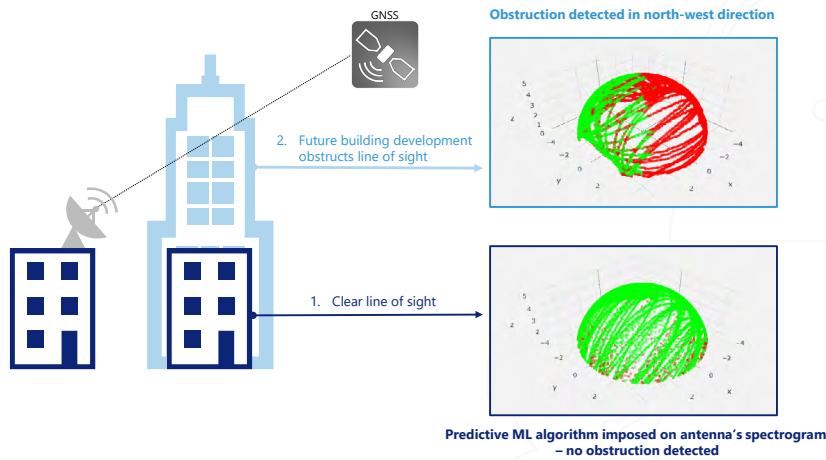
✓ **SatAware™ Health Check**

– One-page report for each site which requires attention with findings and recommendations
– Analysis of antenna placement and quality of satellite reception for each site
– Non-hosted antenna survey solution
– Full Tableau® workbook with all survey data to visually navigate the collected data
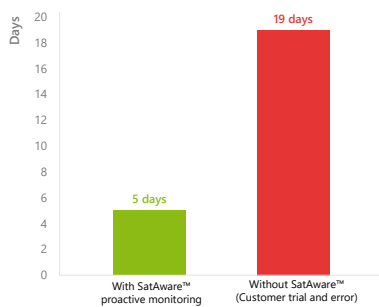
What you get

SatAware™ Viewer	• Data collection engine, installation support, regular updates • Data storage and analytics hosted in ADVA's secure and private cloud • 24-hour snapshot view • TAC support for collector software • 1 dashboard license included
SatAware™ Explorer	In addition to SatAware™ Viewer: • Long-term trend view • Advanced analytics and predictive models • 5 dashboard licenses included
SatAware™ Health Check	• Data collection engine in customer's network managed by ADVA • Network and individual site reports, recommendations • TAC support for collector software • 1 dashboard license included

Case study: SatAware™ secures your network performance

• Customer: large APAC operator
• Case: GNSS device reporting no satellites tracked
• Resolution: move antenna installation

GNSS

Obstruction detected in north-west direction

2. Future building development obstructs line of sight

1. Clear line of sight

Predictive ML algorithm imposed on antenna's spectrogram – no obstruction detected

Why it makes sense

Days

19 days

5 days

With SatAware™ proactive monitoring

Without SatAware™ (Customer trial and error)

SatAware™ Services can reduce the time required to fix GNSS antenna cases by 70%

SatAware™ Services are designed to offer you proactive maintenance capabilities with ADVA's machine learning and AI programs

◇ADVA™