

## Product Overview

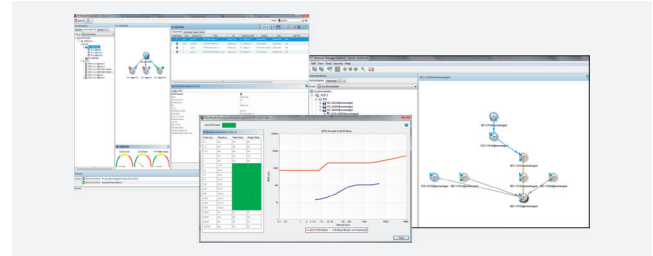
The FSP Sync Manager is an advanced management platform for distributing and assuring timing for frequency, phase and time synchronization network elements. As synchronization and precise timing grow in importance in many infrastructure networks, centralized visibility and control of this mission-critical timing environment has become essential to network operations. Implemented following client-server architecture, the FSP Sync Manager provides the flexibility, availability, scalability and performance required to meet growing demand in network and application synchronization. Its intuitive point-and-click graphical user interface application combined with wizard-based provisioning eliminates complexity, therefore allowing cost-effective operations of synchronization networks.

## Virtual Topology View

The FSP Sync Manager supports the concept of topology map as a means to view the entire synchronization infrastructure in graphical format. The virtual topology map view gives a pictorial representation of the configured synchronization network resources and the relationships between them. It is capable of simultaneously displaying both the IEEE 1588v2 Precision Time Protocol and the Synchronous Ethernet logical topology layer. The FSP Sync Manager is an application that represents the hierarchy of clock distribution, the clock status and distribution capabilities of synchronization network devices in addition to the health of the entire infrastructure. Synchronization topology and status changes can be monitored to enable network operators to trigger appropriate actions.

## Distribution Path Analysis

The FSP Sync Manager provides continuous, real-time visibility into the entire synchronization network infrastructure, allowing network operators to optimize existing topologies, detect synchronization loops and prevent synchronization outages. Built around virtualized and scalable data architecture, the FSP Sync Manager has been designed from the bottom up to support continuous assessment and assured timing precision for today's critical infrastructure networks. Its function for distribution path analysis allows identifying active synchronization routes, monitoring and displaying route status and collecting route-specific statistics. A variety of standard performance metrics such as MTIE,



TDEV and phase accuracy can be displayed graphically to proactively identify and correct problems in the synchronization infrastructure.

## Syncjack™ Monitoring and Assurance

Supporting the complete Syncjack™ synchronization network test framework, the FSP Sync Manager is the ideal platform for monitoring and assuring precise frequency, phase and time distribution and therefore guarantees highest performance of time-critical network applications. The FSP Sync Manager can configure, initiate and monitor all Syncjack™ tests and schedule test procedures for automatic activation at a future point in time. Ongoing tests are monitored while test results are collected and stored for graphical display, comparison or export. Correlating and displaying test results on different levels of detail simplifies step-by-step troubleshooting and fault isolation.

## Features & Benefits

- Integrated discovery, display, configuration and monitoring of synchronization networks
- Intuitive graphical user interface for cost-effective and simplified operation
- End-to-end PTP path management and active clock stream identification
- Monitoring of health status per device, domain or master-slave hierarchy
- Configuration, initialization and scheduling of Syncjack™ test procedures
- Multi-vendor management of PTP grandmaster and client instances

## Technical Information

### Supported Devices

- OSA 5331 PTP – PTP Grandmaster
- OSA 5410 – Syncjack™ PTP Access Grandmaster
- FSP 150 – Demarcation and Aggregation Devices
- TP 5000 PTP Grandmaster

### General

- Based on TMN principles
- Intuitive point-and-click graphical user interface application
- Context-sensitive menu navigation, tooltips and online help
- Wizard-based provisioning application
- Graphical overlay with alarm summary indicators
- Tree-like display of synchronization network topology

### Client-Server Architecture

- Simultaneous operation of single server entity with multiple GUI clients activated on different remote management stations
- Single sign-on with fast switch-over between multiple servers from a single GUI client
- Virtualized GUI clients using Citrix® Presentation Server

### Functionality

- Synchronization map for IEEE1588v2 PTP and/or SyncE logical topology
- Monitoring of status, topology changes and synchronization distribution capabilities
- Clock distribution hierarchy also for partitioned synchronization network domains
- Detection of synchronization loops
- Identification of end-to-end clock distribution routes from master to slave
- Monitoring and display of clock distribution routes
- Collection and display of statistics per clock distribution route
- Event tracking and alarming for individual clock distribution routes
- Correlation and display of route-related events and alarms
- Initiation and monitoring of Syncjack™ test procedures
- Clock Accuracy, Clock Analysis and PTP Network Analysis
- Definition and scheduling of automated test procedures
- Graphical presentation of actual and historical test results
- Comparison and export of test result data with multiple options
- Automatic status update
- Listing of events and alarms with user-definable filters
- Event log and active alarm list
- Availability reports based on defects and degradations
- Correlation, analysis and re-assessment of alarm severity
- Fault correlation and step-by-step root cause analysis

### Security

- Multi-level password protection
- Password encryption
- Customizable user privileges
- User activity log
- External user authentication (RADIUS)
- Customer self-management supporting user-restricted network views

### Connection to Network Elements

- Network-wide access to individual devices
- Direct access to devices via Ethernet management interface
- Remote access over IP-based DCN connection

### Protocols

- SNMP for communication to devices
- Support for SNMPv3 for higher-level security

### Operating System

- Windows Server 2008 & 2012 and Windows 7 for client PCs
- Red Hat Enterprise Linux 6 on VMWare vSphere 5.1

### Additional Information Available in Release Notes

- Recommended hardware installation
- Device-specific functionality



For more information please contact an ADVA Optical Networking consultant or visit us at [www.advaoptical.com](http://www.advaoptical.com)

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