



syn1588[®]

syn1588[®] Software Suite

Release Schedule

Version 2.1 – October 9th 2020

Oregano Systems – Design & Consulting GesmbH

Franzosengraben 8, A-1030 Vienna

P: +43 (676) 84 31 04-300

F: +43 (1) 2533033-6162

@: contact@oregano.at

W: <http://oregano.at>

0.1 Legals

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1 Release Schedule

New releases of the Oregano Systems' syn1588® Software Suite are usually scheduled to be published quarterly, by the end of each quarter.

- Q1 – March/April
- Q2 – June/July
- Q3 – September/October
- Q4 - December

Oregano Systems reserves the right to change this release schedule for any reason, cancel scheduled releases, or add additional releases as we see fit.

The below plan is not set in stone and we may be able to accommodate your specific requirements. If you are interested in specific features listed below, require some of the features sooner, or have a request for an unlisted feature, contact Oregano Systems (contact@oregano.at or sales@oregano.at).

2 Planned Features 2020

2.1 Q4/2020 Release

2.1.1 PTP v2.1 support

Add step-by-step next IEEE1588-2019 features.

2.1.2 syn1588® Dual NIC: general support

2.1.3 syn1588® PCIe NIC: new features

- Support for jumbo frames
- Support for a second, configurable packet timestamping unit, including 1-step PTP operation
- Upgrade the windows driver to NDIS 6.3.

2.1.4 syn1588 API 2.0

This rework will provide improved access to the feature set of the syn1588® hardware.

Note that this will replace the current syn1588 API over the next release cycles, we will provide extensive documentation to make the switch as seamless as possible. You will receive the new API over the next release cycles together with the old API. The current syn1588® hardware features will still be available via the old syn1588 API during this switchover. New features will only be available via the syn1588 API 2.0.

3 Mid-term plans for 2021

3.1 PTP v2.1 support

Add step-by-step next IEEE1588-2019 features.

3.2 PTP Security: Key Exchange

3.3 syn1588® Dual NIC: extended syn1588 API support

3.4 Shared memory API 2.0

This rework will provide improved access to the feature set of the syn1588® software.

Note that this will replace the current shared memory API over the next release cycles, we will provide extensive documentation to make the switch as seamless as possible. You will receive the new API over the next release cycles together with the old API. The current syn1588® software features will still be available via the old shared memory API during this switchover. New features will only be available via the shared memory API 2.0.

4 Long term plans

The following features are currently on our list but will be implemented on a case-by-case base. I.e., currently these features are not scheduled for a specific release. If the demand for a feature is raised, we can evaluate the roadmap.

4.1 PTP Unified Monitoring Model based on YANG

4.2 Extension of the redSync utility

- ➔ Using more than two PTP Masters as time source
- ➔ Utilizing the syn1588® Dual NIC

4.3 Support for optional PTP v2.1 Features

4.3.1 Alternate timescale offsets

4.3.2 Path trace

4.3.3 Holdover upgrade

4.3.4 Common mean link delay service

4.3.5 Configurable correction of timestamps

4.3.6 Calculation of delay asymmetry

4.3.7 Mixed Multicast/Unicast Operation

4.3.8 Grandmaster Cluster

4.3.9 Alternate Master

4.3.10 Unicast Discovery

4.3.11 Layer-1 based synchronization performance enhancement

5 PTP Version 2.1 – IEEE1588-2019

This chapter summarizes and collects the different new features for IEEE1588-2019 aka PTP v2.1. The IEEE1588-2019 standard has been officially published on June 16th 2020.

The intention of this document is to act

- a.) as an information for externals to inform about the planned implementation as well as their priority
- b.) and as an internal guideline (some sort of development roadmap) for adding the new functions to the syn1588® PTP Stack source code.

A good starting point is chapter 19 of [1] which describes the compatibility of v2.1 with v2.0 and v1.0 of the IEEE1588 standard.

The information in this chapter is based on the status of July 2020. Please note, that the priorities might be changed without further notice.

5.1 Overview

The IEEE1588-2019 standard defines the following new functions listed in the following table. For each function its implementation status is given as well whether Oregano System currently plans to implement it. For all function to be implemented their priority will be given.

Note, this document is “work-in-progress”. New information or customer requests might change the priority or the implementation of new functions.

Further note, we decided to use priorities for the new functions but not a specific release date. We will add all new functions depending on their priority as soon as possible. They will be made available with our quarterly releases of the syn1588® PTP Stack.

PTP function (with IEEE1588-2019 chapter)	implemented	ToDo	priority
8. (new) PTP datasets	N	Y	1
13. (new or updated) PTP message formats	N	Y	1
16.1 Unicast message negotiation	Y		
16.2 Path trace	N	Y	
16.3 Alternate timescale offsets	N	Y	9
16.4 Holdover upgrade	N	Y	
16.5 Isolation of PTP instances running under profiles specified by different standards organizations	N	Y	
16.6 Common mean link delay service	N	Y	9
16.7 Configurable correction of timestamps	N	Y	6
16.8 Calculation of the <delayAsymmetry> for certain media	N	Y	6
16.9 Mixed Multicast/Unicast Operation	Y		
16.10 Cumulative frequency transfer method for synchronizing clocks	N	N	
16.11 Slave Event Monitoring	N	Y	8
16.12 Enhanced Synchronization Accuracy Metrics	N	N	
16.13 Message Length Extension	N	N	
16.14 PTP integrated security mechanism	Y (partially)		
17.2 Grandmaster Cluster	N	Y	
17.3 Alternate Master	N	Y	
17.4 Unicast Discovery	N	Y	
17.5 Acceptable master table	Y	N	

17.6 Mechanism for external configuration of a PTP instance's PTP port state	Y		
17.7 Reduced state sets and use of the <foreignMasterList> feature	N	N	
18. Interactions between PTP Instances in different PTP domains	N	N	

6 Further Information

You are looking for further information about our syn1588® product line-up? Please contact Oregano Systems support! We will be pleased to provide you all the required information.



Franzosengraben 8

A-1030 Vienna

AUSTRIA

<https://oreganosystems.at>

contact@oregano.at