



Press Release – 27 March 2019

Applying the 2-out-of-3 concept in license management

Wibu-Systems introduces high availability in licensing

Karlsruhe, Germany – Wibu-Systems brings an absolute novelty to Hannover Messe: at their booth C15, hall 6, visitors can have a taste of the recently introduced CodeMeter Triple Mode Redundancy (TMR) Server, a solution that combines high availability, high performance, and uninterrupted license use during license updates. Server outages or license usage peaks in networks no longer have to mean service disruptions: All purchased licenses are reliably available.

CodeMeter, Wibu-Systems' flagship technology for protection, licensing, and security, provides software publishers and intelligent device manufacturers with 23 preset software license models. With one of these, named High Available License, the user can own a redundant license server; the 2-out-of-3 architectural principle ensures the availability of software in the event of a license server failure, providing uninterrupted license updates.

Part of the beauty of the solution is that, to the user, the entire TMR system appears as a single entity. Although there is enormous complexity in the architecture to ensure that high availability is coupled with industry-leading protection and security against license fraud, everything has been designed with "business as usual" as a core feature.

With CodeMeter TMR Server, Wibu-Systems offers the option to rely on its own datacenter in a tried and tested, durable configuration consisting of five servers that can be operated as virtual machines. Three license servers work as one joint system: As long as two of the three servers are available, the entire system will stay up and



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running. The downstream interface with the clients is provided by a newly developed double TMR Server that the clients can access via a virtual IP address.

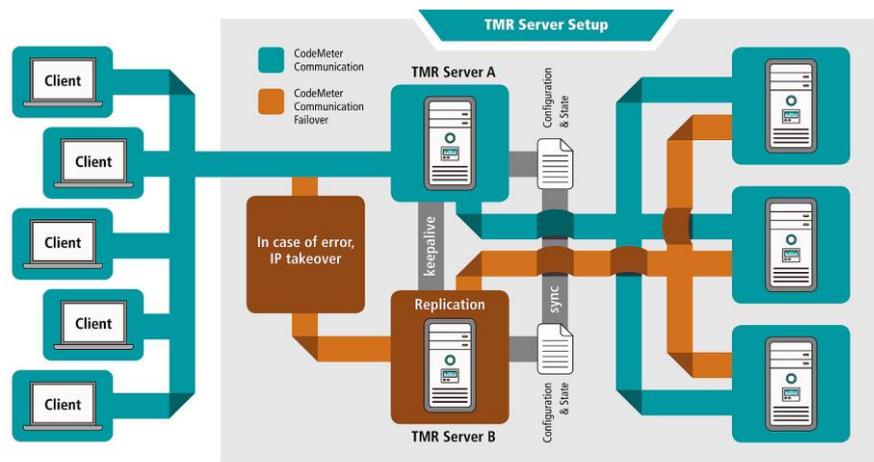
This works because every license is created in triplicate and given a special ID, the TMR ID, as an additional property. The three licenses are placed into three separate license containers, the CmContainers, that also have the same identifier; the TMR group can then allocate the software or hardware-based CmContainers with the same ID to a virtual CmContainer. This is ultimately the one and only license container the end users see, so for them, everything works as normal.

The twin TMR Servers are currently available as a Linux service. Upstream from these, the three CodeMeter servers can be operated under Linux or Windows. When configured correctly, the CodeMeter licenses are only available to the downstream TMR Servers: no client would have direct access to them. A potential attacker who only has one CmContainer with one of the constituent TMR licenses cannot use the TMR license as a whole. The CodeMeter server would deny the usage of any single license with a TMR ID, unless it is operated correctly in a TMR system.

David Paine, Wibu-Systems' Product Manager for CmCloud and CodeMeter License Central, the completely cloud-based license lifecycle management solution and the database-derived platform for license creation, delivery, and management, is particularly proud of this achievement: "In areas like the automotive industry, where no access to licenses could mean that crucial production lines are forced to a standstill, users demand and expect redundancy. By subscribing to our CodeMeter TMR Server structure, clients can count on license availability regardless of server crashes or failures. The TMR group is a consolidated architecture that can be set up swiftly and securely by

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our team. The software publisher would just need to have our latest license technology in place and deploy licenses using CodeMeter License Central or program licenses with the high-level programming API we provide”.



CodeMeter TMR Server guarantees optimum availability while keeping a strict count of the purchased licenses

About Wibu-Systems

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Wibu-Systems, a privately held company founded by Oliver Winzenried and Marcellus Buchheit in 1989, is an innovative security technology leader in the global software licensing market. Wibu-Systems' comprehensive and award-winning solutions offer unique and internationally patented processes for protection, licensing and security of digital assets and know-how to software publishers and intelligent device manufacturers who distribute their applications through PC-, PLC, embedded-, mobile- and cloud-based models.



Media graphic resources available at: <https://www.wibu.com/photo-gallery.html>

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