

TCM[®] SITE SERVER

Overview

The TCM[®] Site Server is the software platform for managing TCM[®] installations. The TCM[®] Site Server is the backbone of the TCM[®] solution—collecting and consolidating data from the M-Systems [TCM[®] hardware front-ends] mounted in the wind turbine nacelles. The Site Server software requires an acquisition of the M-System.

Features

- Allows for multiple ES connections (active and passive).
- NERC CIP compliance
- Change Management for software and configuration updates
- Automated software and configuration update of the M-Systems
- Can be secured via TCM jump host
- Web-based application for service and maintenance
- Language localization by request
- User management
- Integrated user manuals
- Control room interface via OPC UA IEC (requires a license.)
- Email notification of alarms and system log entries
- Retrospective calculation of new condition indicators
- System log for registration of system faults
- Availability map for documenting historical equipment availability
- Consolidates data from hundreds of M-Systems

Includes data Analysis with TCM[®] Ocular

- Powerful diagnostic tool
- Measurement configuration tool

Automated Disk Maintenance

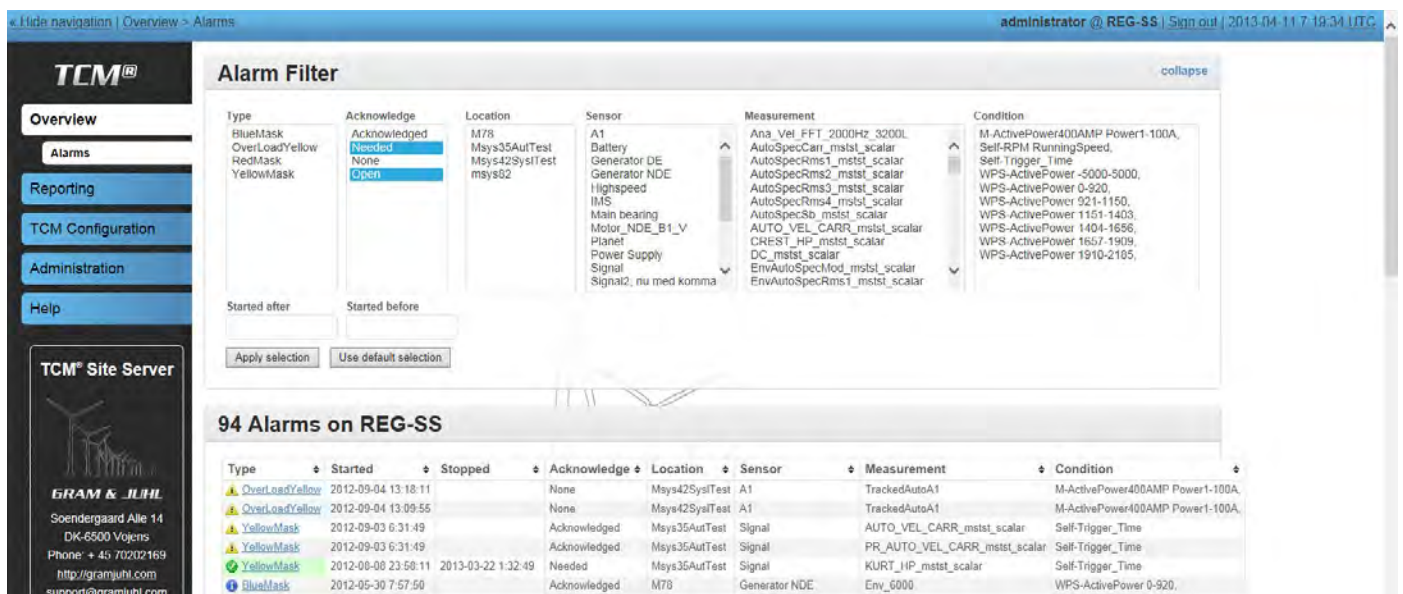
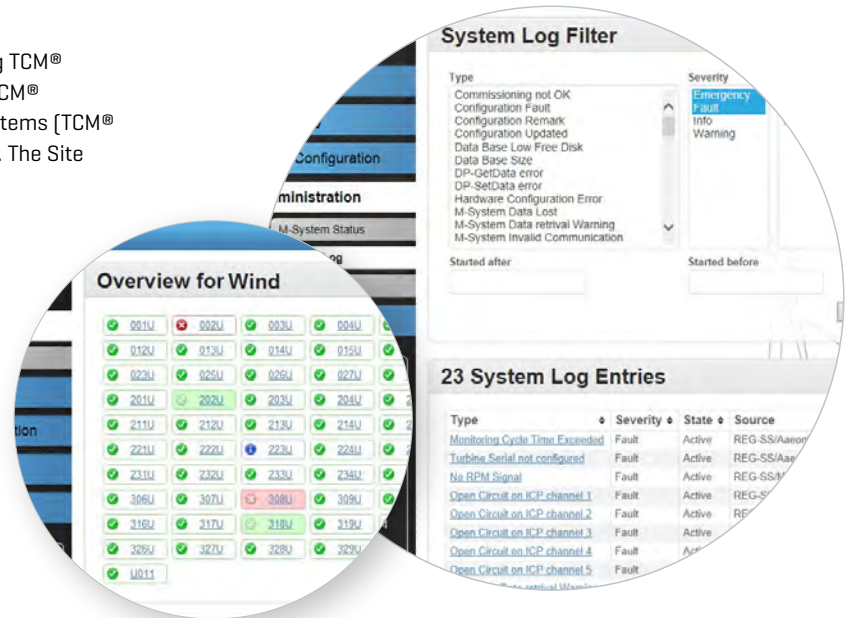
- Disk usage trending report
- Scheduled database maintenance

Traceability

- Single page overview of installed equipment operational status
- Sensor calibration management

Alarm Handling

- Searchable alarm list
- Alarm details with automatically generated trends



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TCM[®] Site Server Hardware

The TCM[®] Site Server application is meant to run over long time spans [years]. Accordingly, it demands professionally supported hardware and is either physical or virtualized and is not included in the Site Server package.

The TCM[®] Site Server system requirements are:

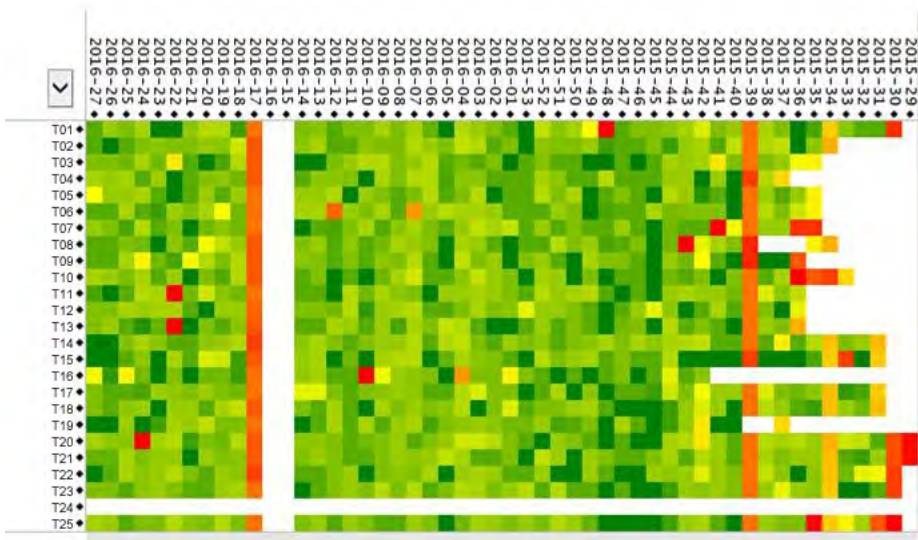
Component	Requirement
Operating System	Windows Server 2012 R2
Processor	1.4 GHz or more
Memory	8 GiB RAM as minimum requirement
OS Disk Space	32 GiB or more
Network	100 Mbit
Storage	RAID storage technology
Storage space	Typically 5 GiB per turbine [depending on configuration]

Installed Software Package	
Application language	Latest PHP version 5.6 bundled with software package*
Database	MySQL community edition 5.6.X [installed separately]
Web server	Internet Information Server [IIS]

*Java runtime must be installed separately - version 1.7 or higher

Monitor TCM[®] System Uptime

The Site Server has an Availability Map found under the "Administration" pane, which shows weekly availability or "online connectivity" for a selected component [ie. M-System or sensor]. The Availability Map shows weekly availability for a selected component [ie. M-System or Sensor].



Availabilities are displayed on a color scale ranging from red to green. M-System availability is measured in "nines" and ranges from 0 [bad] to 4 nines [good]. Sensor availabilities range from 0 [bad] to 100 [good]

Bad Good