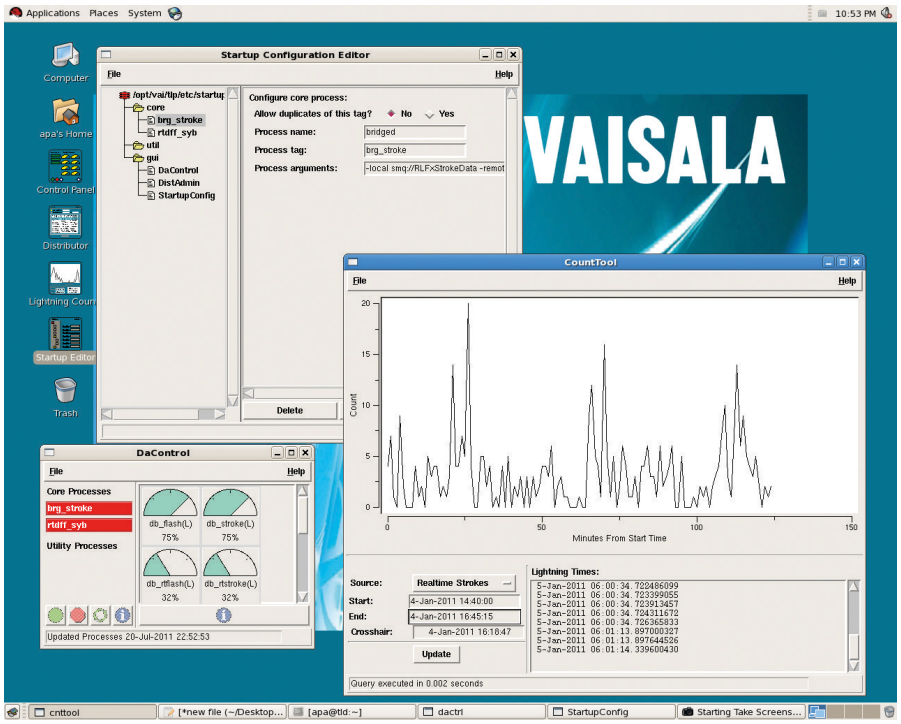
Thunderstorm Total Lightning Database™ TLD100™ and TLD200™



Features

- Provides long-term storage of stroke and flash data in a relational database for poststorm and multi-year statistical analyses
- Distributes archived data to Vaisala FALLS® Fault Analysis and Lightning Location System
- Supports multiple workstations and simultaneous queries
- Manages multiple user connections

Total Lightning Database™ TLD100™ and TLD200™ is a processing module in the Vaisala Thunderstorm Information System that specializes in archiving cloud and cloud-to-ground lightning data for forensic applications.

Easy, Secured Access to Real-time and Archived Lightning Information

TLD100™ and TLD200™ is a lightning data management processor module that receives and stores real-time lightning data from the Vaisala Thunderstorm central processor. Vaisala Thunderstorm Information System operators use the module to archive their lightning data into a relational database. Users have easy and secured access to the archived data for use in their lightning display software and lightning analysis software. The module also provides secured access to real-time lightning data.

Flexibility for Users

Multiple users can simultaneously access lightning information for use in their Vaisala FALLS® Fault Analysis and Lightning Location System, or custom lightning application software.

TLD100™ and TLD200™ allows flexible and efficient manipulation of lightning data through a published set of industry standard Structured Query Language (SQL).

Technical Data

Summary

TLD100™ and TLD200™ resides on a single or multiprocessor server. It includes the Vaisala lightning database software license. TLD100™ and TLD200™ utilizes a powerful, open source, objectrelational database system by PostgreSQL. PostgreSQL has proven architecture that has earned a strong reputation for reliability, data integrity and correctness.

Minimum System Requirements

Computer hardware is subject to change. In case of evolution of an item, an equivalent or better item will be provided.

TLD100™ and TLD200™ module includes a reliable server with the following minimum specifications:	
Processor	1 or more x86_64 compatible CPUs 2 GHz or faster
Operating system	CentOS 6 (64-bit edition)
Memory	TLD100™: 16 GB RAM TLD200™: 32 GB RAM Server should support future RAM growth to 96 GB
Hard disk space	4 internal hard drives Each 500 GB or larger Server should accept more than 4 hard drives for future growth
RAID controller	Hardware RAID controller that supports RAID 5
Ports	USB ports 2 NIC Ethernet ports (100/1000 Mbps)
Optical disc drive	DVD+RW burner
Monitor	VGA Monitor supporting 1280 × 1024 resolution
Modem	CentOS 6 release or greater

Inputs and Outputs

Power requirements	100 ... 240 VAC 47 ... 63 Hz 0.4 kVA
Data Access/Output	
Scalable number of simultaneous users	
Supports simultaneous real-time and archived data access	
Access to archived data based on date/time, latitude/longitude, and range/azimuth queries	
Base configuration supports on-line storage for 1 billion strokes or flashes	
Simultaneous flash or total lightning and stroke data access support	

System Compatibility

Communication Interfaces	
TCP/IP (recommended)	
TLD100™ and TLD200™ supports	Archive lightning location data to Vaisala FALLS (TLD200 only) ODBC-compliant applications and other Vaisala FALLS® server software (may require additional hardware)

Operating Environment

The operating environment specifications are equal to the hardware specifications by default. The following specifications are subject to change without notice based on hardware availability.

Operating temperature	+10 ... +35 °C (+50 ... +95 °F)
Storage temperature	-40 ... +65 °C (-40 ... +149 °F)
Operating humidity	20 ... 80 %RH non-condensing (non-condensing twmax = +29 °C)
Storage humidity	5 ... 95 %RH non-condensing (non-condensing twmax = +38 °C)
Operating altitude	-16 ... 3048 m (-50 ... 10 000 ft)
Storage altitude	-16 ... 10 600 m (-50 ... 35 000 ft)

Support Services

Training and after-sales support services are available for maintaining optimal network and processor performance. Contact your Vaisala Sales Representative for service agreement information

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