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Fault Analysis and Lightning Location System™ FALLS® Server
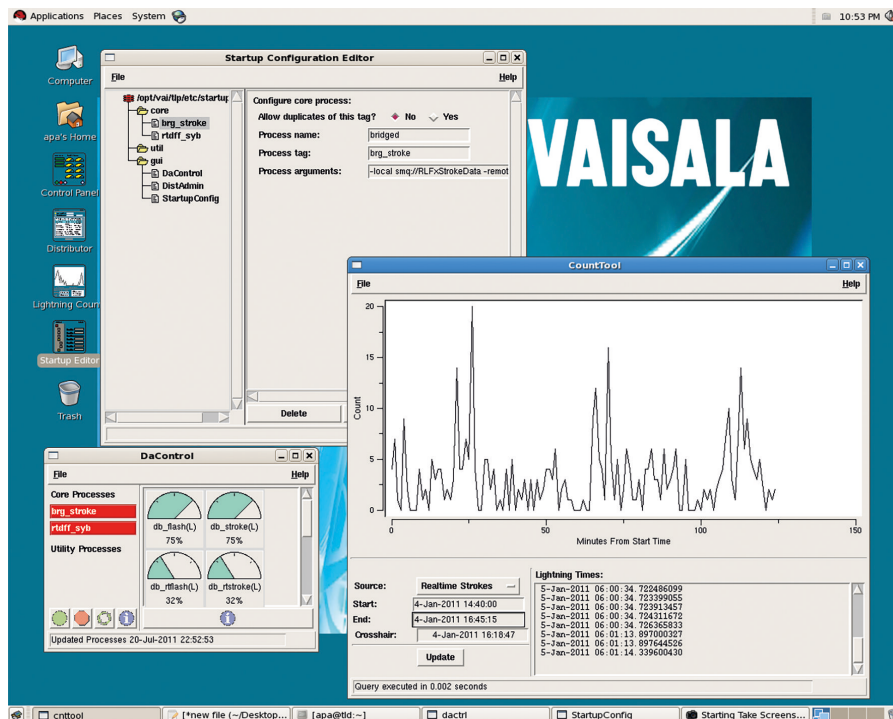
FALLS® Server is a processing module in the Vaisala Thunderstorm Information System. It specializes in archiving cloud and cloud-to-ground lightning data for forensic applications, and connecting with FALLS® Client application to display decision support information.

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

FALLS Server is a lightning data management processor module that receives and stores real-time lightning data from Vaisala Thunderstorm central processor. Vaisala Thunderstorm Information System operators use the server 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 server also provides secured access to real-time lightning data.

Flexibility for Users

Multiple users can simultaneously access lightning information for use in their FALLS Fault Analysis and Lightning Location System, or custom lightning application software. The standard data format allows users to import lightning data into their weather display software that is configured to accept external data.

FALLS Server allows flexible and efficient manipulation of lightning data through a published set of industry standard Structured Query Language (SQL) function calls and procedures.

Technical Data

Summary

FALLS® Server resides on a single or multiprocessor server. It includes the Vaisala lightning database software license. FALLS® Server utilizes a powerful, open-source, object-relational 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.

Internet connectivity is required for installation. Recommended speed: T1.	
Optical disc drive	DVD+RW burner
Modem	RHEL6 or CentOS 6 compatible
Form factor	Tower or rack mount
Processor	2 or more physical CPUs x86_64 compatible 2 GHz or faster Dual-core or better
Operating system	Linux CentOS 6.x
Memory	Min. 64 GB RAM
Hard disk space	4 or more internal hard drives, each 1 TB or larger
RAID	Min. 3 disks configured as RAID 5 1 disk as a hot spare to the RAID set
Ports	2 or more USB 2.0 ports 2 NIC ethernet ports (100/1000 Mbps)

Data Access and 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	Asynchronous RS-232 TCP/IP (recommended) FALLS® Server supports: • Archive lightning location data to Vaisala FALLS® and Vaisala DAM analysis software • Real-time data to other third-party software • ASCII-based, user-defined formats • Stored procedures and triggers • ODBC-compliant applications

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 ºC (+84.2 °F)
Storage humidity	5 ... 95 %RH, non-condensing Non-condensing twmax: +38 ºC (+100.4 °F)
Operating altitude	-16 ... 3048 m (-52 ft 6 in ... 10 000 ft)
Storage altitude	-16 ... 10 600 m (-52 ft 6 in ... 35 000 ft)

Inputs and Outputs

Power requirements	100 ... 240 VAC 47 ... 63 Hz 0.4 kVA

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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