Torrus software:

Overview of challenges and new features

Stanislav Sinyagin <ssinyagin@k-open.com>
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What Torrus is today

- **Industry-proven** performance monitoring solution and replacement of Cricket, Cacti, MRTG

- **Free**, Open Source software

- High **performance** of SNMP polling

- **Hierarchical** data structure

- **Adaptable**, modular design

- Designed for process **automation**

SNMP discovery engine

- **Modular** design

- Flexible configuration

- **IF-MIB discovery** for virtually any vendor

- **Multi-threading** gains speed dramatically

- Extensive discovery for **Cisco routers**, Cisco class-based **QoS**, DOCSIS CMTS

XML Configuration

- Easy to generate from programs

- Takes time to understand

- Takes more time to start editing by hand

- Usually generated by the discovery engine, so nobody cares anyway

Hierarchical database

- Advantages: top-down iwXm:ag: dLvnn

SNMP collector performance

- Up to 50K SNMP objects every 5 minutes without much tuning

- Up to 200K SNMP objects every 5 minutes from a single server (requires careful planning and tuning, as well as hi-end hardware)

Collector challenges

- Distribute the load among all CPU cores

- Distribute the CPU and disk I/O load evenly in time, across the collecting interval

Collector enhancements

- Split the collecting job into smaller tasks (so-called dispersed timeoffsets)

- Use of multi-threading: a background thread writes to RRD files (since 2006-07-21)

Collector enhancements (cont.)

- Retrieve index mapping tables during the collecting period, and minimize the initialization time (since 2006-12-03)

- Run multiple collectors per tree (since 2007-06-16)

Threshold monitor

- Expressions are monitored, not just values

- Expressions can span multiple data sources

- Multiple severity levels can be defined

- Flexible notification paths (Email, SMS, SNMP trap, …)

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Reference installations

- Cablecom

- Bluewin

- Comcast

- Bell Canada

- Some U.S. government departments

- Few hundred smaller installations, most of which are unknown to me

Future plans: short-term

- IPv6 support

- Plain-text export of collected data

- Enhancements for distributed, multi-server installations

- Whatever the paying customer wants :-)

Future plans: long-term

- Incremental configuration compiler

- Database model suitable for dynamically changing networks (such as CPE monitoring)

- Granular access control

- Ajax-driven WebUI with custom preferences and favourites

Questions and live demo