



Enabling Grids for E-science

Nagios Grid Monitor

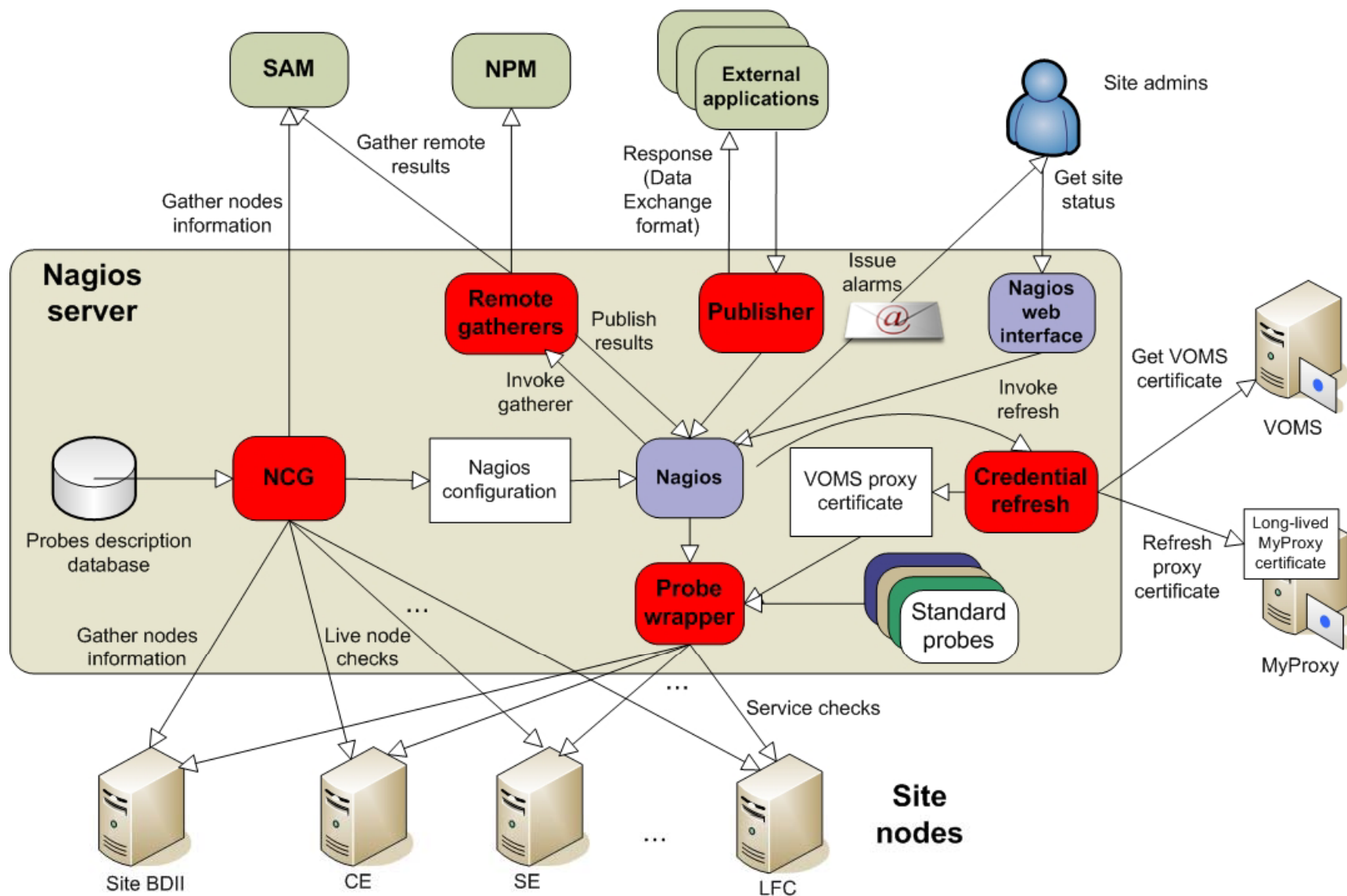
E. Imamagic, SRCE
OAT Kickoff Meeting

www.eu-egEE.org



- **Nagios framework**
- **Nagios Grid Monitor**
 - Architecture
 - Components
- **Current status**
- **Future work**

- **Host and service problems detection and recovery**
- **Alarms in case of problems**
- **Fine grained configuration**
 - users, hosts, services, probes, notifications
- **Host and service dependencies**
- **Easy to develop and use custom sensors**
- **Importing results from external monitoring systems**
 - passive checks
- **Web interface**

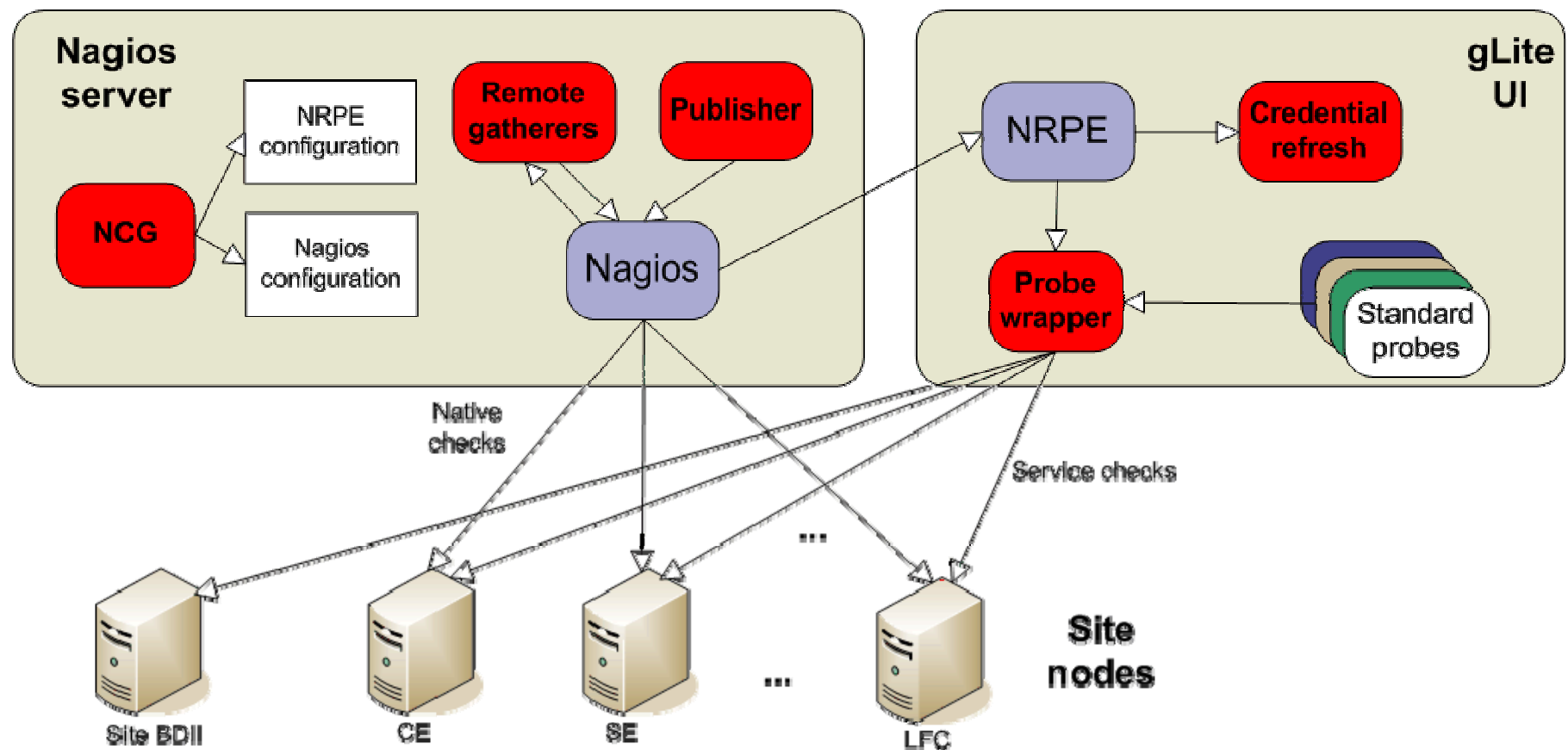


- **Probes for monitoring grid services**
 - Grid Monitoring Probes Specification
- **Standard probe wrapper**
 - integrates standard probes with Nagios
- **Remote gatherers**
 - import results from external monitoring system
 - Grid Monitoring Data Exchange Standard
- **Publisher**
 - export results from Nagios Grid Monitor
 - Grid Monitoring Data Exchange Standard

- **Credential management**
 - provides proxy certificate for standard probes
- **Nagios Config Generator (NCG)**
 - uses various information sources
 - enables manual configuration tuning
 - modular implementation
 - information sources can be added
 - can be reused for other monitoring systems

- **Probe description database**
 - frequencies, timeouts, arguments needed, dependencies
 - part of NCG
- **Service dependencies**
 - alarm filtering
 - hierarchy of probes
 - simple probes more often (e.g. 5 min)
 - heavyweight probes less often (e.g. 30 min)

- Avoid installation of grid middleware on Nagios server



- **Three sets of standard probes integrated**
 - SRCE, CERN, OSG
- **Two external monitoring systems**
 - SAM, ENOC DownCollector
- **Several deployments**
 - CERN-PPS, SRCE, NIKHEF, PIC, IN2P3, ScotGrid
- **RPMs in apt and yum repository**
- **Installation and configuration manual**
- **More info**

<https://twiki.cern.ch/twiki/bin/view/LCG/GridServiceMonitoringInfo>

- **Nagios Grid Monitor node type**
 - easier deployment
 - gLite box + Yaim configuration
- **GGUS integration**
 - updating tickets related to failed hosts or services (J. Templon)
- **Credential management alternatives**
 - certificate-based MyProxy certificates (-R)
 - custom credential management
- **NCG multisite support**
 - generating config for multiple sites
 - crucial for regional instances

- **GOCDB integration**
 - region, site and services information
 - site personnel information
 - scheduled downtimes
- **NRPE on service nodes**
 - monitoring local components (logs, processes, etc.)
- **Probe description database**
 - separating from NCG to standalone database

- **Regional monitoring instance**
 - monitor services from regional point of view
 - utilize network topology
 - integration with existing site-level Nagios instances
 - integration with messaging systems (ActiveMQ)
 - both pushing and receiving data
 - complex regional-level probes
 - can be further split to NGI-level

Thank You!

Questions?