



DESIGNER, INTEGRATOR & OPERATOR OF MISSION CRITICAL SYSTEMS

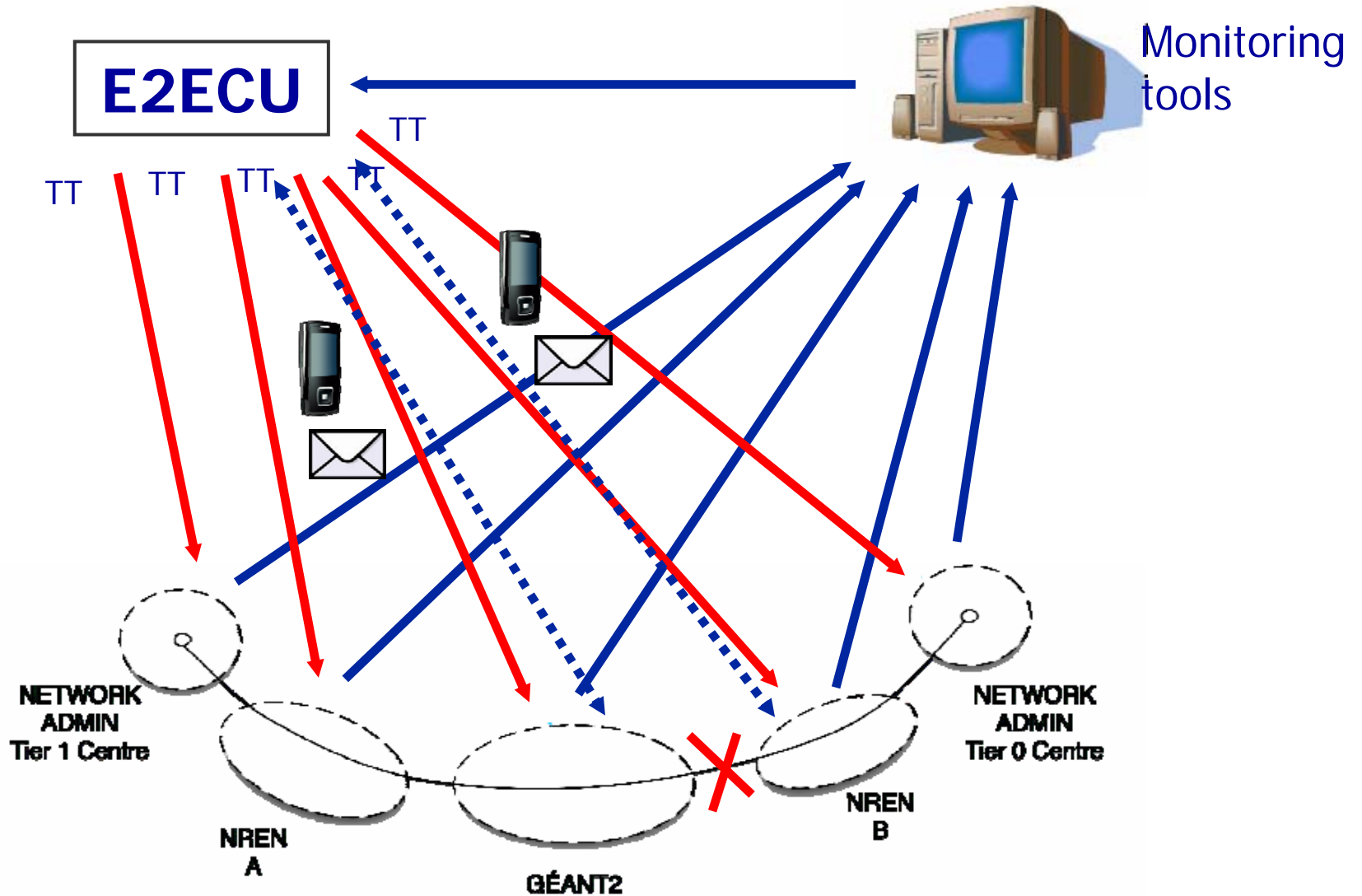
# GEANT2 E2ECU

APM Meeting – 09/01/2007



# E2ECU - Fault report

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# Useful information

DESIGNER, INTEGRATOR & OPERATOR OF MISSION CRITICAL SYSTEMS

- **Opening hours**

- Week days: 6am to 10pm CET
- Week-end days: 9am to 6pm CET

- **Mail address: [e2ecu@noc.geant2.net](mailto:e2ecu@noc.geant2.net)**

- **Telephone number: +33 141 288 577**

- **Fault/Maintenance report form on GEANT2 website**

- Mail and phone can also be used to report fault and maintenance



# Roles of the GEANT2 E2ECU

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- **Fault detection on inter-domain links (End-to-end links)**
  - Supervision of the e2e links
  - Fault/Maintenance announcement => TT
- **Co-ordination**
  - Troubleshooting of the issues
- **Provide monthly report**
  - An initial draft will describe the e2e links availability and tickets opened



# E2ECU – Fault detection

E2E Monitoring System  
<http://e2ems.geant2.net>

SNMP traps when events occur

GEANT2 E2ECU  
**Nagios**



Status information sent by the PerfSonar MPs

NREN A

NREN B

Research Centres

Date [Duration]	#	Host	Service Type Service Name	Output	[TT]
12:17:49 (0:00:47)	6	FR-GR2	RRP	[RRP - vRRP] 11.9.18.20:202149 [RRP - vRRP] 11.9.18.20:202149 Peer: 10.40.128.8 - 10.40.128.8 State: alive	(93246) ✓
10:33:34 (0:00:12)	2	CY3	ACCESS RRK CY3-SHERK1	Attacker: 10.33.34.1 [IP: 10.33.34.1] [IP: 10.33.34.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 0	✓
08:31:04 (0:00:42)	1	CY3	ACCESS RRK CY3-SHERK2	Attacker: 10.31.04.1 [IP: 10.31.04.1] [IP: 10.31.04.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 0	✓
10:58:49 (0:00:47)	1	CY3	ACCESS RRK CY3-SHERK1	Attacker: 10.58.49.1 [IP: 10.58.49.1] [IP: 10.58.49.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 0	✓
11:34:09 (0:00:27)	1	CY3	RR RRK CY3-RR	Attacker: 10.34.09.1 [IP: 10.34.09.1] [IP: 10.34.09.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 0	✓
12:18:19 (0:00:37)	1	CY3	ACCESS RRK CY3-SHERK2	Attacker: 10.18.19.1 [IP: 10.18.19.1] [IP: 10.18.19.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 0	✓
12:38:29 (0:00:07)	1	FR-GR2	ACCESS RRK FR-GR2-IN-NET	Attacker: 10.38.29.1 [IP: 10.38.29.1] [IP: 10.38.29.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 2	(93246) ✓
12:22:59 (0:00:37)	2	GR-GR2	RR RRK GCC AT-GR2-GR-GR2 1	Attacker: 10.22.59.1 [IP: 10.22.59.1] [IP: 10.22.59.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 2	(93246) ✓
11:49:19 (0:00:17)	1	GR-GR2	RR RRK GCC AT-GR2-GR-GR2 2	Attacker: 10.49.19.1 [IP: 10.49.19.1] [IP: 10.49.19.1] Frame: 0.0+0 Out: 0.0+0 Queue: 0.0+0 In: 0.0+0 Flaps: 2	(93246) ✓
04:08:54 (0:00:42)	2	FR-GR2	RRP	[RRP - vRRP] 11.9.18.20:202149 [RRP - vRRP] 11.9.18.20:202149 Peer: 10.40.128.8 - 10.40.128.8 State: alive	(94370) ✓
12:15:19 (0:00:03)	1	FR-GR2	ACCESS FR-GR2-IN-NET	Attacker: 10.15.19.1 [IP: 10.15.19.1] [IP: 10.15.19.1] Peer: 10.40.128.8 - 10.40.128.8 State: alive	(93246) ✓
02:04:55:53 (0:00:21)	3	UK-GR2	RRP	[RRP - vRRP] 11.9.18.20:202149 [RRP - vRRP] 11.9.18.20:202149 Peer: 10.40.128.8 - 10.40.128.8 State: alive	(94370) ✗

GEANT2 NEB

Network Event Broker



# GEANT2 NEB

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New alarms incoming

Showing Rows 1 to 11 of 11							
Date [Duration]	#	Host	Service Type Service Name	Output	[TT]		
10:25:01 [1h 22' 30"]	1	LHCOPN	e2e Services CERN-CNAF-LHCOPN-001	CNAF-MILAN: <b>Down</b> (Start: 2007-01-05, 09:21:48 GMT)			
10:49:21 [0h 58' 10"]	1	DK-GN2	ACCESS DK-GN2-JSCC Backup1	Alias:Link to JSCC Backup1 (Pr:Telia Id:IC-110929) Rtr:rt1.cop.dk Int:so-1/1/2 Adm:Up Opr: <b>Down</b>	[966742]	✓	
10:51:31 [0h 56' 0"]	1	DK-GN2	BGP	[IPv4 - eBGP:4/5+0 iBGP: 25/25+0] [IPv6 - eBGP:3/3+0 iBGP: 24/24+0] Peer: 62.40.124.254 - JSCC_Backup (AS3058) State: <b>Idle</b>	[966742]	✓	
Thu 12:42:42 [23h 4' 49"]	1	GR-GN2	BB IF MCC GR-GN2-IT-GN2 1	Alias:Link1 (MCC) to IT-GN2 (Pr:DANTE Id:ath-mil) Rtr:rt1.ath.gr Int:so-6/0/0:0 Adm:Up Opr: <b>Down</b> Alias:Link1 (MCC) to GR-GN2 (Pr:DANTE Id:ath-mil) Rtr:rt1.mil.it Int:so-7/0/0:0 Adm:Up Opr: <b>Down</b>	[961793]	✓	
Thu 12:51:33 [22h 55' 58"]	1	GR-GN2	BB IF MCC GR-GN2-IT-GN2 2	Alias:Link2 (MCC) to IT-GN2 (Pr:DANTE Id:ath-mil) Rtr:rt1.ath.gr Int:so-6/0/0:1 Adm:Up Opr: <b>Down</b> Alias:Link2 (MCC) to GR-GN2 (Pr:DANTE Id:ath-mil) Rtr:rt1.mil.it Int:so-7/0/0:2 Adm:Up Opr: <b>Down</b>	[961793]	✓	
26 Dec 18:19:44 [9d 17h 27"]	1	IE-GN2	BB IF IE-GN2-UK	Alias:Link to UK (Pr:CABLEWIRELESS Id:H0000084A) Rtr:rt1.dub.ie Int:so-6/0/0 Adm:Up Opr: <b>Down</b>	[951594]	✓	
11:09:41 [0h 37' 50"]	1	DK-GN2	ACCESS ERR DK-GN2-JSCC Backup1	Alias:Link to JSCC Back... (so-1/1/2 on rt1.cop.dk) Frame: 0.0e+00 Out: 0.0e+00 Queue: 0.0e+00 In: 0.0e+00 Flaps: 2	[966742]	✓	
Thu 21:34:21 [14h 0' 5"]	1	IT3	ENV	CRITICAL: Memory: Routing Engine 0 - 84 % Memory Usage CFEB 1 Exhaust temperature sensor Standby Power Supply 0 temp sensor <b>Down</b> [more...]	[962775]	✓	

TT number

ACK status



# E2ECU - Tools

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- **TTS**

- WebP@C: CS In-house developed TTS – Same as the one used for GEANT2 NOC
- Send tickets to registered users per project
  - Each user registered to receive the tickets for a project will receive the tickets that are related to this project but not for the other projects
  - Adding recipients with the DANTE agreement

- **Database**

- Temporary solution
  - Excel file containing the information about e2e links and the entities to contact
    - E2E links ID
    - Segment
    - Responsible NOC of the segment
    - Contact phone numbers and emails
  - Allowed users/entities to contact the E2ECU
- The DANTE Database is being developed to store the information about e2e links



# Current setup status

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- Mailbox and phone number **100%**
- NAGIOS plug-in finished **100%**
- Procedures written **100%**
- Trouble Ticketing System configured **100%**
- Database **65%**
  - excel file done, DANTE Database is being developed
- Web interface under development **25%**
- Monthly reports **50 %**
  - awaiting new version of E2E Monitoring system to calculate the links availability

**Pilote service until end of January**

**Operational beginning of February**





# GEANT2 E2ECU

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- **What is currently monitored ?**

- 1 project is being monitored
  - LHCOPN
- 10 E2E links are monitored in the E2E Monitoring System
  - But many links miss their Administrative status or part of the e2e link is not monitored yet
- Perfsonar MP/MA
  - If the PerfSonar MP/MA of the entity is not sending the data anymore to the E2E Monitoring System, an alarm is received by the E2ECU



# Questions, remarks ?

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