



Consorti de
Serveis Universitaris
de Catalunya

SIG-NOC Tools Survey 2015

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The evolution of the survey

- ✓ On the first survey we had 54 quite open questions in 7 groups:
 1. Basic information (3)
 2. NOC taxonomy (6)
 3. Network and Services (6)
 4. NOC tools (29)
 5. Communication and front end (6)
 6. Collaboration and best practices (3)
 7. Closing (1)
- ✓ New tools have appeared, some others have disappeared or changed and NOCs have evolved.

The evolution of the survey

- ✓ On the first survey we had 54 quite open questions in 7 groups:
 1. Basic information (3)
 2. -NOC taxonomy (6)
 3. -Network and Services (6) ← +Standards(5?)
+Competences(?)
 4. NOC tools (29)
 5. -Communication and front end (6)
 6. -Collaboration and best practices (3)
 7. -Closing (1)
- ✓ New tools have appeared, some others have disappeared or changed and NOCs have evolved.
- ✓ In previous steps, we decided to:
 - Shorten the number of questions by eliminating the taxonomy, services, communication and collaboration parts.
 - Focus on the tools and include some questions about standards (ITIL/ITSM).
 - Score the tools in two ways: Importance for the institution / Quality of the tool.
 - Include all the tools that had more than one answer in the last survey and also a generic "in-house" (asking the possibility of open-sourcing it) and "other".
- ✓ Now we have 35 questions, answerable via "click-click".

What we will review today

- ✓ For all the survey:
 - The “big blocks”:
 - Basic information (2)
 - Standards (5?)
 - Competences (?)
 - Tools (26 with 13 yes/no questions and 13 about the tools)
 - Missing questions or answers
 - The tool we will use (SurveyMonkey, Google forms, Limesurvey,..)
- ✓ For each functionality:
 - The name of the functionality (more “standard”?)
 - The definition
 - The tools that we will include
 - Missing tools
- ✓ For all the questions about tools:
 - The scale
 - The “I don’t use it option”
 - The way they will look like on the survey (options)

1. Name (acronym) of your organisation *
2. Type (range) of the network that your organisation is responsible for*
(Please choose all that apply):
 - Wide area network among several countries
 - National research and education network (NREN)
 - Regional metropolitan network
 - Campus university network
 - Specific research network (any range)
 - Commercial network (any range)
 - Internet exchange?
 - Other:

3. Does your NOC use any methodology or follow any standard based procedures (Please choose all that apply):

- ISO
- eTOM
- ITIL
- NITS
- FIPS
- No at the moment
- Other:

4. If your organisation uses ITIL is your staff ITIL certified (for instance the ITIL foundations training)?

- Yes
- No

5. Do you use ITIL in all the Departments?

- Yes
- No

6. Do you use ITIL processes/functions for the operational side of your activities?

- Yes
- No

7. Do you integrate your ITIL implementation with similar implementations in your third parties/customers)

- Yes
- No

Would it be helpful to have more questions about ITIL?

✓ For instance:

- What processes/functions does your institution follow (list)?
- Does your organisation have a CAB (Change Advisory Board)?
- Do you use ITIL processes / functions on a daily basis?
- Do you have instances where ITIL is “bypassed”?
- Do you require ITIL being implemented at (some of) your third parties? (e.g in Call For Tenders)
- Do you report towards third parties / customers in an ITIL mind-set?
- Does ITIL make your organisation more efficient?
- Does ITIL have an effect on your Service Delivery delays?
- Does ITIL have an effect on your Incident Resolution times?
- Does ITIL make your organisation more consistent towards customers?
- Does ITIL in general save you time in the long term?
- Did you encounter resistance when ITIL was introduced into your organisation?
- Do you experience overhead in the way ITIL is implemented at your organisation?
- How many years did it take to implement ITIL from conception to production?

Would it be helpful to have a section about competences?

For each one of the functionalities below, indicate if your NOC is responsible for them and what tools you use for those functions

Please do note:

- If you use more than one tool for a given function, do not forget to specify all.
- If you use home-grown tools that are not commonly known, please include further reference.
- Feel free to share brief comments based on your practical experience with each of the tools.

✓ And then for each one of the functionalities:

- Short definition of <functionality>
- Is your NOC responsible for <functionality>
- What tools do you use for <functionality>

Tool	How important is this tool for your NOC?	How would you rate this tool for the <functionality>?	Comments
TOOL1			
TOOL2			
...			

For each functionality we will review

✓ This functionality stands for...

Short definition

Tools:

- Tool1
- Tool2 (drop/change?)
- Tool3

Tools included in the survey because they were mentioned more than once in 2011

New suggestions:

- Tool4
- Tool5
- Tool10

Possible answers to include in the survey

Tools mentioned only once in 2011

Answers from one organization in 2011:

Tool7
Tool8
Tool9

Tool10 (add?)
Tool11
Tool12

Tool13
Tool14
Tool15

NOC tools – Monitoring

Observation and measurement of several parameters (from the link status or traffic on an interface or line to physical parameters, like temperature humidity etc).

Tools:

- CACTI
- CRICKET
- ICINGA
- INTERMAPPER
- **LOGGING**
- LOOKING-GLASS
- MRTG
- NAGIOS
- **NETFLOW**
- NFDUMP
- NFSN
- OPENVIEW
- PERFSNAR
- RANCID
- SMOKEPING
- SPECTRUM
- **SYSLOG**
- WEATHERMAP
- ZENOSS
- ZINO

New suggestions: Do we need more information of what a NOC monitors?

- Observium
- RIPE Atlas
- RIPE stats
- RIPE RIS / BGPlay

Answers from one organization in 2011:

Alcatel NMS	GARR mon. sui.	Mgr
BCNET CMDDB	Hobbit	NFA
Beacon	iBGPlay	NMIS
Bigbrother	ICmyNet.Flow	NTOP
Ciena NMS	ICmyNet.IS	Observium
Ciena Preside	Kayako	OpManager
Cisco IP SLA	LambdaMonitor	Racktables
Cisco EEM	MonaLisa	SMARTxAC
Dude	Munin	Splunk
Equipt sp NMS	NAV	Trapmon
Fluxoscope	NetCool	WuG
FSP Net	Netscout	Zabbix
Manager	Network Node	

NOC tools – Problem management / Incident management?

The primary objectives of Problem Management are to prevent problems and resulting incidents from happening, to eliminate recurring incidents and to minimize the impact of incidents that cannot be prevented. Following the necessary steps in order to identify the source of a problem. Getting warnings about problems or incidents.

Tools:

- NAGIOS
- REQUEST TRACKER
- ZABBIX
- ZINO

New suggestions:

- ELK stack
- NLNOG ring tools
- OTRS
- RIPE Atlas
- RIPE stats
- RIPE RIS/BGPlay
- Splunk

Answers from one organization in 2011:

ARS
CA spectrum
Hobbit
HP insight mgr
HP service cter
HP service mgr

Icinga
ICmyNet.IS
ITIL
Jira
Monitor One
Proprietary NMS

Service now
[Splunk](#)
Vigilant_congestio
Wiki
Zenoss

NOC tools – Performance management

Following a procedure in order to identify the source of a performance problem on the network.

Tools:

- BWCTL
- HADES
- IPERF
- MRTG
- NDT
- PERFSNAR
- **RIPE TTM**
- SMOKEPING
- ZINO

New suggestions:

- RIPE Atlas
- NLNOG ring tools
- Wireshark

Answers from one organization in 2011:

Atlas

BC NET CMDB
CISCO IP SLA
DynaTrace
IPPM
Jitter
MGEN
Munin

Nagios

NFDUMP
Netflow
Netminder
Ops Mgr
Owamp
PING
Prosilent

QoS

SpeedTest
Storsentry
Traceroute
TCPDUMP
Wireshark
Zenoss

Querying of data sources for reference and statistics.

Tools:

- CA SPECTRUM
- CACTI
- MRTG
- MUNIN
- NAGIOS
- NFSEN
- ZENOSS
- ZINO

New suggestions:

Answers from one organization in 2011:

BCNET CMDB
Business object
datamarts
Confluence
Cricket
Excel
GINS
HO service desk

Hobbit
Icinga
ICmyNet.IS
Infovision
Jira
MonaLISA
MSR reporter
Netflow

Smokeping
Splunk
Stager
StorSentry
Zabbix

Process for the tracking of incidents, problems or tasks.

Tools:

- ARS (Remedy)
- JIRA
- OTRS
- REQUEST TRACKER
- SERVICE NOW

New suggestions:

Answers from one organization in 2011:

BMC service express
Easyvista
HP Service center

HP Service Manager
HP Service desk
Kayoko Help Desk

Controlling and recording of changes in values technologies etc.

Tools:

- CONFLUENCE
- REQUEST TRACKER

New suggestions:

Answers from one organization in 2011:

EditGrid
HP-SM
Rancid

Redmine
Savannah
Sharepoint

Telemater
Trac
VC-4 CMDB

NOC tools – Configuration management and backup

Control and backup of the configuration for the routers switches and other pieces of equipment.

Tools:

- CVS
- IMS
- RANCID
- SUBVERSION

New suggestions:

Answers from one organization in 2011:

CiscoWorks
Cfengine

Netbackup
viewvc

Communication with people either in the same institution or in other institutions.

Tools:

- E-MAIL
- IM
- IRC
- JABBER
- MAILING LISTS
- SKYPE
- WIKI

New suggestions:

- Slack
- Twitter
- Telephone
- Whatsapp

Answers from one organization in 2011:

Adobe connect	MSN
Davical	Phone
Desktop video	Pidgin
EVO	Sametime
Gtalk	Scopia Desktop
HP Service Center	VoIP
HP Service Manager	Webex
iChat	

NOC tools – Knowledge management/documentation

Storing and sharing knowledge information to improve the efficiency in an organization.

Tools:

- CONFLUENCE
- DOCUWIKI
- MEDIAWIKI
- REQUEST TRACKER
- WIKI

New suggestions:

Answers from one organization in 2011:

Editgrid	Silverstripe
HP service center	Telemator
Intranet (Web)	Twiki
Joomla	Wordpress blog
Moinmoin	
Plone	
Sharepoint	

Control of **physical** and logical resources to avoid third parts from attacking the resources of an institution.

Tools:

- **ACL**
- BGPMON
- **FIREWALL**
- KERBEROS
- **Physical security**
- REQUEST TRACKER
- TACACS+

New suggestions:

- RSA software
- Radiator
- Freeradius

Answers from one organization in 2011:

2-factor token	iBGPlay	Routing authentication
Bastion host	lcmynet.low	Rtconfig
Copp	keepass	RTIR
Cyclops	LDAP	VPN
DNSSEC	NfSen	
Drupal based TTS	OTRS	
fwbuilder	Radius	

NOC tools – Inventory management

Organization and control of information about an institution's devices materials and products.

Tools:

- EXCEL
- IMS

New suggestions:

Answers from one organization in 2011:

BCNET CMDB
BDcops
Editgrid
HP Service desk
Inflow

Insight manager LDAP
MOT2
Navision
NOClook
Rancid

Telemator
VC-4 CMDB
Wiki

NOC tools – Resources management

Organization and control of logical resources such as IP addresses AS numbers circuits numbers topology documentation etc.

Tools:

- CONFLUENCE
- EXCEL
- IPPlan
- VISIO
- WIKI

New suggestions:

Answers from one organization in 2011:

Access	Pinger
BCNET CMDB	Racktables
Bdcops	Telise
IP-range	Text files
MOT2	

NOC tools – Out-of-band Access

Access to the network devices of an institution from an external network.

Tools:

- ADSL
- CONSOLE SERVER
- DRAC
- HP ILO
- PSTN/ISDN
- UMTS/GSM/3G

New suggestions:

Answers from one organization in 2011:

DRAC

IPMI

NOC tools - Data aggregation representation visualisation

Aggregate live data from various tools and represent/visualize them in a human readable way.

Tools:

- CACTI
- WEATHERMAP

New suggestions:

- Splunk
- ELK stack (Elastic Logstash & Kibana)

Answers from one organization in 2011:

CMDB	Netflow
Google-maps	Splunk
IMs	Stager
Monalisa	Zenoss
Munin	Zino
NAV	

The way it will look like: Option 1

	I use it	Importance for my NOC	Quality of the tool
CACTI	<input type="text"/>	<input type="text"/>	<input type="text"/>
CRICKET	<input type="text"/>	<input type="text"/>	<div>1 2 3 4 5</div>
ICINGA	<input type="text"/>	<input type="text"/>	<input type="text"/>
INTERMAPPER	<input type="text"/>	<input type="text"/>	<input type="text"/>
LOGGING	<input type="text"/>	<input type="text"/>	<input type="text"/>
LOOKING-GLASS	<input type="text"/>	<input type="text"/>	<input type="text"/>
MRTG	<input type="text"/>	<input type="text"/>	<input type="text"/>
NAGIOS	<input type="text"/>	<input type="text"/>	<input type="text"/>

Both ratings are easy but you can not comment on each tool

The way it will look like: Option 2

2.1: separated questions for importance and rating, comments at the end

	Importance					
	1	2	3	4	5	I don't use it
CACTI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CRICKET	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ICINGA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2.2: separated questions for importance and rating, comments for each tool

	Rate					
	1	2	3	4	5	I don't use it
CACTI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comments	<input type="text"/>					
CRICKET	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comments	<input type="text"/>					

Easy to click, although it “doubles” the number of questions.

The way it will look like: Option 3

Easy ratings, but the danger of including more than one in the answers

	Importance					Rate					I don't use it
	1	2	3	4	5	1	2	3	4	5	
CACTI	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CRICKET	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICINGA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
INTERMAPPER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LOGGING	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LOOKING-GLASS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MRTG	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAGIOS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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Thank you!
Questions? Suggestions?

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