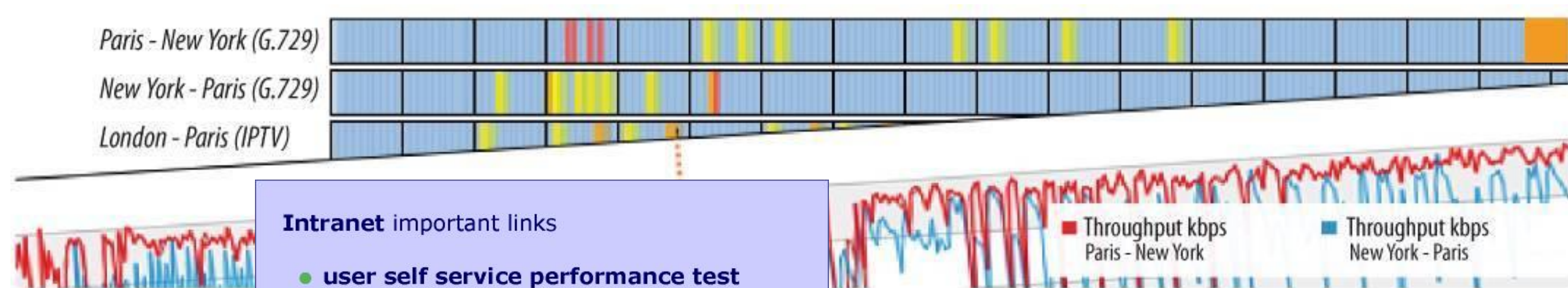


■ GeNiEnd2End Network 24/7 end-to-end Quality of Service Monitoring



Intranet important links

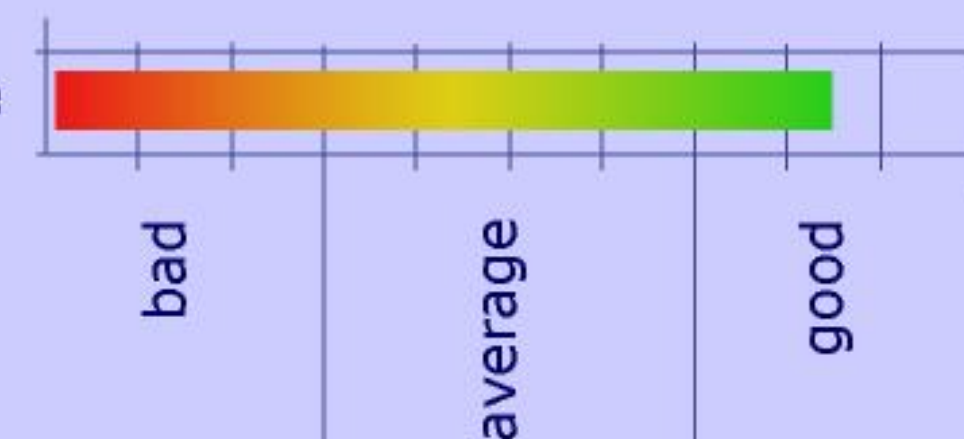
- **user self service performance test**
- Support Wiki
- telephone direct
- safety instructio

Starting the performance test

Start

Clicking this button starts the
perform
Within
get the

Performance



1.

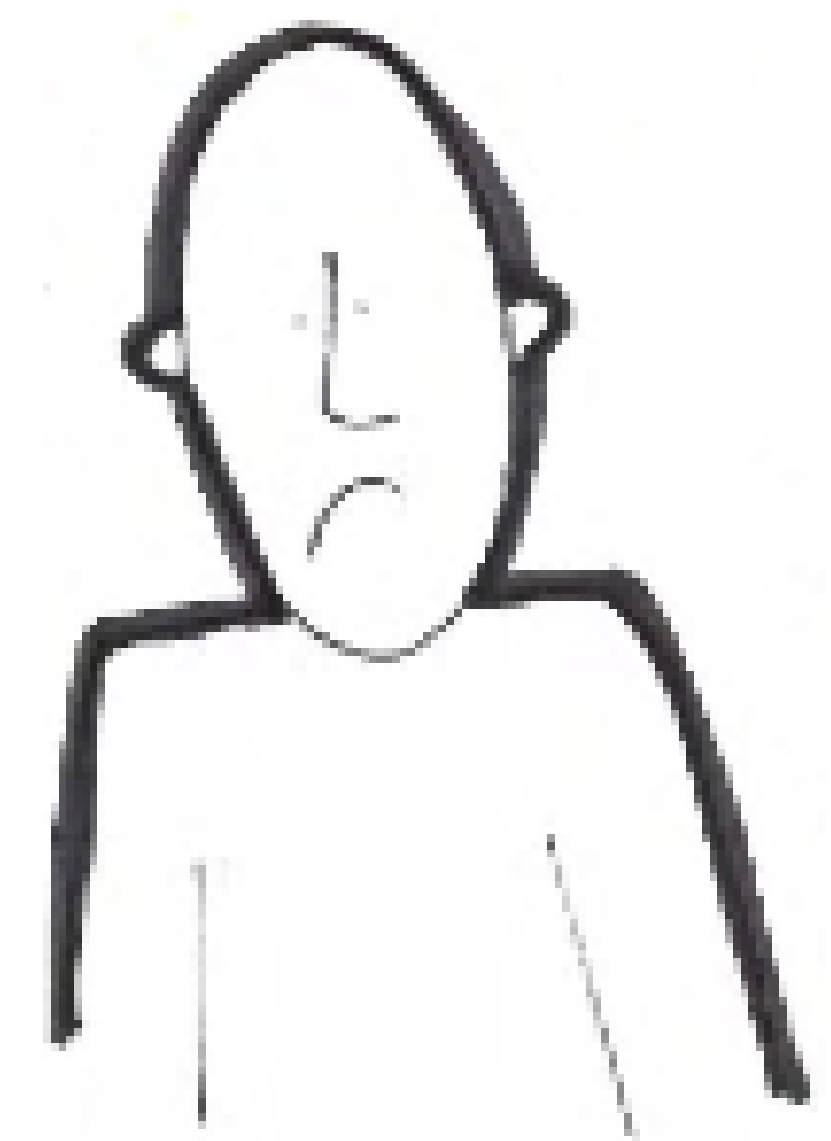
2.

3. Performance OK

■ The visibility gap End users complaining about IT performance

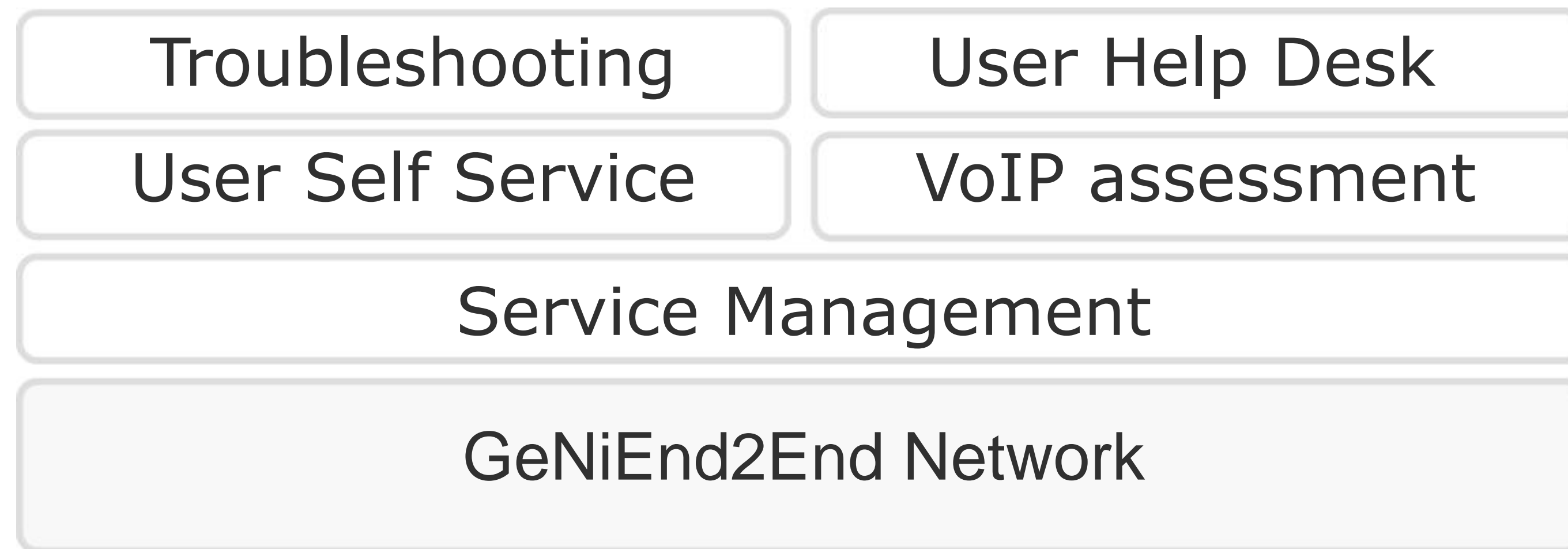
What do you think ...

- how often are end user performance issues not detected by IT management systems?
- what is the percentage of performance problems which are misdiagnosed?
- how often is your precious working time misspend for irresponsible performance issues?
- what is the average time to correct performance problems?
- what effects does this have for you?



■ GeNiEnd2End Network

End-to-end QoS performance testing for network specialist,
service desk and end user

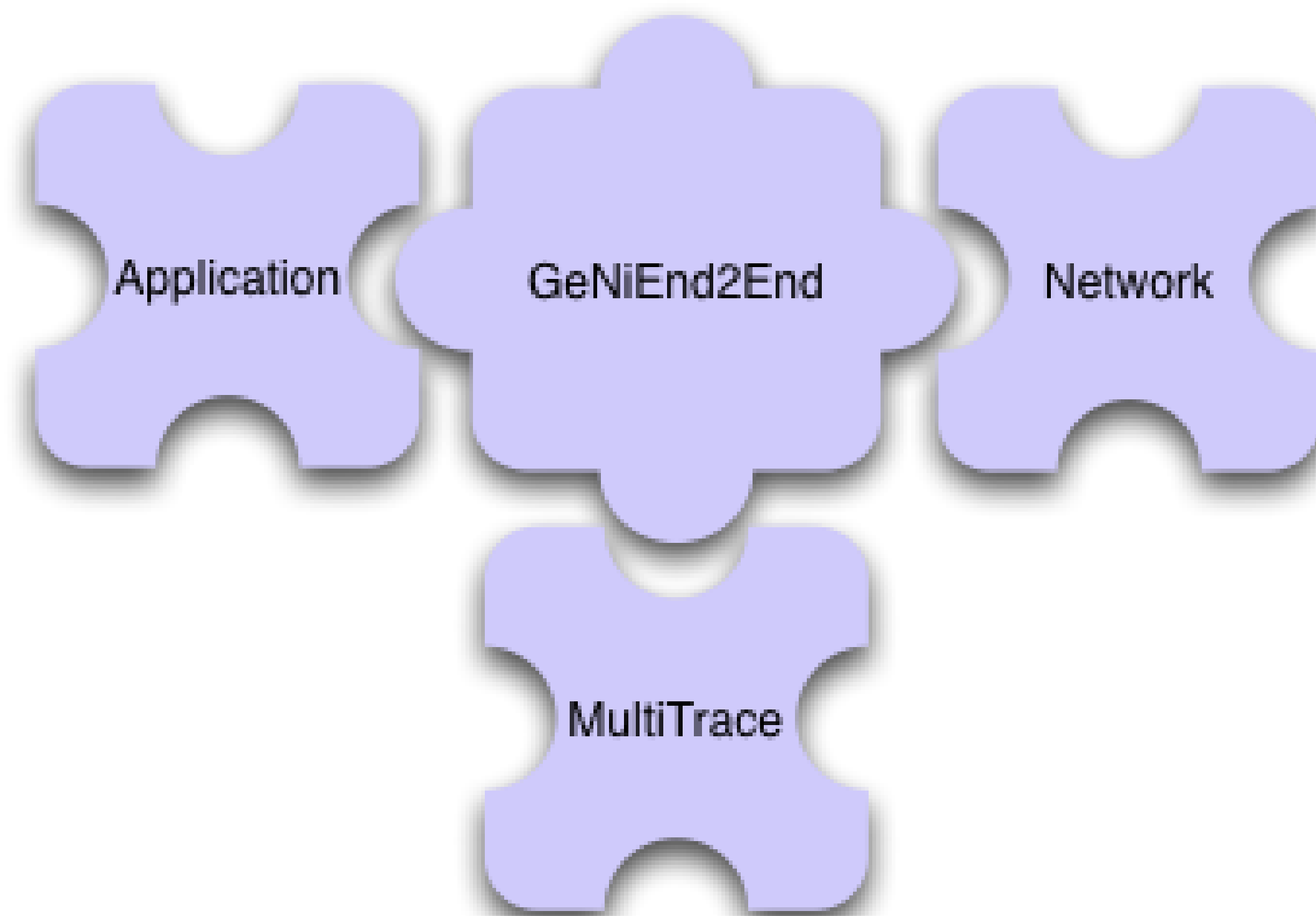


field of applications for GeNiEnd2End Network

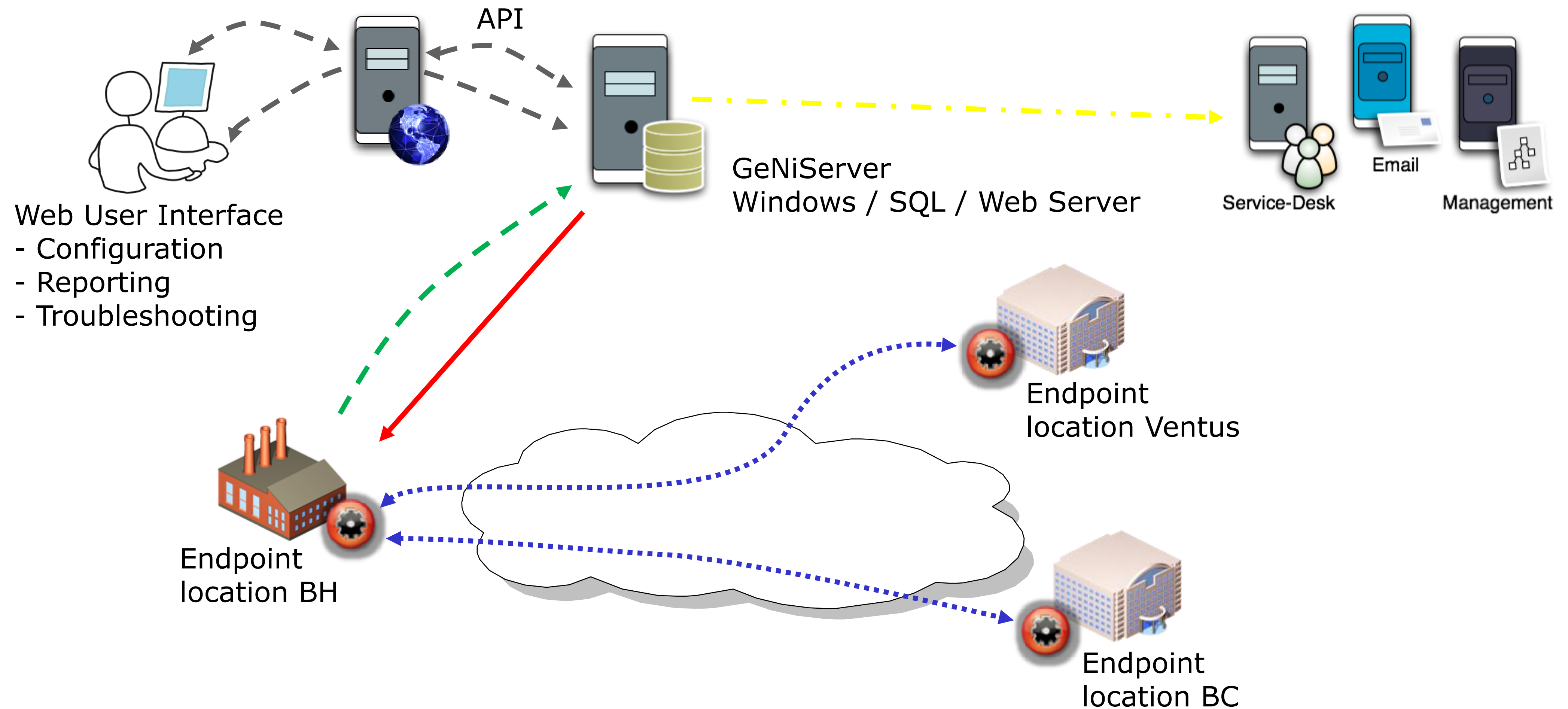
■ More end user visibility with GeNiEnd2End

Three complementary monitoring methods

- Synthetic end user experience monitoring, replaying scripted user transactions with reference systems
- Active end-to-end QoS and QoE monitoring for Triple Play Services
- Multi-Tier packet tracing for network troubleshooting



■ Mode of operation GeNiEnd2End Network



- 24/7 control of performance tests
- End-to-end Measurement (Data, VoIP and Video)
- Transfer of measured values
- Alerting

Endpoint OS



and more

■ 3 field of applications

- 24 x 7 end-to-end service level monitoring or assessment measurement for Triple Play Services
- AdHoc end user service verification initiated by 1st level support
- User-self-service performance testing



The screenshot shows the GeNi End2End web application interface. At the top, there is a blue header bar with a "Help" button on the left. The main content area has a light blue background with a diagonal grey stripe. In the center, the GeNi End2End logo is displayed, followed by the tagline "visualize End-User Experience". Below the logo, there is a "Login" section with two input fields: "Username:" and "Password:". A "Login" button is positioned below the password field. At the bottom left, there are two small flags representing Germany and the United Kingdom. At the bottom center, there is a blue footer bar with an "AdHoc" button. Below the "AdHoc" button, there is a dropdown menu with three options: "GUI", "API HTML", and "API GUI". On the right side of the footer bar, the version information "Version: 4.1 (4132) © NETCOR™ 2002 - 2010" is displayed.

Help

GeNi End2End
visualize End-User Experience

Login

Username:

Password:

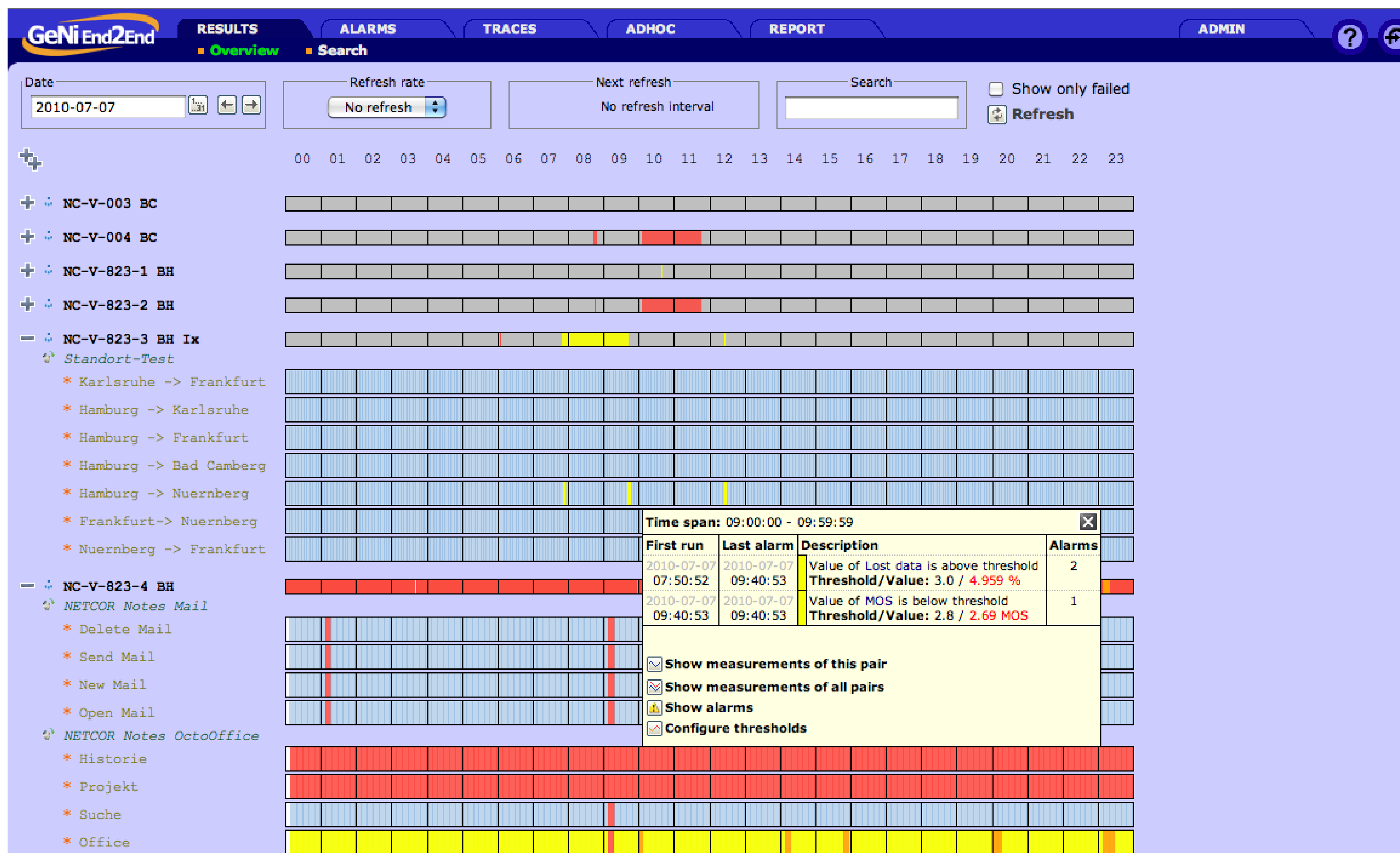
Login

AdHoc

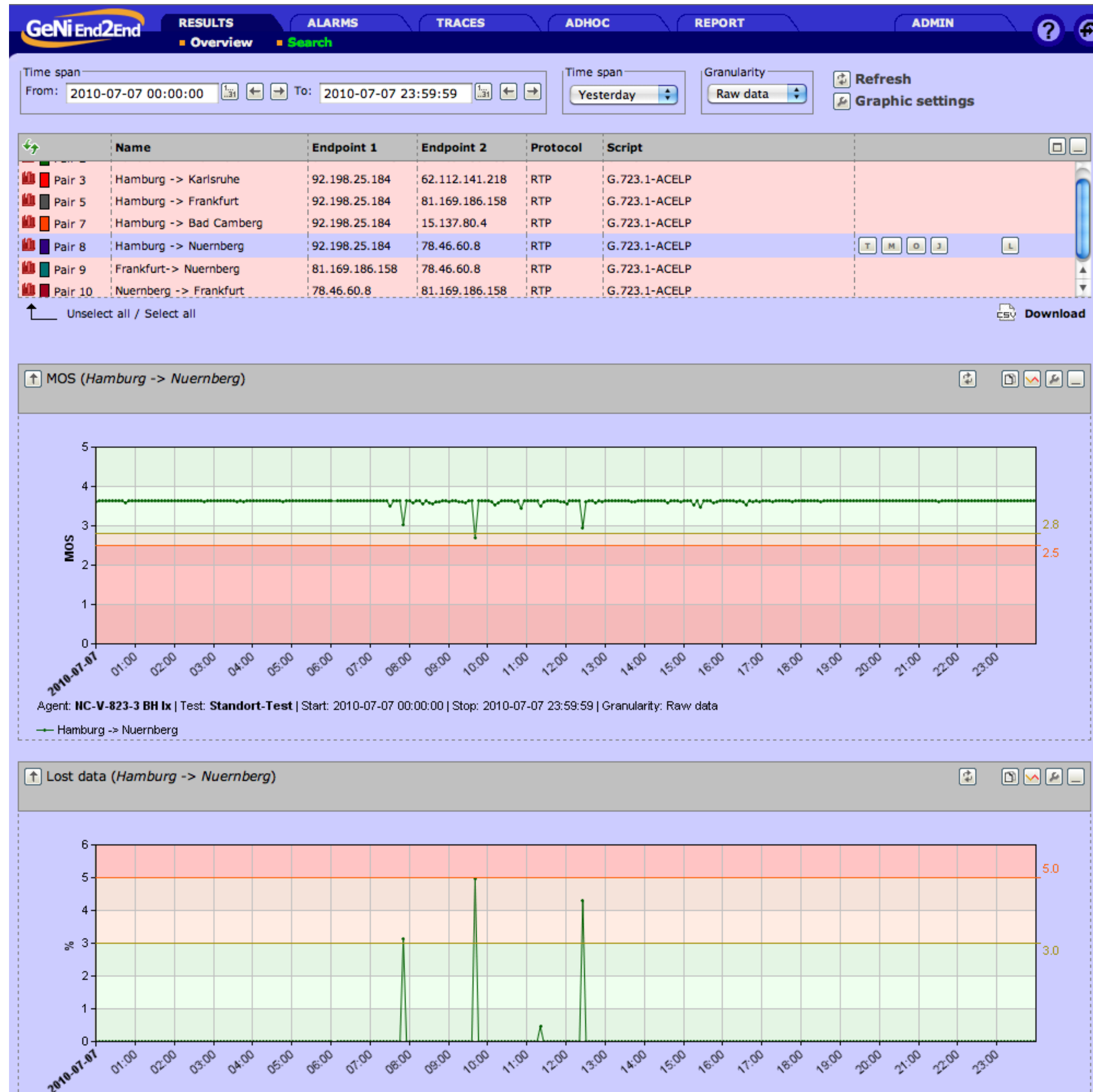
- GUI
- API HTML
- API GUI

Version: 4.1 (4132) © NETCOR™ 2002 - 2010

■ Daily QoS and QoE performance view






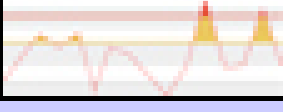




Time charts



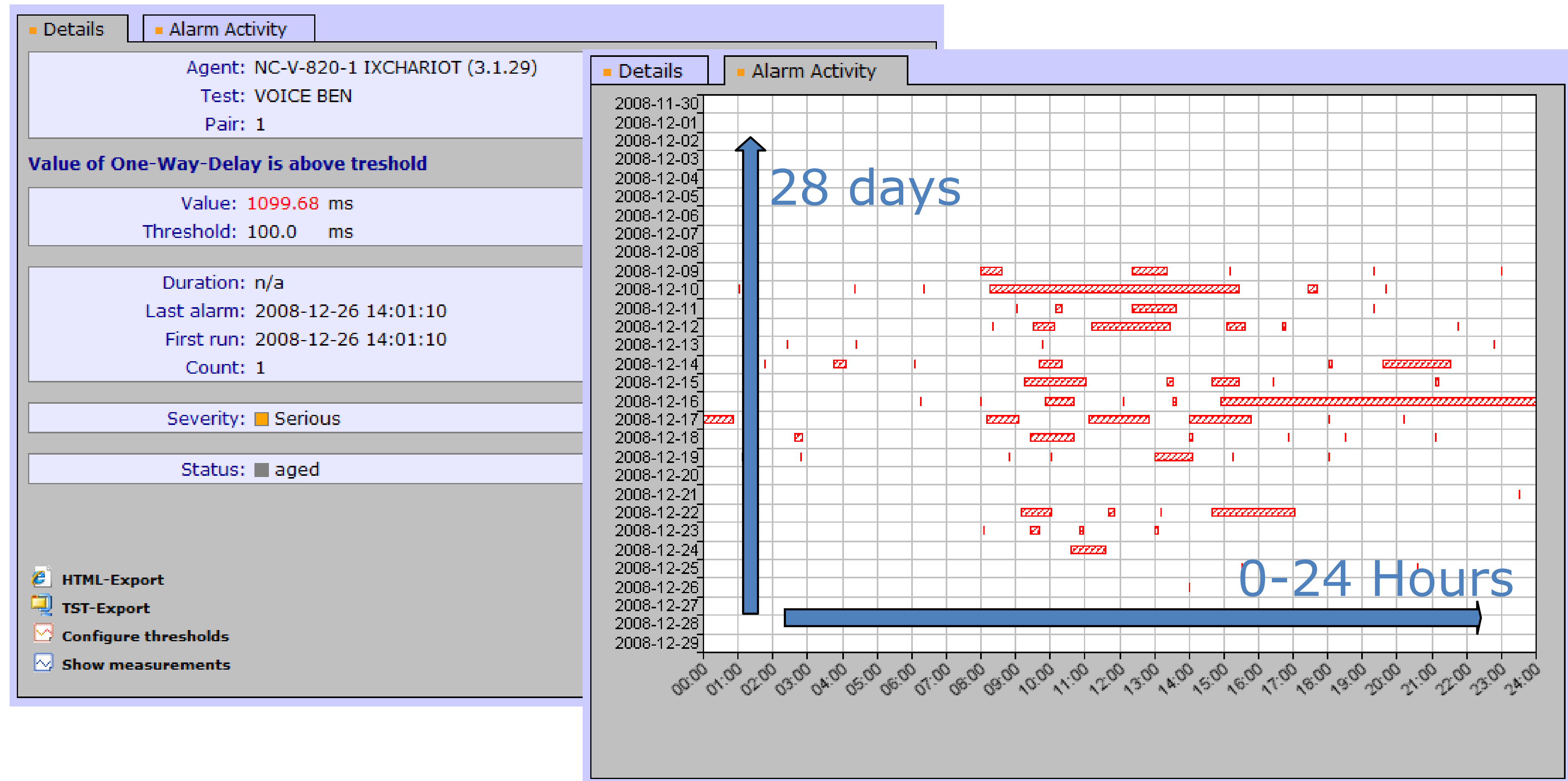
- Historical data available for up to 1 year
- Data aggregation in varied time intervals
- Disclosed database allows easy integration with existing management systems
- Measurement data export to CSV-files

■ Threshold definitions

- Threshold are definable globally or for every connection (pair)
- All threshold breaches are saved in local database
- Optionally threshold breaches are alerted by email and/or SNMP Trap

Pair: 1	Pair Comment			Protocol	Script
	Pair 1			RTP	G.711u
Name	Warning		serious warning	Unit	Measurement type
Throughput	0.0	=	0.0	Mbit/s	 Average ▼
MOS	3.5	>	3.0	MOS	 Average ▼
One-Way-Delay	50.0	<	100.0	ms	 Average ▼
Lost Data	0.1	<	1.0	%	 Average ▼
Jitter	20.0	<	50.0	ms	 Average ▼
Delay Factor (DF)	10.0	<	50.0	DF	 Average ▼
Transactionrate	0.0	=	0.0	#/Second	 Average ▼
Reponse Time	0.0	=	0.0	sec	 Average ▼

■ Detailed alarm ticket information with alarm history



Scheduled email reporting

GeNiEnd2End

RESULTS ALARMS TRACES ADHOC **REPORT**

■ Reports ■ **Report definition**

Management

- New
- Edit
- Delete

Report name:

Report type:

Fixed timespan: ☐

Start time:

End time:

Interval:

Time: :

Day:

Granularity:

Language:

Send by eMail: ☐

Report eMail:

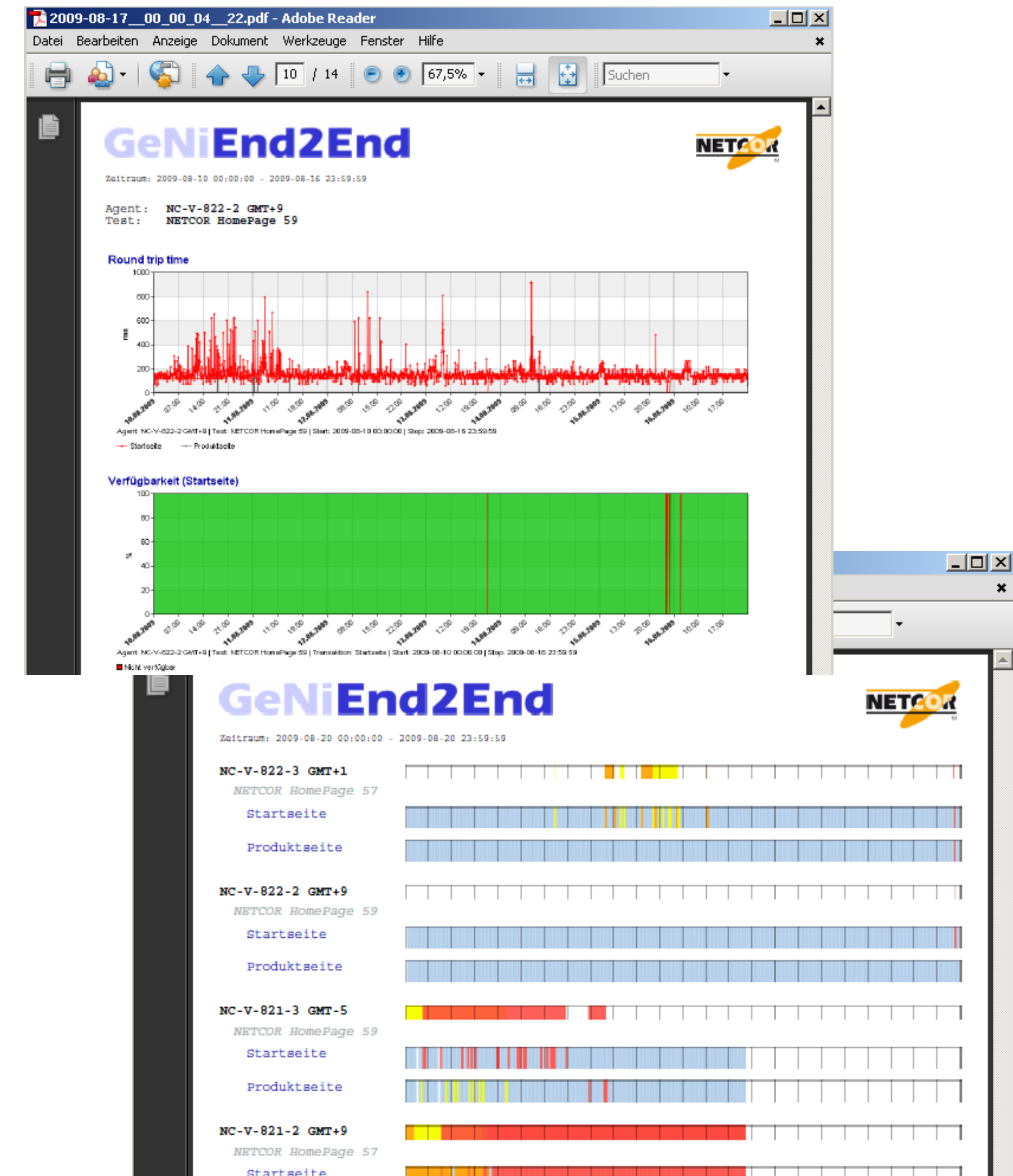
Recipient:

Output format:

Format:
☒ Portrait format
☐ Landscape format

Logo top left:

Logo top right:



■ Adhoc end user service verification done by 1st level support (sample workflow)

GeNi End2End RESULTS ALARMS TRACES ADHOC REPORT ADMIN

Test History Test (Trace) History (Trace)

Agent: Choose
Test: Choose

Source IP: 15.137.80.4
Source-Desc.:
Destination: Choose
Destination IP:
Destination-Desc.:

eMail: lg@netcor.de
eMail-Type: Standard HTML DEU

☐ TST - File
☐ HTML - File
☐ CSV - File

Start test Reset

Hide history

Time	Source IP	Source-Desc.	Destination IP	Destination-Desc.	Agent	Test
2010-07-12 13:43:04	15.137.80.4	End User Thomas	15.137.208.9	Fileserver	JonasVM2	2 Pair Voice
2010-07-12 13:40:05					JonasVM2	2 Pair Voice

Legend

- Test was successful Good
- Test is running Fair
- Test is in queue Bad
- Alarm
- Evaluating results The file is not available

Refresh
Copy entry

Measurements

	Pair 1	Pair 2
MOS:	4.37	4.36
One-Way-Delay:	11 ms	32 ms
Lost data:	0.0 %	0.0 %
Jitter:	4.1 ms	1.1 ms

- Configure test parameters:
- Select available AdHoc Agent (optional)
- Select predefined test (VoIP, Throughput, Response time)
- Enter IP address of end user pc and select destination address
- Enter email address and email template
- Test results are available via email or web GUI

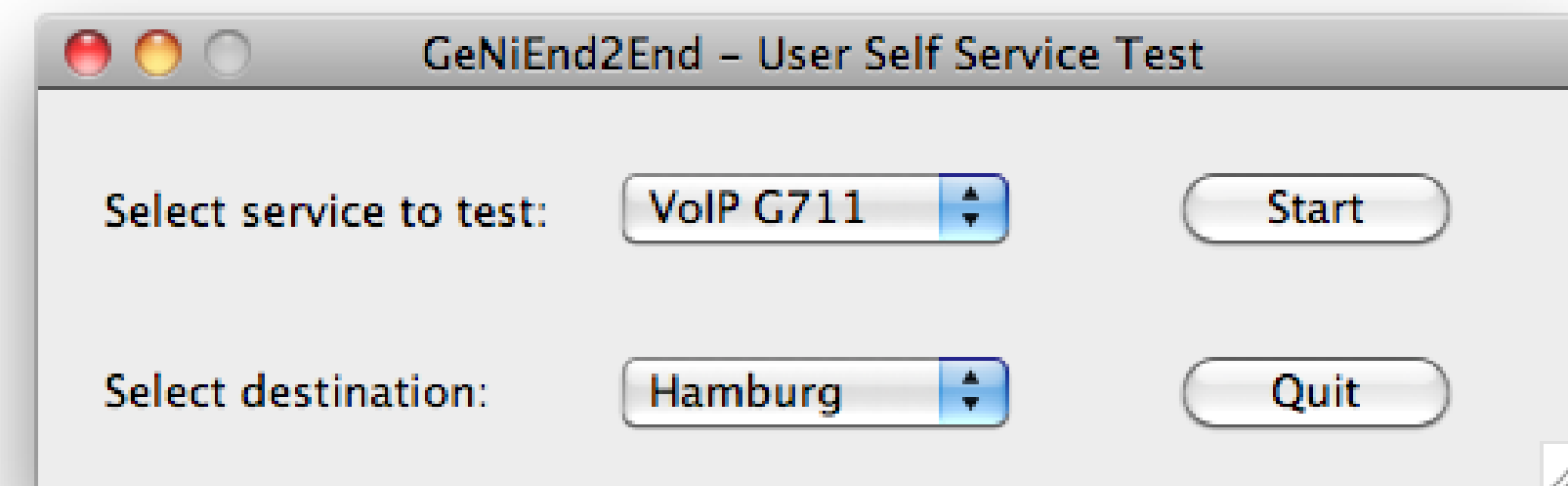
This workflow can be integrated using the integrated API in an already existing helpdesk workflow

■ User-self-service performance testing



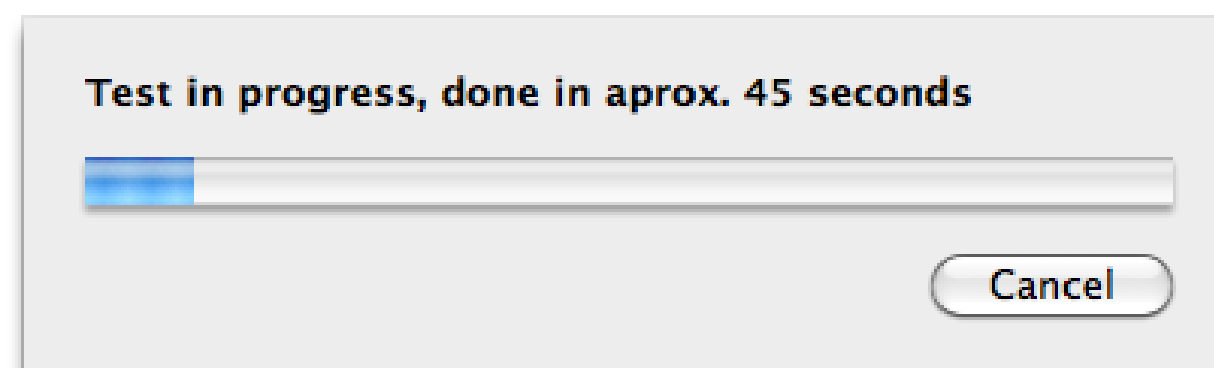
■ User-self-service performance testing (workflow example)

1. Start Test (example GUI)



Endpoint user

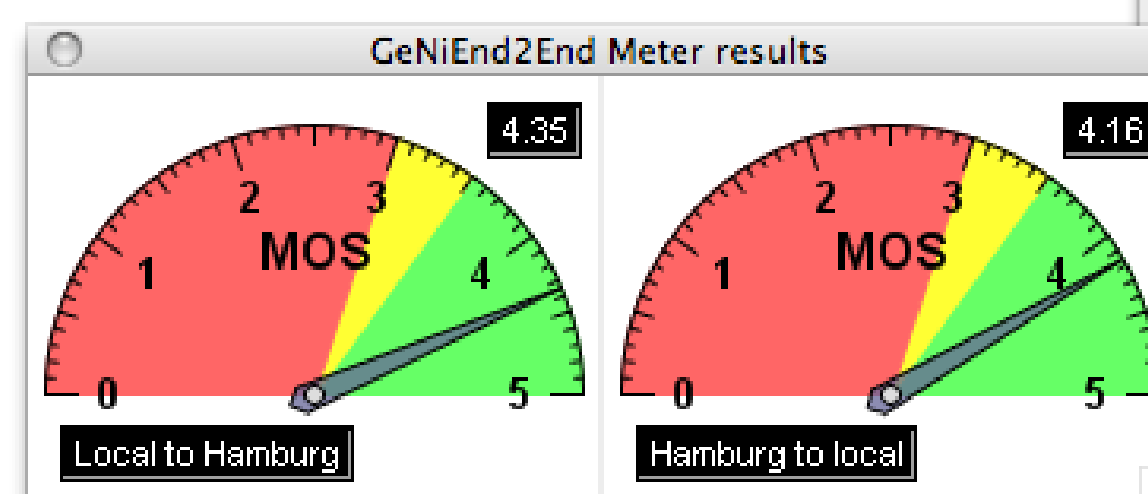
2. Test in progress



Network bottleneck?



3. Results



VoIP G711 Service tested to destination Hamburg

Direction	Local to Hamburg	Hamburg to Local
MOS	4.35	4.16
One way delay (ms)	54	1
Jitter (ms)	0.0	0.0
Packet loss (%)	0.0	0.267

Local IP = 15.137.209.47 - Destination IP = 15.137.208.9

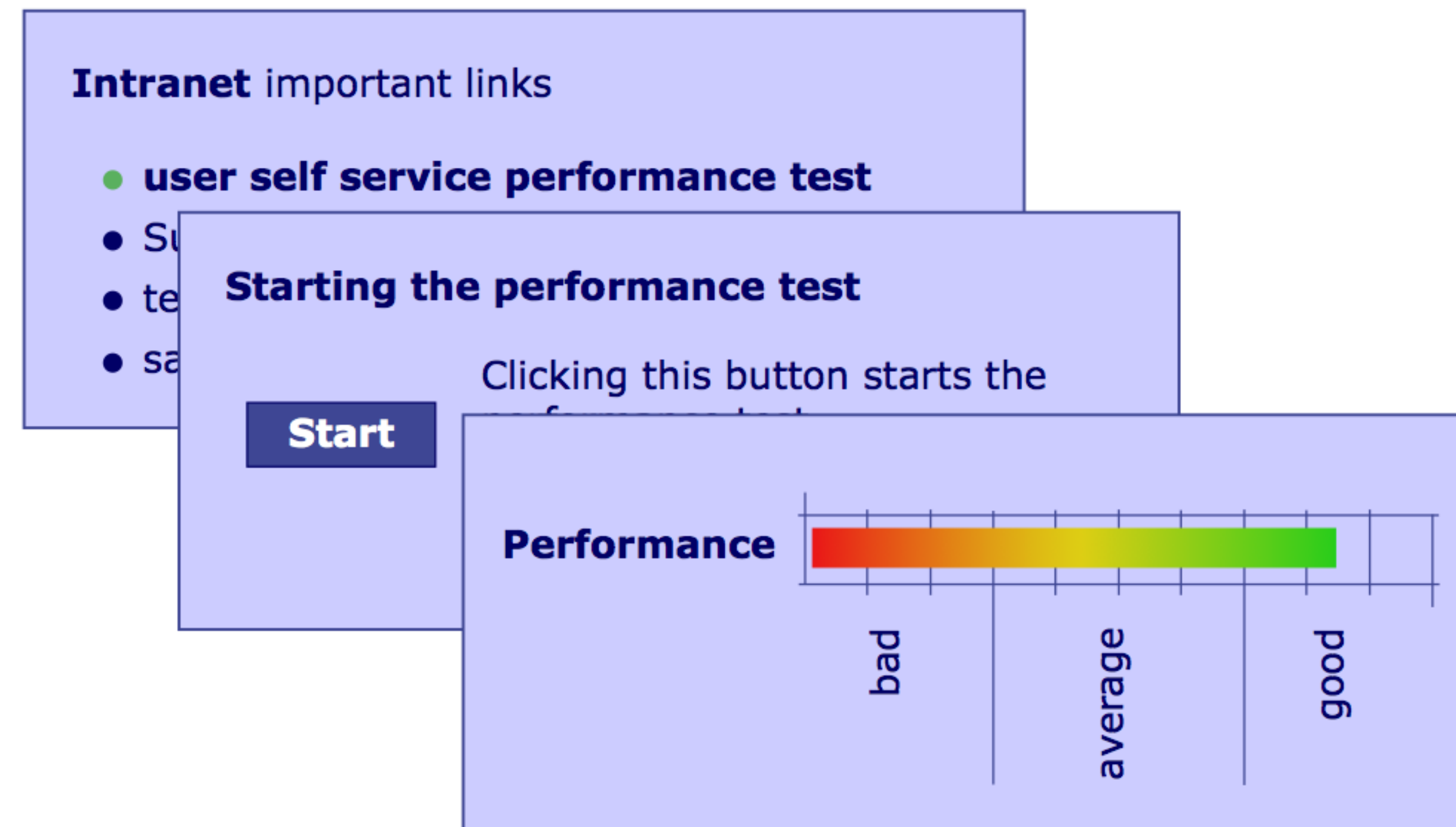
Close



Endpoint data center

■ Benefits of adhoc testing from the end user

- In case of performance problems, immediately an end-user performance measurement is initiated
- Done by 1st level support means support costs savings
- Done by user means objective on-demand measurement values and cost savings



■ Benefits of GeNiEnd2End Network

- Ad-Hoc service verification / User-self-Service performance testing
 - cost-effective identification of performance bottlenecks
 - Trouble Tickets can be rated and assigned by the 1st-Level Support which increases the solution rate
 - failure classification (network/application/server) without time consuming packet analysis and evaluation of SNMP management tools
- 24x7 end-to-end Qos monitoring
 - going from reactive to proactive management - identify performance problems before the user gives notice
 - 24x7 overall view of the end-to-end performance of the network infrastructure for Triple Play Services
 - No installation required of dedicated Hardware Probes
Advantage: future-proof, fast and easy rollout means cost savings
 - An unlimited number of software Endpoints can be installed

■ Is that sufficient enough?

Elimination procedure is effective and economic

- takes little time and effort
- and delivers fast results

BUT

it only excludes the network.

In case you require more, you need to spend more effort!

■ GeNiJack - integrated endpoint

- Compact and lightweight
- Easy to deploy
- Cost-effective
- Low power usage

