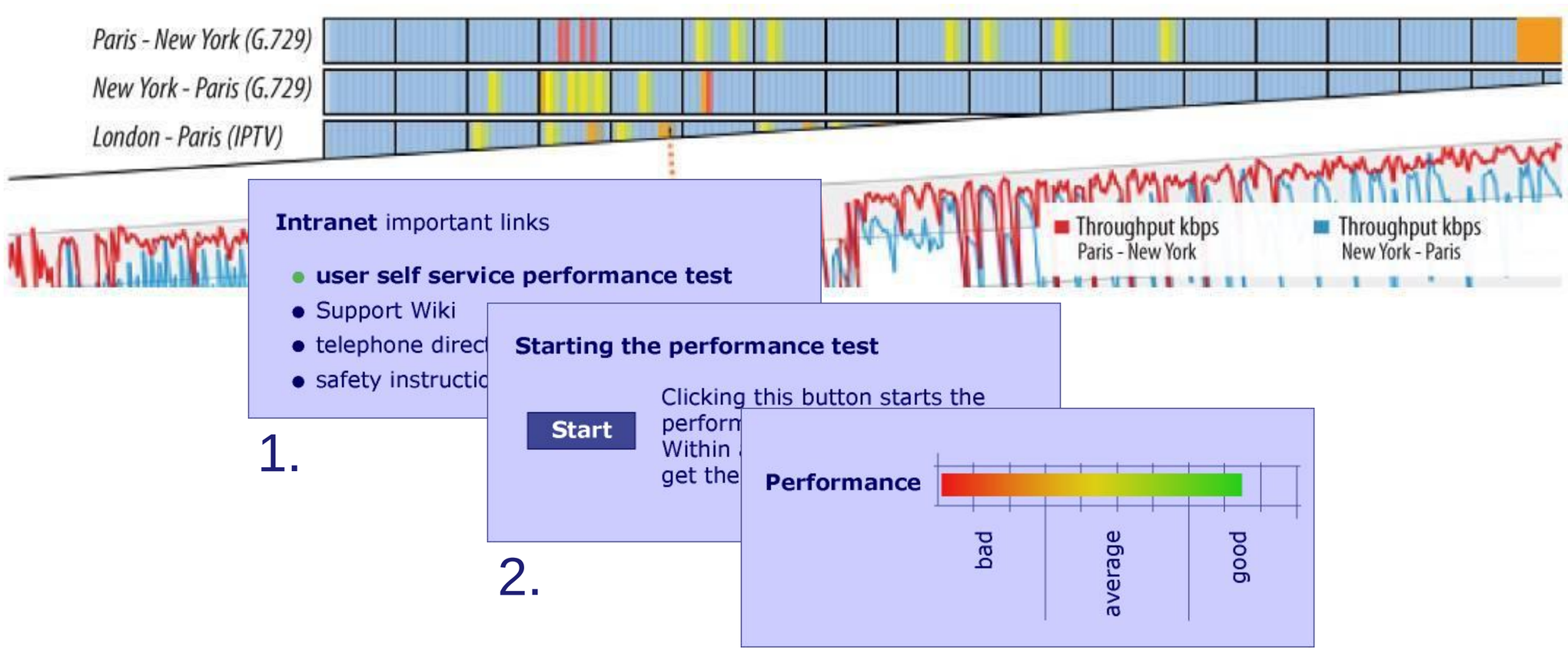
GeNiEnd2End Network
24/7 end-to-end Quality of Service Monitoring



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

Troubleshooting	User Help Desk
User Self Service	VoIP assessment
Service Management	
GeNiEnd2End Network	

field of applications for GeNiEnd2End Network

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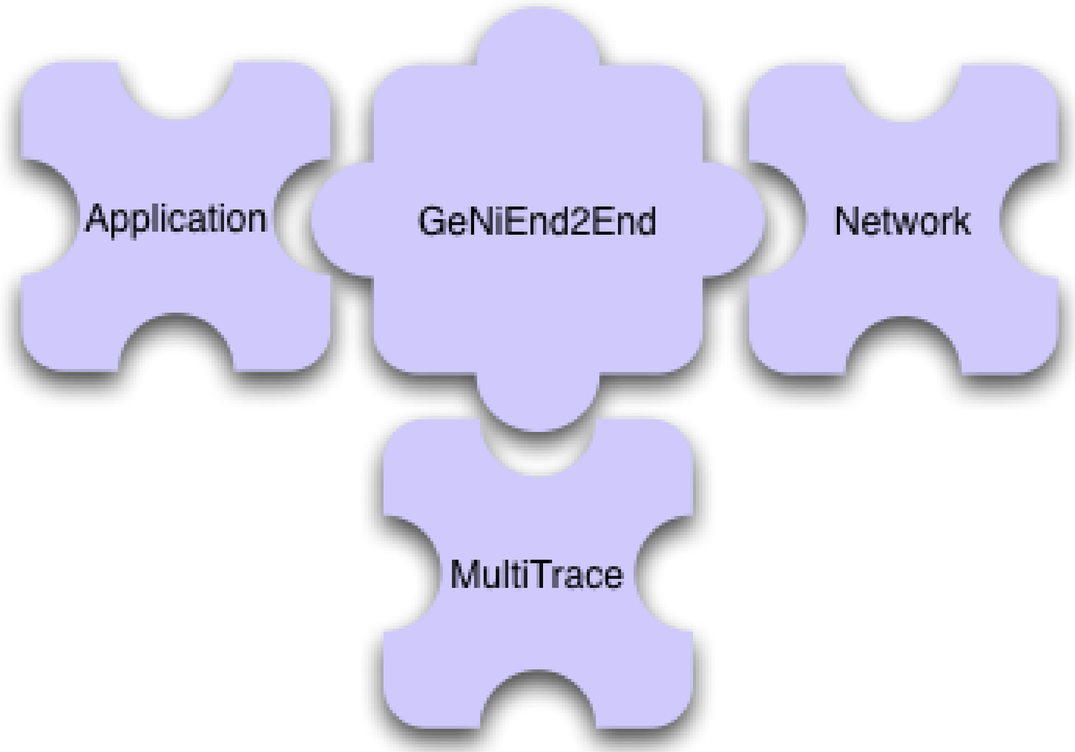
visualize End-User Experience

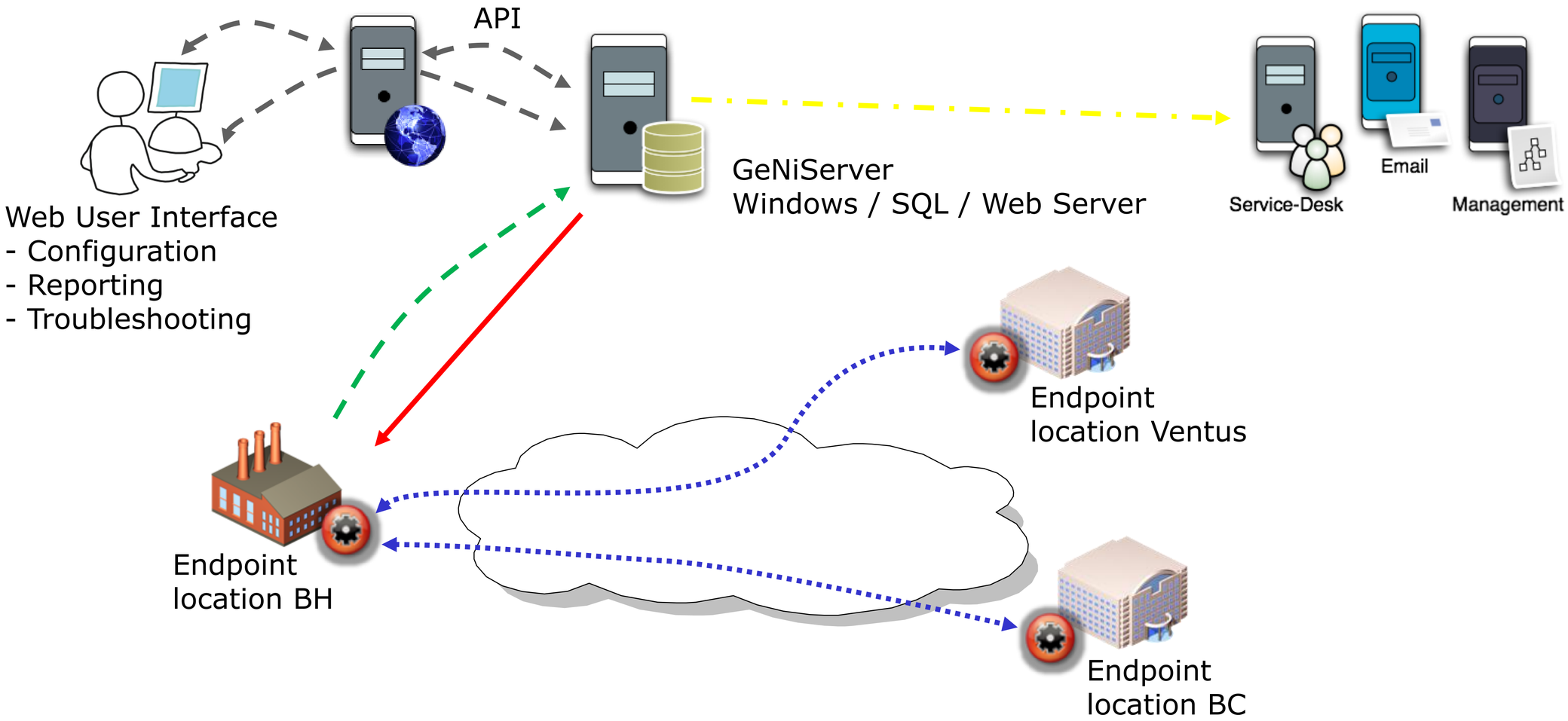
More end user visibility with GeNiEnd2End

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

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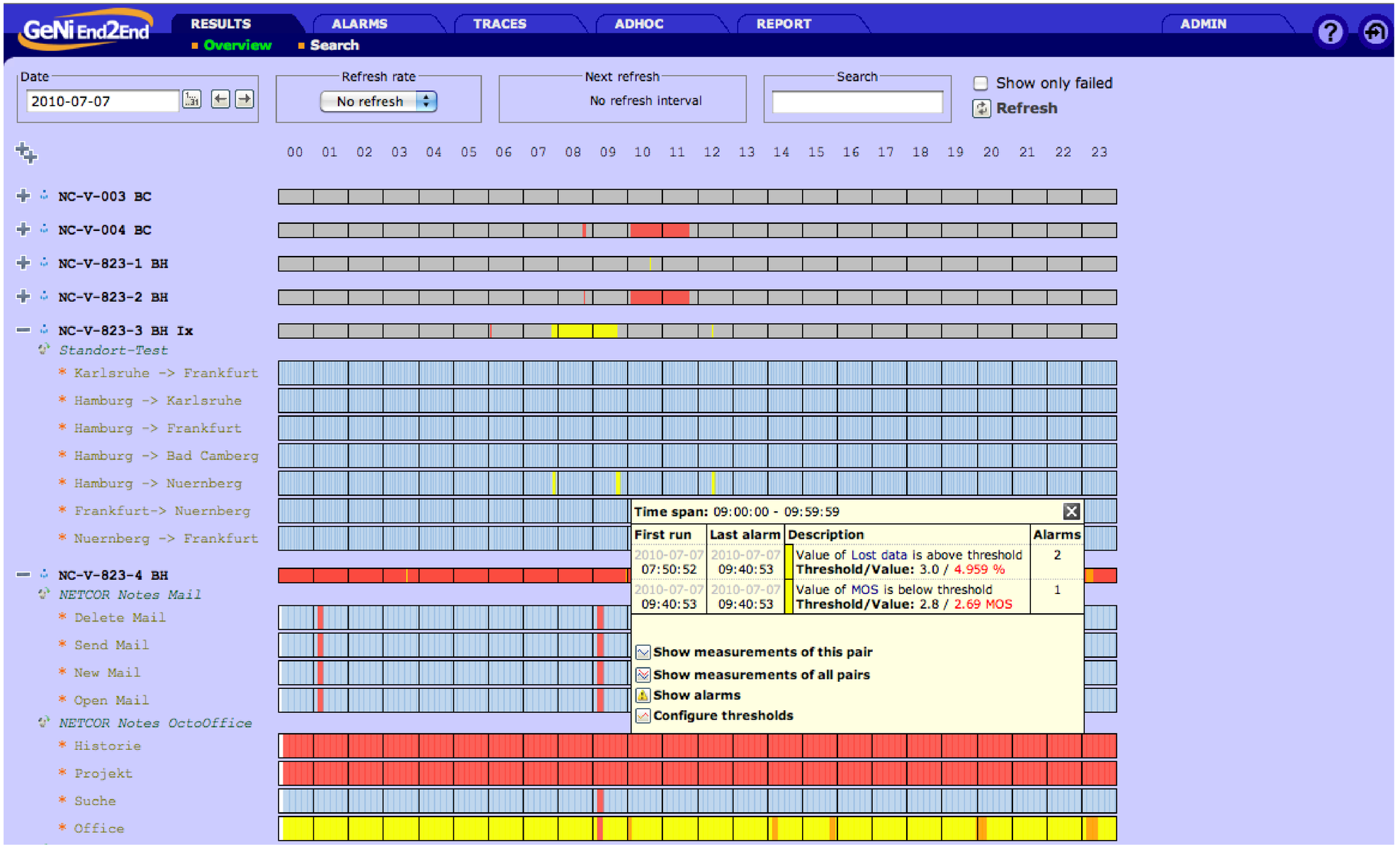
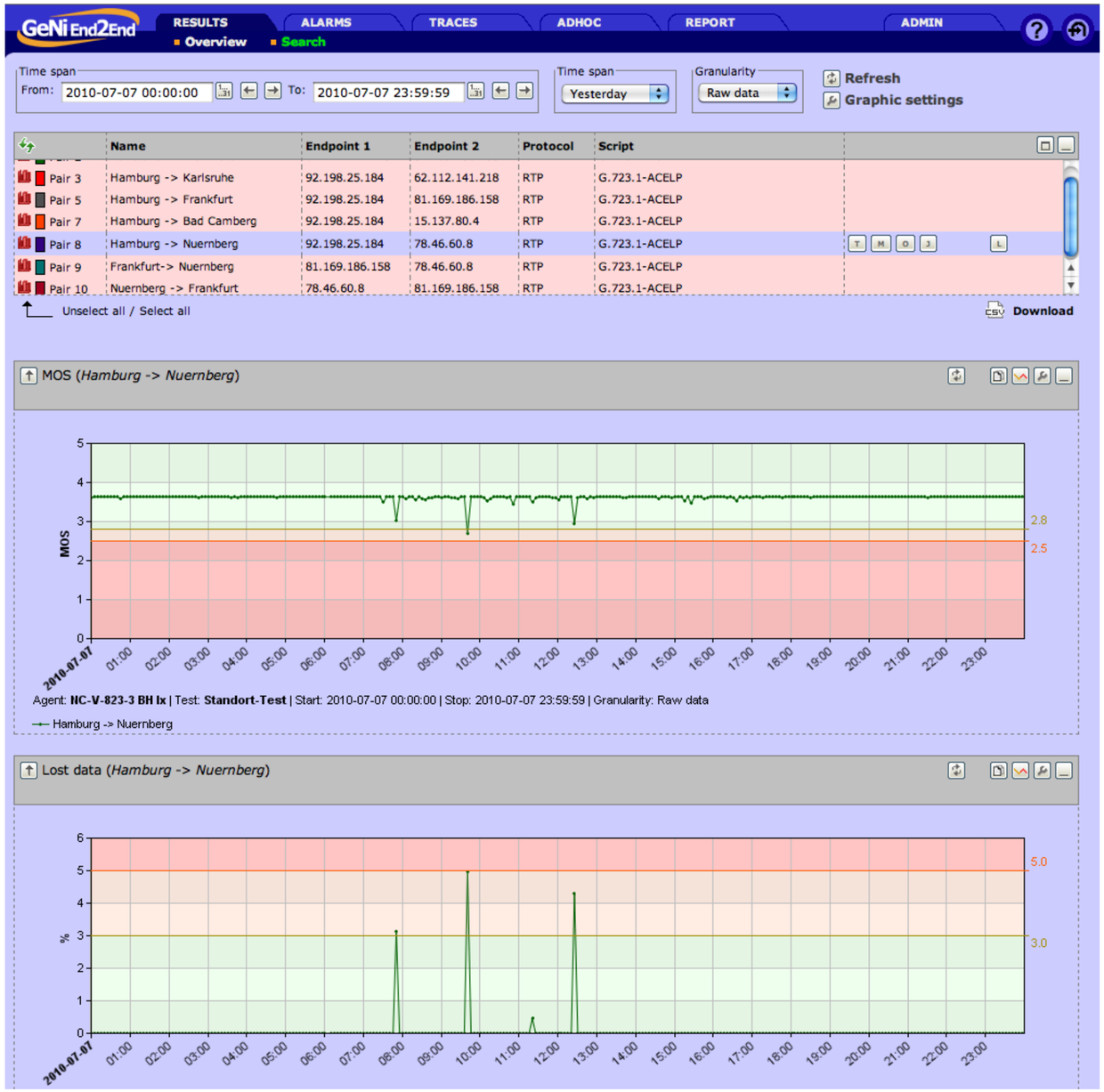
3 field of applications

- 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

Daily QoS and QoE performance view



Time charts



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

NETCOR™
Kompetenz in IT-Performance

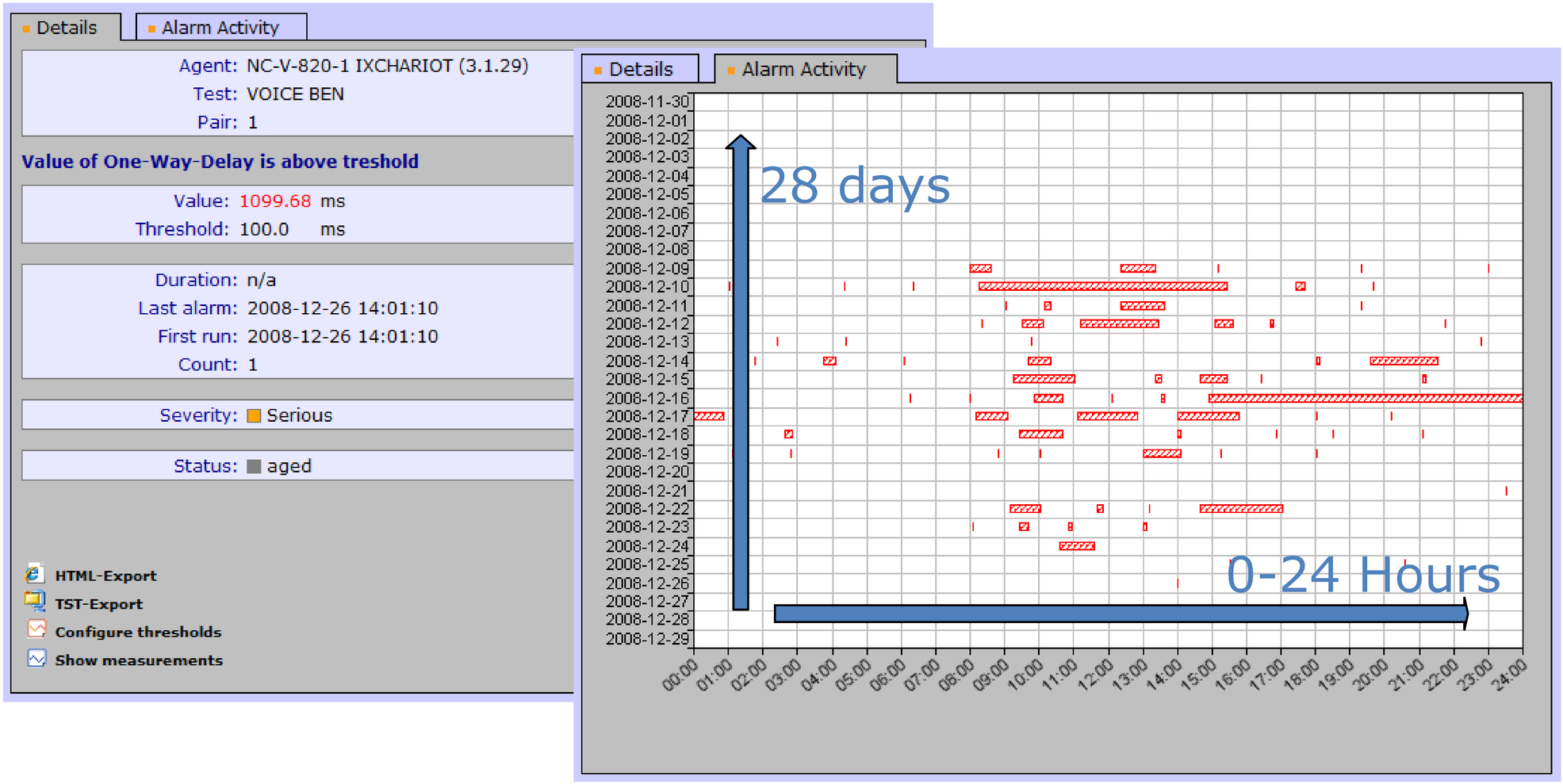
Threshold definitions

- 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

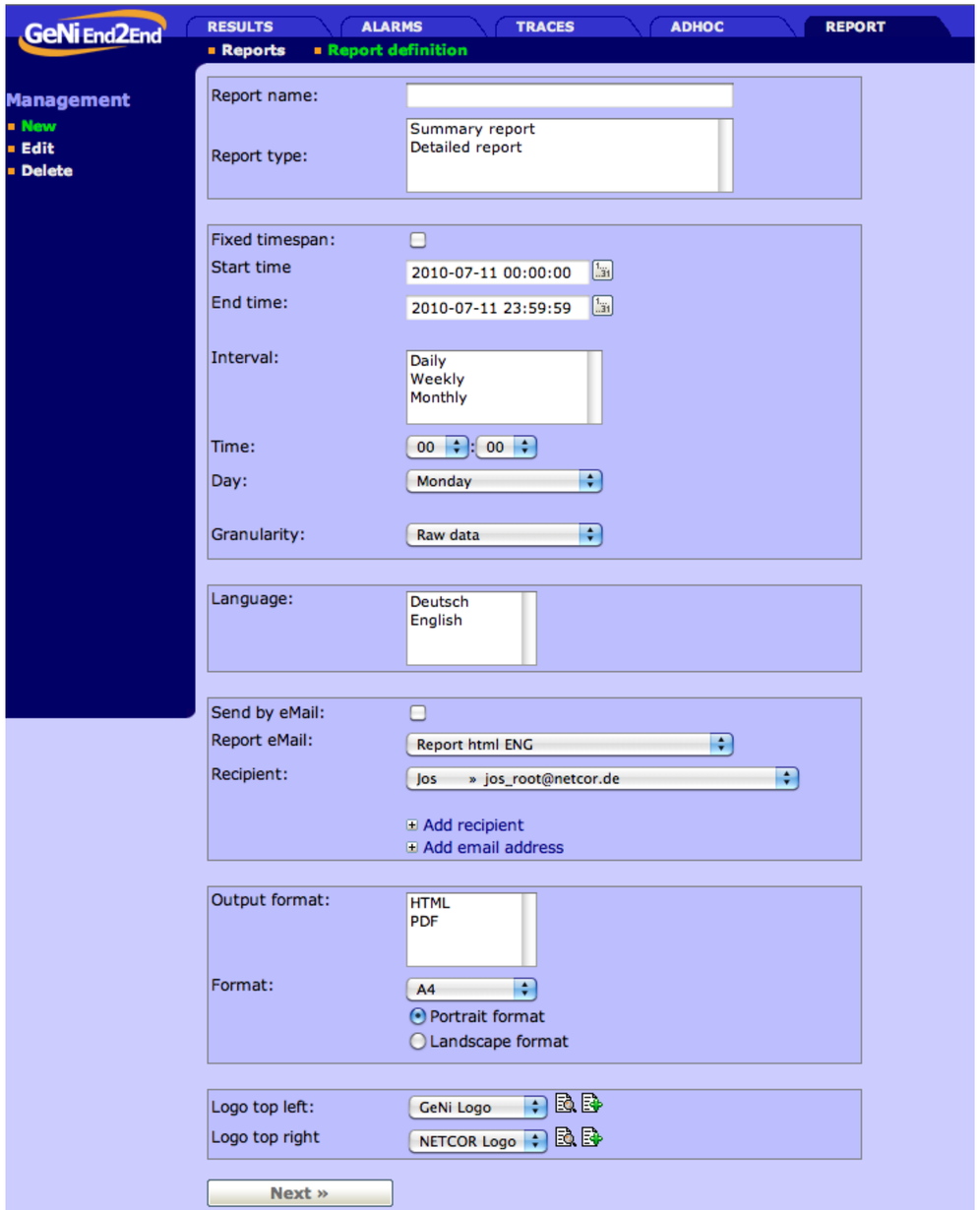
Pair Comment			Protocol	Script
Pair: 1	*Pair 1*		*RTP*	*G.711u*

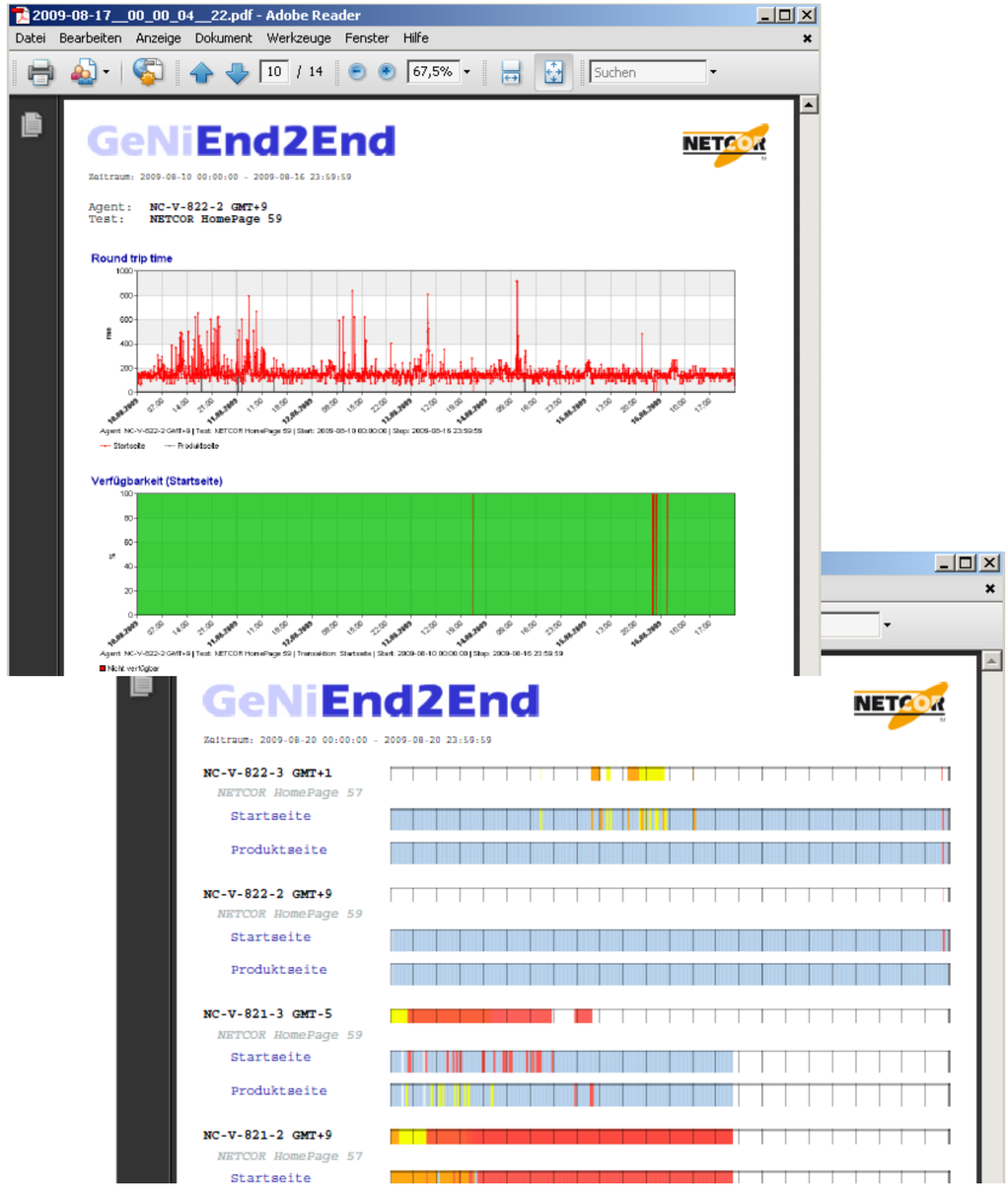
Name	*Warning*		*serious warning*	*Unit*		*Measurement type*
Throughput	0.0	=	0.0	Mbit/s		Average
MOS	3.5	>	3.0	MOS		Average
One-Way-Delay	50.0	<	100.0	ms		Average
Lost Data	0.1	<	1.0	%		Average
Jitter	20.0	<	50.0	ms		Average
Delay Factor (DF)	10.0	<	50.0	DF		Average
Transactionrate	0.0	=	0.0	#/Second		Average
Reponse Time	0.0	=	0.0	sec		Average

Detailled alarm ticket information with alarm history

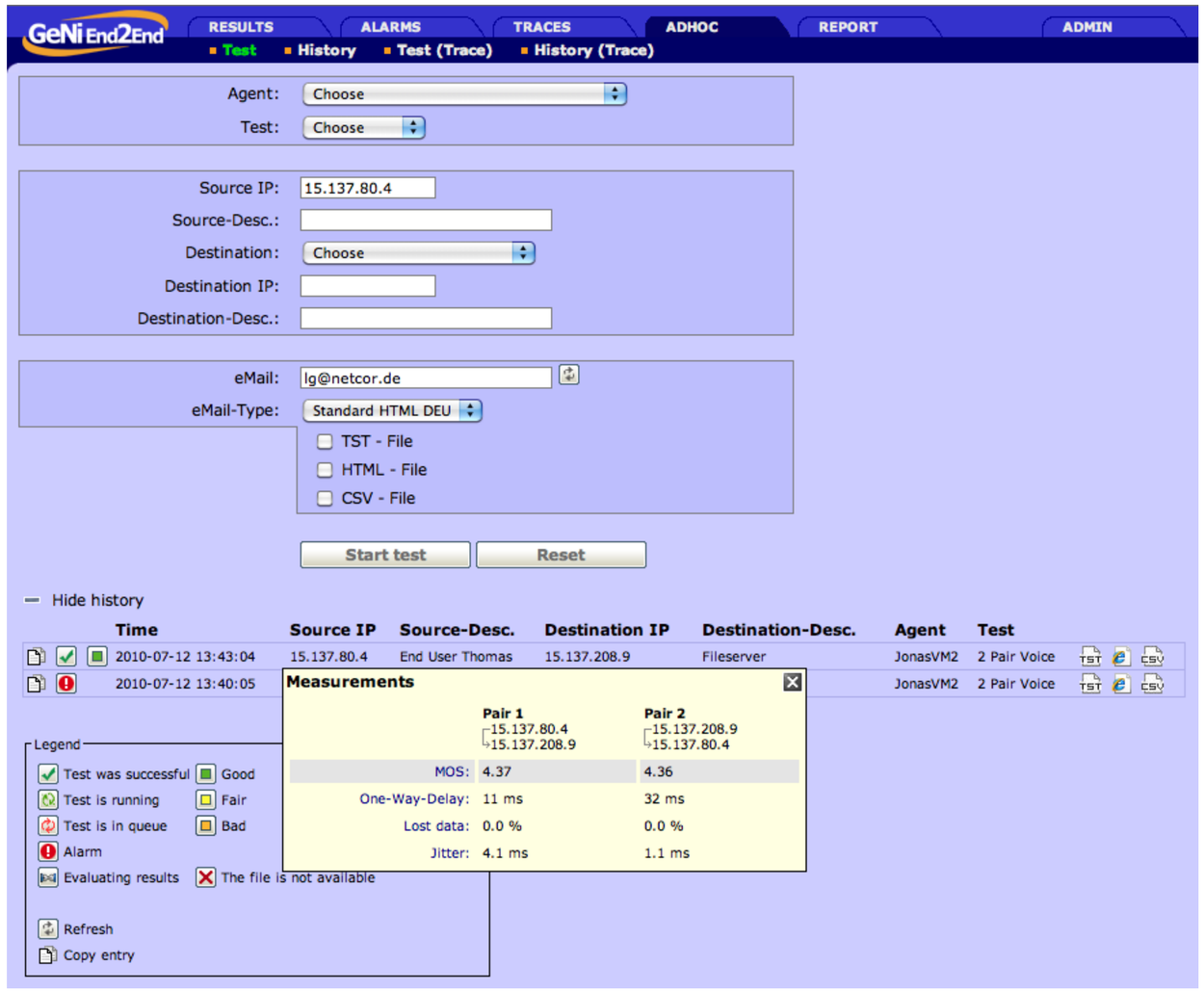


Scheduled email reporting





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



- 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

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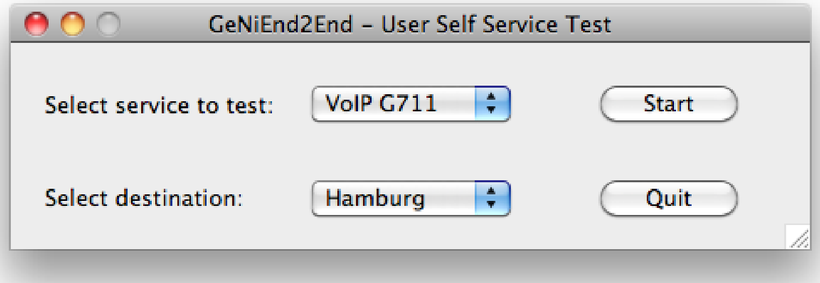
User-self-service performance testing

User-self-service performance testing (workflow example)

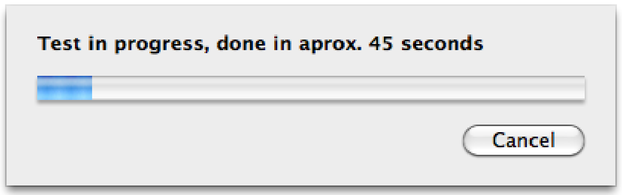
1. Start Test (example GUI)



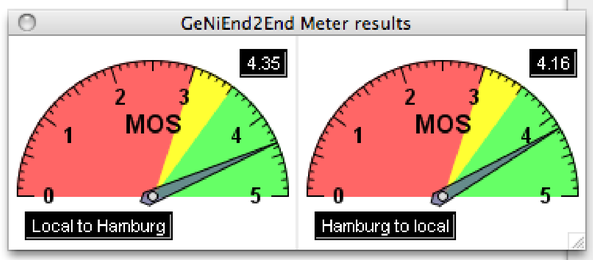
Endpoint user

Network bottleneck?

2. Test in progress



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

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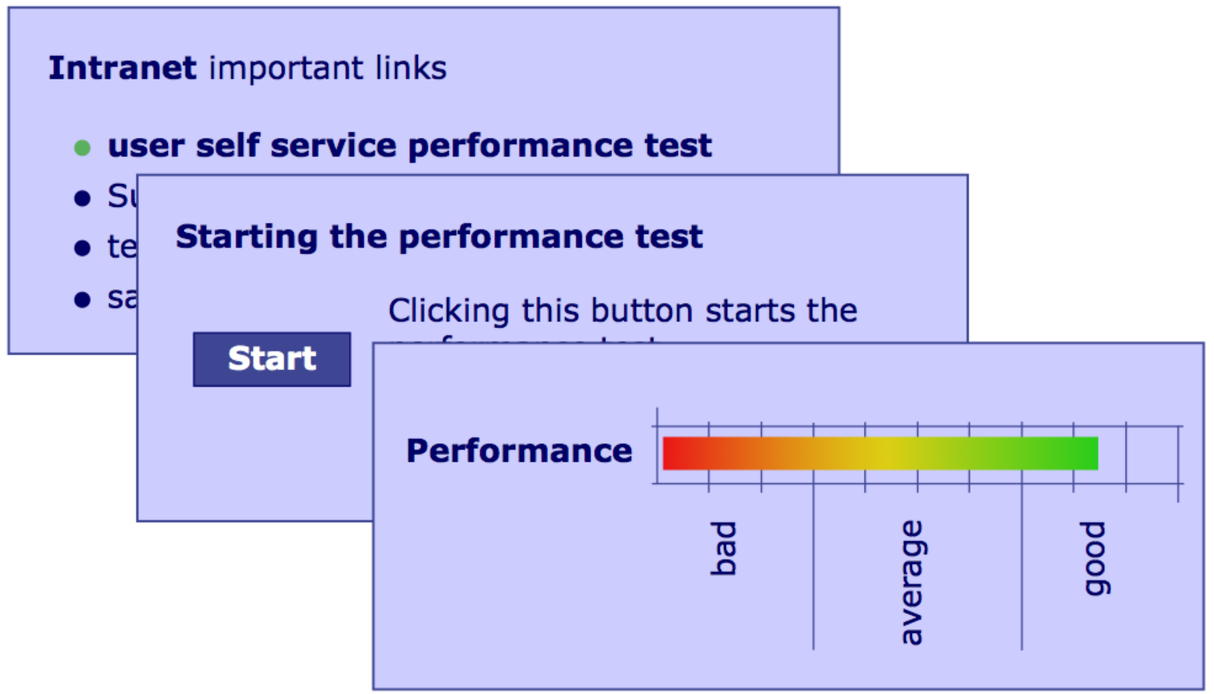
Benefits of adhoc testing from the end user

- In case of performance problems, immediatly 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

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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