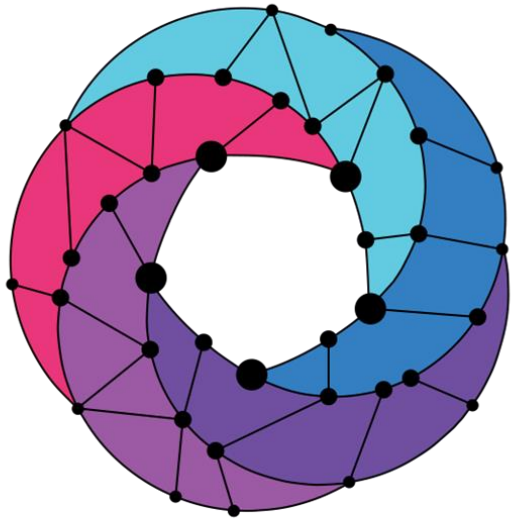

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Keysight IxLoad for OSM Hackfest

Oliver Ferch & Ruben Gutierrez

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Who is Keysight?

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A Brief History of Keysight

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1939–1998:
Hewlett-Packard years

A company founded on electronic measurement innovation

1999–2013:
Agilent Technologies years

Spun off from HP, Agilent became the World's Premier Measurement Company

In September 2013, it announced the spinoff of its electronic measurement business

2014+:
Keysight years

On November 1, Keysight became an independent company focused on the electronic measurement industry

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Technology Innovation is Driving Perpetual Change

Keysight is accelerating innovation to connect and secure the world

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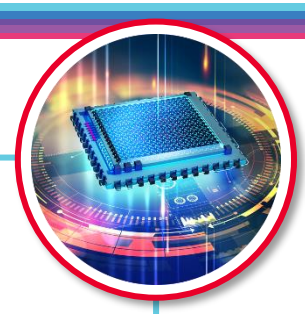
KEYSIGHT TECHNOLOGIES

WIRELESS

$3.6T 5G mobile value chain by 2035[1]

AUTOMOTIVE

70% of new vehicles and trucks shipped will be connected by 2023[2]



QUANTUM

Nations investing >$10B through 2024 for leadership[3]

NETWORKING / CLOUD

Data center capacity expected to grow 4X by 2022[4]

IOT

127 new IoT devices connected to the internet every second[5]

AEROSPACE / DEFENSE

New satellite launches could grow 3X by 2025[6]

[1] Qualcomm 5G Economy. [2] Statista March 2019. [3] HSRC 2018. [4] Various industry sources. [5] McKinsey Global Institute 2017. [6] MIT Technology Review.

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© Keysight 2021 - OSP - Keysight Enabling real power of 5G: O-RAN Fronthaul - HO January 2021

OUR MISSION AT IXIA / Keysight

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We challenge the infrastructure, harden security and visualize the applications

VISIBILITY

- ✓ Improve network and application visibility and performance

SECURITY

- ✓ Find and eliminate security vulnerabilities

TEST

- ✓ Validate network and security equipment performance and application Quality of Experience

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Tool of choice: IxLoad

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Introducing IxLoad

IxLoad provides converged multiplay service emulation to validate the **quality of experience** of real-time and business-critical application services

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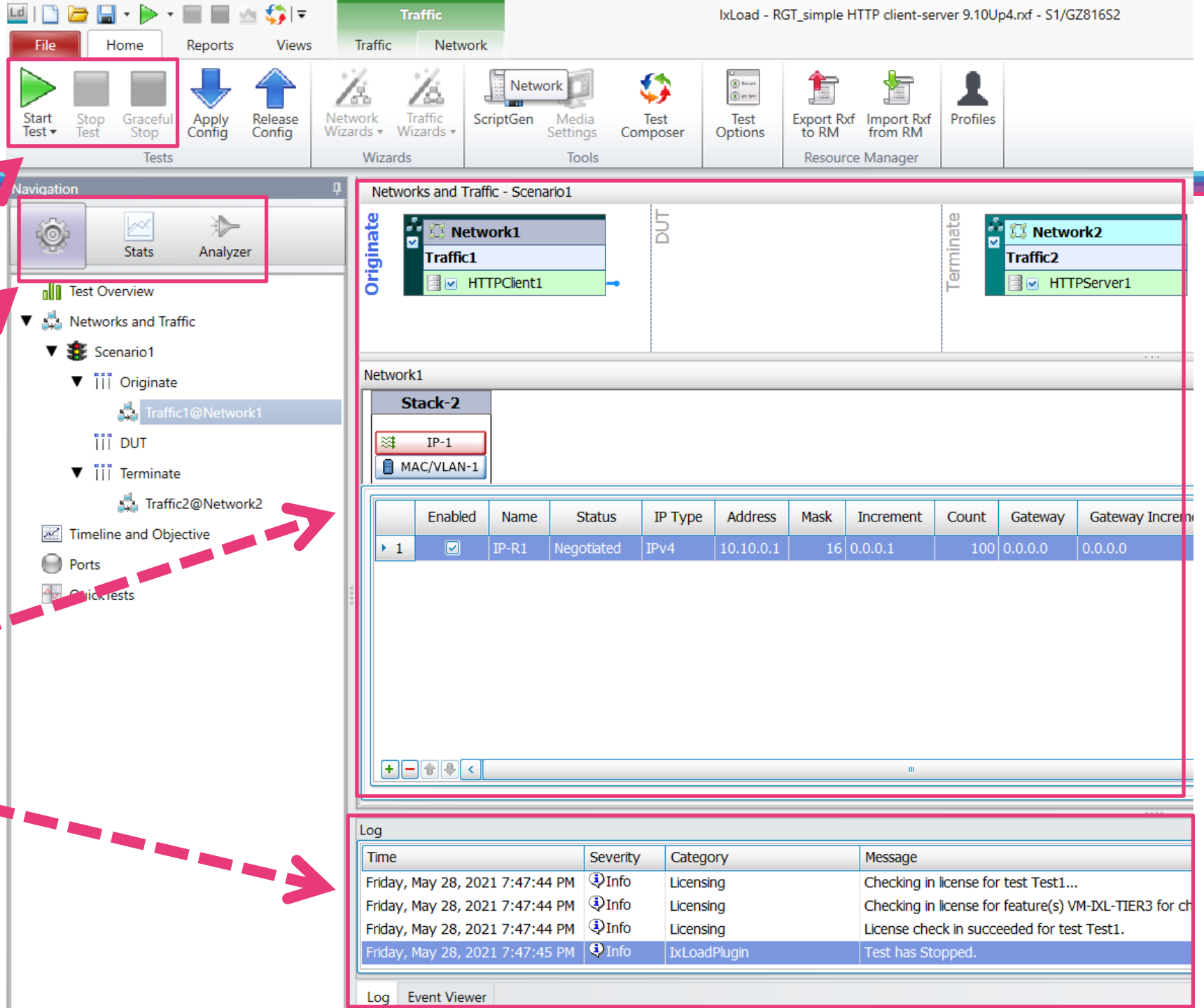
IxLoad GUI

Test controller
- Start
- Stop
- Graceful Stop

Navigation Panel
- Configuration
- Stats
- Analyzer → Network Capture

Adaptative canvas
- It depends on Navigation panel

Log/Event viewer



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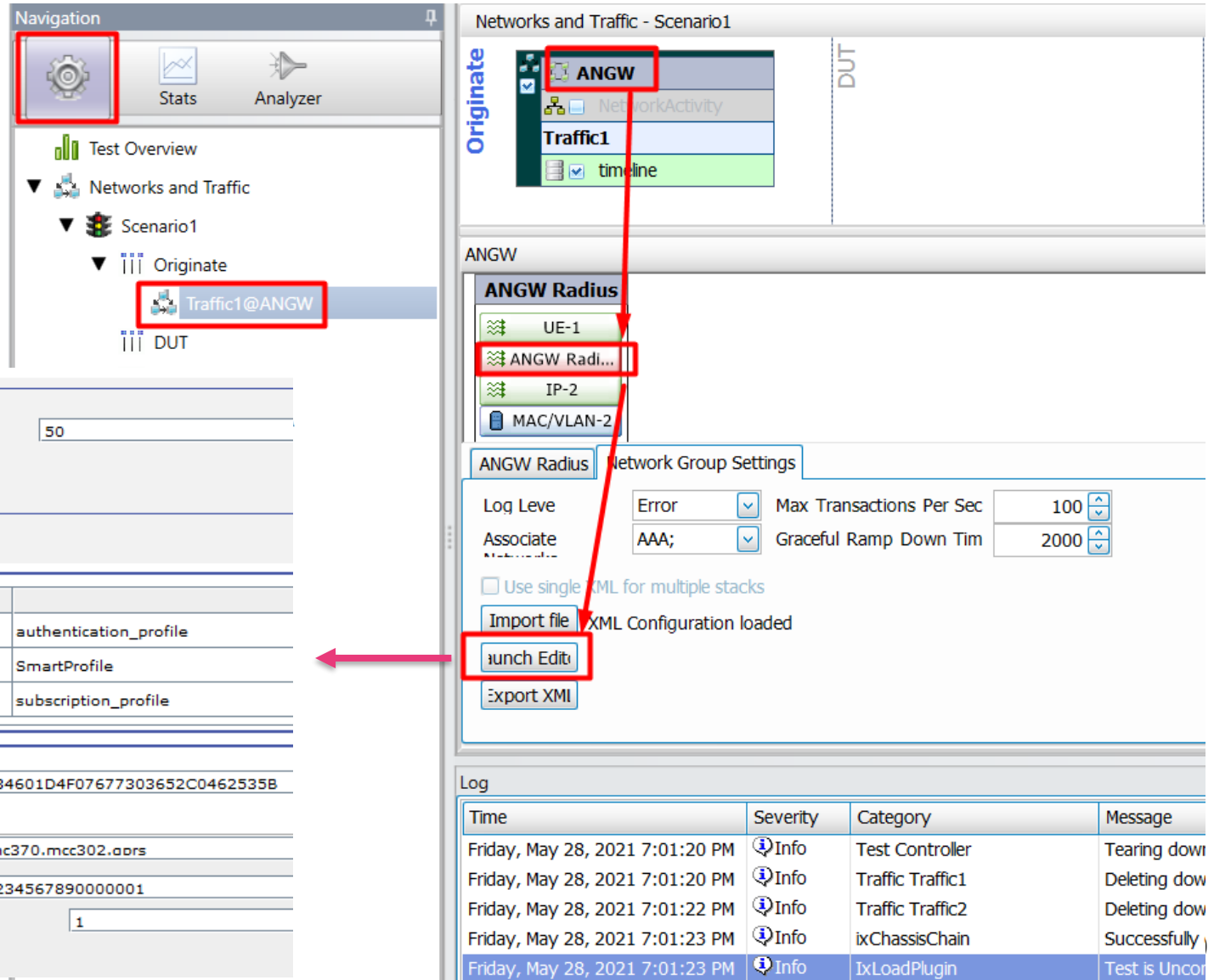
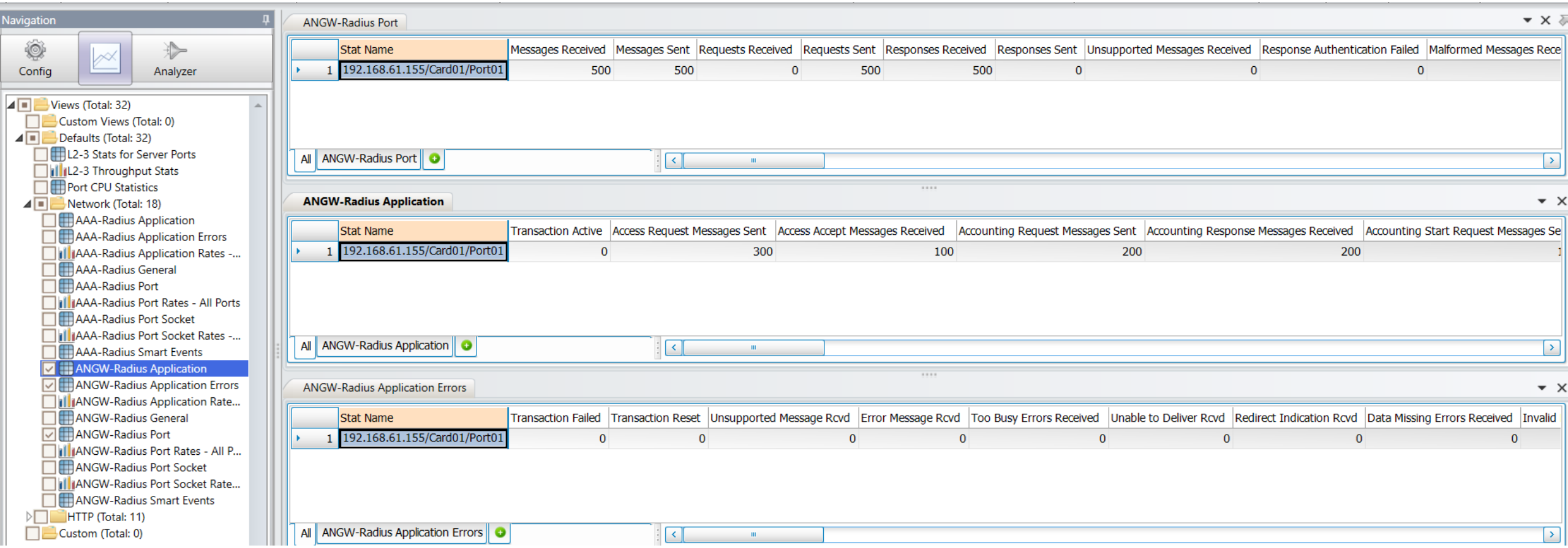
Radius Configuration

How to check the configuration



FreeRadius → Radius stats



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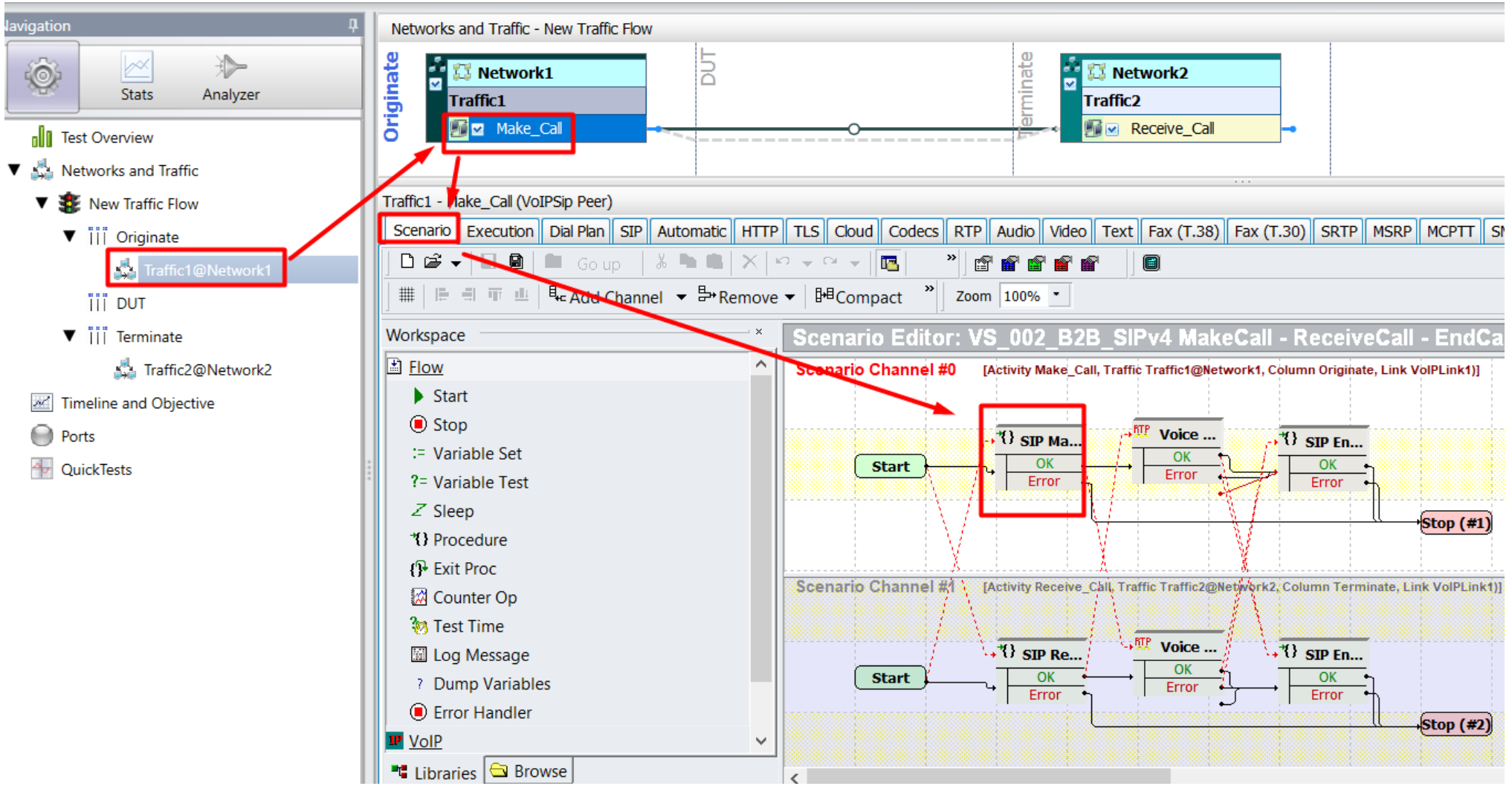
Asterisk → VoIP Configuration

How to check the configuration



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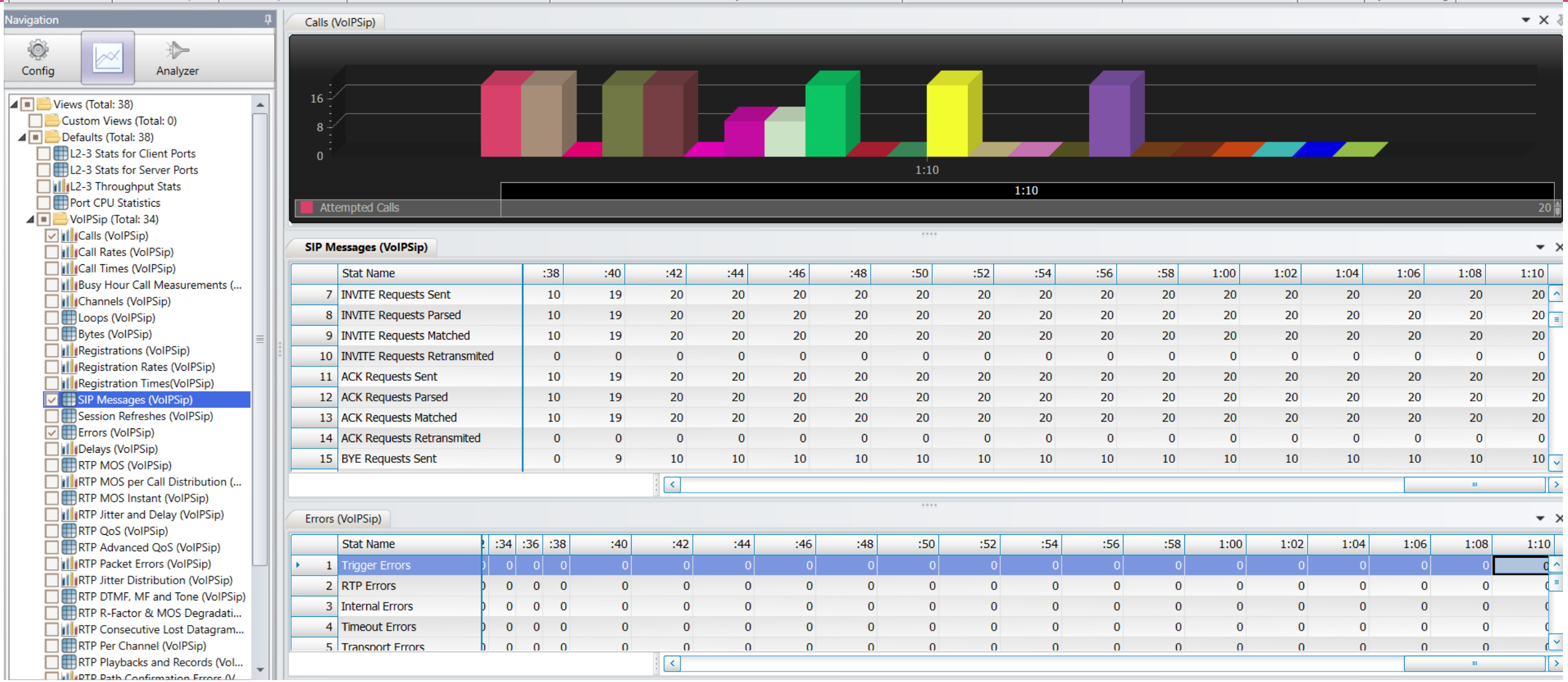
Asterisk → VoIP stats



	Stat Name	:38	:40	:42	:44	:46	:48	:50	:52	:54	:56	:58	1:00	1:02	1:04	1:06	1:08	1:10
7	INVITE Requests Sent	10	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
8	INVITE Requests Parsed	10	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
9	INVITE Requests Matched	10	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
10	INVITE Requests Retransmited	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	ACK Requests Sent	10	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
12	ACK Requests Parsed	10	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
13	ACK Requests Matched	10	19	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
14	ACK Requests Retransmited	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	BYE Requests Sent	0	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

	Stat Name	:34	:36	:38	:40	:42	:44	:46	:48	:50	:52	:54	:56	:58	1:00	1:02	1:04	1:06	1:08	1:10
1	Trigger Errors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	RTP Errors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Internal Errors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Timeout Errors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Transport Errors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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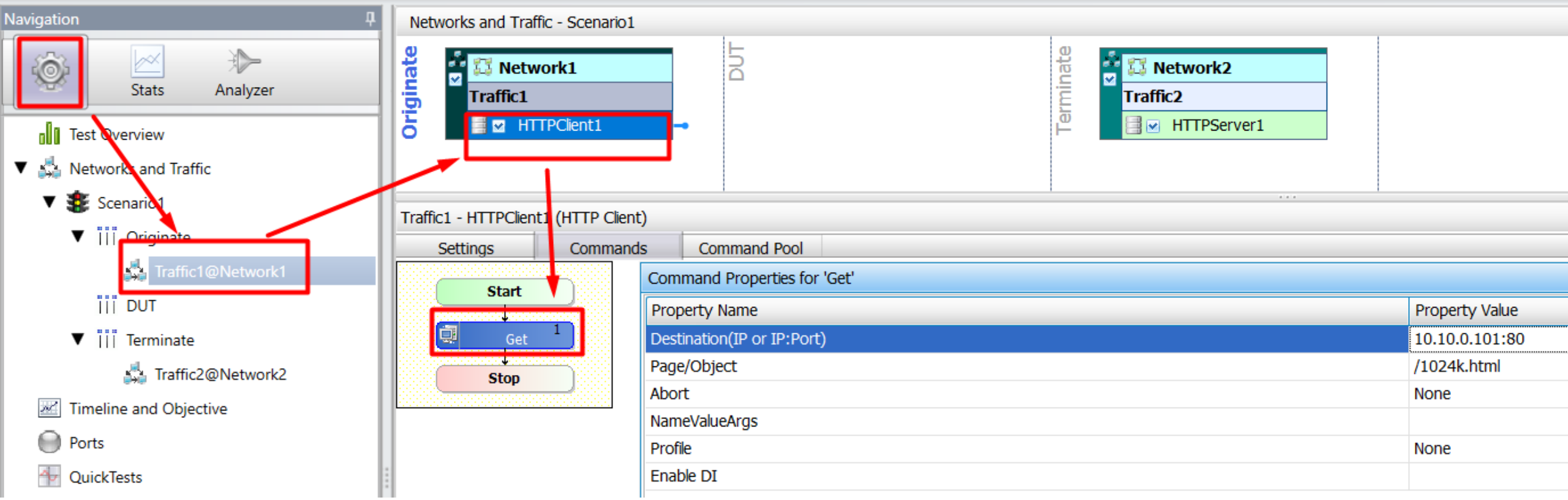
VYOS →HTTP Configuration

How to check the configuration



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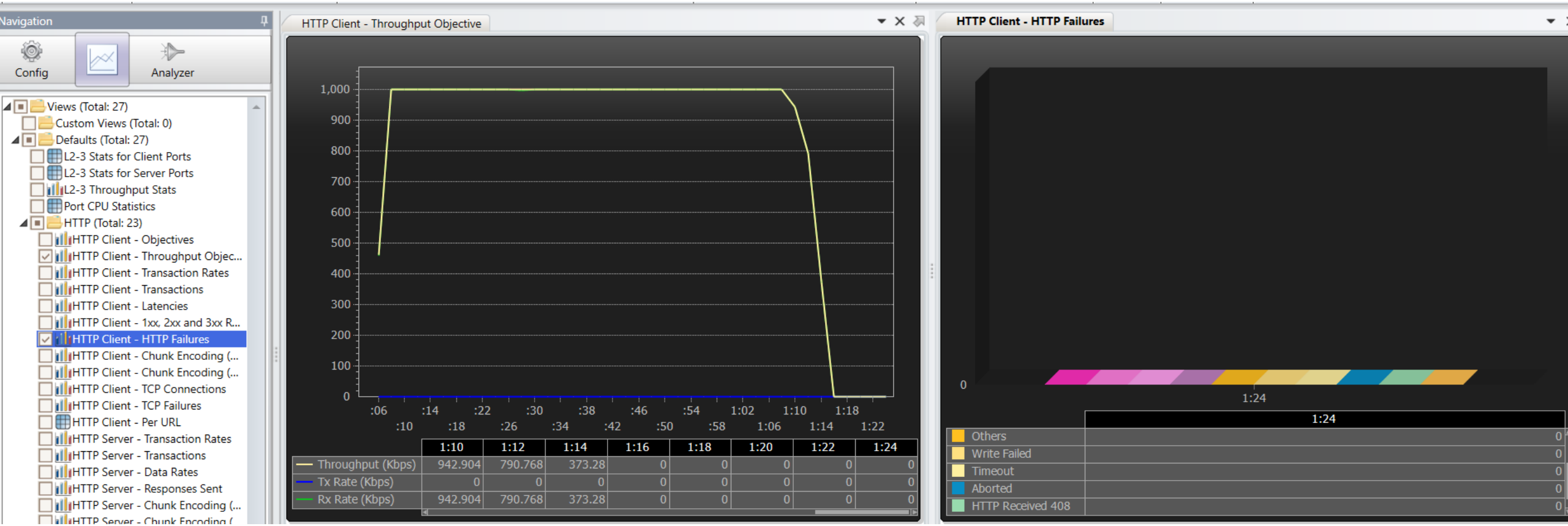
VYOS → stats



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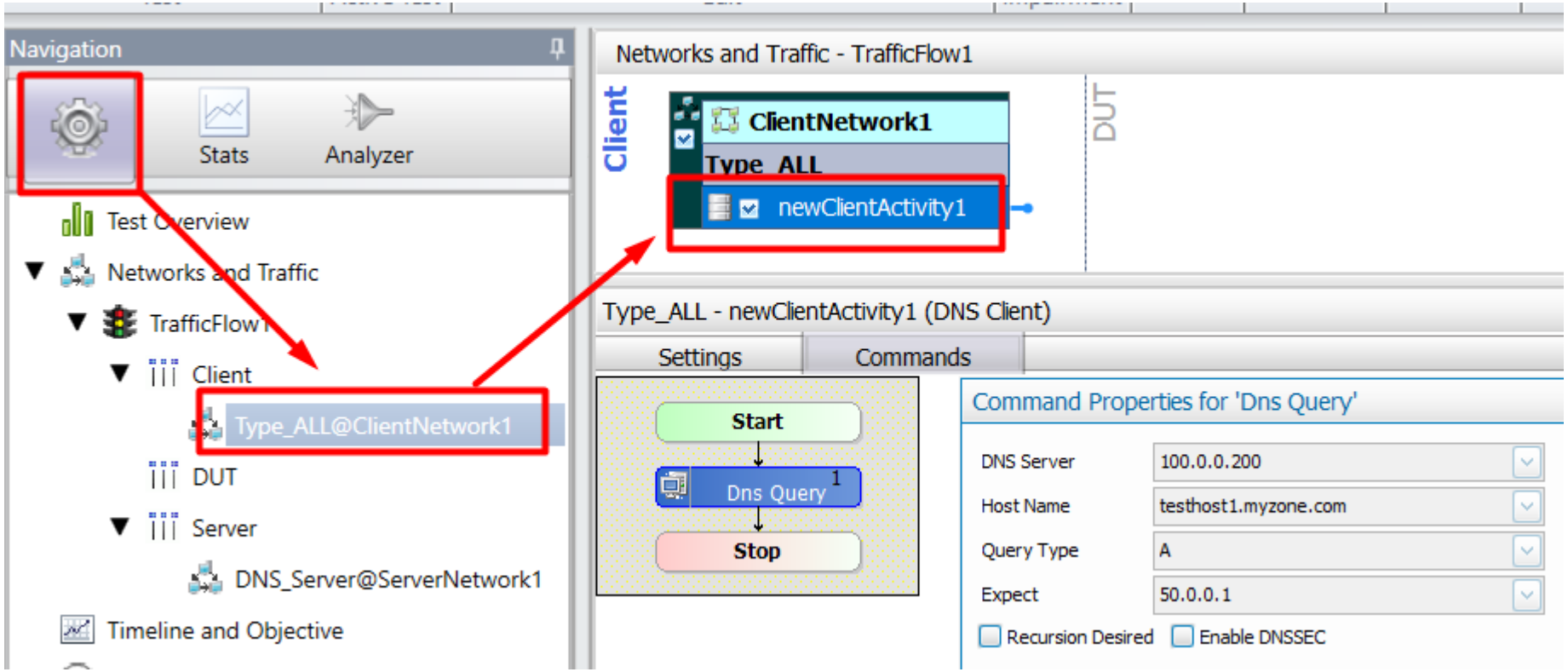
OpenDNS →DNS Configuration

How to check the configuration



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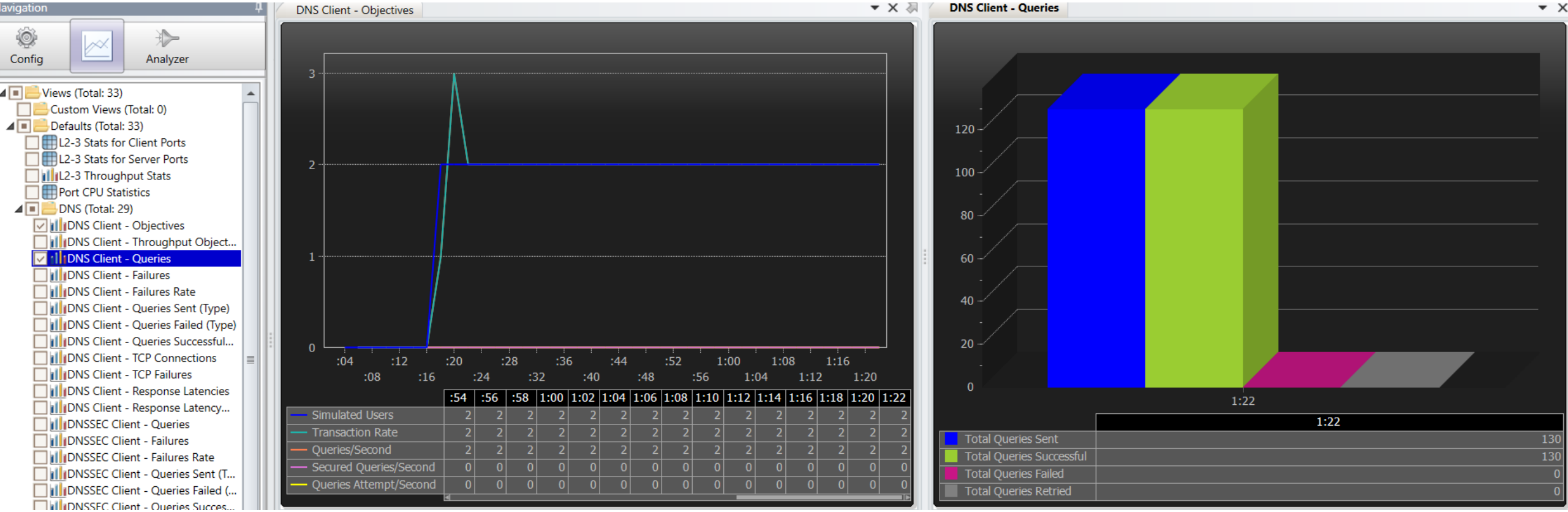
OpenDNS → DNS stats



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Something is wrong with IxLoad?

Contact Keysight guys:

- Ruben Gutierrez
- Oliver Ferch

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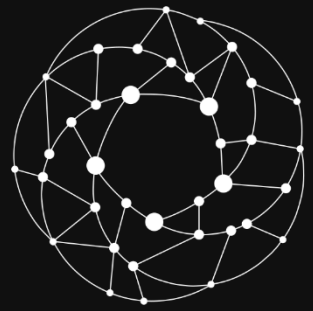

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Happy Testing!!

Questions?

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