

5G Labs – Training Day2

Apr 2025

Confidential

Signaltron

5G LABS Training Day-2

Firewall - Functions and Configurations, Blocking and unblocking of websites.

IoT Gateway – Architecture, Operation, APN settings, Connecting to 5G NW, AI/ML with IoT.

Indoor CPE – Wireless interfaces, 5G Network settings, Wifi-settings, Trouble shooting.



Firewall webpage url: <u>https://192.168.10.1</u>

- Username: admin
- Password: admin@321

Features:

- VLAN
- Intrusion Detection
- Rich traffic/shaping QOS support
- IPSec
- Dynamic routing
- Website blocking

Firewall

Configurations:

COSGrid <				admin@C-Edge.COSGrid O Q				
🖵 Lobby		Hardware settings						
陆 Reporting		() Overwrite global settings						
🗮 System								
📥 Interfaces		Static IPv4 configuration						
[LAN]		1 IPv4 address	10.25.2.7	•				
[mgmt]	æ							
[WAN]	#	1 IPv4 Upstream Gateway	WAN_GWv4 - 10.25.0.11					
Assignments	(A)							
Overview		DHCPv6 client configuration						
Settings	Q ⁰	Configuration Mode	Dutie Atheneyd CooffeeTile Ouwide					
Virtual IPs	G		Basic Advanced Config File Override					
Wireless	(ţţ	Request only an IPv6 prefix						
Point-to-Point		Prefix delegation size						
Other Types			64 👻					
Diagnostics		🚯 Send IPv6 prefix hint						
Firewall		1 Use IPv4 connectivity	8					
+ Routing		osen vi connectivity						
VPN		1 Use VLAN priority	Disabled •					
V Services								
Fower			Save Cancel					

Firewall

Website block:

COSGrid <			admin@C-Edge.COSGrid 🛛 🔍	
₹ Routing	Services: Web Proxy: Adminis	tration		► C ■
© VPN				
Services	General Proxy Settings - Forward Proxy	Proxy Auto-Config Remote Access Control Lists	Support	
Captive Portal	✓ advanced mode			full help 🕖
DHCPv4	Allowed Subnets			
DHCPv6	0	S Clear All Conv. Paste		
Dnsmasq DNS	Investricted IP addresses			
Intrusion Detection				
Monit		S Clear All Copy Paste		
Network Time	Banned host IP addresses			
Ntopng	A	Clear All 🖓 Copy 🜓 Paste		
OpenDNS	O Whitelist	google.com ×		
Redis		🕄 Clear All 🖉 Copy 🖪 Paste		
Unbound DNS	Blacklist	github.com × flipkart.com ×		
Web Proxy	7	😮 Clear All 🖓 Copy 🜓 Paste		
Administration	Apply			
Cache Log				
Access Log				
Store Log				
🖋 Power				
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Partly sunny	Q Search	L C 🕂 🖉 🖬 🖡	📮 🗣 💞 🦷 👘 🔿 🖓	IN

Indoor CPE



Kenstel KCP-5G-510I

Features:

- 5G NR Connectivity:
- Wi-Fi Access:
- Security
- MAC Address authentication

Connect the Ethernet cable from switch to the highlighted LAN port.

Login url: <u>http://192.168.10.19</u> Username: root Password: Signaltron

Indoor CPE – Sim insertion



Kenstel KCP-5G-510I

Indoor CPE APN settings

\leftarrow \rightarrow C (A Not secure 19	2.168.10.19/cgi-bin/luci/;stok=	4c419603406d9e4a1b4	4fc90c5c3401d1/admin/s	tatus/cellular?mode=ap	n-setting			☆ 🛃 💿
🔡 📔 💡 🛞 What is the differen	📕 Adobe Acrobat 🛛 🎧 GitHub	o - krishnadey 🚯 4G	ShareTechnote 🛛 🐴 ADB co	ommands to 🤱 Untitl	led - Sequence 🗜 Ra	dio Bearer - an o 🗧 eSIM Profi	le Genera	» 🗋 All Bookm
KENSTEL ≡								RSSI []
ENSTEL	CELLULAR Welcome to Kenstel -	NR5G					A > CELL	ULAR > APN SETTING
Dashboard	APN Setting							?
🍫 System +	_							
⇄ Network +								
.ııll Cellular –								+ APN
Cellular Config	Context-ID	PDP Type	APN Name	Username	Password	Authentication	Status	Action
APN Setting	1	IP\///\/6	NA	NA	ΝΔ	NONE	×	×
Data Usage		11 4400				NONE		
SMS	2	IPV4V6	ims	NA	NA	NONE	×	×
Serving Cell	4	IPV4	internet	NA	NA	NONE	×	×
Lock Bands		I		1	I			
Operator Selection								



IoT Gateway



- Connect ethernet cable from switch to Lan-0 (highlighted one in the picture)
- IoT Gateway webpage url: <u>https://192.168.11.1</u>
- User: root
- Password: ecsd-edge@3682

IoT Gateway APN

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	$\leftarrow \rightarrow C$ \bigcirc \bigotimes 19	92.168.11.1/cgi-bin/luci/admin/network/network			ය ව ≡
•					[→ Logout
-	Status	Interfaces Devices Global network on	tions		
	⁴ Services >	Interfaces			
	Docker Docker Network Interfaces Wireless	5G modemmanager-5g	Protocol: RX: TX: Error:	ModemManager 0 B (0 Pkts.) 0 B (0 Pkts.) Modem connection in progress. Please wai	t. This process will timeout after 2 minutes.
	DHCP and DNS Hostnames Static Routes SQM QoS Firewall Diagnostics	LAN O br-lan	Protocol: Uptime: MAC: RX: TX: IPv4: IPv6:	Static address 0h 0m 28s 3C:EC:EF:98:CA:FC 41.77 KB (397 Pkts.) 270.80 KB (290 Pkts.) 192.168.11.1/24 fdea:a541:e804::1/60	ී 🖒 🗹 👕
	QoS & VPN >	WAN eth3	Protocol: MAC: RX: TX:	DHCP client 3C:EC:EF:98:CA:FF 0 B (0 Pkts.) 0 B (0 Pkts.)	ර ් 🗹 🖢
		Save & Apply Save Reset COSGrid Networks			Add

Goto Network -> Interfaces ->edit button(circled)

IoT Gateway APN



Set the APN to "internet"

IoT Gateway – Selecting modem as

<u>back</u>haul

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				br-lan		TX:		270.80 KB	(290 Pkts.)	Ŭ	0		
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	¢			WAN		MAC:		3C:EC:EF:9	8:CA:FF	5			
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				COSGrid Networks									

In Firewall settings, It will be unspecified. Select wan to use 5G modem as backhaul.

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IoT Gateway – Sim insertion

