

The 3<sup>rd</sup> Asi@Connect Project Meeting - March 26 2018

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# NREN Update - Sri Lanka

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Chief Executive Officer

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**LEARN**

Lanka Education and Research Network

# LEARN Association

Lanka Education and Research Network

- Formulated to establish Lanka Education And Research Network (LEARN), the NREN (National Research and Education Network) of Sri Lanka, as a Limited Guarantee Company.
- Membership
  - 16 Full Members
  - 22 Associated and Affiliated Members
- The Operation of LEARN is Governed by the **Articles of Association of LEARN** (2009).

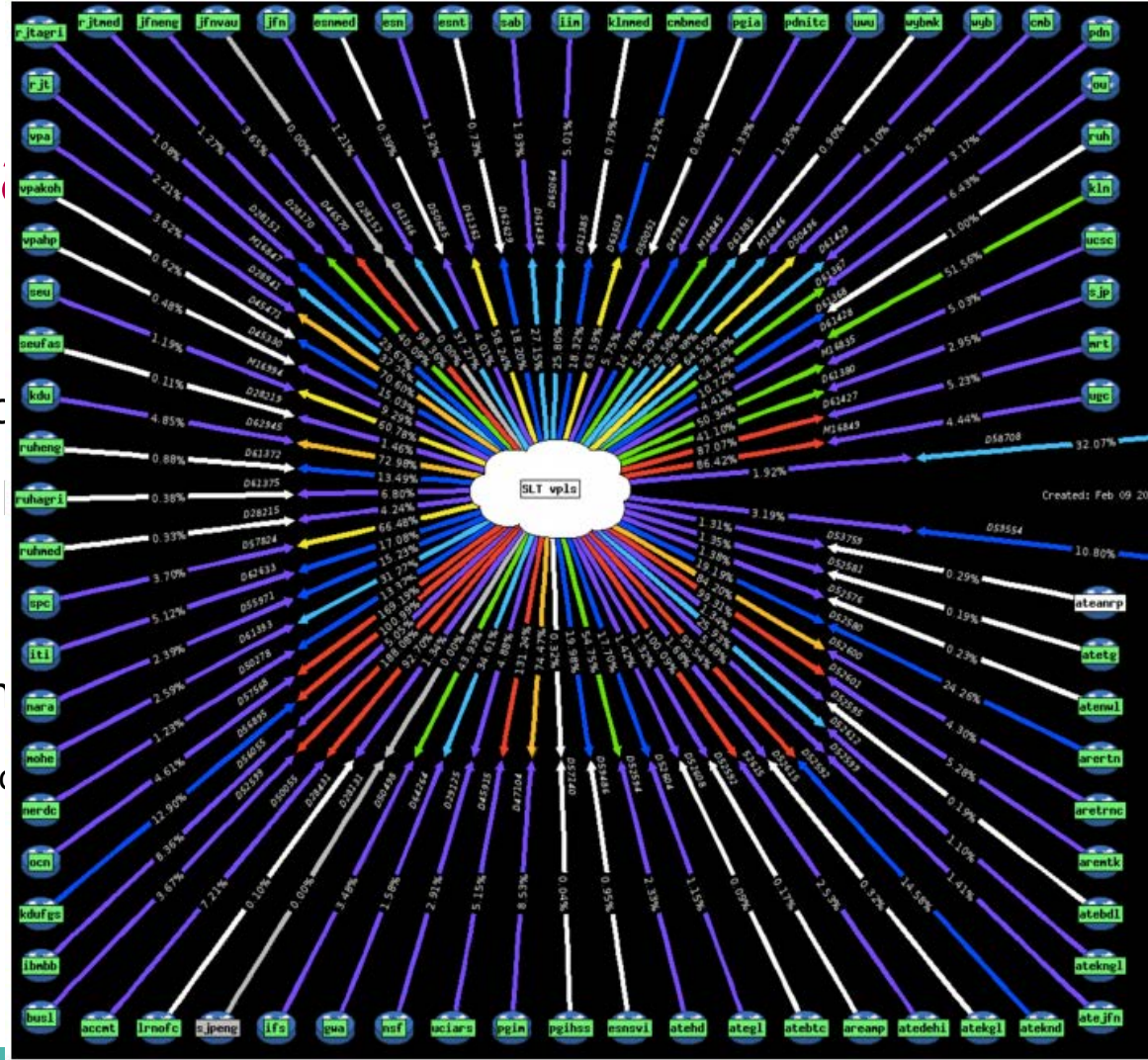
# LEARN Membership

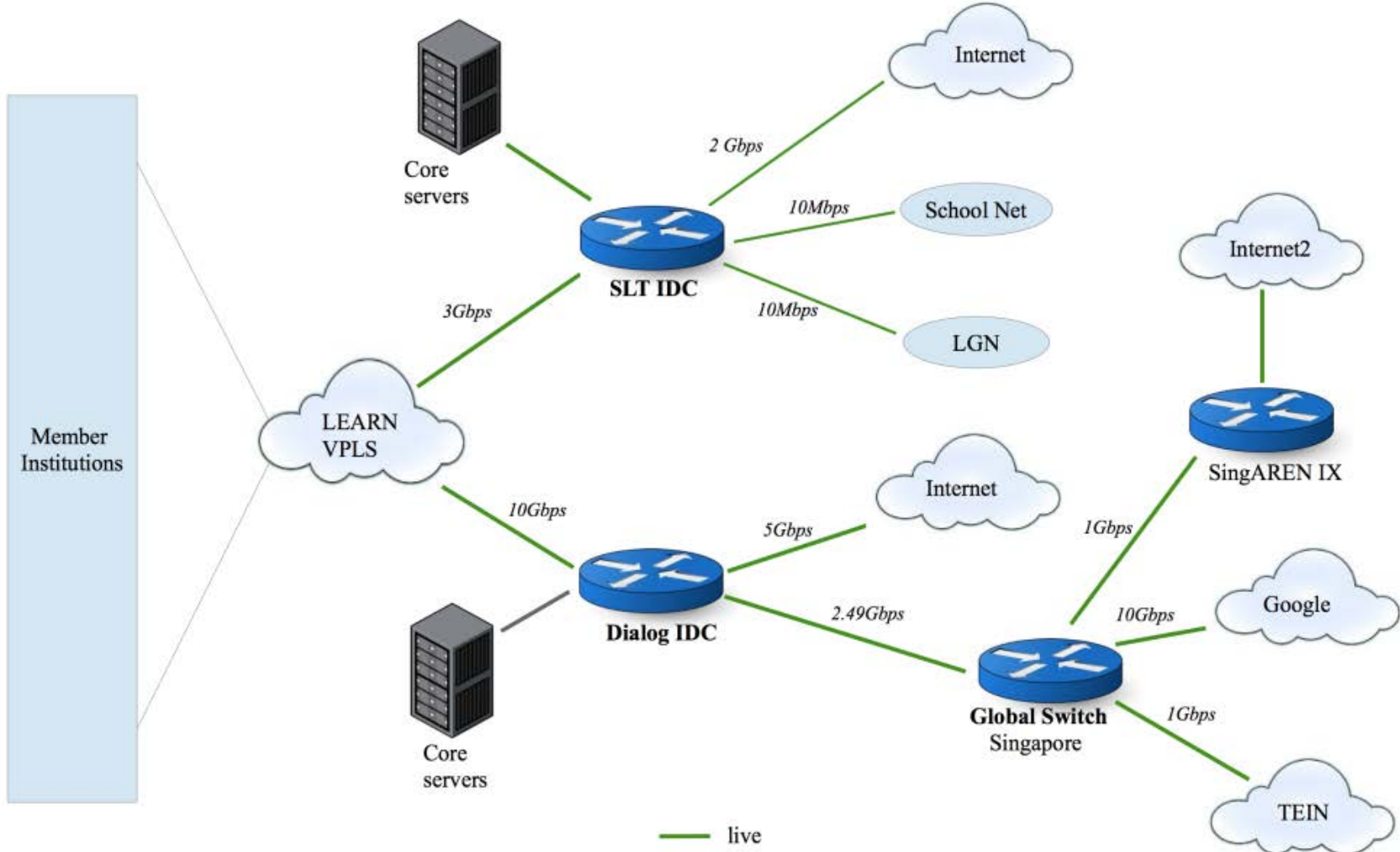
Lanka Education and Research Network

- University Grants Commission (UGC) & Universities under the University Act (16, 1978)
- Institutes for Higher Learning under University Act
- R&D institutes coming under Govt. Ministries
- Any other Research or Educational Institute or Organization

# Local Links (vii)

- Total of 73 connections
- Total local link (VPLS) subscribers
- Highest local link bandwidth
  - University of Peradeniya
  - University of Moratuwa
- Lowest local link bandwidth
  - All 16 Sri Lanka Institute of Agriculture and Forestry
- All are Optical Fiber Links





# Academic and Commodity Internet (2)

## Member subscriptions

- Total by all the connections - ~6.5Gbps
- Current peak utilization - ~5.0Gbps
- Some institutions are under subscribed
- Largest institutional subscription is 750 Mbps IA
- Smallest institutional subscription is 5 Mbps IA

<https://lnms.learn.ac.lk/traffic/vpls.php>

# What's New?



# LEARN TAC (Technical Assistance Center) Service

Lanka Education and Research Network

- Domain to be addressed:
  - Assistance to develop institutional infrastructure.
  - Design networks, provide technical specifications for them to prepare tender Documents.

^ 10 highest priority tickets I own

Edit

#	Subject	Priority	Queue	Status
16	VLAN structuring for MedFac Ruhuna	0	L1-Support	(pending ticket #17)
138	IRS issue	0	L2-Support	open
225	[TN-2018011186000195] Unauthorized access from 192.248.95.1	0	L1-Support	(pending ticket #244)
201	Vlan structuring	0	L2-Support	open
274	Request for change the DNS entry - in IPv4 and IPv6	0	L1-Support	(pending ticket #275)
17	VLAN structuring for MedFac Ruhuna	0	L2-Support	stalled



# Cloud Services

- Cloud services for resource requirements of members
- LEARN is proposing to provide cloud services to its members to support
  - disaster recovery
  - hosting services and
  - high performance computing requirements
- The proposal is for LEARN hosting and managing the servers in a data centre
- We have spent time testing of open source cloud stacks. Finally selected Open Nebula with Ceph distributed storage for LEARN cloud. Now we are in the process of preparing specification for the hardware.
- Training/internship via Asi@Connect Project

# SDN at LEARN

- In-house SDN Testing

- Open Daylight

- Checking the device compatibility

- Collaborative work with OF@TEIN+ project

- It is OpenFlow-enabled SDN Infrastructure over TEIN project

- LEARN to connect with OF@TEIN

- Participated in the 1st OF@TEIN+ annual meeting which was held at the University of Malaya, January 2018

- About to install a node at LEARN core (with the help of local researchers)

# LEARN-NKN Link

- 1 Gbps link between
  - LEARN PoP in Colombo
  - NKN PoP in Chennai
- Latency to \*Indian routes\* have improved
  - RTT of 80ms -> 20ms
- As of now, the utilization is \*low\* (few tens of Mbps)
  - Seems to be web traffic
  - Working on better utilization



**BSNL**  
Connecting India  
Faster

**BSNL CONNECTS  
INDIA WITH SRI LANKA**

**SHARING INFORMATION AND DATA FASTER**

BSNL connected NKN (National Knowledge Network) of India with LEARN (Lanka Education and Research Network) of Sri Lanka for exchange of knowledge and learning between the two countries through high speed submarine cable.

[www.bsnl.co.in](http://www.bsnl.co.in) | Like BSNL India on  Follow Us BSNL Corporate on  and  Instagram

# Events

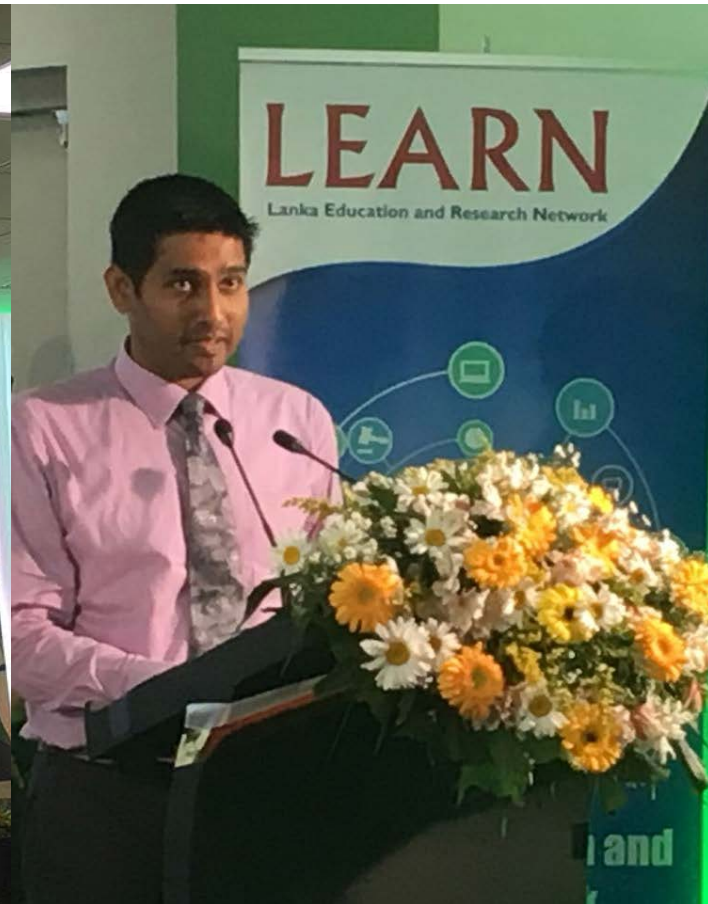
**LEARN**

Lanka Education and Research Network

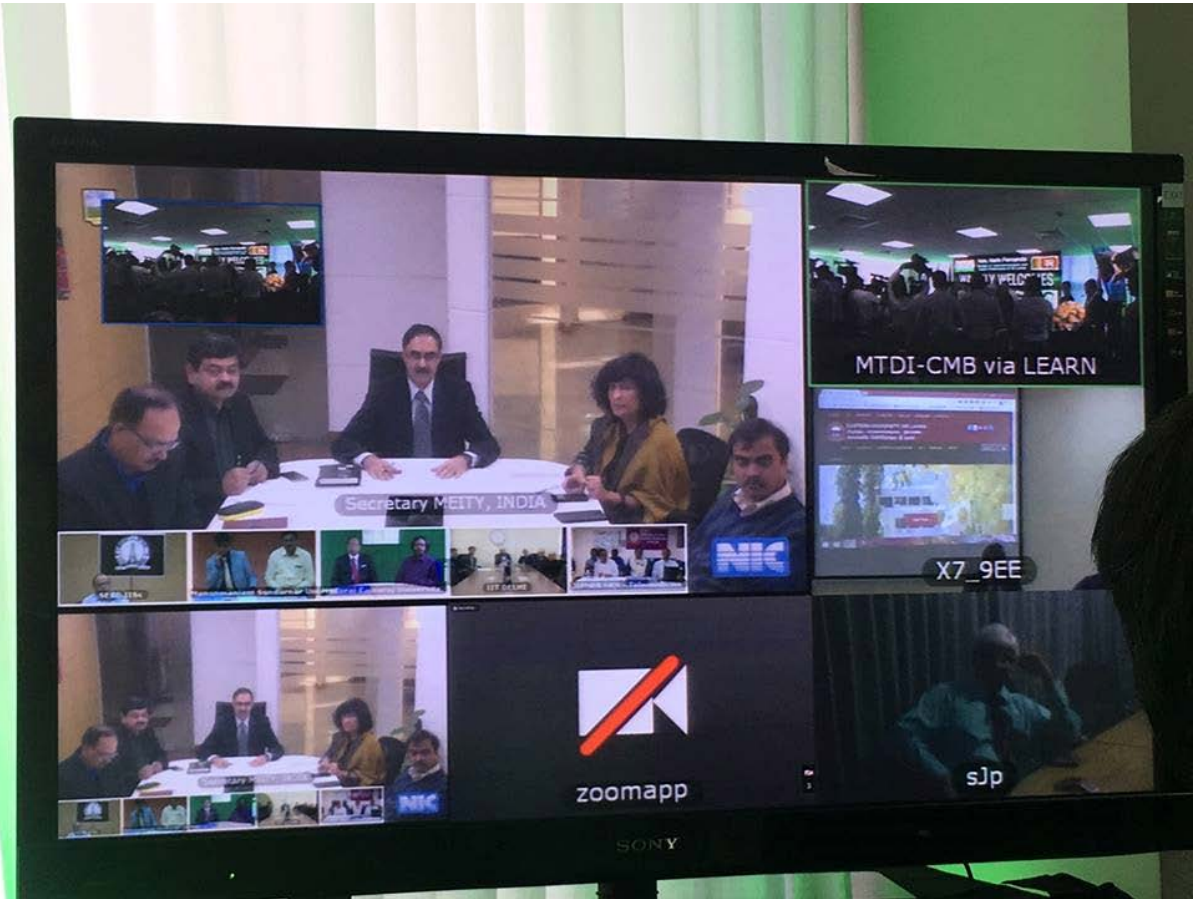
# LEARN-NKN Link Launch in Colombo [15<sup>th</sup>



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# LEARN Annual NoC Meeting [27 Nov





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# Monitoring and Measurements Workshop



# Monitoring and Measurements Workshop

[28-29 Nov 2017]





# LANKA NETWORK OPERATORS GROUP

20th October 2017, Colombo.

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# LKNoG Conference [18 Oct 2017]



# LKNoG Conference [18 Oct 2017]



**Thank You!**

