



Indonesia Update (ITB)

TEIN4 Meeting
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**The 9th TEIN4 Project Meeting, the 10th Governors' Meeting
1 August 2016**



Outline

- IDRen/Inherent Initiatives
- Network Update

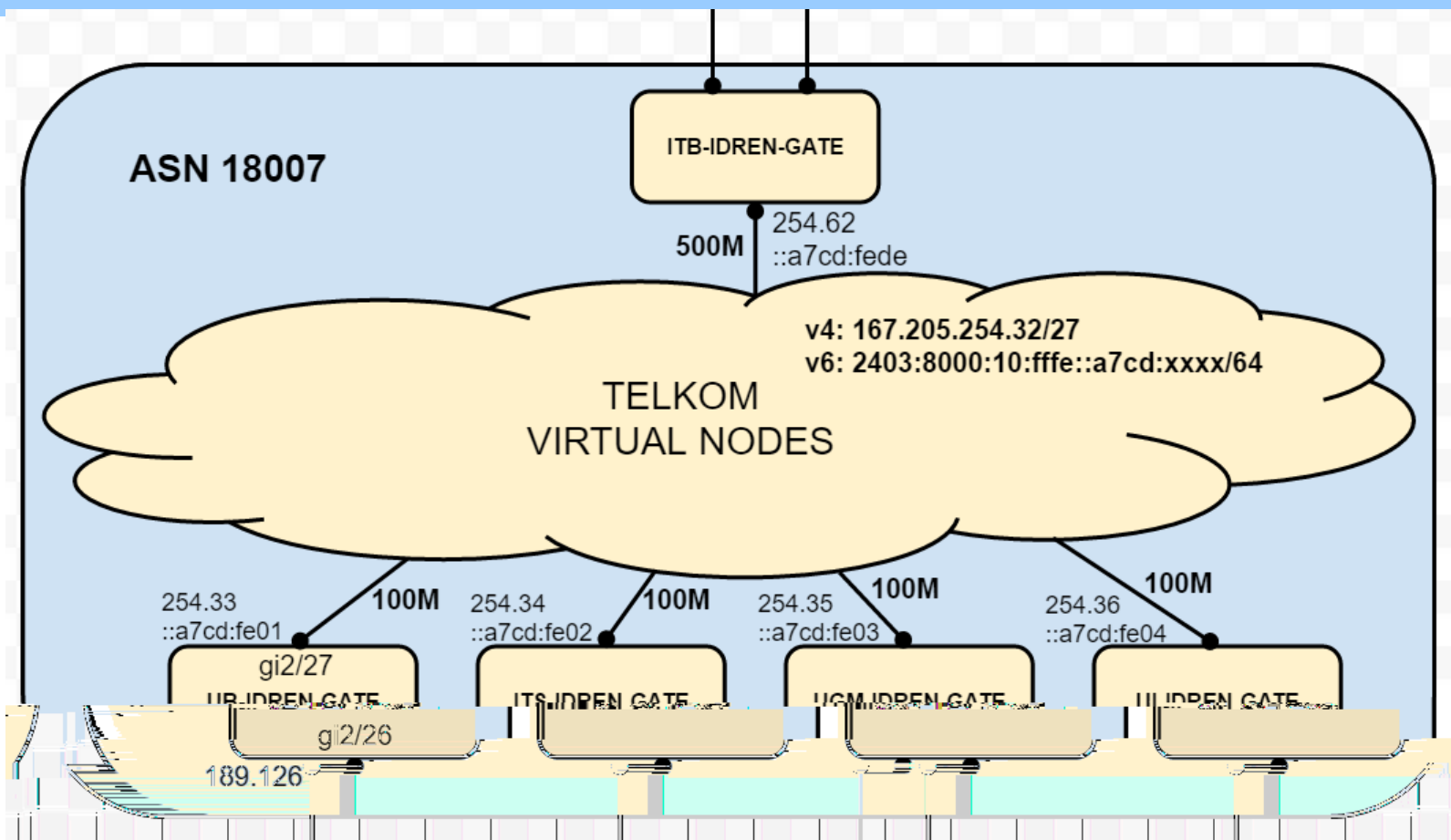


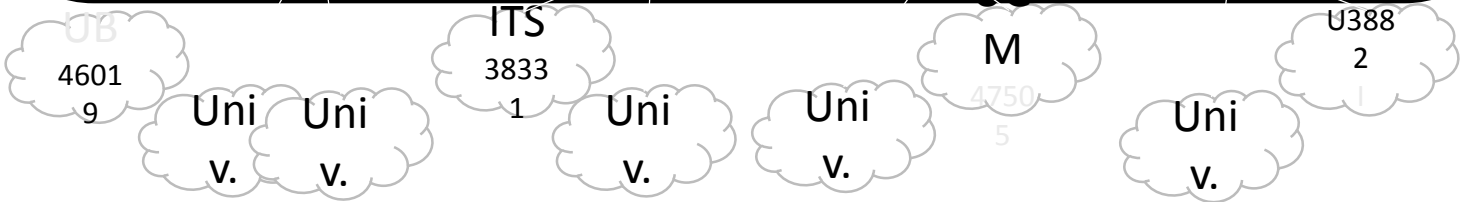
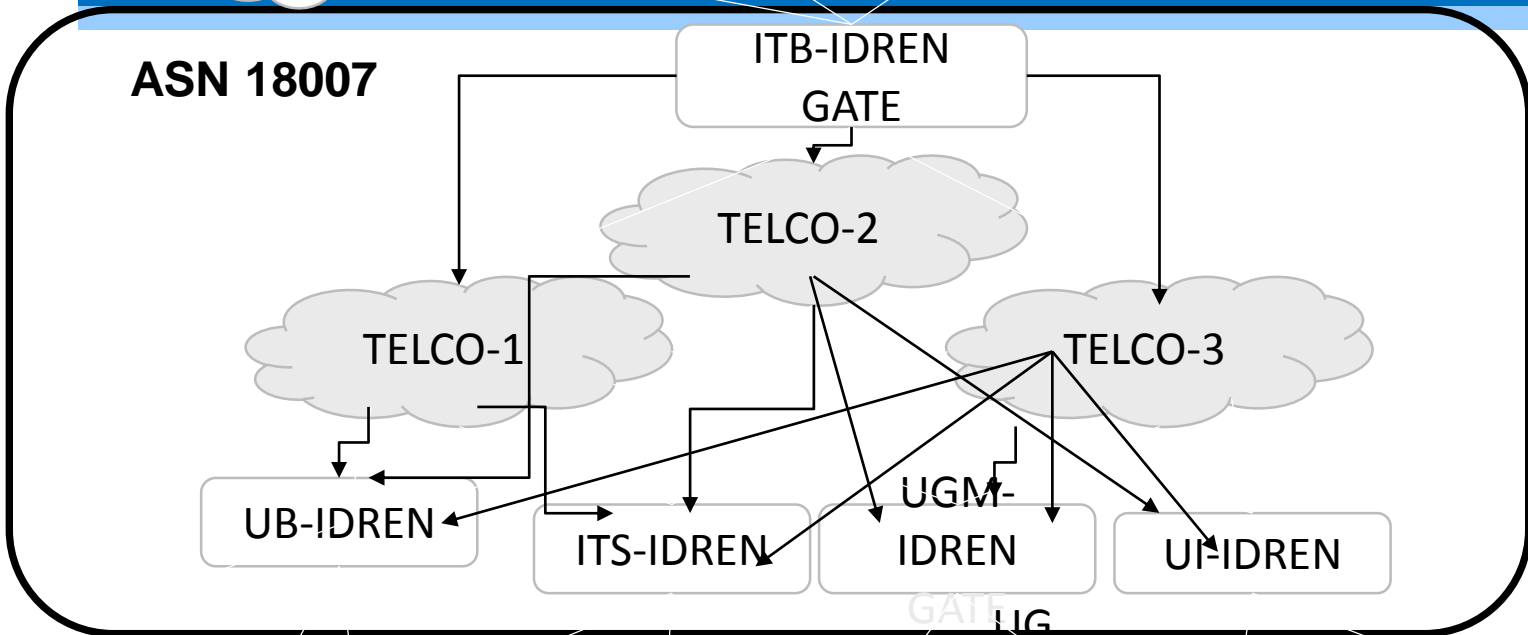
Idren/Inherent initiatives updates 2016

- Several universities initiatives to build again NREN (Inherent)
 - Developing interconnected networks amongst Universities/Research Institutions
 - Collaborating in Research & Education
 - Facilitating the development of Open Learning Resources and Information System amongst members
 - Bridging the gaps by connecting islands of knowledge
- Ministry of Science , Technology and Higher Education has accepted to umbrella this initiatives
- Collaboration with TELCO's and Services Provider (ISP)
- Build Collaboration Model
 - Develop Sustainability models



First Implementation (2015)







Approach – IdREN Interconnectivity Concept

- IDREN != INTERNET
 - No transit to Internet
 - Provide transit to other RENs:
 - Currently via TEIN (ASN 24490)
- IDREN-GATE
 - Distribution Node
 - IDREN ASN (ASN 18007)
 - Transit AS
- IDREN-NODE
 - Access Node
 - Stub AS, should never be a transit
 - Univ./Research Institution ASN
- IDREN NET CLOUD
 - ISP/Government supports L2 connectivity
 - R&E Institutions manage & operate L3 Connectivity



Plan on 2016 /2017

Multi connection Multi operator

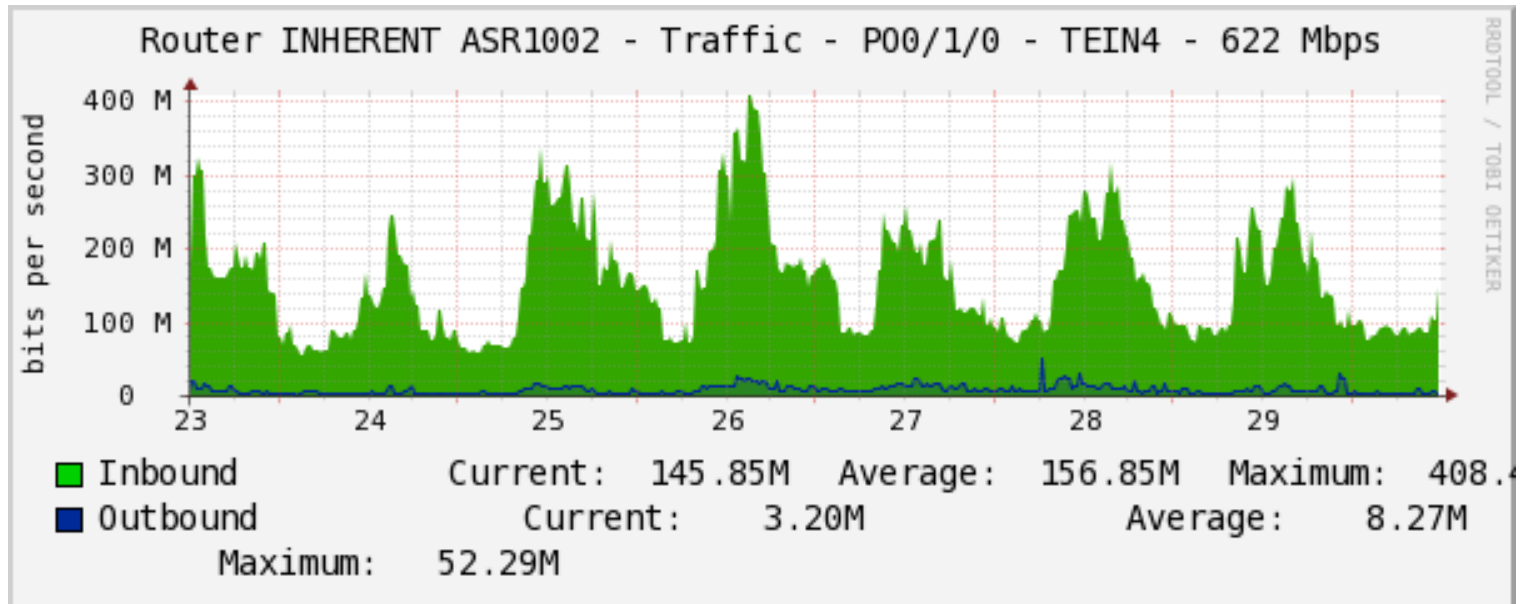


Map source: <http://www.openstreetmap.org/directions#map=7/-7.368/109.094>



Inherent/IDREN Traffic

- Max 420 Mbps





ITB's gateway , AS18007

- http://bgp.he.net/AS18007#_peers
- More than 50 Universities has been connect ,
- 30 Universities have their Own IP address and ASN, target 100 Universities have their own IP and ASN (next year)

Rank	Description	IPv6	Peer
1	PT Telekomunikasi Indonesia		AS7713
2	Trans-Eurasia Information Network (TEIN2) - SG	X	AS24490
3	Institute of Technology Bandung	X	AS4796
4	Universitas Negeri Yogyakarta		AS55674
5	Universitas Islam Negeri Maulana Malik Ibrahim (UIN Maliki)		AS131781
6	Universitas Islam Negeri Suska Riau		AS133844
7	Politeknik Negeri Sriwijaya		AS46047
8	TELKOM UNIVERSITY		AS133357
9	Universitas Jember		AS132678
10	Universitas Sriwijaya		AS132676
11	Institut Seni Indonesia Yogyakarta		AS63876
12	University of Indonesia		AS3382
13	PPTIK UNIVERSITAS GADJAH MADA		AS45705
X	AS46019		14 Universitas Brawijaya
	AS46049		15 Universitas Diponegoro
	AS55680		16 Kantor Sistem Informasi Universitas Atma Jaya Yogyakarta
	AS38331		17 Institut Teknologi Sepuluh Nopember
	AS55687		18 Universitas Tanjungpura



Number of Connected ASN in June 2016, Visible in other RENs

No	IDREN Node (ASN)	Node Location	IDREN Gate							
			UI	ITB	UGM	ITS	UB	UNY	01-IDREN	
1	UNY (55674)	Yogyakarta								1
2	POLSRI (46047)	Sumatera Selatan		1						1
3	UNSRI (132676)	Sumatera Selatan								1
4	UNEJ (132678)	Jawa Timur					1			
5	UI (3382)	Jawa Barat	1							
6	ITB (4796)	Jawa Barat		1						
7	UB (46019)	Jawa Timur					1			
8	UGM (45705)	Yogyakarta			1					
9	ITS (33831)	Jawa Timur				1				
10	UNTAN (55687)	Kalimantan Barat	1							
11	UNG (132660)	Gorontalo		1						
12	USU (55697)	Sumatera Utara		1						
13	UAD (132642)	Yogyakarta							1	
14	UMY (58818)	Yogyakarta							1	
15	UAJY (55680)	Yogyakarta								1
16	USD (55672)	Yogyakarta							1	
17	STIKUBANK (59138)	Jawa Tengah		1						
18	POLMAN (133805)	Jawa Barat								1
19	TELKOM Univ (133357)	Jawa Barat								1
20	UNSYAH (63510)	Aceh								1
21	ISI (63876)	Yogyakarta								1
22	UINSUSKA (133844)	Riau								1
23	UNRI (56254)	Riau								1
24	UNDIP (46049)	Jawa Tengah								1
25	UIN-Malang (131781)	Jawa Timur						1		
26	UKSW (134627)	Jawa Tengah		1					1	
27	UNLAM (58475)	Kalimantan Selatan		1						
28	UNHAS (134614)	Sulawesi Selatan								1
29	UNILA (56237)	Lampung								1
TOTAL			2	7	1	1	3	4		13



Eduroam Initiatives (XeAP project)

- Initiatives by TEIN and lead by Aarnet
- Setup NRO (National Roaming Operator) in Indonesia through ITB
- Status :
 - System was develop by Aarnet
 - Website for ready (<http://eduroam.ID>)
 - By the end of August 2017 , Eduroam will be ready to support for Indonesia
- Training and sosialisasi will be held on October 2017



Application

- Network test Bed
 - SDN
- Weather prediction Model
 - Disaster mitigation (Flood and fire)
- Telemedicine (TEMDEC)
- E-learning



Planning (IDREN)

- 2016
 - Building the collaboration between Government, Universities's network, and community (Telco provider , ISP Provider etc) to strengthen Network Capacity
 - Develop the MOU and collaboration schemes
 - Provide the Training and capacity building for the university members
 - For NOC in University
 - Expand the Eduroam in many universities
 - Running several initiatives for research for spesific thematic
 - Telemedicine (Telemedicine working group)
 - Disaster Mitigation Center activities (collaboration with EU)
- 2017
 - Broader the collaboration among the university
 - Proposed several specific application such as telemedicine , disaster mitigation , bio-informatics , environment monitoring etc.



■ Thank you