

End-to-End Multi-Domain Operations

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[GN3 Project: SA2 T2]

Not a Lecture!



- Interrupt me!
- Feel free to ask questions as we go along...
- ... or email me later – emma@dante.net
- ... or Skype: emma-20965

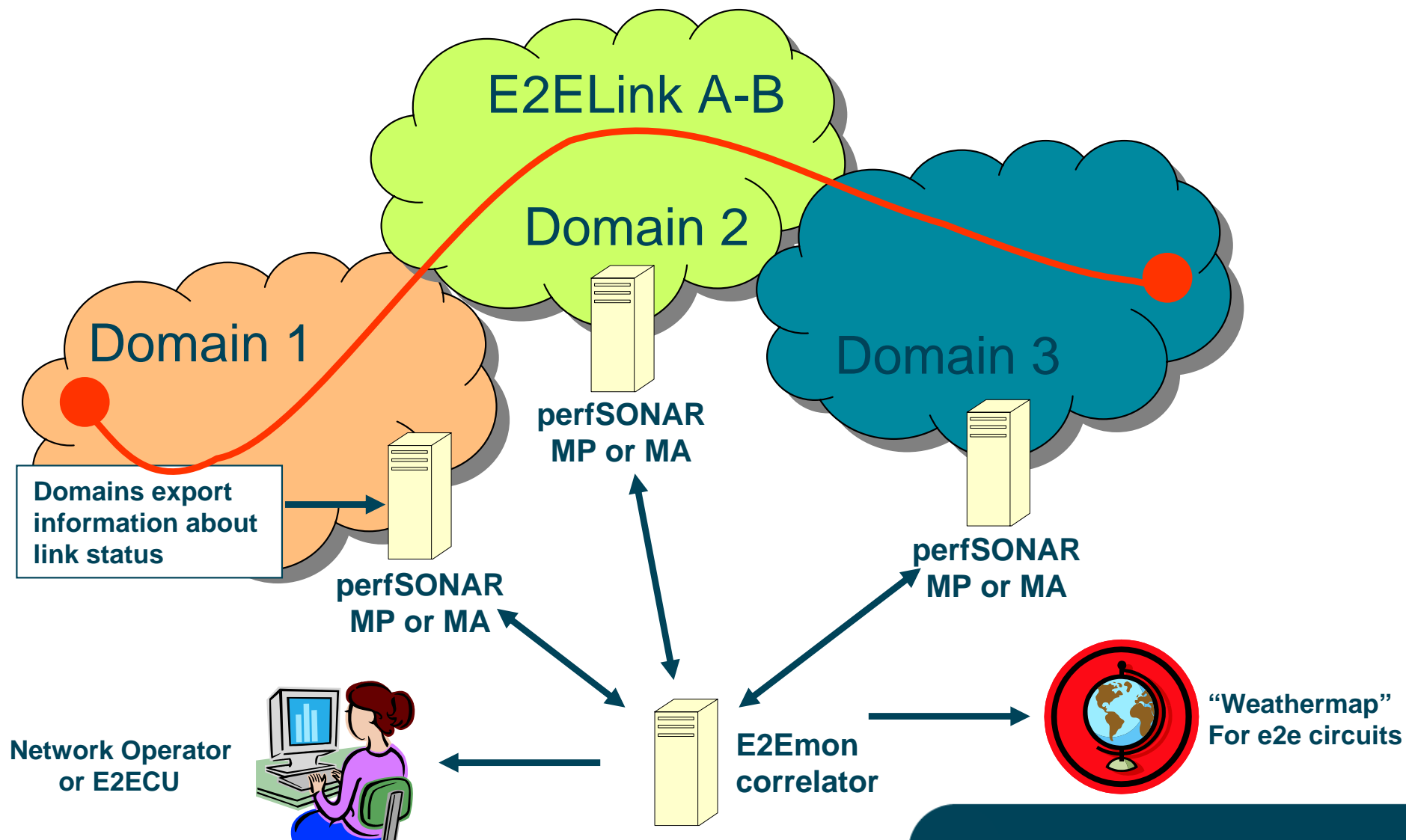
Work in GN3 SA2 Project



- Service development
- Co-ordination & Operations
- Monitoring Tools & Performance
- Security
- Workflow Tools

- A tool is a service!
- Someone has to plan it
- ... and create it
- ... and support it
- ... and use it !

E2Emon - always under construction



- E2ECU
 - React to outages
 - Optical circuits
 - E2Emon
 - Share information
 - Mostly LHCOPN & DEISA today
- Future ?
- Ticket loops / many emails – need to avoid!

More acronyms needed !!!



- **cNIS**: Common Network Information Service
- **I-SHARe**: Information Sharing across Heterogeneous Admistrative Regions
- **AutoBAHN**: Automated Bandwidth Allocation across Heterogeneous Networks
- **AMPS**: Advance Multi-domain Provisioning System

Why I-SHARe for Multi-Domain E2E Links?



- Seamless operational support experience to end-users
- Support of various processes
 - *Ordering*
 - *Set-up*
 - *Management of fault, maintenance, changes*
 - *Decommissioning*
- Minimise resources
- Preserve autonomy

I-SHARe prototype @ work

Create new E2E Link Request



E2E Link Requests

Request Information				Action Status							
ID	Project	End Site A	End Site B	Actions History	Ordering Coordinator	Route Finding	UNI Negotiation	NNI Negotiation	Offer To The End Site	Acceptance	Set Up
<u>1</u>	Hadron VPN	CNAF	GridKA	☰	✓	✓	⚠	☐	☐	✓	☐
<u>2</u>	FEDERICA	FED-GARR-MI	FED-DFN-ERL	☰	⚠	✓	⚠	⚠	☐	☐	☐
<u>3</u>	Interferometry	Medicina	Effelsberg	☰	☐	✓	☐	⚠	☐	☐	☐

Add Create new request

Status of actions

I-SHARe prototype @ work

UNI / NNI Interfaces



E2E Link Request Details: 1

Route Info Actions

CNAF

GARR

SWITCH

DFN

GridKA

Edit

Back

Action Logbook

Adjacent interfaces at each neighbour side of a Demarcation Point

- Workshop tomorrow
- Services & Research areas in GEANT project
- Under Services area:
 - Development
 - Architecture Survey
 - Pilot

What we'd like to know from you



- What services do/will you find most useful?
- Do multi-domain services work well for you?
- What kind of reports would be useful for you?
- Any other feedback

- We're here to help!
- Talk to us! 😊

emma@dante.net

Spare slides follow



Route

Info

History

Documents

Edit E2E link Request ID #

e-Mail Recipient (Drop-down)

Send e-Mail

Request ID

Project

End Site A

...

12

...

...

...

Ordering Coordinator

Route Finding

UNI Negotiation

NNI Negotiation

Offer to The End Site

Acceptance

Set Up coordinator

Start Set Up



CERN	<input checked="" type="checkbox"/>	
RENATER	<input checked="" type="checkbox"/>	
DFN	<input checked="" type="checkbox"/>	
GARR	<input type="checkbox"/>	
PSNC	<input type="checkbox"/>	
PCSS	<input checked="" type="checkbox"/>	

Edit

Back

Status of the corresponding action in the current process

Status of the UNI/NNI interface specification.