How to address the increasing connectivity needs of the HEP community?

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LHCOPN

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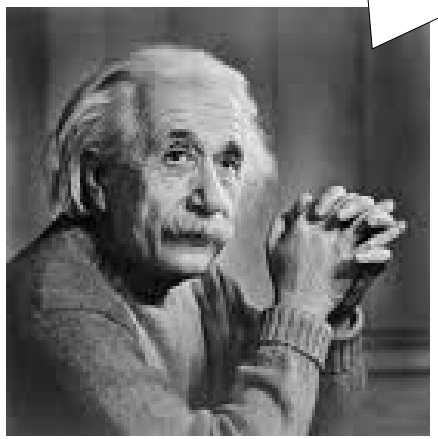
Are End-to-End Dynamic Circuits really practical?

Dynamic circuits?

Dynamic circuits?

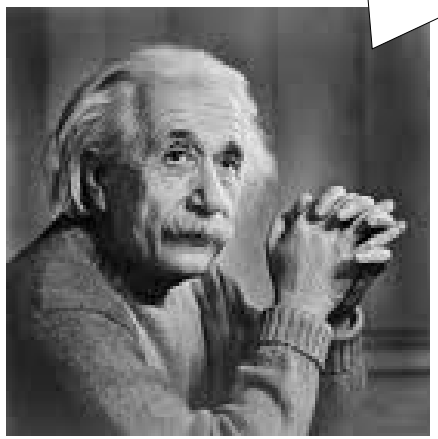
I need my TeraBytes here



Here is your pipe!

Dynamic circuits?

I need my TeraBytes here



Here is your pipe!

but…

Dynamic circuits?

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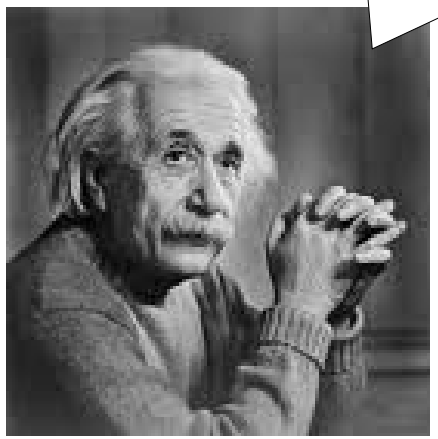


Here is your pipe!

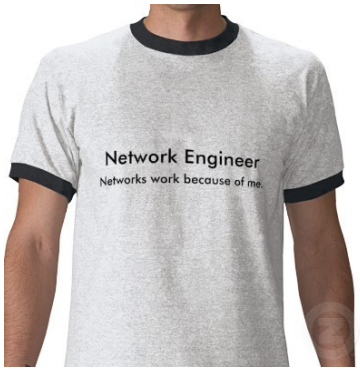
but…

Have you set up the routing?

Give me one week to call the maintenance window!

How many circuits did you say?!?

How do I debug it?

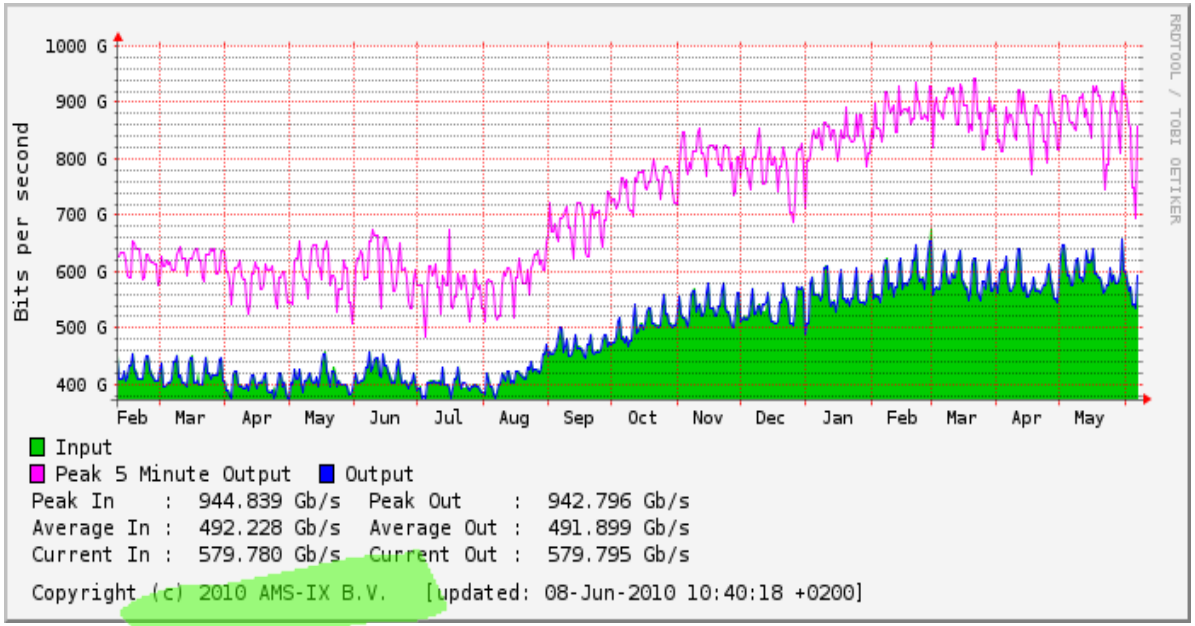


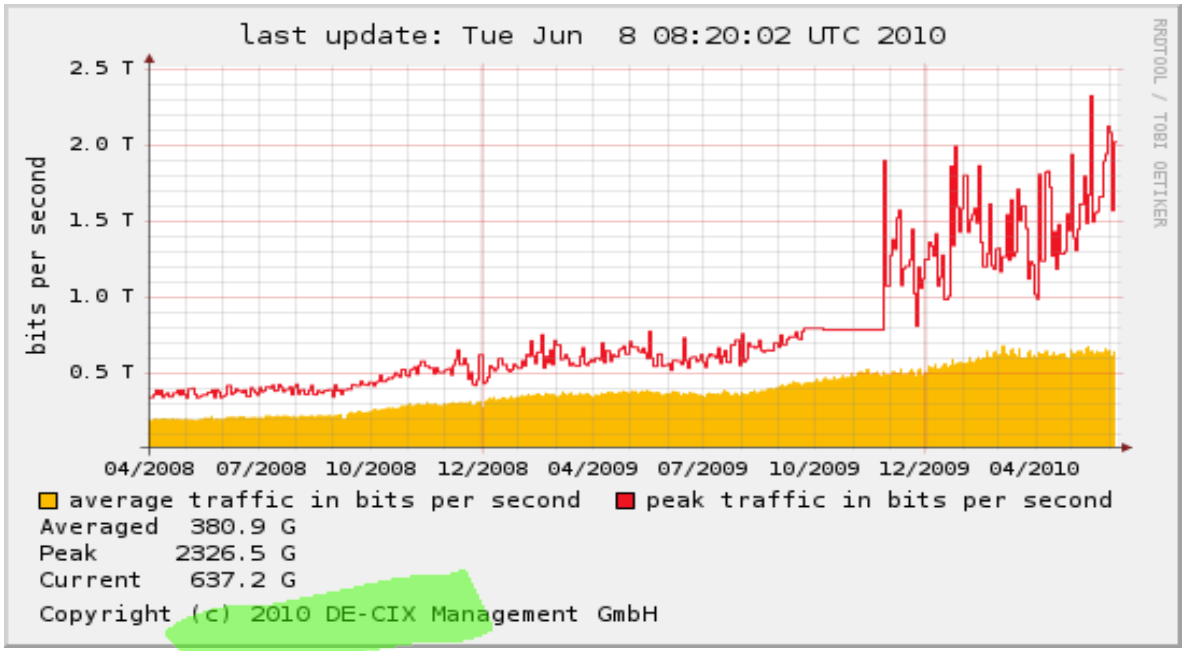
Have you opened the firewall?

….

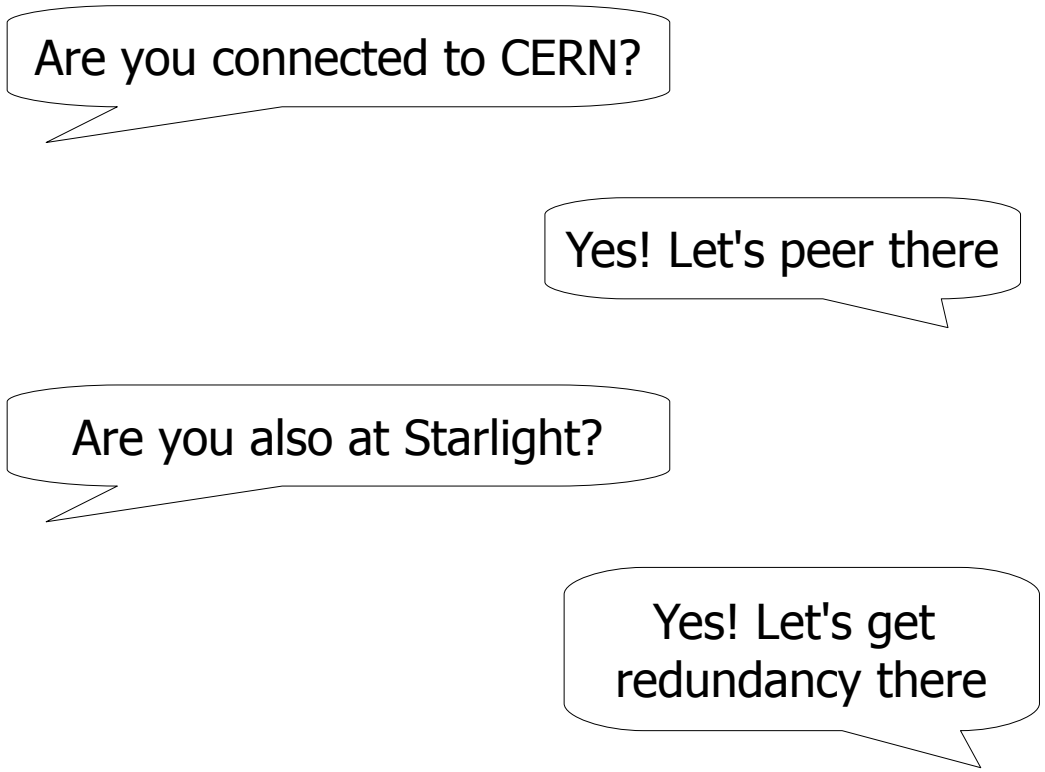
What's going on out there?

Social networking





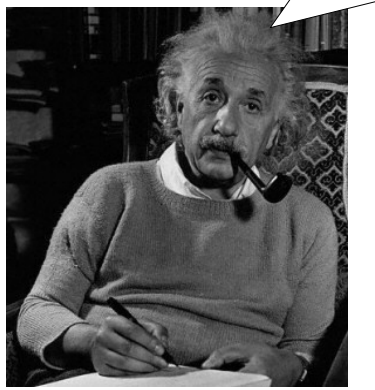
Can't we do the same?



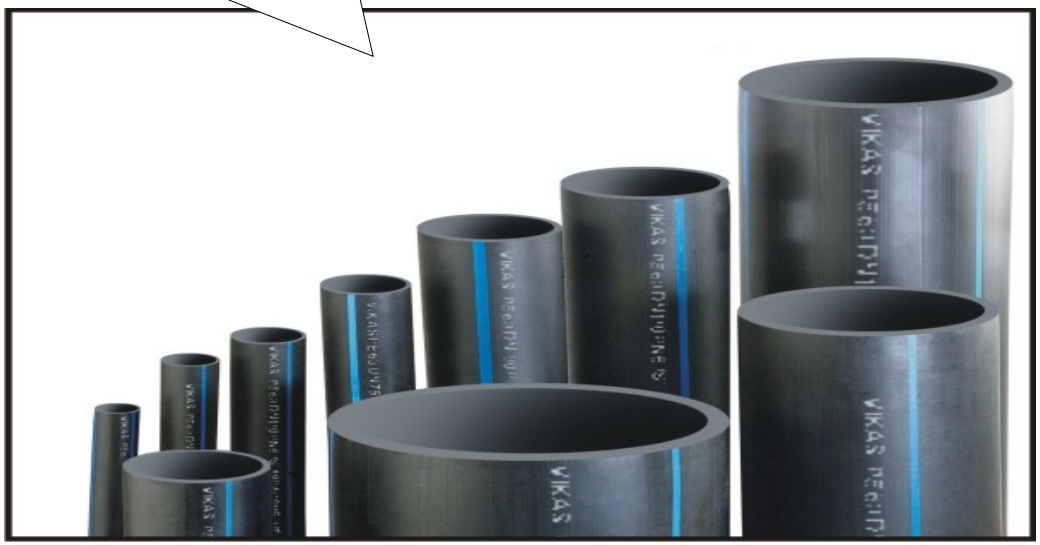
Bandwidth on Demand? Yes please!

Bandwidth on Demand

I need my TeraBytes here. Now!



How fast? Choose your size!



Bandwidth on Demand

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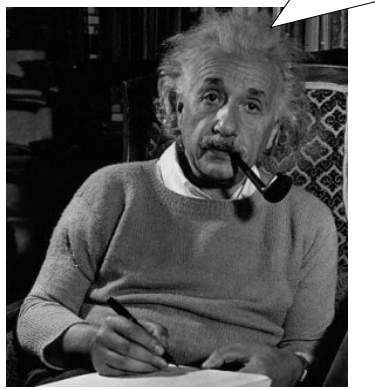
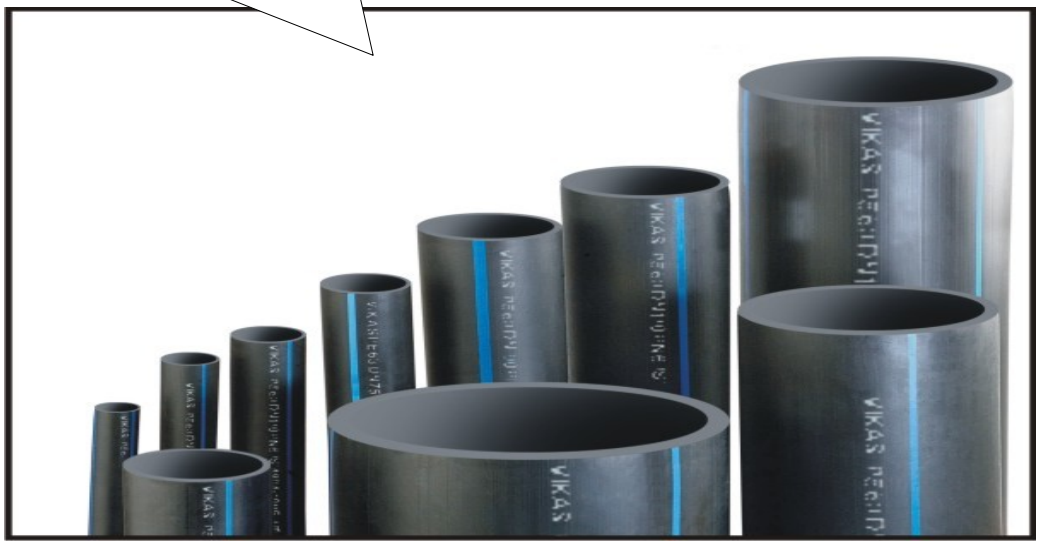
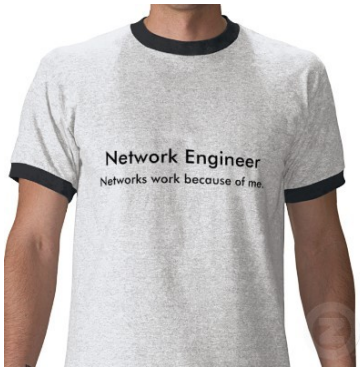


How fast? Choose your size!



No problem: business as usual!



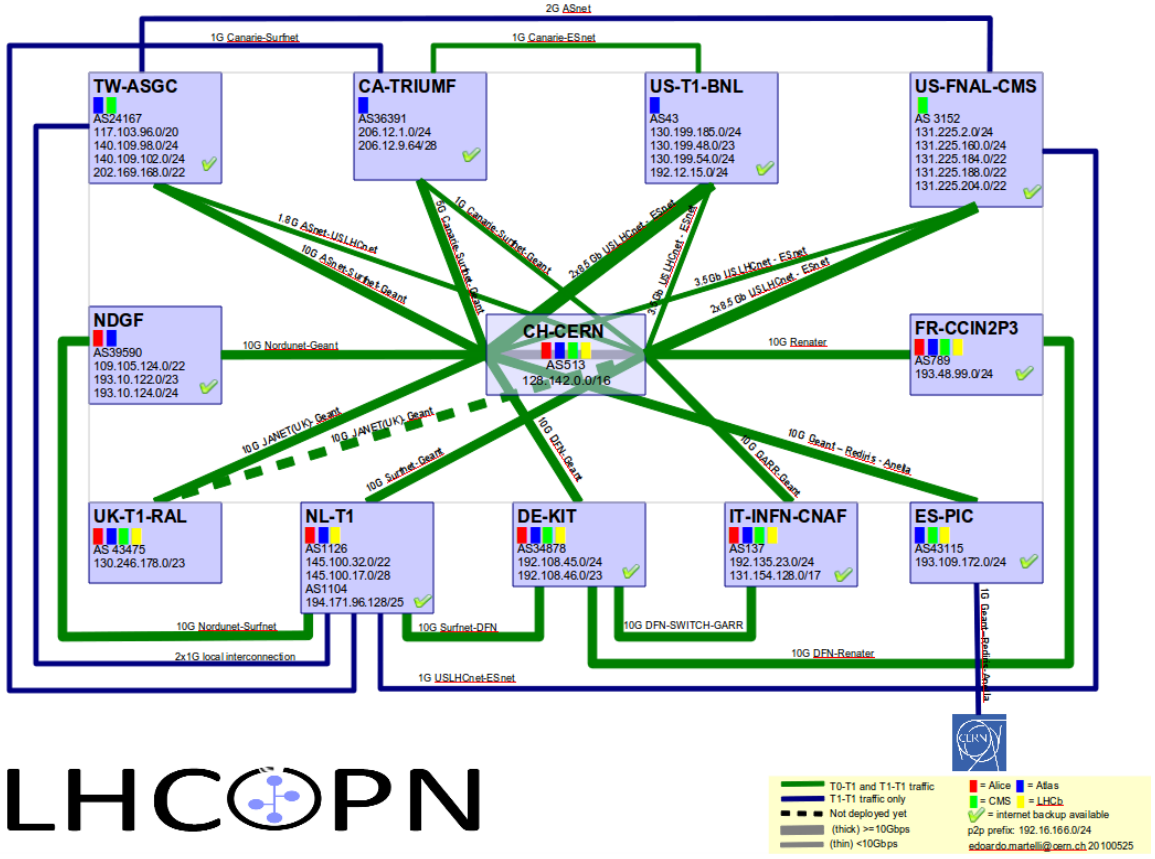
In practice:

Proof of Concept: the LHCOPN

- **Traffic between any pairs of connected sites**

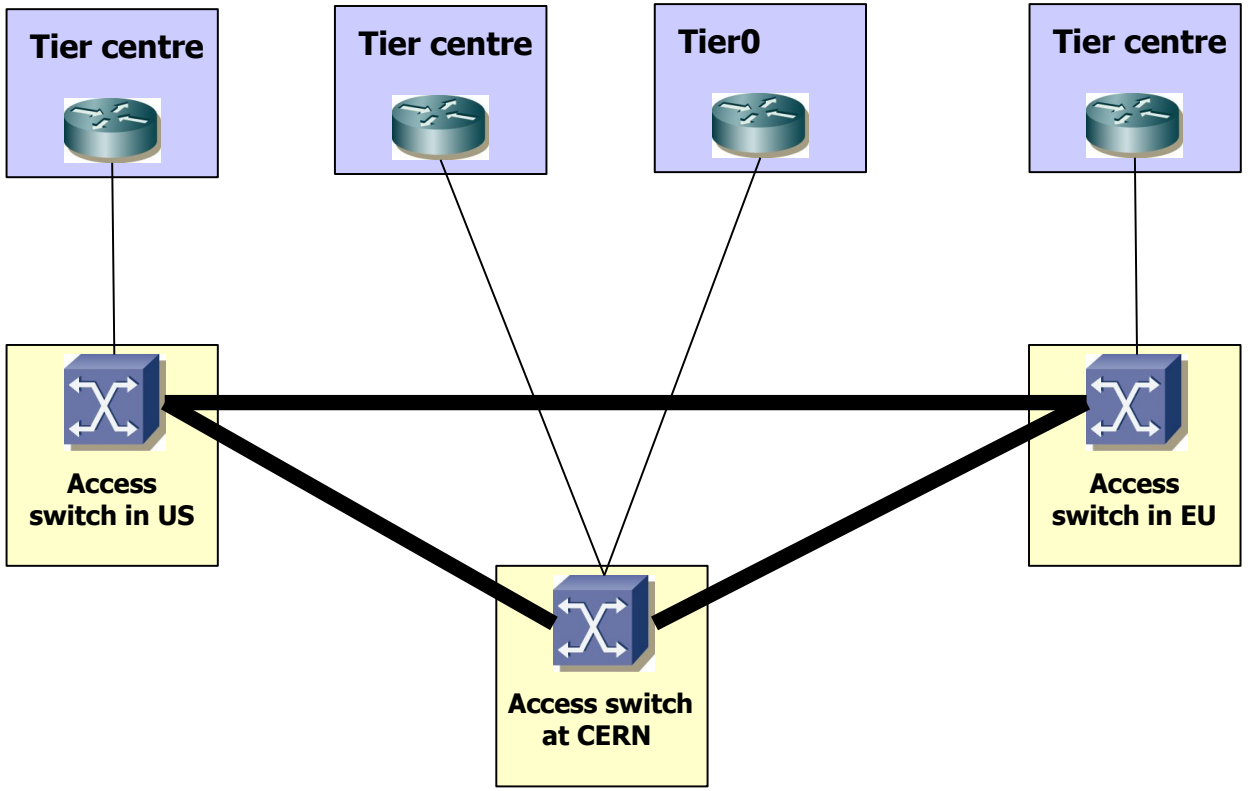
- Effective use of expensive circuits

- Dynamic bandwidth allocation on transatlantic circuits



What's next?

Distributed IXP* for the LHC



LHCOPN meeting - Vancouver, September 2009

*IXP = Internet eXchange Point

Opinions?