



# Potential Topics for FC-BB-6 T1 1/09-300v0

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## Cisco Statement on FC-BB-6

- **Cisco strongly supports the adoption of FCoE as standardized in FC-BB-5**
- **Cisco is committed to extend and improve FCoE functionality in FC-BB-6**

# Maintenance



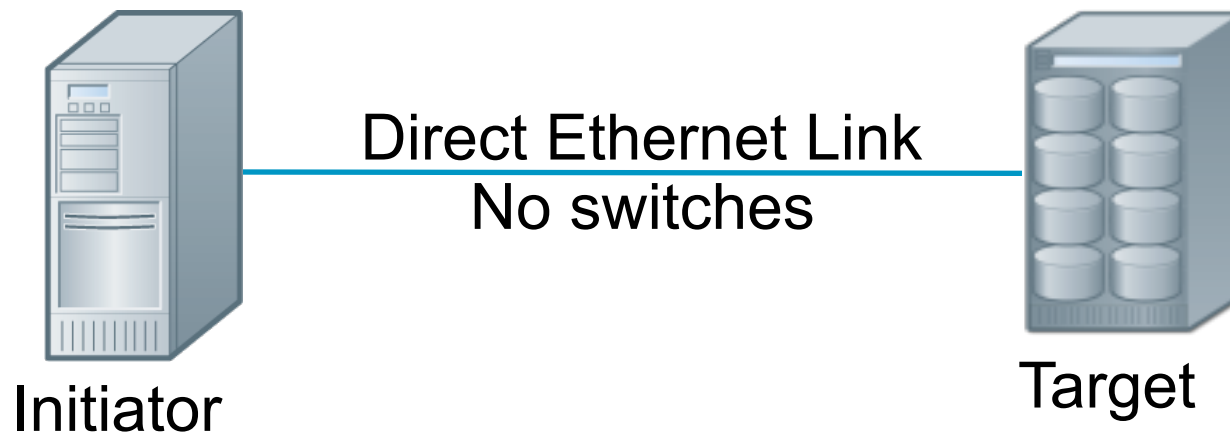
We are not aware of any issue related to FC-BB-5, however with larger deployments we may discover something that needs attention

# FCoE point-to-point

- One of Roger's preferred topic, he has already done some work, so why not?

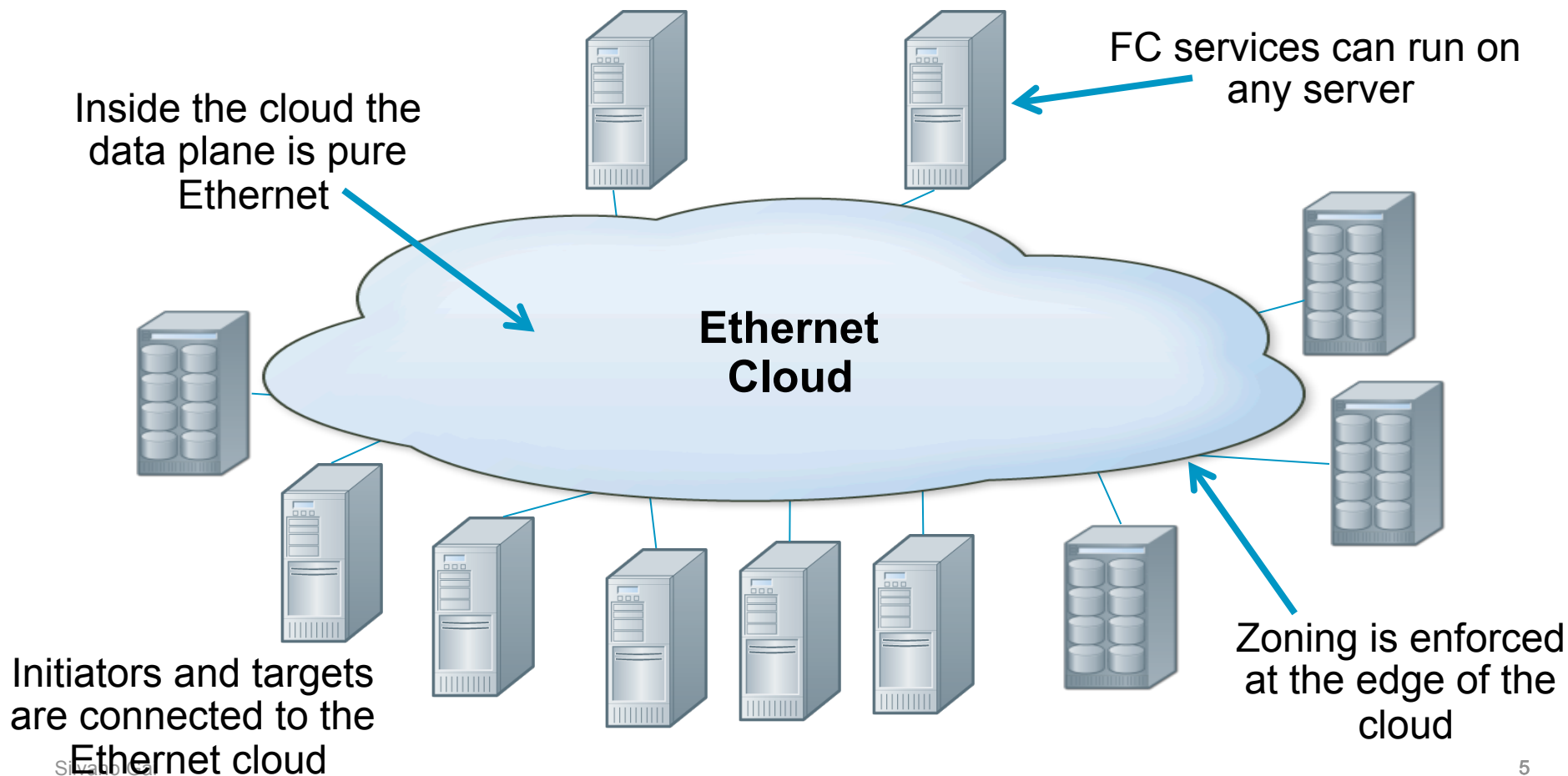


Smile



# FCoE end-to-end

- We discussed this in FC-BB-5, it was too much work and we deferred, it is a good idea



# BER (Bit Error Rate)

- Ethernet guarantees a BER better than  $10^{-12}$
- There was a time when  $10^{-12}$  was good!!!
  - At 10 megabit/s it was one error every 28 hours
- But FCoE is 10 GE and higher
  - At 10 GE it is an error every 100 seconds
  - At 40 GE it is an error every 25 seconds
  - At 100 GE it is an error every 10 seconds

# I am confused, why does FCoE work???

- **Pragmatically, on fiber in a controlled environment like a datacenter, with short distances, the error rate is Zero**

**Customers have grown acquainted to this!**

- **With copper, at 10G speed or higher is a different story:**

**Twinax cable (CX-1) is as good as fiber, but limited in distance (7 meters)**

**10GBase-T does not have the distance limitation, but error rates in the order of  $10^{-14}$  or worse are possible**

# Which BER do we need?

- **Sentences I heard**

  - No error in 72 hours ( $10^{-18}$  note 1)**

  - FICON – no more than an error per month ( $10^{-18}$  note 2)**

  - With 10,000 servers, no more than a SCSI timeout a day ( $10^{-18}$  note 3)**

- **In a nutshell, to give some space for growth, we need to look at a solution which boosts the BER of Ethernet cables from  $10^{-12}$  to  $10^{-20}$**

Note 1: test succeed 99% - 100 hosts

Note 2: 100 hosts

Note 3: average FCoE load on links 20%

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Thank You