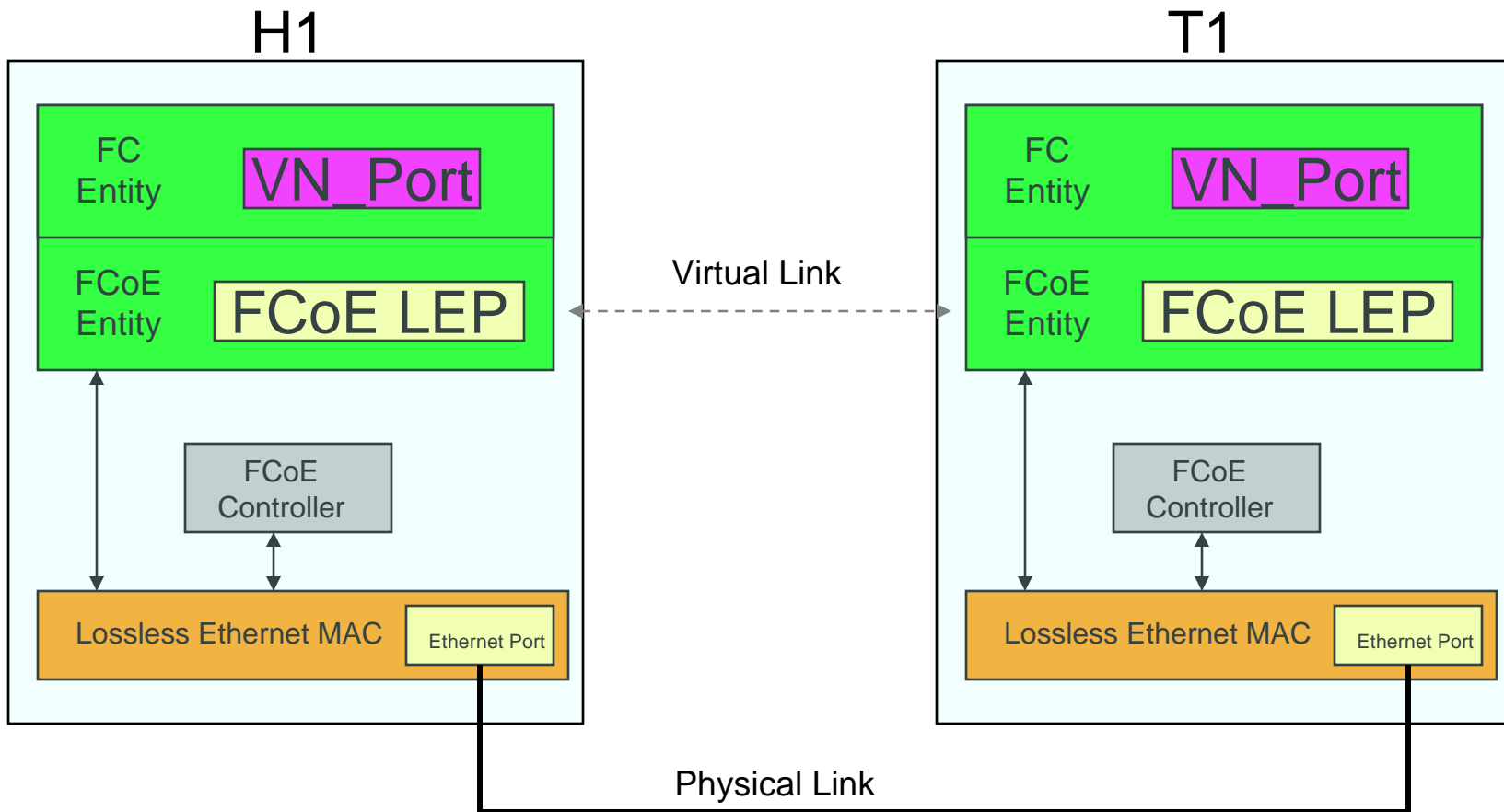


# FCoE Point To Point (VN\_Port to VN\_Port Network Configuration)

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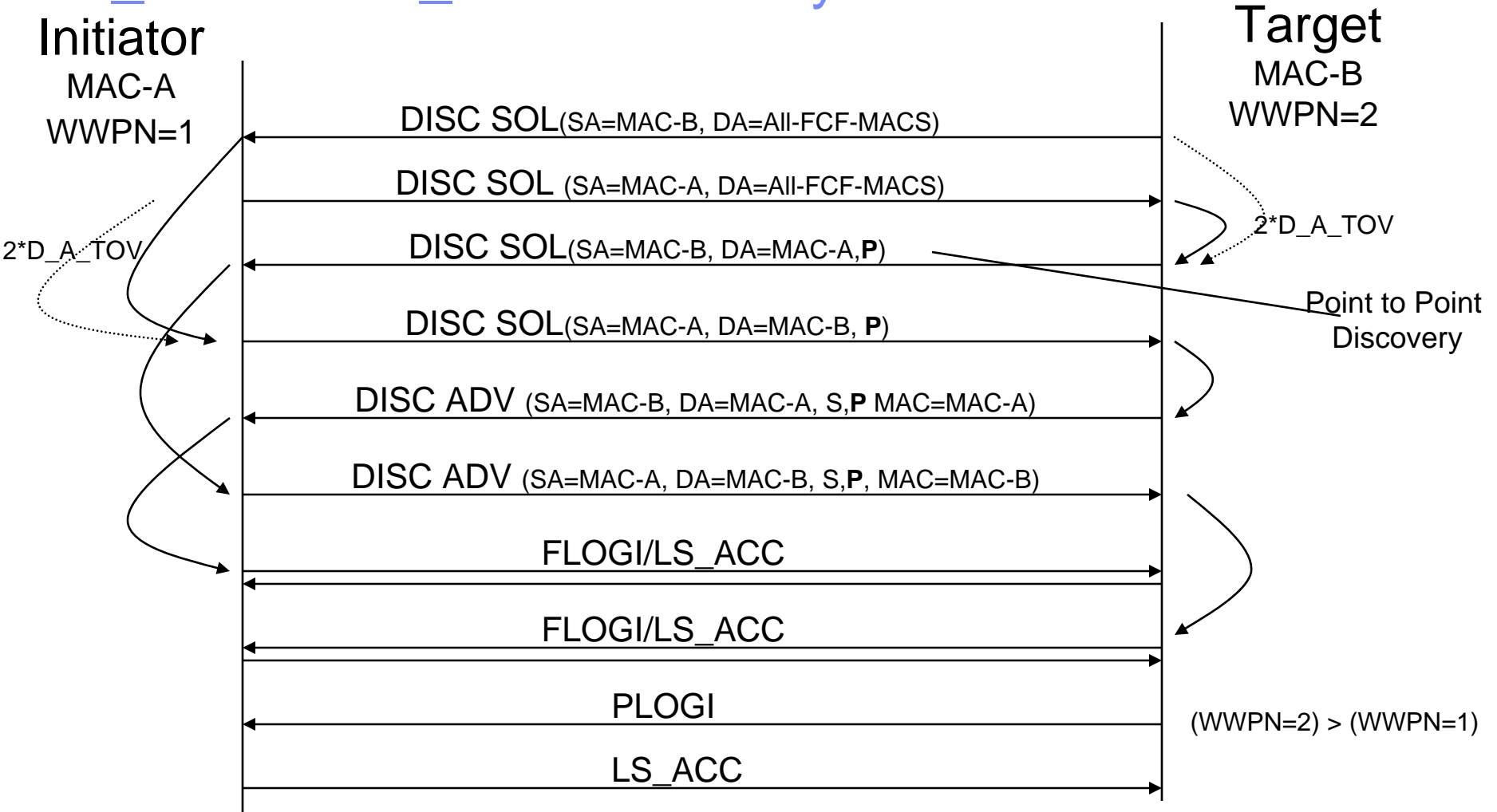
# VN\_Port to VN\_Port Network Configuration



# FC-LS Point to Point Login Process

- **6.2.2.4 Nx\_Port response to FLOGI**
- If an Nx\_Port receives a FLOGI, the Nx\_Port shall respond to the received FLOGI with an LS\_ACC reply Sequence with the OX\_ID equal to the OX\_ID of the received FLOGI and the Common Service Parameter Nx\_Port/F\_Port bit set to zero (i.e., an Nx\_Port). This indicates a point-to-point connection with another Nx\_Port. The D\_ID of the LS\_ACC shall be the S\_ID of the received FLOGI. The Payload shall include the Service Parameters from the received FLOGI with all classes mark invalid, and the 64-bit N\_Port\_Name and 64-bit Node\_Name of the connected Nx\_Port. If the received N\_Port\_Name is less than its N\_Port\_Name, the Nx\_Port proceeds to N\_Port Login. If the received N\_Port\_Name is greater than its N\_Port\_Name, the Nx\_Port waits for PLOGI from the attached N\_Port.

# VN\_Port to VN\_Port Discovery Flow



Only relevant bits and descriptors shown

## VN\_Port to VN\_Port Discovery Steps

- 1) The initiator and target FCoE Controllers both send FIP Discovery Solicitations as allowed by FCoE Initialization Protocol (FIP).
- 2) The FCoE Controller of an E\_Node MAC that supports VN\_Port to VN\_Port network configuration (direct connection) listens to the All-FCF-MACS group address. If the FCoE Controller receives one and only one\* FIP Discovery Solicitation at this address, and has not received an FIP Discovery Advertisements from any FCF for  $2 * D\_A\_TOV$ , the FCoE Controller transmits a FIP Discovery Solicitation to the SA MAC address of the received FIP Discovery Solicitation. This Solicitation has the **P** bit set to indicate Point to Point Discovery.  
Note: The one and only one test and the timeout are required to verify that there are no ethernet switches in the topology.  
(Alternatively, the Enode could just use the timeout and not use the receipt of the FCF Solicitation. In this case, the Point to Point Discovery Solicitation would have to use the All-ENode-MACS destination address. )
- 3) The FCoE Controller of an E\_Node MAC that supports VN\_Port to VN\_Port network configuration responds to a FIP Discovery Solicitation that has the **P** bit set by sending a solicited FIP Discovery Advertisement with the **P** bit set.
- 4) Both Initiator and Target ENodes perform Fabric Login using their preferred addressing mode.
- 5) Using the rules of FC-LS, the VN\_Port with the larger WWPN initiates N\_Port login using the Enode MAC address granted in the FIP FLOGI LS\_ACC and S\_ID and D\_ID it chooses to assign.

## VN\_Port to VN\_Port Virtual Link Maintenance ?

- The FCoE Controller for both ENode MACs that have discovered a point to point configuration (FIP FLOGI LS\_ACC received with Nx\_Port/F\_Port bit = 0) generate FIP Keep Alive messages;
  - every FKA\_ADV\_PERIOD using the ENode's MAC address
  - every  $10 * \text{FKA\_ADV\_PERIOD}$  using the VN\_Port's MAC address, if it is different from the ENode MAC address (FPMA)
- FKA\_ADV\_PERIOD is the smaller of that sent and received in Point to Point discovery messages.
- The FCoE Controller for both ENode MACs that have discovered a point to point configuration verify that at least one FKA is received within  $2.5 * \text{FKA\_ADV\_PERIOD}$
- Using Ethernet physical link failures can eliminate this requirement to send and monitor FKA.

# Thank you