

## WWPN to Fabric association

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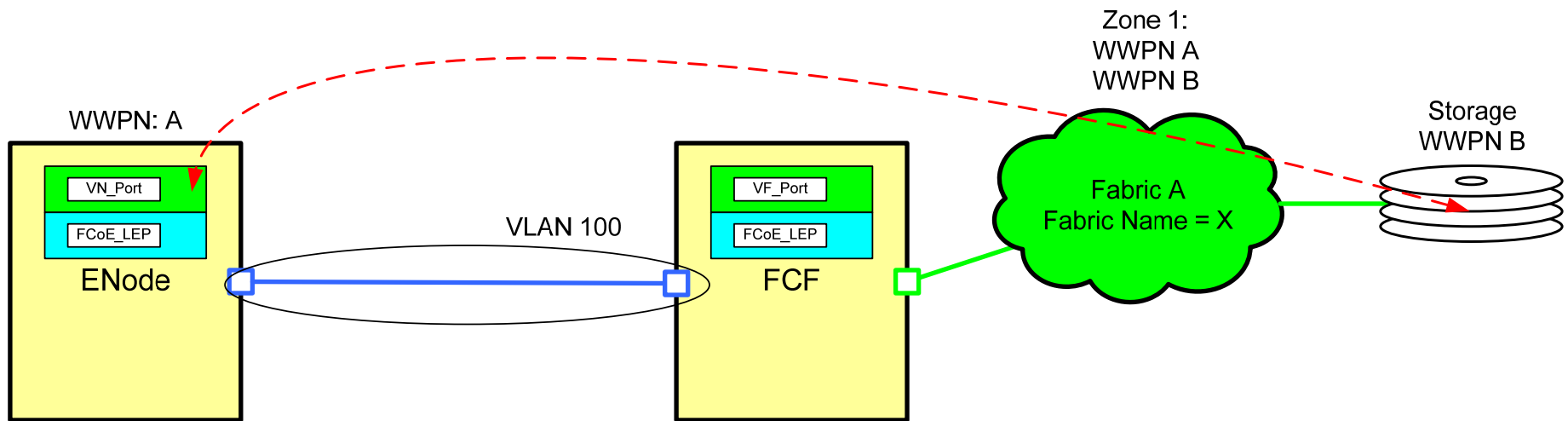
# Agenda



- The problem with FIP, Multiple FCFs and the VN\_Port WWPN
- A potential solution

# The problem with FIP, Multiple FCFs and the VN\_Port WWPN

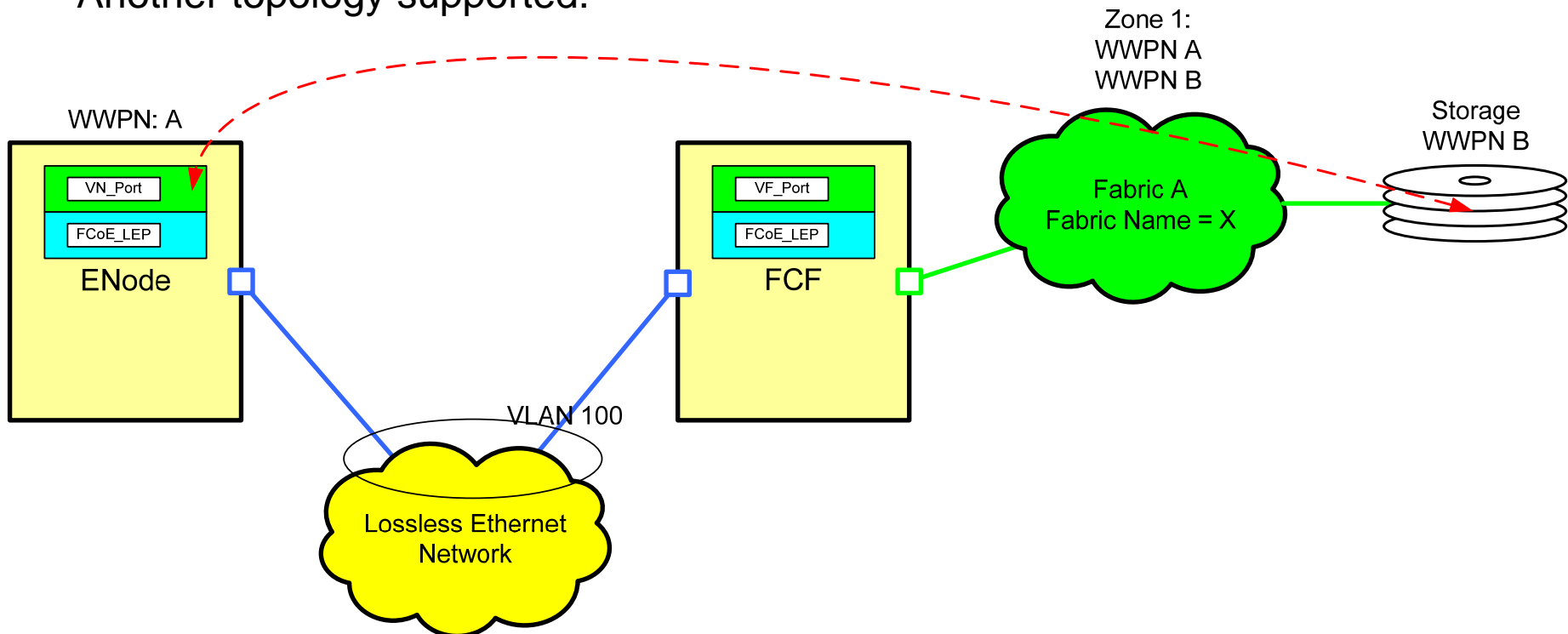
- Most common topology today.



- No problem - WWPN A logs into the only FCF present and is able to discover Storage WWPN B.
  - Changing VLAN ID or Fabric Name is not a problem.

# The problem with FIP, Multiple FCFs and the VN\_Port WWPN

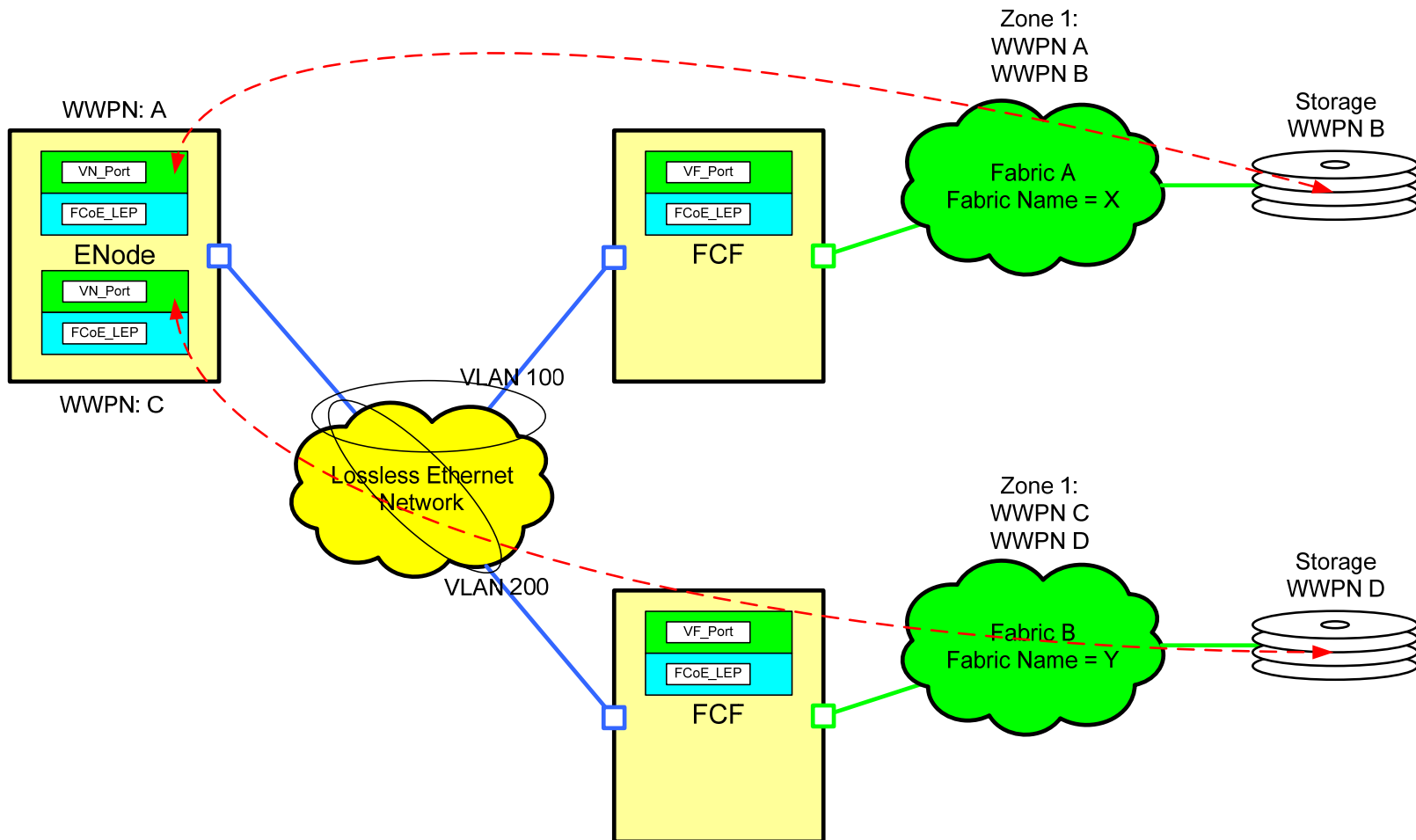
- Another topology supported.



- No problem - WWPN A logs into the only FCF present and is able to discover Storage WWPN B.
  - Changing VLAN ID or Fabric Name is not a problem.

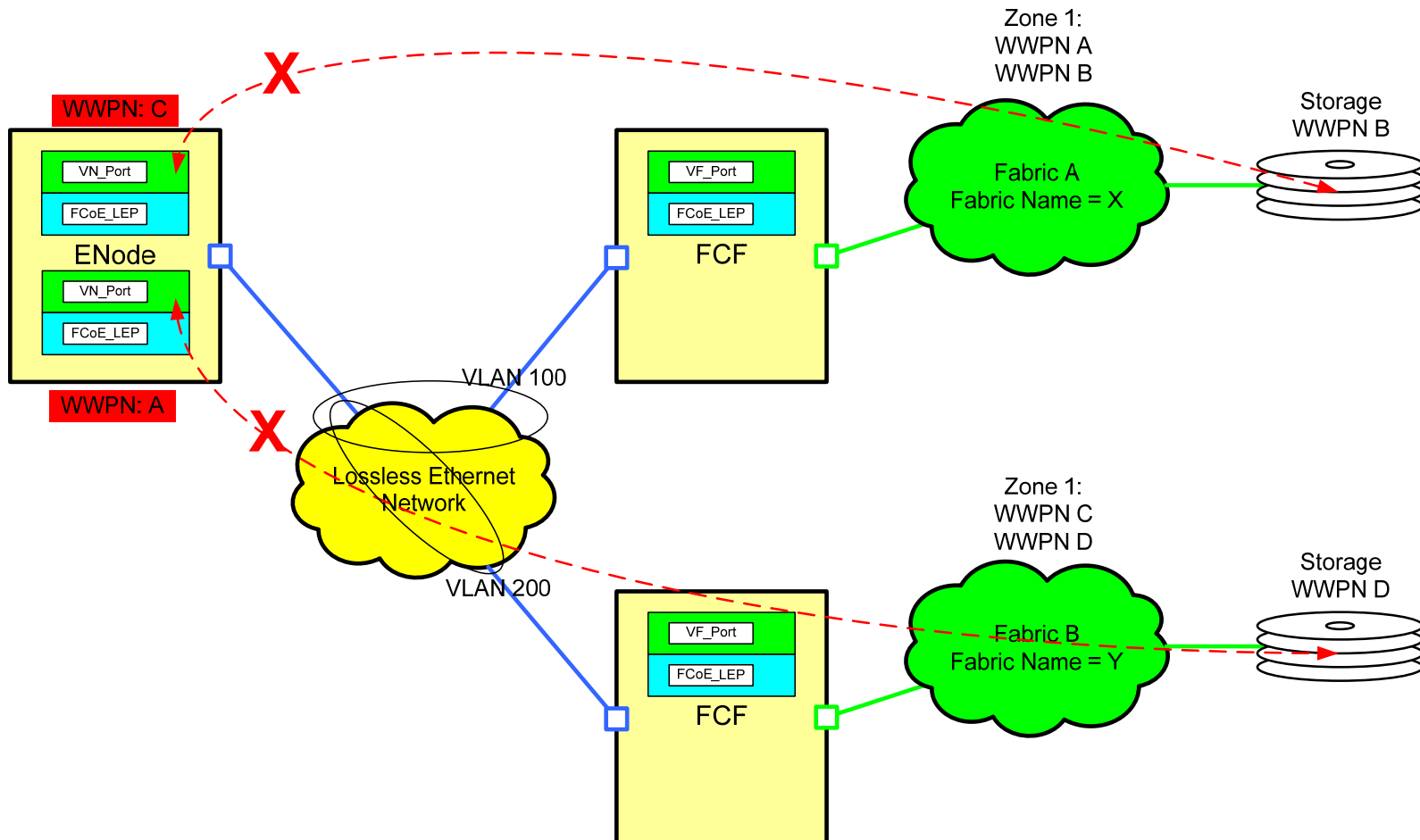
# The problem with FIP, Multiple FCFs and the VN\_Port WWPN

- An interesting configuration.



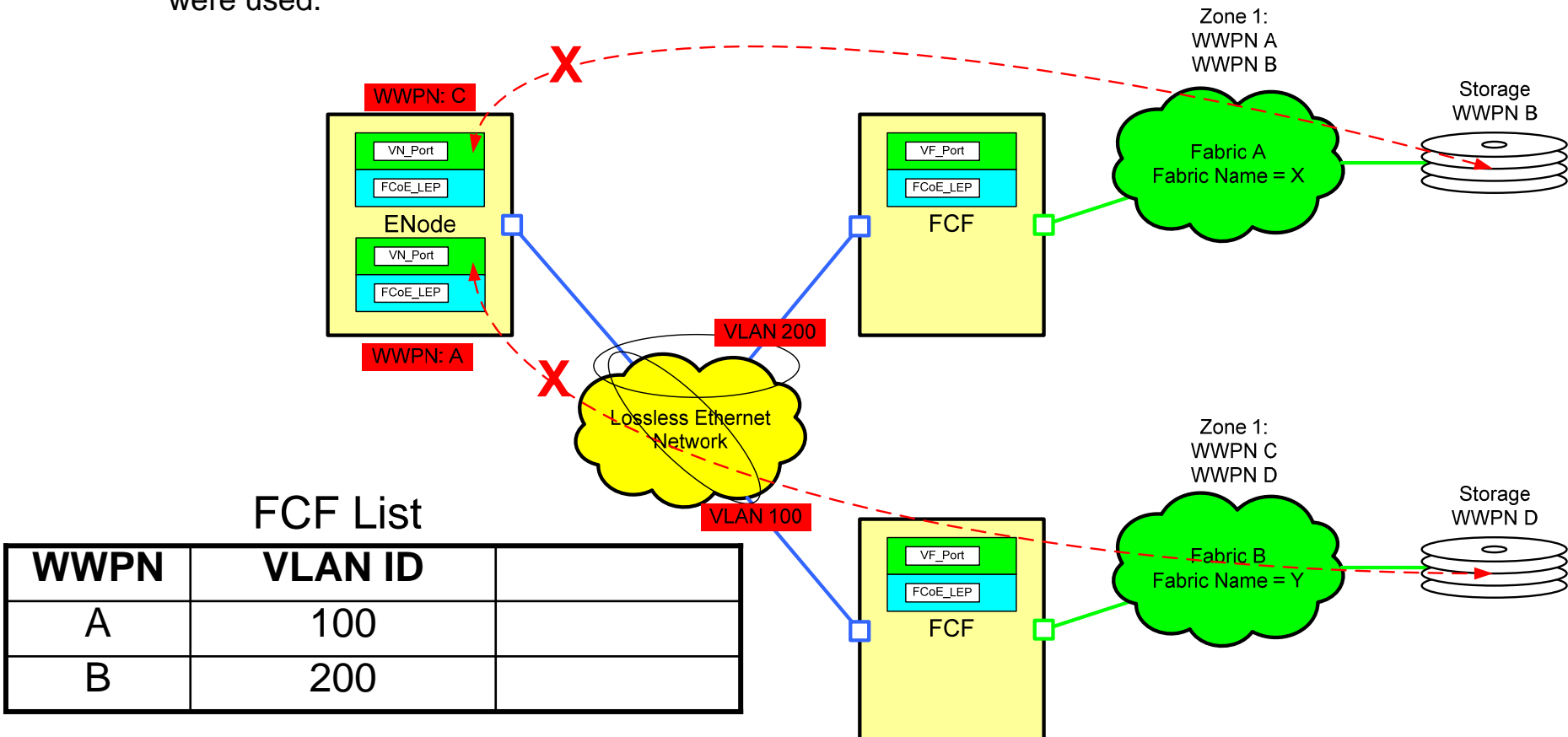
# The problem with FIP, Multiple FCFs and the VN\_Port WWPN

- The problem – What ensures each VN\_Port will re-login to the same FCF after a reboot, cable pull, CVL, etc.



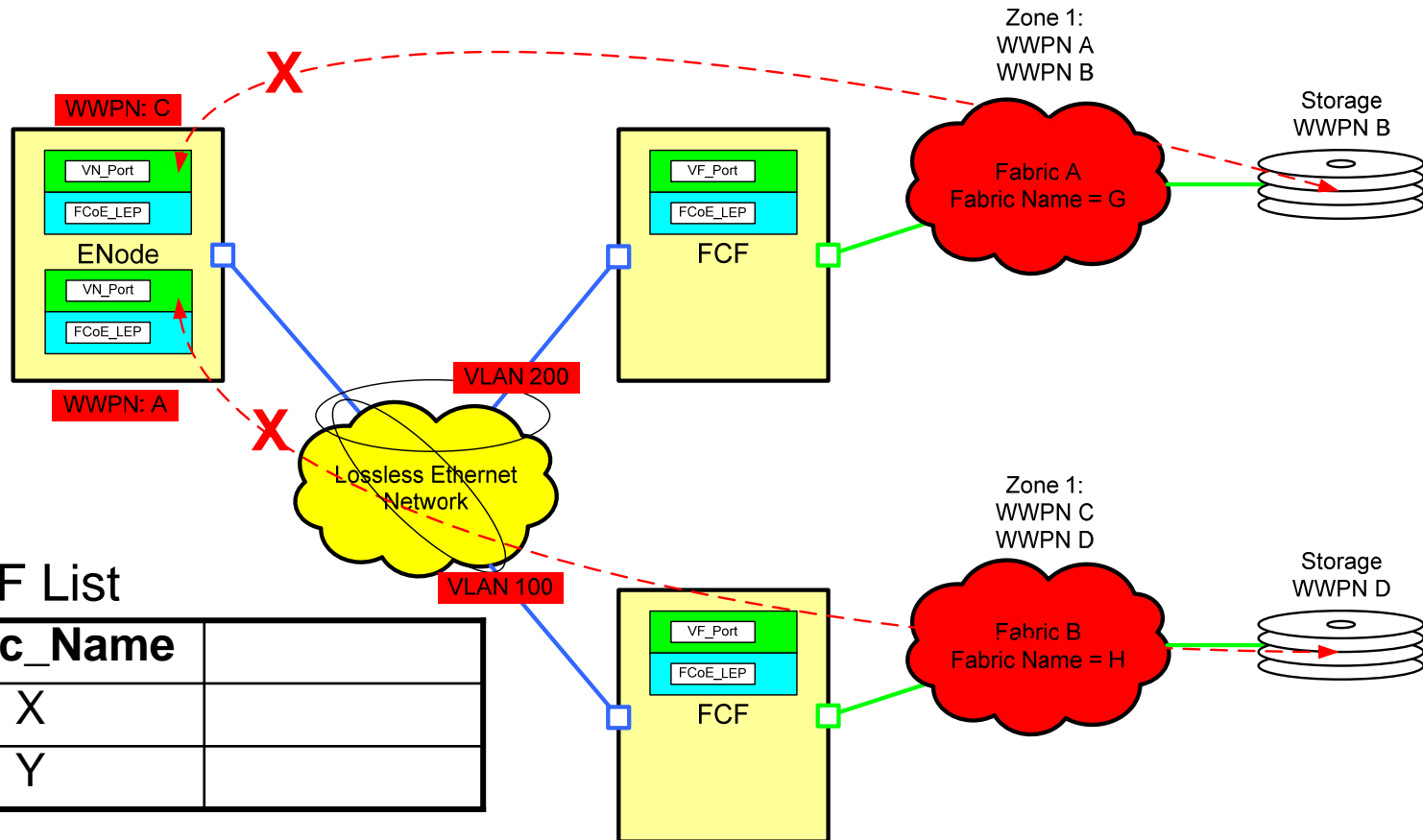
# Potential solutions

- Associate a VN\_Port instance with a VLAN
  - The problem here is that the VLAN can be changed by a network admin.
  - This may not be a change that happens very often but it would be catastrophic if only the VLAN ID were used.



# Potential solutions

- Associate a VN\_Port instance to a Fabric\_Name
  - The problem here is that the Fabric Name can change when the principal switch of the fabric changes.



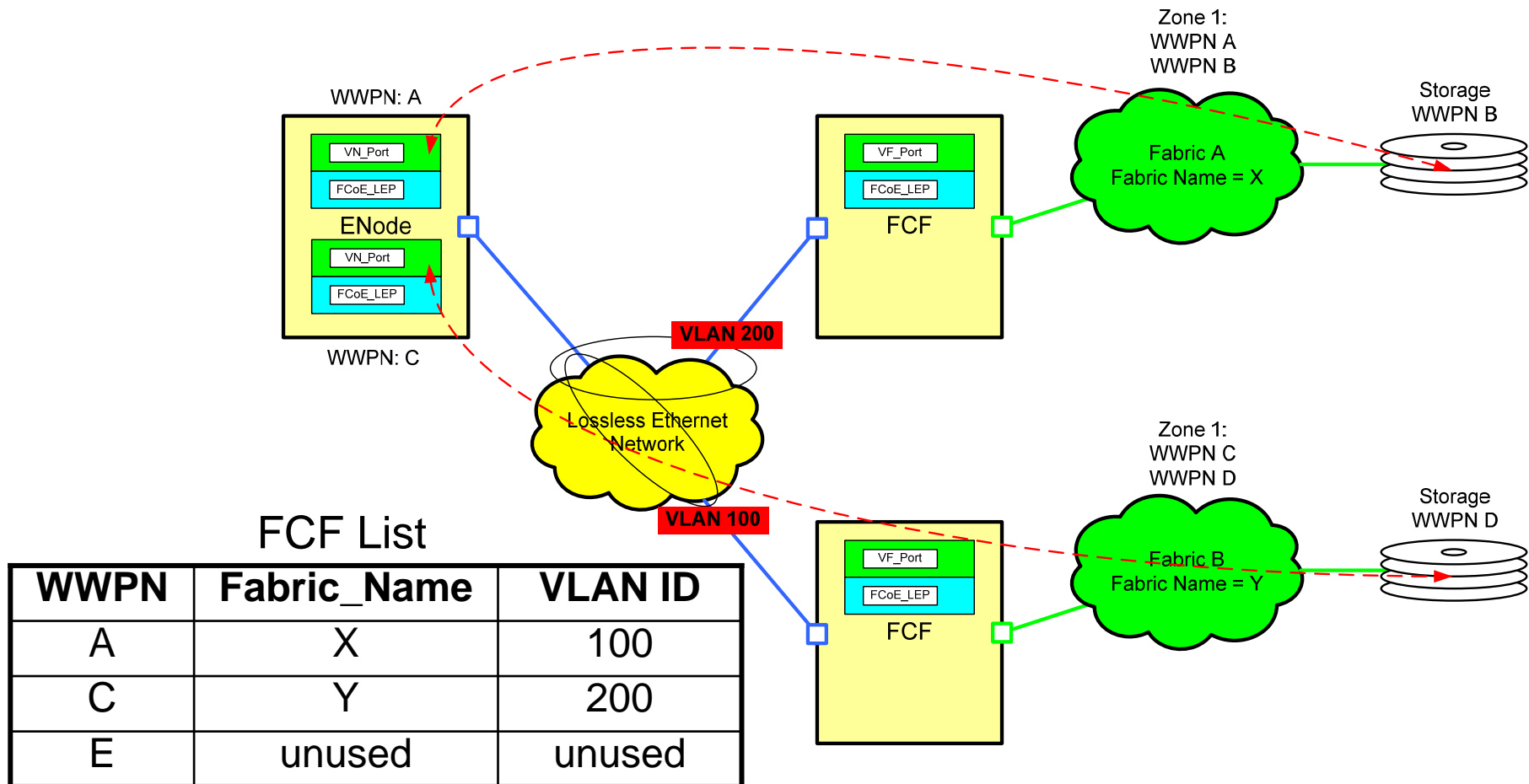
## Potential solutions



- Use both the VLAN and the Fabric\_Name
  - Requires both VLAN ID and Fabric\_Name to change in order to create a problem
  - Refer to the next few slides for examples

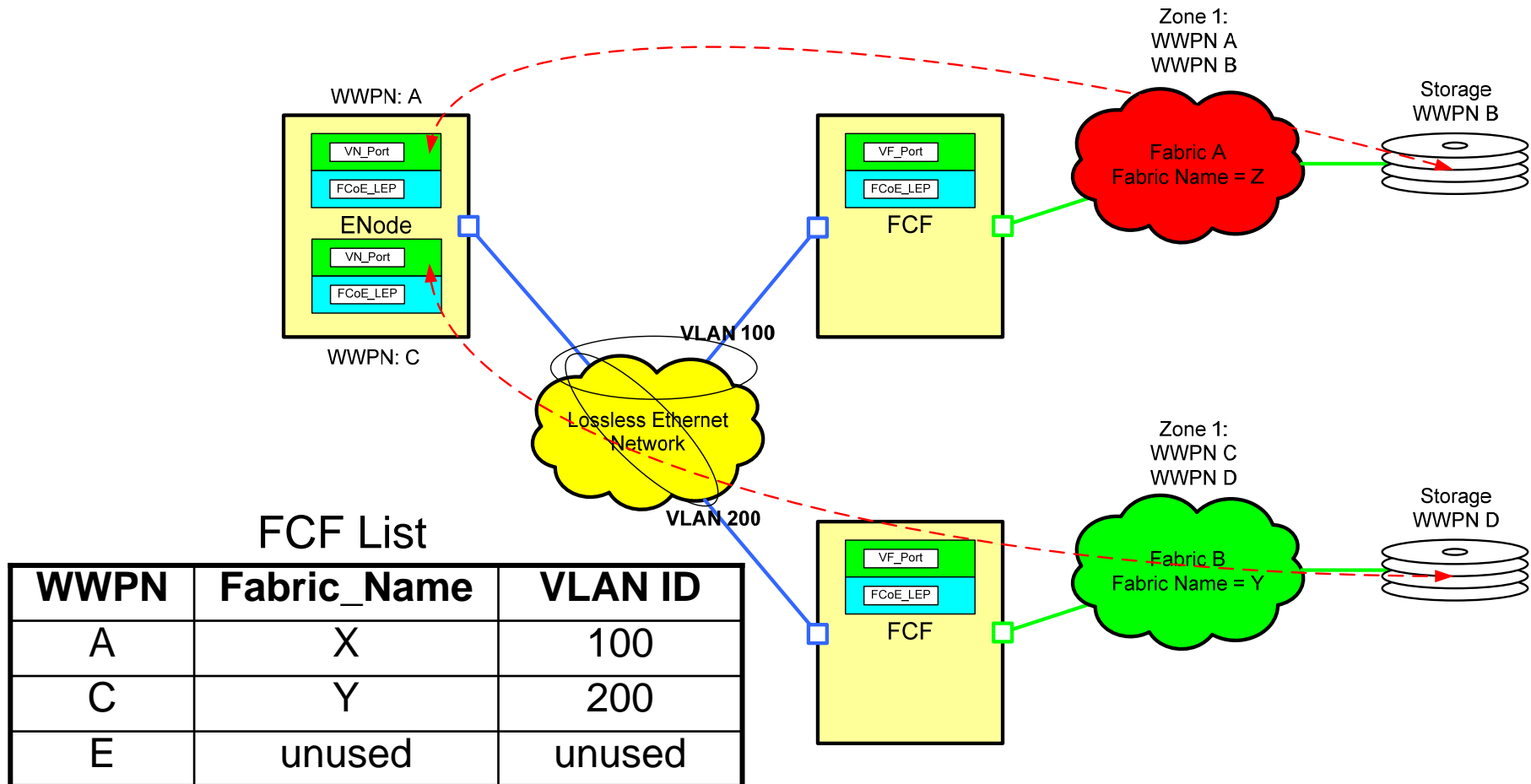
# VLAN changes but the Fabric\_Name is known

- If the VLAN / Fabric\_Name pairing is unknown – Use the Fabric\_Name association to determine which WWPN to use.



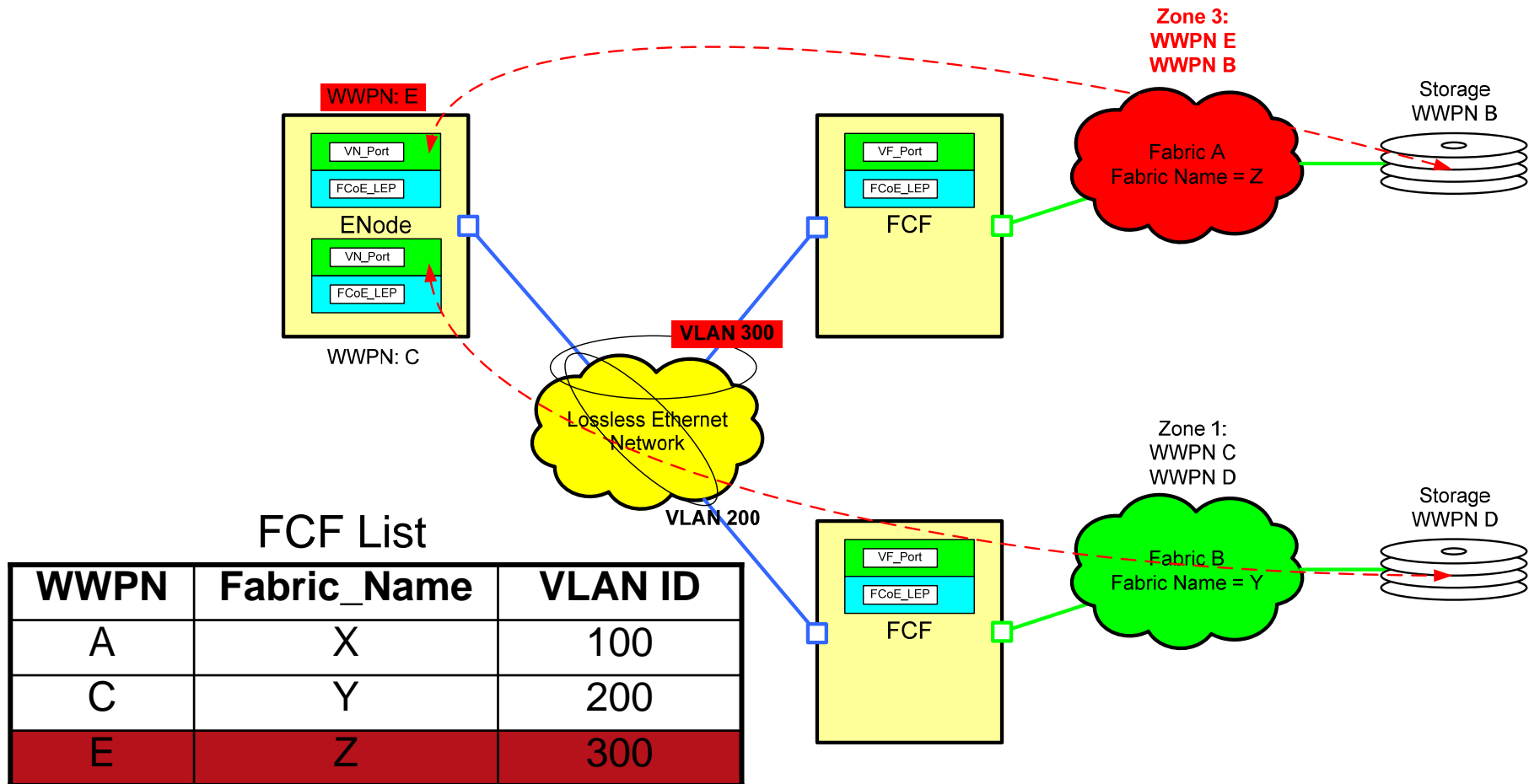
# Fabric\_Name changes but the VLAN is known

- If the VLAN / Fabric\_Name pairing is unknown and the Fabric Name is unknown – Use the VLAN ID association to determine which WWPN to use.



# Fabric\_Name and the VLAN are unknown

- If the VLAN ID and the Fabric\_Name are both unknown – Use a previously unused WWPN (if available).



## Proposed solution



- Add an informative annex to FC-BB-6 that includes text similar to the following
- An FCoE VN\_Port may create an association between the VN\_Port WWPN, the VLAN ID and the Fabric\_Name in the FIP Discovery Advertisement. This triple may be used as outlined in the following algorithm:
- For each FCoE VLAN notification, transmit a FIP solicitation and wait for a Discovery Advertisement:
  - If the Fabric\_Name in the DA is recognized (i.e. previously discovered and logged into), login to the FCF using the WWPN previously used for this Fabric\_Name. Upon successful login, update the VLAN ID in the triple if different from the one previously used.
  - If the Fabric\_Name in the DA is not recognized but the VLAN ID is, login to the FCF using the last WWPN associated with the VLAN ID. Upon successful login, update the triple with the new Fabric Name.
  - If neither the Fabric\_Name nor the VLAN ID are recognized, use a previously unused WWPN to login to the FCF. Upon successful login, update the triple with the new Fabric Name and VLAN ID.

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