

# Extensions to RSVP-TE for LSP Ingress Local Protection

draft-ietf-teas-rsvp-ingress-protection

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# Introduction

3 failure cases  
(combinations)

below:

1. Ingress PE1 fails

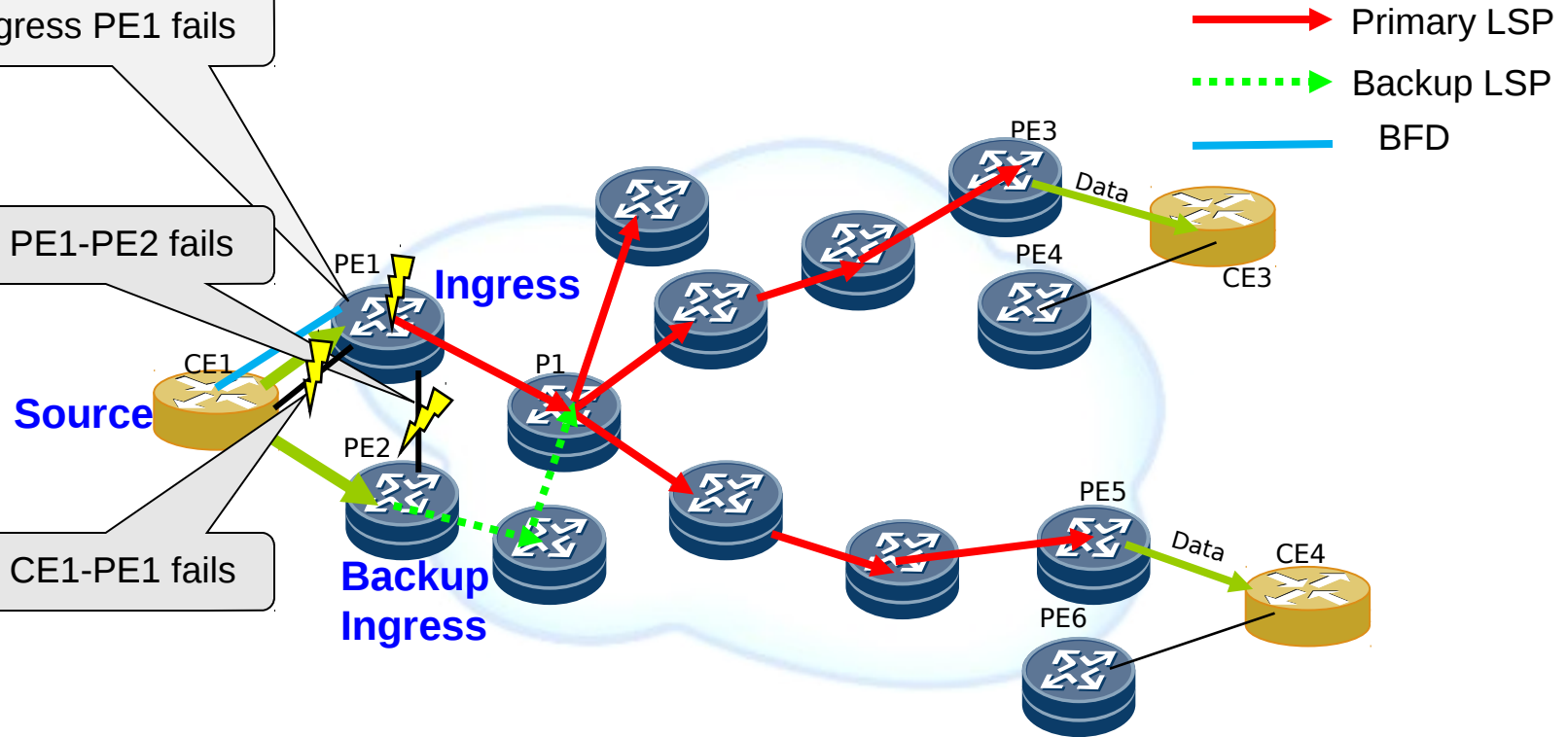
2. Link PE1-PE2 fails

3. Link CE1-PE1 fails

Ingress Protection behaviors for 2 modes:

1) Source Detects Ingress Failure

2) Backup & Source Detect Ingress Failure



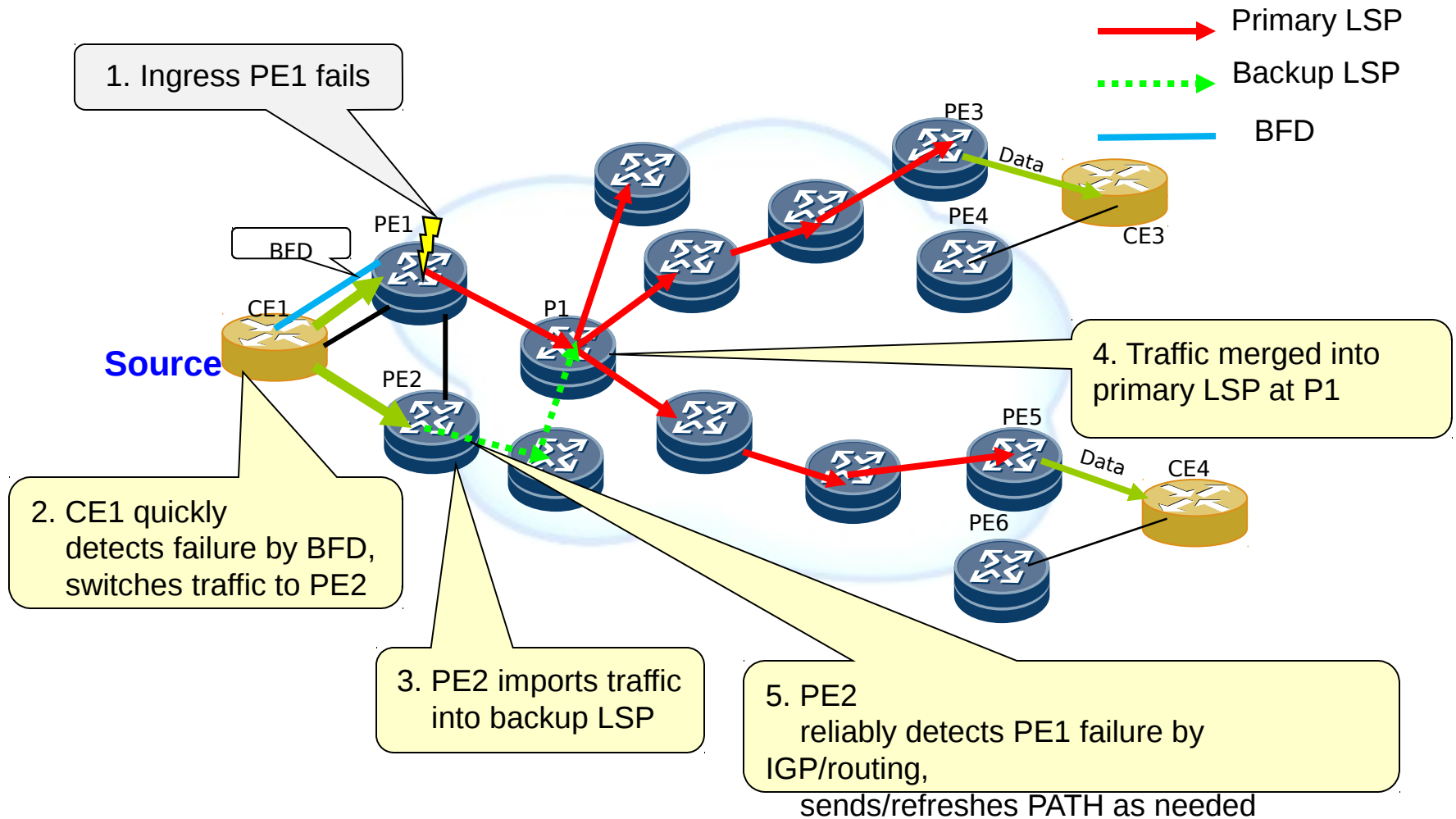
# Source Detects Failure (1/3)

Source (CE1) quickly

detects ingress (PE1) failure and switches traffic to backup ingress (PE2)

Backup Ingress (PE2)

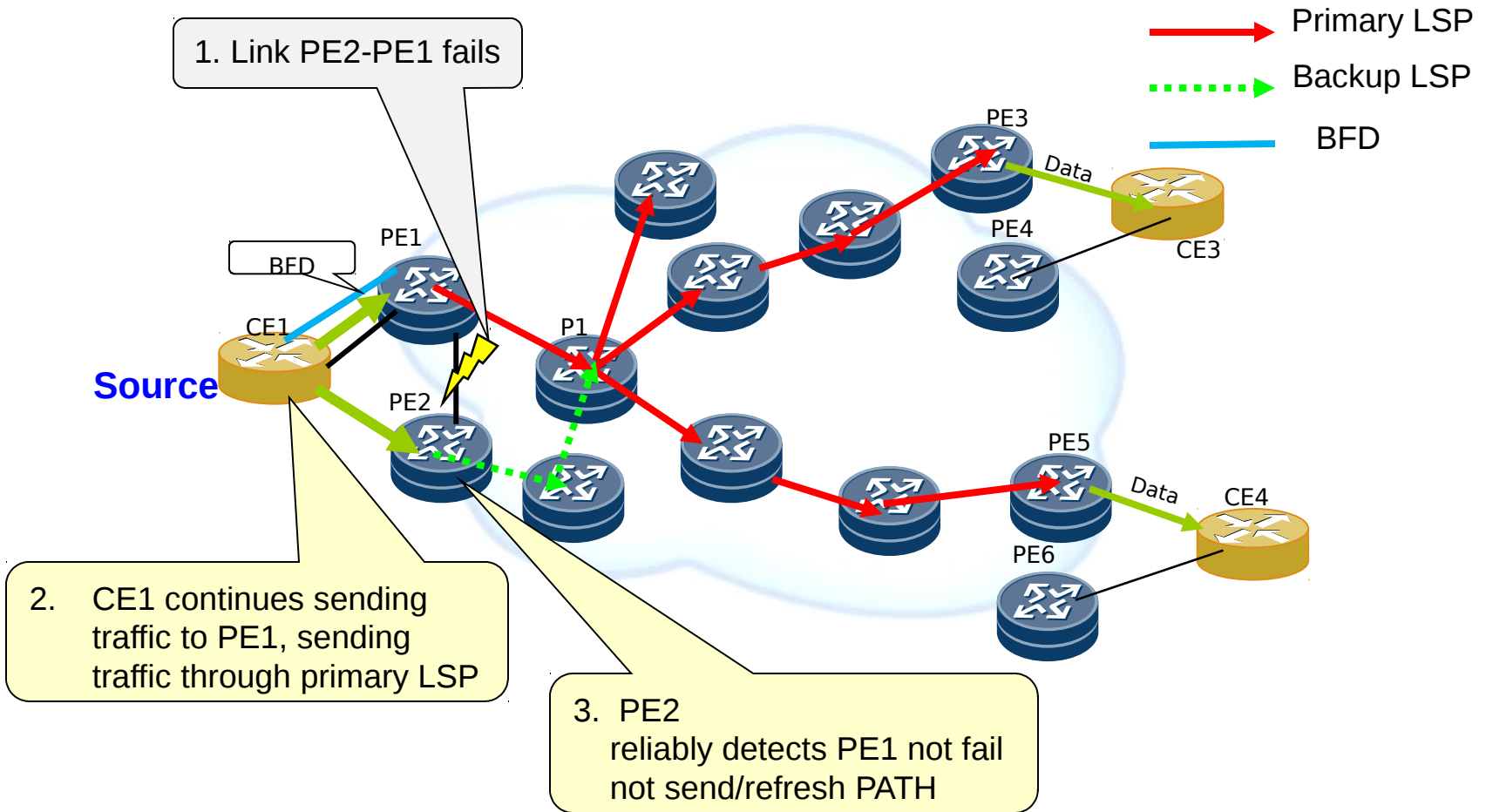
always ready to import traffic into backup LSP reliably detects ingress failure, sends Path as needed



# Source Detects Failure (2/3)

Source (CE1) quickly detects ingress (PE1) failure and switches traffic to backup ingress (PE2)

Backup Ingress (PE2) always ready to import traffic into backup LSP reliably detects ingress failure, sends Path as needed



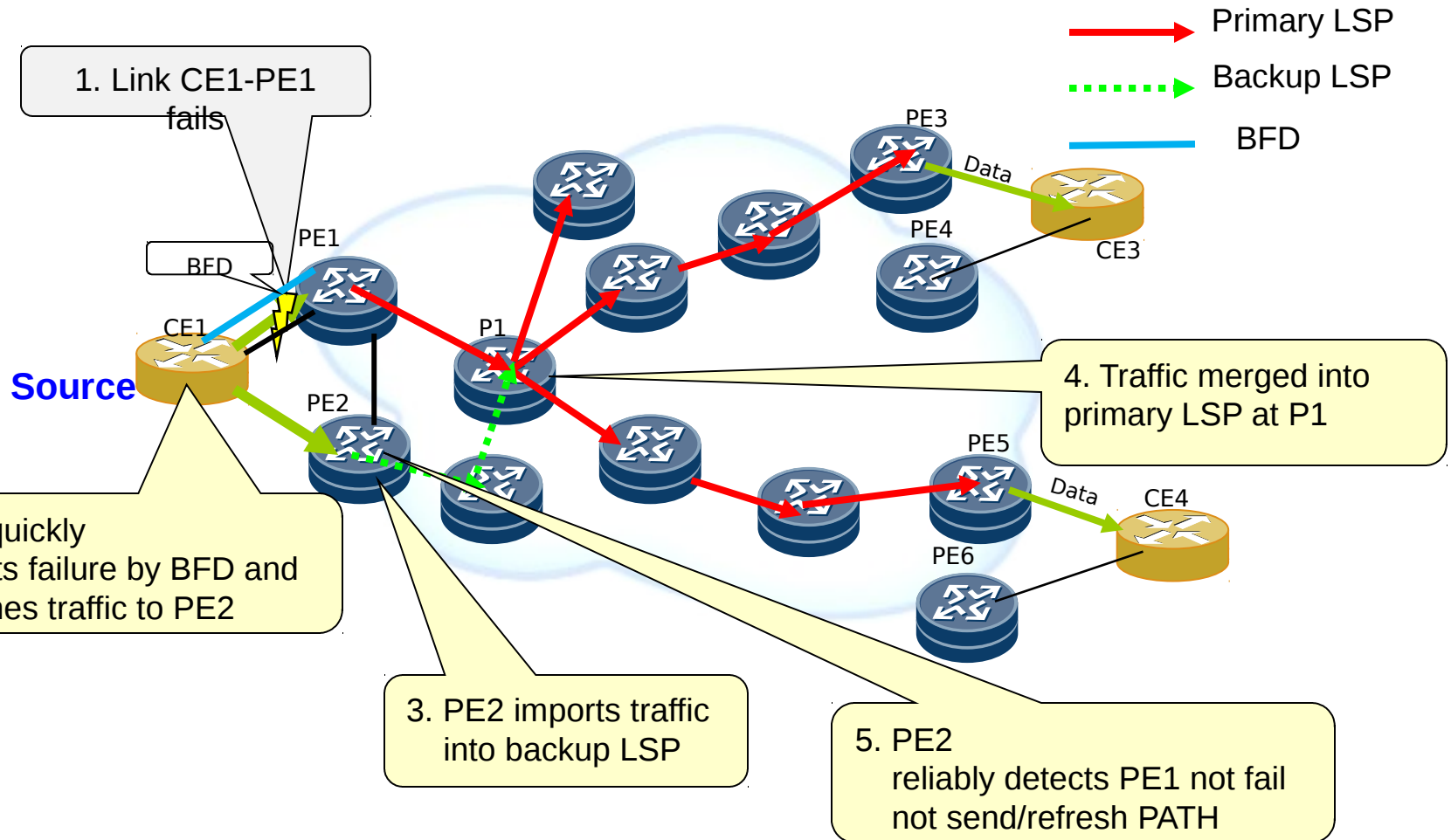
# Source Detects Failure (3/3)

Source (CE1) quickly

detects ingress (PE1) failure and switches traffic to backup ingress(PE2)

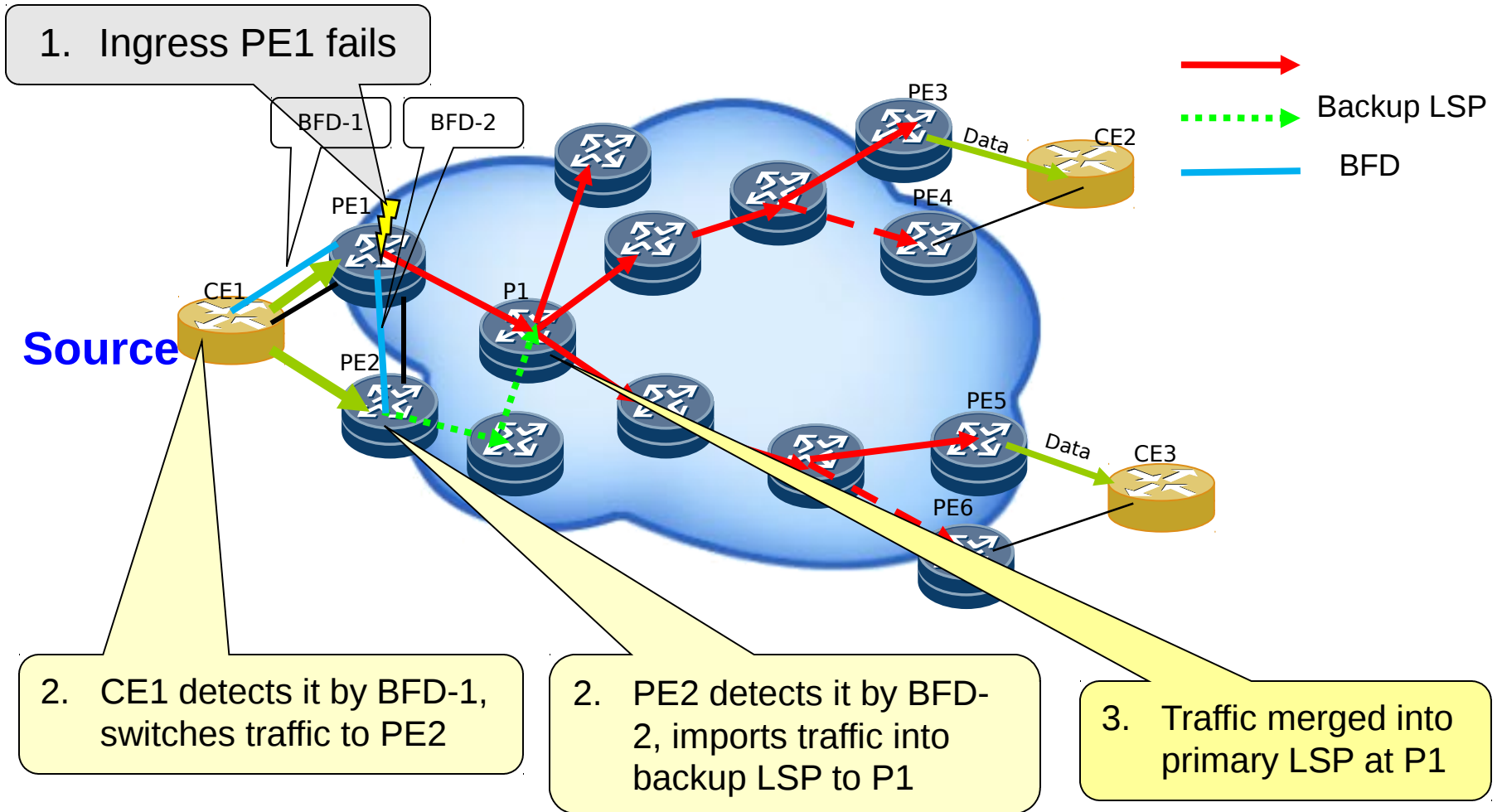
Backup Ingress (PE2)

always ready to import traffic into backup LSP  
reliably detects ingress failure, sends Path as needed



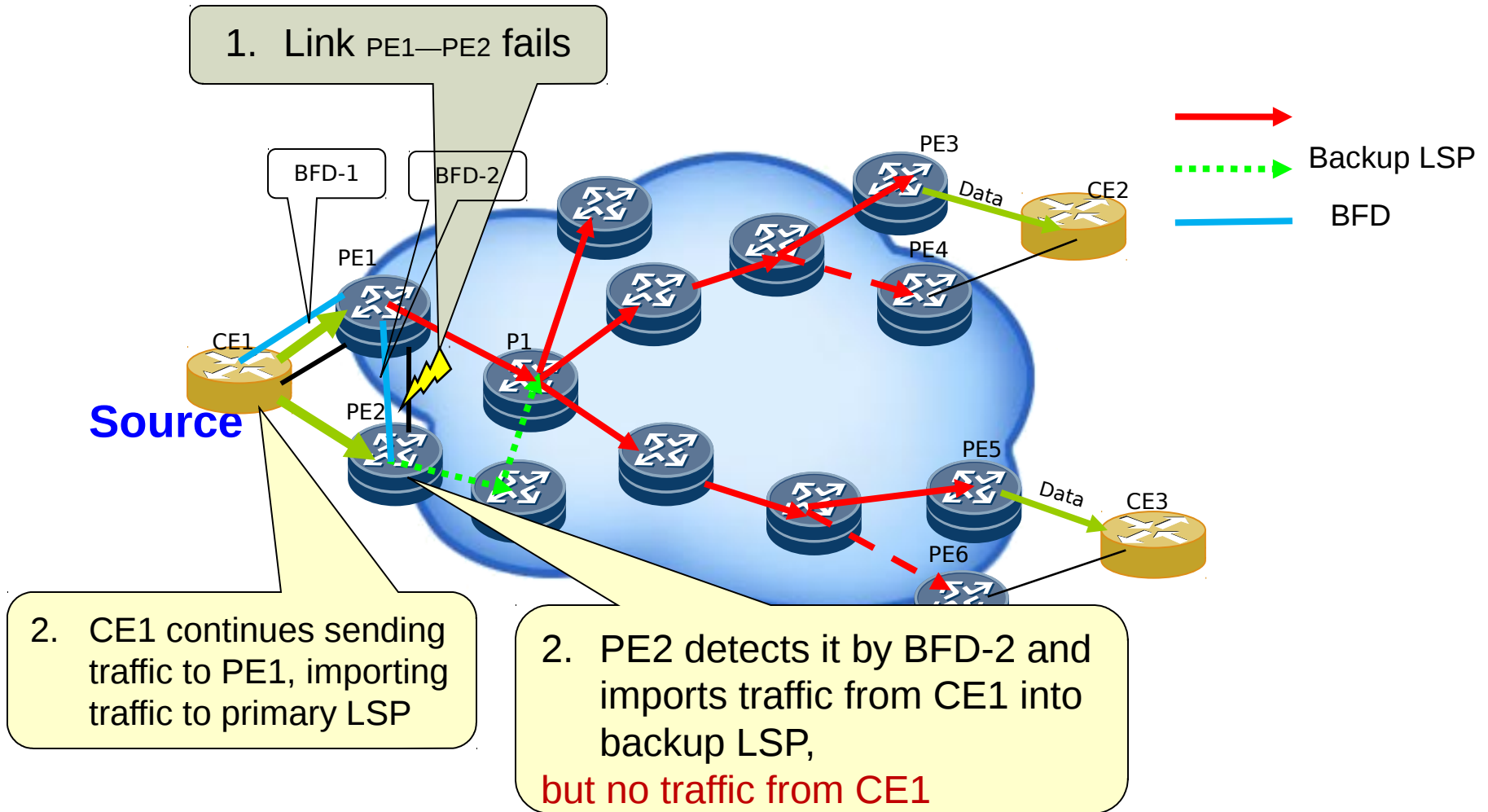
# Backup and Source Detect Failure (1/3)

Backup ingress (PE2) and source (CE1) detect ingress (PE1) failure and control the traffic delivery concurrently (CE1 switches traffic when detecting failure, PE2 imports traffic into backup LSP when detecting failure)



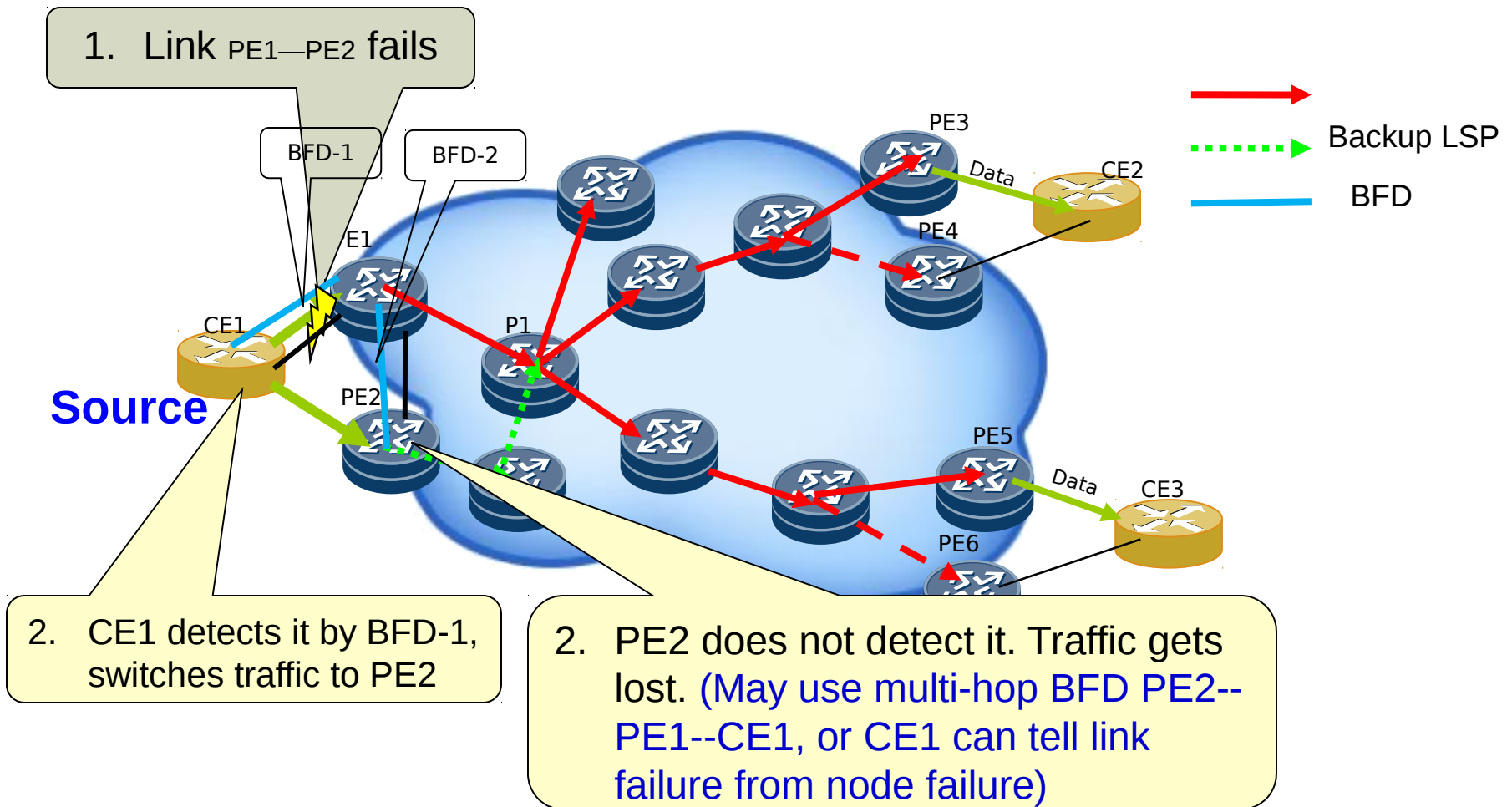
# Backup and Source Detect Failure (2/3)

Backup ingress (PE2) and source (CE1) detect ingress (PE1) failure and control the traffic delivery concurrently (CE1 switches traffic when detecting failure, PE2 imports traffic into backup LSP when detecting failure)



# Backup and Source Detect Failure (3/3)

Backup ingress (PE2) and source (CE1) detect ingress (PE1) failure and control the traffic delivery concurrently (CE1 switches traffic when detecting failure, PE2 imports traffic into backup LSP when detecting failure)



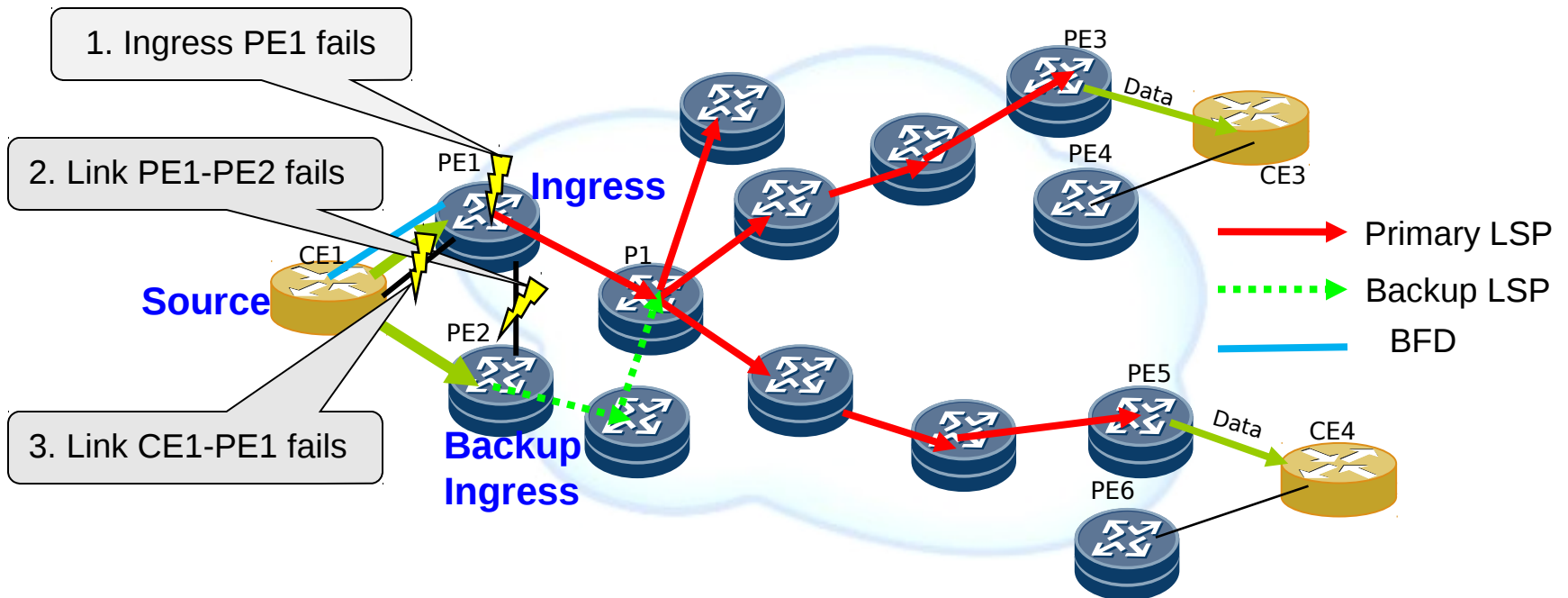


# Summary

Presented:

Ingress protection behaviors for two modes

- 1) **Source Detects Ingress Failure:** works for all cases
- 2) **Backup and Source Detect:** may not work for some cases if cannot tell link failure from node failure or no multi-hop BFD X border



# Next Step

- Welcome comments