

# Zone supervisor Election process

Text description and walk thru example

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5<sup>th</sup> January 2006

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# Election process

## Self Discovery process

- Self discovery process completes the route tables of the zoning expander devices
- SMP REPORT GENERAL response has CONFIGURING bit set to zero when discovery process completes for each expander device.
- BROADCAST (CHANGE) is issued by the expander device to indicate that the self discovery process is complete (See 7.11 SAS domain changes)

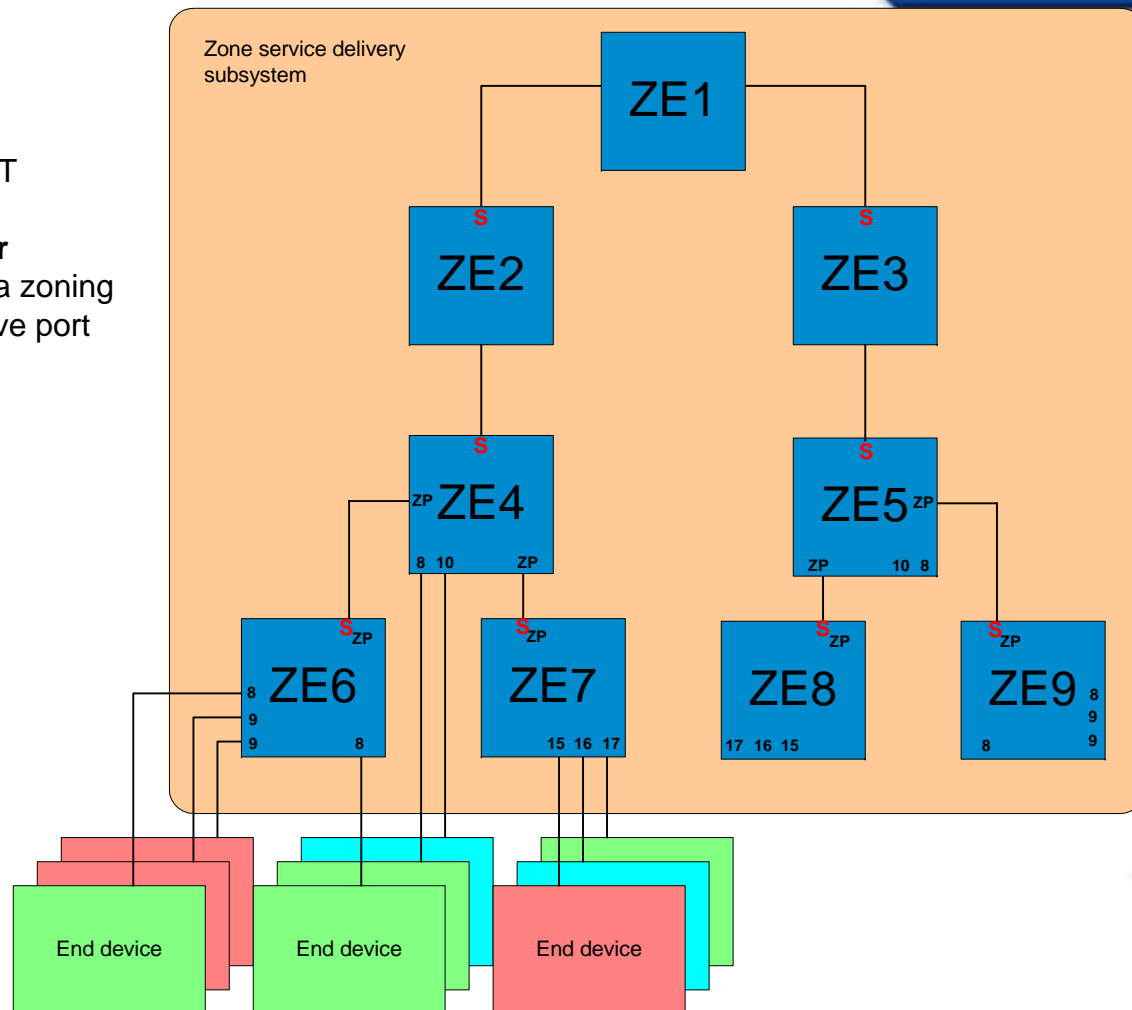
## Active supervisor election process

- The zoning expander device shall make a DISCOVERY request to each device in the ZSDS after self configuration has completed.
- For each zoning expander device the REPORT GENERAL response provides ZONE SUPERVISING PRIORITY and ATTACHED SAS ADDRESS information.
- The DISCOVER response provides ZONE SUPERVISING PRIORITY and ATTACHED SAS ADDRESS information for each device attached to a zoning expander.
- Each expander completes active zone supervisor election.

## Example : Self configuring of route tables

### Self configuring is complete when:

- Zoning expander devices REPORT GENERAL response with the CONFIGURING bit set to zero; **or**
- Self-configuration is complete for a zoning expander device with no subtractive port



**STATUS:** {Supervisor priority, SAS Address}

ZE4 election = {000, 0000\_0000\_0000\_0000} ZE4,6,7

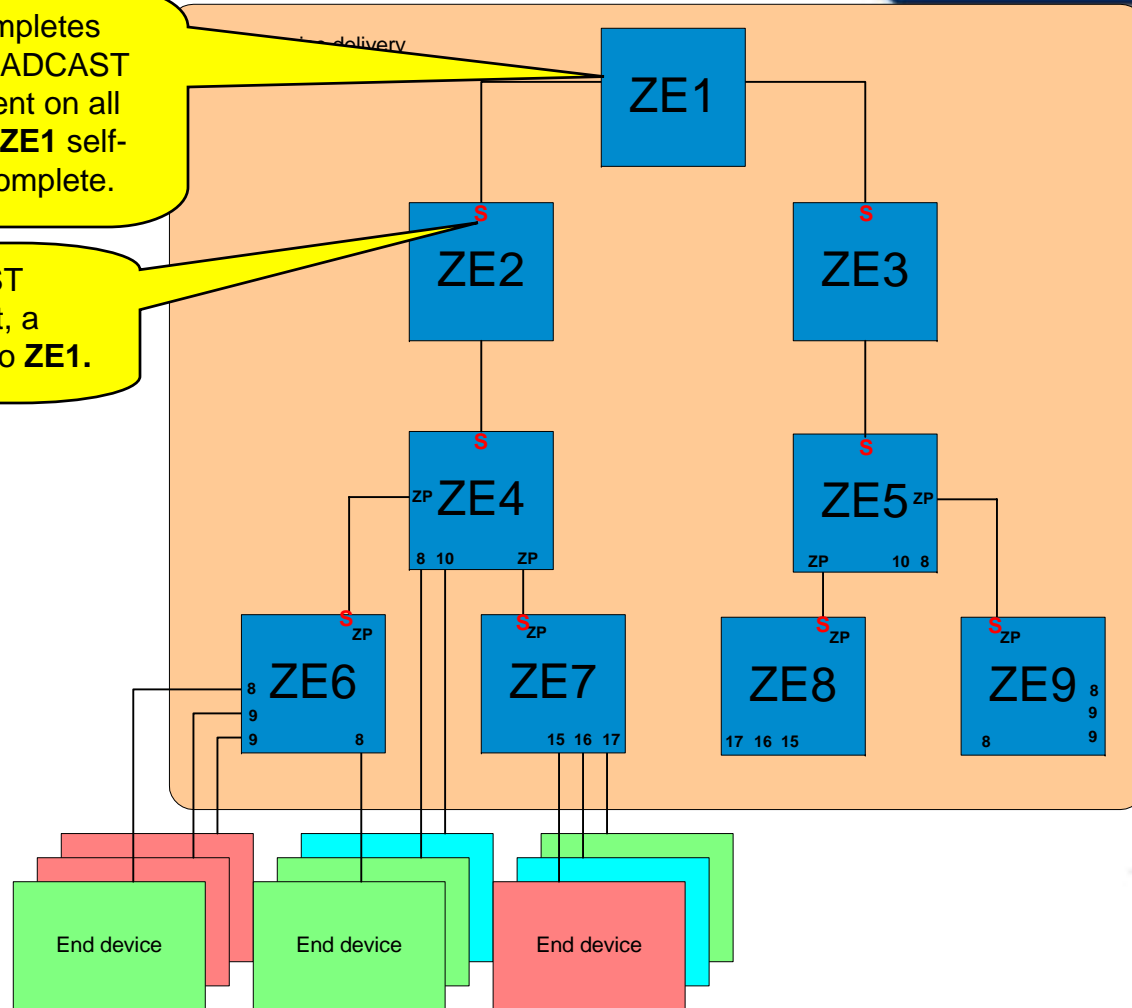
ZE2 election = {000, 0000\_0000\_0000\_0000} ZE2,4,6,7

ZE1 election = {000, 0000\_0000\_0000\_0000} ZE1..9

## Example : Self configuring of route tables completes

When **ZE1** completes configuring BROADCAST (CHANGE) is sent on all phys to indicate **ZE1** self-configuring is complete.

When **ZE2** receives BROADCAST (CHANGE) on the subtractive port, a REPORT GENERAL request is sent to **ZE1**.



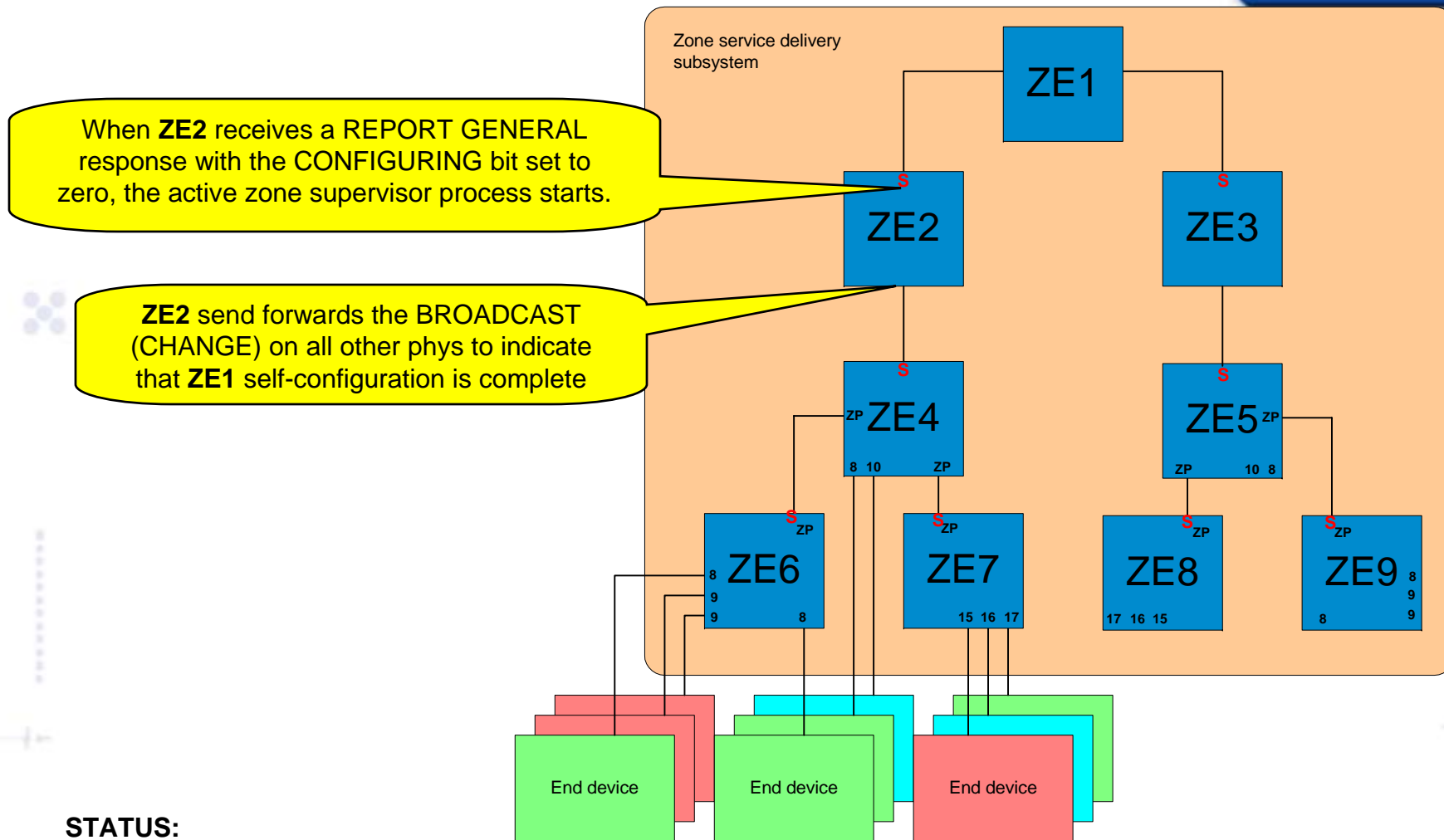
### STATUS:

ZE4 election = {000, 0000\_0000\_0000\_0000} ZE4,6,7

ZE2 election = {000, 0000\_0000\_0000\_0000} ZE2,4,6,7

ZE1 election = {max priority, max SAS address} ZE1..9

## Example : Completion of self configuration propagates



### STATUS:

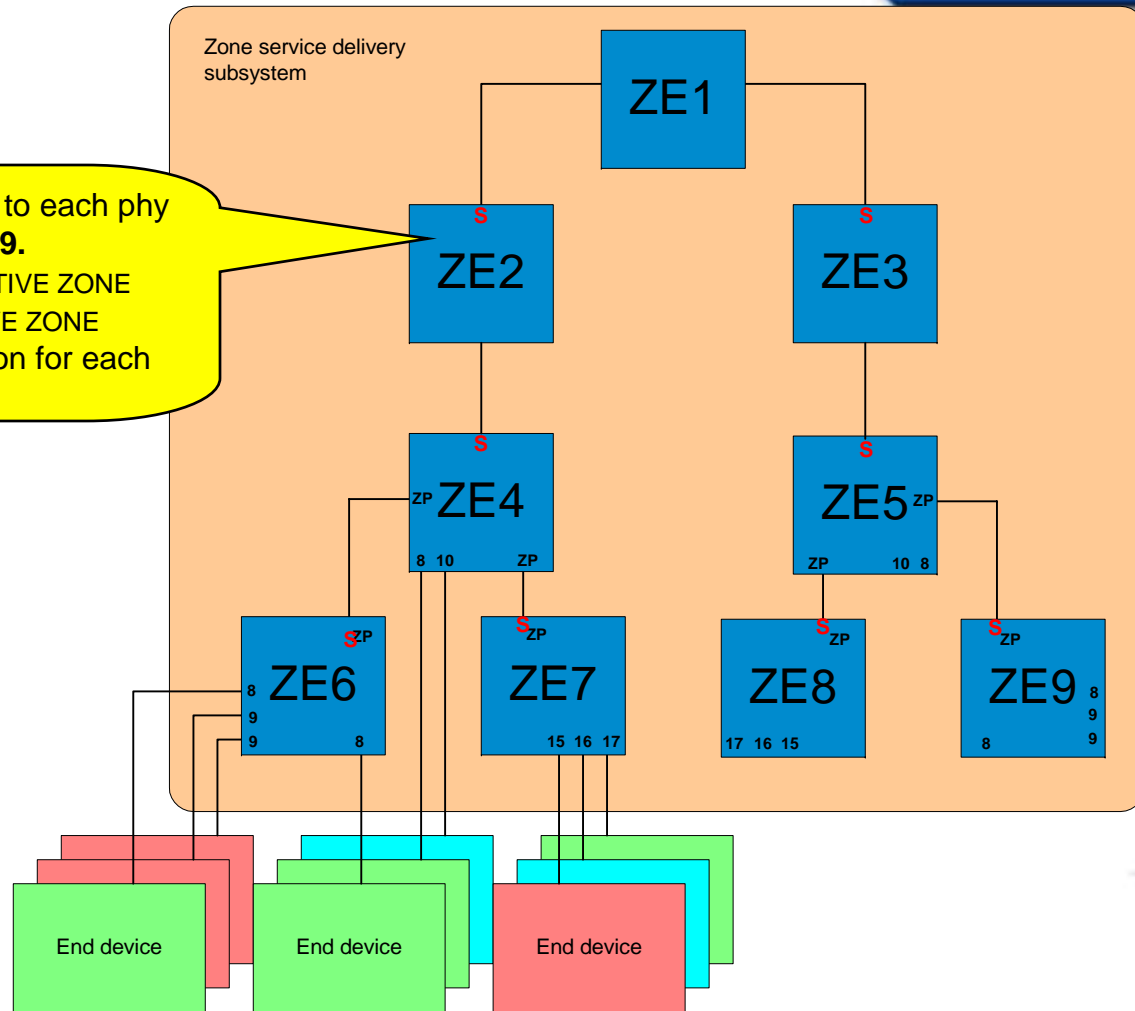
ZE4 election = {000, 0000\_0000\_0000\_0000} ZE4,6,7

ZE2 election = {000, 0000\_0000\_0000\_0000} ZE2,4,6,7

ZE1 election = {max priority, max SAS address} ZE1..9

## Example : Supervisor election

**ZE2** may send a DISCOVER request to each phy attached to **ZE1, 3,5,8** and **9**.  
DISCOVER response provides ACTIVE ZONE SUPERVISING PRIORITY and ACTIVE ZONE SUPERVISOR SAS ADDRESS information for each device.



**STATUS:**

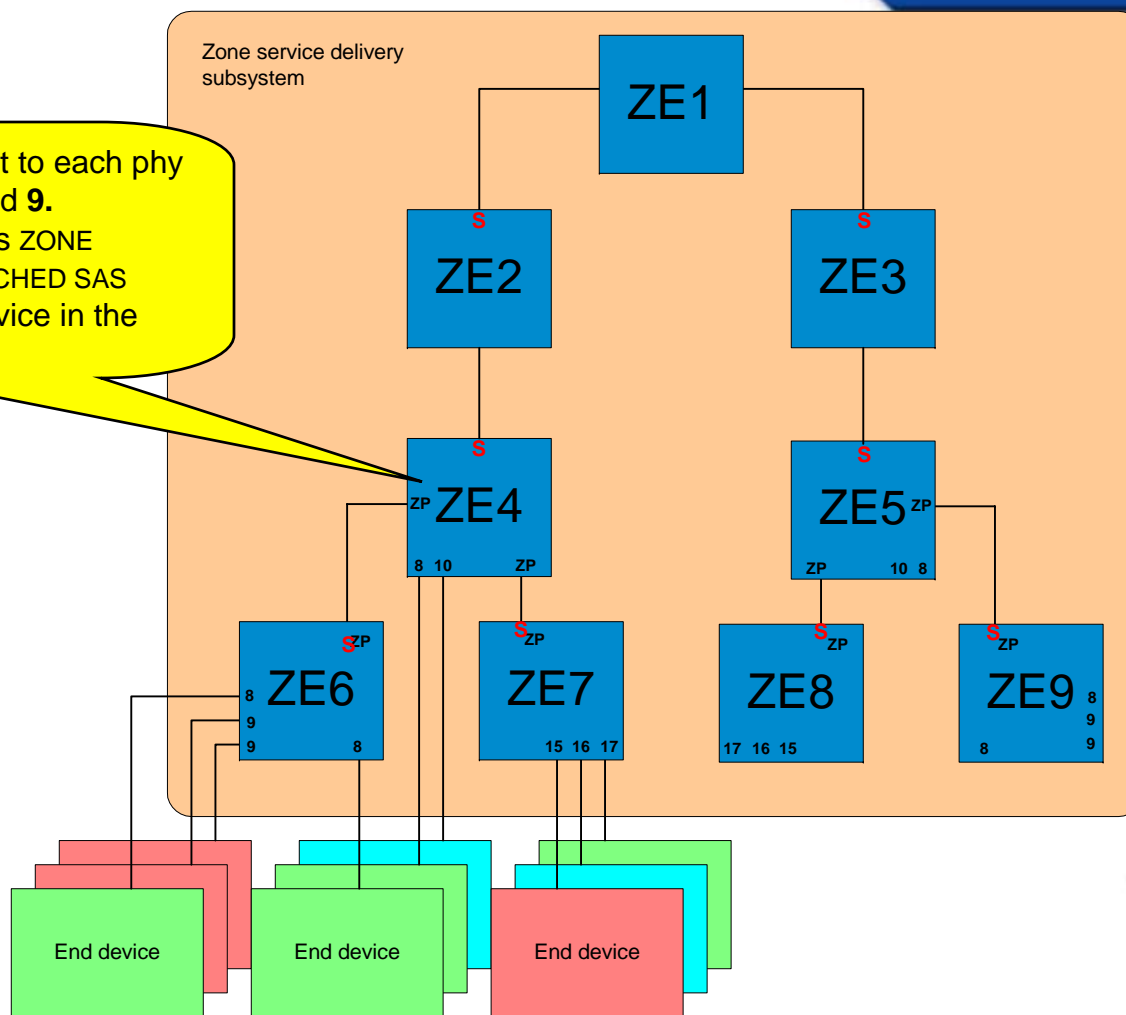
ZE4 election = {000, 0000\_0000\_0000\_0000} ZE4,6,7

ZE2 election = {max priority, max SAS address} ZE1..9

ZE1 election = {max priority, max SAS address} ZE1..9

## Example : Supervisor election completes

ZE4 may send a DISCOVER request to each phy attached to ZE 2,1,3,5,8 and 9.  
DISCOVER response provides ZONE SUPERVISING PRIORITY and ATTACHED SAS ADDRESS information for each device in the ZSDS.



### STATUS:

ZE4 election = {max priority, max SAS address} ZE1..9

ZE2 election = {max priority, max SAS address} ZE1..9

ZE1 election = {max priority, max SAS address} ZE1..9

# Detailed procedure of election process

## Self Discovery process

- Self discovery process completes the route tables of the zoning expander devices
- SMP REPORT GENERAL response has CONFIGURING bit set to zero when discovery process completes for each expander device.
- BROADCAST (CHANGE) is issued by the expander device to indicate that the self discovery process is complete (See 7.11 SAS domain changes)

## Active supervisor election process

- In response to a BROADCAST (CHANGE) a zoning expander device shall make an SMP REPORT GENERAL request on the phy that received it.
- If the configuring bit is set to zero in the SMP REPORT GENERAL response from an attached zoning expander device then the expander shall send DISCOVER requests to each phy of the attached expander device that sent the BROADCAST (CHANGE).
- The expander identifies the ZONE SUPERVISOR PRIORITY of the attached expander device from the SMP REPORT GENERAL response, and all devices attached from the DISCOVER response.
- The DISCOVER response frame indicates the ZONE SUPERVISOR PRIORITY of each phy and the highest priority device is identified.
- When all phys on all expander devices have been reported, then the election process is complete.