###### Configure and verify Static\Manual Remote MEP

***Objective:***

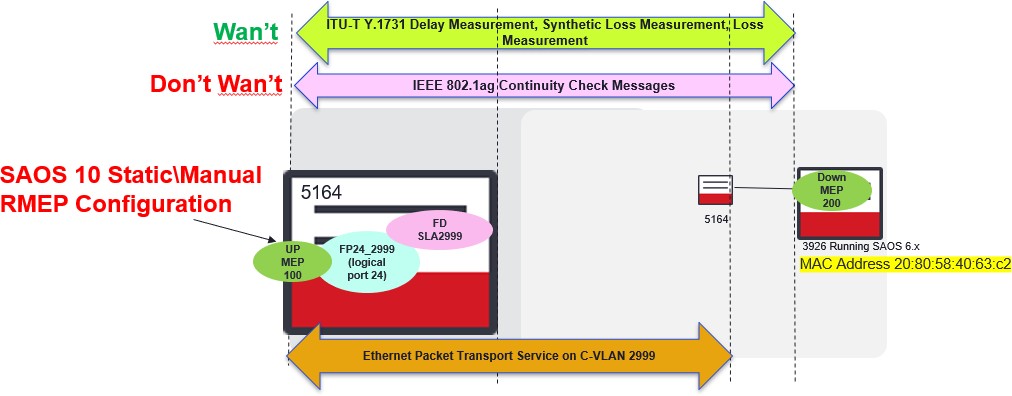
Objective is to configure a Static\Manual Remote MEP that can support Y.1731 test sessions between a local MEP and a statically configured remote MEP when no CCM sessions are present.

Pre-requisites:

Ethernet packet transport service is configured on C-VLAN 100 including necessary forwarding domain, flow points and all other necessary transport constructs.

Far side MEP is configured and ready to execute Y.1731 tests (reference config included within).

***Procedure:***



* Configure the local mep and disable CCM transmission. Setting ccm-interval to a value of invalid disables CCM transmission:

cfm-global-config admin-state enable

maintenance-domain 'Y.1731' name-type character-string name "Y.1731" md-level 1 mhf-creation none id-permission chassis

maintenance-domain 'Y.1731' maintenance-association 'LWCTOH02T2A-P-CN-0999-01-EVEN' name-type character-string name "LWCTOH02T2A-P-CN-0999-01-EVEN" ccm-interval invalid component-

list '1' mhf-creation none id-permission chassis fd-name "SLA2999"

maintenance-domain 'Y.1731' maintenance-association 'LWCTOH02T2A-P-CN-0999-01-EVEN' maintenance-association-end- point '100' interface "FP24\_2999" direction up administrative- state true ccm-ltm-priority 6 interface-type fp continuity- check cci-enabled true

maintenance-domain 'Y.1731' maintenance-association 'LWCTOH02T2A-P-CN-0999-01-EVEN' maintenance-association-end- point '100' l2-transform pcp pcp-7 vlanid 2999

Please consult SAOS 10.1 and SAOS 10.2 CATP for test cases which are specific to CFM.

* Configure static\manual RMEP

maintenance-domain 'Y.1731' maintenance-association 'LWCTOH02T2A-P-CN-0999-01-EVEN' remote-mep-config '200' mac- address "20:80:58:40:63:c2" admin-state enable

* Validate the addition of the static\manual RMEP operation using show commands

5164\_0007> show cfm remote-meps

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CFM REMOTE MEP

| | | Local | Remote | | | | MAC Status | Remote MEP | | | Discovery |

| MD ID | MA ID | MEPID | MEPID | State | MAC Address | RDI | Defect | CCM Defect | Oper State | Rx CCM | Type |

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| Y.1731 | LWCTOH02T2A-P-CN-0999-01-EVEN | 100 | 200 | failed | 20:80:58:40:63:C2 | False | False | True | enabled | 0 | static |

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Note: The state of “failed” is inherited from the SAOS 6.x implementation and is expected. There is no state monitoring for a static RMEP without CCM.

* Validate that no CCMs are sent or received

5164\_0007> show cfm meps md-id Y.1731 ma-id LWCTOH02T2A-P-CN-0999-01- EVEN local-mep-id 100

+ CFM MEP +

| Parameter | Value |

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| Maint. Domain ID | Y.1731 |

| Maint. Assoc. ID | LWCTOH02T2A-P-CN-0999-01-EVEN |

| Local MEPID | 100 |

| FP Name | FP24\_2999 |

| MAC Address | 00:23:8A:FB:AA:A0 |

| Direction | up |

| Administrative State | True |

| Alarm Time (centisec) | 250 |

| Reset Time (centisec) | 1000 |

| Alarm Priority | remote-invalid-ccm |

| CCM/LTM Priority | 6 |

| CCM Enabled | True |

| CCM Sequence Errors | 0 |

| RDI Present | False |

| Instability Defect | False |

| Next CCM TransID | 1 |

| Ppm Force Ccm Off | False |

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| Loopback | |

| Active | No |

| LBM Tx | 0 |

| In-order LBR Rx | 0 |

| Out-of-order LBR Rx | 0 |

| Bad MSDU LBR Rx | 0 |

+ + +

| Frame Statistics | |

| Tx CCM | 0 |

| Rx CCM | 0 |

| Tx LBM | 0 |

| Rx LBR | 0 |

| Rx LBM | 0 |

| Tx LBR | 0 |

| Tx LTM | 0 |

| Rx LTR | 0 |

| Rx LTR Invalid | 0 |

| Rx LTR Invalid Relay Action | 0 |

| Rx LTR Unexpected | 0 |

| Rx LTM | 0 |

| Rx LTM Invalid | 0 |

| Tx LTR | 0 |

| Tx DMM | 0 |

| Rx DMR | 0 |

| Rx DMM | 0 |

| Tx DMR | 0 |

| Tx SLM | 0 |

| Rx SLR | 0 |

| RX SLM | 0 |

| Tx SLR | 0 |

| Tx LMM | 0 |

| Rx LMR | 0 |

| Rx LMM | 0 |

| Tx LMR | 0 |

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* Initiate a Y.1731 test remotely and verify that the static\manual RMEP responds. Delay Measurement test shown in this example.

5164\_0007> show cfm meps md-id Y.1731 ma-id LWCTOH02T2A-P-CN-0999-01- EVEN local-mep-id 100

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| +  |  +  | | Parameter  Maint. Domain ID | | | CFM  |  +  | | MEP  Value  Y.1731 | +  |  +  | |
| | | Maint. Assoc. ID | | | | | LWCTOH02T2A-P-CN-0999-01-EVEN | | |
| | | Local MEPID | | | | | 100 | | |
| | | FP Name | | | | | FP24\_2999 | | |
| | | MAC Address | | | | | 00:23:8A:FB:AA:A0 | | |
| | | Direction | | | | | up | | |
| | | Administrative State | | | | | True | | |
| | | Alarm Time (centisec) | | | | | 250 | | |
| | | Reset Time (centisec) | | | | | 1000 | | |
| | | Alarm Priority | | | | | remote-invalid-ccm | | |
| | | CCM/LTM Priority | | | | | 6 | | |
| | | CCM Enabled | | | | | True | | |
| | | CCM Sequence Errors | | | | | 0 | | |
| | | RDI Present | | | | | False | | |
| | | Instability Defect | | | | | False | | |
| | | Next CCM TransID | | | | | 1 | | |
| |  +  | | Ppm Force Ccm Off  Loopback | | | |  +  | | False | |  +  | |
| |  | | Active  LBM Tx |  | | |  | | No  0 | |  | |
| | | In-order | LBR Rx | | | | 0 | | |
| | | Out-of-order LBR | | Rx | | | 0 | | |
| |  +  | | Bad MSDU LBR Rx  Frame Statistics | |  | |  +  | | 0 | |  +  | |
| | | Tx CCM | |  | | | 0 | | |
| | | Rx CCM | |  | | | 0 | | |
| | | Tx LBM | |  | | | 0 | | |
| | | Rx LBR | |  | | | 0 | | |
| | | Rx LBM | |  | | | 0 | | |
| | | Tx LBR | |  | | | 0 | | |
| | | Tx LTM | |  | | | 0 | | |
| | | Rx LTR | |  | | | 0 | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| | | Rx | LTR | Invalid |  | | | 0 | | |
| | | Rx | LTR | Invalid Relay | Action | | | 0 | | |
| | | Rx | LTR | Unexpected |  | | | 0 | | |
| | | Rx | LTM |  |  | | | 0 | | |
| | | Rx | LTM | Invalid |  | | | 0 | | |
| | | Tx | LTR |  |  | | | 0 | | |
| | | Tx | DMM |  |  | | | 0 | | |
| | | Rx | DMR |  |  | | | 0 | | |
| | | Rx | DMM |  |  | | | 100 | | |
| | | Tx | DMR |  |  | | | 100 | | |
| | | Tx | SLM |  |  | | | 0 | | |
| | | Rx | SLR |  |  | | | 0 | | |
| | | RX | SLM |  |  | | | 0 | | |
| | | Tx | SLR |  |  | | | 0 | | |
| | | Tx | LMM |  |  | | | 0 | | |
| | | Rx | LMR |  |  | | | 0 | | |
| | | Rx | LMM |  |  | | | 0 | | |
| | | Tx | LMR |  |  | | | 0 | | |
| + |  |  |  |  | + |  | + |

* Validate that the Delay measurement test on the far side gets a meaningful measurement. SAOS 6.x Delay measurement shown in this example.

3926\_0099> cfm delay show

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MESSAGE INFORMATION

MEP DELAY MEASUREMENT

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| |Local|Remote |Remote| | |

| | | |Rep | |

|Service |Mepid|Mac Address |Mepid | TestId |Iteration

| DMM | DMR | Delay in us | Jitter in us |Time| Acc |

+ + +

+ + + +

+ + +

+ + +

|Y.1731 |200 |00:23:8A:FB:AA:A0|100 |1 |1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |100  | | |100 | |Two-way  | | | | |Two-way |  | | |  | |N/A |No  | | |  | | | | | | |
| |  | | |Min: | | | 19|Min:  | |  | 0| | | | | | | | | | | | |  | | |
| |  |  |  |  |  |  |  |  | | |Avg:  |Max:  |  |  | | |  |  |  | | 21|Avg:  | 22|Max:  |  |Tot:  |  |Forward  |  |Min: | | 0|  2|  65|  | 0| | |  |  |  | | |Stamp:  |  |  |  |  |  |  |  | | | Hw|  |  |  |  | | | |  |  |  | | |  |  |  | | |

| | | | | | |

| | |Avg: 0| | |

| | | | | | |

| | |Max: 1| | |

| | | | | | |

| | |Tot: 34| | |

| | | | | | |

| | |Backward | | |

| | | | | | |

| | |Min: 0| | |

| | | | | | |

| | |Avg: 0| | |

| | | | | | |

| | |Max: 2| | |

| | | | | | |

| | |Tot: 47| | |

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Note: How to initiate supported Y.1731 tests from SAOS 10.x is the same for dynamic RMEP and static\manual RMEP. Please see test cases 5.6.1, 5.6.2, and 5.6.3 for Y.1731 acceptance test cases.

Note: While not a popular case, it is supported to send and\or receive CCM messages when using a static\manual RMEP.

Note: a combination of static\manual RMEP and dynamic RMEP is not supported on the same CFM service.

For Reference only: SAOS 6.x commands used for this test case.

Configuration cfm enable

cfm md create md Y.1731 md-name-string Y.1731

cfm service create vlan 2999 name Y.1731 md md1 ma-name-string LWCTOH02T2A-P-CN-0999-01-EVEN next-mepid 200 cfm service set service Y.1731 ccm-interval off

cfm service enable service Y.1731

cfm mep create service Y.1731 port 1.1 type down mepid 200 cfm remote-mep create service Y.1731 mepid 100

cfm remote-mep set service Y.1731 mepid 100 hold-state enable

cfm remote-mep set service Y.1731 mepid 100 mac 00:23:8a:fb:aa:a0 cfm remote-mep enable service Y.1731 mepid 100

Operation

cfm delay send service Y.1731 mepid 100 local-mepid 200 cfm delay show

Test Case Results:

Passed: Yes No Verified by Date/Time Comments