IOH Spesific MOP

«titlemop»



|  |  |  |  |
| --- | --- | --- | --- |
| **Prepared by:** | **Aktortifan Ridno Prabu Pratama**  **(AWX1014609)** | **Date:** | **«predate»** |
| **Reviewer:** | **Aris Budiyanto**  **(AWX544314)** | **Date:** | **«predate»** |
| **Approver:** | **Goh Kok King**  **(G00493149)** | **Date:** | **«predate»** |

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# Description of Change

## Description of Site

**Network Topology:**

|  |  |
| --- | --- |
| **NCE Network topology diagram** |  |
| **Key features and business** | Port Expansion : Add/Replace Eth Board, Add new cascading IDU, Control Board Replacement, Add/Replace IDU  Features : EPLA/PLA/LAG, E-LAN, SDH/PDH interface reconfiguration, traffic rebalance |

**Remote access information: customer agree remote access. The authorization will provided at operation date. Remote Access via VPN**



## Purpose and Requirements

|  |  |
| --- | --- |
| **Change purpose\*** | MW Port expansion to upgrade the capacity & solving the port congestion |
| **Change scope\*** | Port Traffic Balancing, Add New Eth Board, Eth Board Replacement, Control Board Replacement, and add/replace IDU **«linknum»** NE in H3I **«region»** area |
| **Change time\*** | **«date»** To **«date»**, **«time»**  (All day from 00:00 – 23:59, follow customer approval CR) |

## Description of Change and Change Influence

**NE version update information**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NO. | NE ID | NE TYPE | QTY | Current Version | Target Version |
| 1 | NCE (10.70.17.147) | NCE-T | 1 | V100R019C00SPC630 | V100R019C00SPC630 |

NE version list:



Service influence

|  |  |  |  |
| --- | --- | --- | --- |
| **DUID** | **Qty** | **Dependency List** | **Data Source** |
| «duid» | «qty» | «list» | «source» |

# Preparations for Change

## Composition of Change Team and Responsibility of Team Members

### Change Team of Huawei Company（Customer）

|  |  |  |
| --- | --- | --- |
| Name | Responsibility | Telephone No. |
| Rian Ikbal | H3I Planning | 089618888805 |
| Argidinata | H3I Operation | 08992393335 |
| Bayu Rendro | H3I TBM JABO3 | 08999333364 |
| Ernest | H3I TBM JABO1 | 08982293334 |
| Widi | H3I TBM JABO2 | 089688100017 |

### Huawei On-site Change Team

|  |  |  |
| --- | --- | --- |
| **Name** | **Responsibility** | **Telephone No.** |
| Goh Kok King (g00493149) | Owner for change | +62 897-3607-326 |
| Ajia Leonardo (a00598938) | Team Member | +62 813-6217-4917 |
| Aris WX544314 | Team Member | +62 8990098546 |
| Samuel Teguh (WX281796) | Team Member | +62 895-3035-7149 |
| Imar Prasetiono (i00262076) | Team Member | +62 896-3002-1008 |
| Arwan Rianto WX912663 | Team Member | +6281212670311 |
| Miki Priyanto WX684662 | Team Member | +6282177587757 |
| Saeful Fadli WX813785 | Team Member | +6289635328746 |
| Pahruroji WX903309 | Team Member | +6287773101536 |
| Dedi Kusuma WX684663 | Team Member | +6281286527001 |
| Novel Akbar WX819421 | Team Member | +6289637356535 |
| Amran Rosadi WX826183 | Team Member | +628983906128 |
| Abdul Rosyid WX684665 | Team Member | +6281216960391 |
| Nizar Muchtar WX684664 | Team Member | +62817818414 |
| Berto Pasaribu WX922005 | Team Member | +6282150274902 |
| Suherman WX999953 | Team Member | +6281214451181 |
| Sigit Wibowo WX903307 | Team Member | +62817293888 |

### Huawei Remote support Team (Optional)

|  |  |  |
| --- | --- | --- |
| **Name** | **Responsibility** | **Telephone No.** |
| Zhangling z00380621 | Escalation from microwave side | 081219748518 |
| Cheiw Cheong Loon c00742069 | Team member | +6281314862000 |

## Remote Access + Platform & Software Access

|  |  |  |
| --- | --- | --- |
| **Item** | **Preparation status** | **Owner** |
| NCE-T | Prepare 2 remote access solutions to customer network  Main solution 1: VPN using Fixed Broadband  Backup solution 2: VPN using Mobile Broadband | Aris / AWX544314 / 08990098546  Samuel/WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 |

## Check of Equipment Running

| No. | Check Item | Check result or steps |
| --- | --- | --- |
| 1 | alarm | Query and monitor by using NCE server MML Command “browse current alarm”. Check result : **No alarm** |
| 2 | Ethernet interface utilization | Query Ethernet port utilization and coordination with regional Network Performance Management team. Check result : **No Issue** |
| 3 | Radio Link Performance (ES, SES & UAS) | Query performance link analysis and coordination with regional Network Performance Management team. Check result : **No Issue** |
| 4 | Hardware operation status | Query and monitor by using NCE server. Check result : **Board No alarm** |

## Change Risks and Countermeasures

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Main Issues and Risks Description** | **Countermeasure** | **Possibility** | **Impact** |
| 1 | Service Interruption | if the service interrupted more than 1 hour , we have on-site support | Medium | Low |
| 2 | Data Lost | Data already backed-up in server NCE | Low | Low |
| 3 | NE out of management | Subcont onsite do troubleshooting using Web LCT | Low | Low |

## Check before Change

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Preparations Before Change** | **Owner** | **Completion Date** |
| 1 | Readiness of Operation team(including no limit: customer/change team/relate vendor team/monitoring team/verification team) | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before activity |
| 2 | Readiness of Implementation Solution (Including no limit: activity solution/verify solution/rollback solution) | Aris (WX544314)  Samuel Teguh (WX281796)) | 1 day before activity |
| 3 | Readiness of Solution verify in test bed(For High Risk Implementation solution) | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before activity |
| 4 | Readiness of Solution Review | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before activity |
| 5 | Readiness of remote log-in environment | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before activity |
| 6 | Readiness of Site Enter Permit(If relate) | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before activity |
| 7 | Explain MOP to customer | Aris (WX544314)  Samuel Teguh (WX281796) | NA |
| 8 | Get 3 approval of RFC | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before activity |
| 9 | Confirm test solution with customer | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before activity |
| 10 | Send email notification of operation to customer | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 3 hours before Activity |
| 11 | Get operation user account permission from customer | Deden 00738162  Aris WX544314  Samuel Teguh S WX281796  Goh Kok King g00493149  Ajia Leonardo a00598938  Imar Prasetiono 00262076 | 1 day before Activity |

If no, input **NA** here

# Operation Steps for Change

## Overall Description of Change Steps

|  |  |  |
| --- | --- | --- |
| **No.** | **Main steps** | **Operation time** |
| 1 | Preparation | 11:00 – 12:00 (subject to CR) |
| 2 | Operation | 13:00 – 15:00 (subject to CR) |
| 3 | Verification | 15:00 – 16:00 (subject to CR) |
| 4 | Rollback | 16:00 – 17:00 (subject to CR) |
| 5 | Complete | 17:00 (subject to CR) |

## Operation Steps for Change

I. Preparation Step

1. Check the alarm before the execution
2. Coordinates with NOC & TOC before starting to execute

II. Implementation Step

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Change Step** | **Operation** | **Implementation Person** | **Time** |
| 1 | Backup NE database | Backup NE database and capture existing configuration on NCE and via WebLCT by on site team | Aris WX544314  Deden 00738162  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 11:00 – 12:00  (subject to CR) |
| 2 | Hardware  Installation (Depend on Scenario) | Install the equipment :   * Install the new IDU, or swap the existing IDU with new one * Replace the control board unit * Insert new eth board, or replace the existing eth board * Laying new/replace cable (electrical/optical) of the IDU cascade, or from RTN to BTS. Reengineering the service connection | Team On sites | 13:00 – 14:00 (subject to CR) |
| 3 | Configuration | * Log in to the NE via Web LCT by onsite team and via NCE for remote support, set up the NE initial parameter * Set up all the existing configuration and parameter when change the control board * Set up the Ethernet interface parameter * Set up the VLAN on E-LAN configuration * Set up Aggregation service (EPLA/PLA/LAG) * Check the traffic utilization, do the rebalance if needed | Aris WX544314  Deden 00738162  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 14:00 – 15:00 (subject to CR) |

## Test and Verification

Describe in details how the test is conducted, specify the owner of each test item and test items, record detailed test processes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Test Item** | **Operation Method** | **Owner** | **Time** |
| 1 | Service test | Check actual Ethernet port or Microwave rate/ throughput | Aris WX544314  Deden 00738162  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 15:00-15:15 (subject to CR) |
| 2 | Alarm compare | Check the alarm before and after Change configuration (Note: When finish upgrade check 2G/3G/4G node availability status) | Aris WX544314  Deden 00738162  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 15:15-15:30 (subject to CR) |
| 3 | Check Utilization | Check the actual percentage of utilization, do the rebalancing if the traffic still not balance or the utilization > 80% of capacity | Aris WX544314  Deden 00738162  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 15:30-15:45 (subject to CR) |
| 4 | Check Performance | Check Link performance (ES; SES and UAS) | Aris WX544314  Deden 00738162  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 15:45-16:00 (subject to CR) |

## Solution for Changeback In the Case of Failure

### Definition of Change Failure

| **Change back time** | 16:00 – 17:00 (subject to CR) |
| --- | --- |
| **Change back decision maker** | **Huawei: TD** (Zhangling z00380621)  **Customer**: Bayu Rendro (H3I TBM JABO3), Ernest (H3I TBM JABO1), Widi (H3I TBM JABO2) |
| Rollback condition | Service degradation more than 10%  Loss monitor  New/existing board fault alarm |

### Changeback Steps

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Change back Steps** | **Operation content** | **Owner** | **Time** |
| 1 | Rollback hardware | Change back the existing hardware/equipment | Aris (WX544314)  Deden 00738162  Samuel Teguh (WX281796)  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 16:00 – 16:30 (subject to CR) |
| 2. | Rollback the configuration | Reconfigure all the parameter as same as before execution :   * Reconfigure Ethernet interface parameter * Reconfigure ELAN service * Reconfigure E1 (SDH/PDH) service * Reconfigure Aggregation service (EPLA/PLA/LAG) | Aris (WX544314)  Deden 00738162  Samuel Teguh (WX281796)  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 16:30 – 17:00 (subject to CR) |

### Change back flow (optional)

NA

### Equipment Status Check (optional)

NA

### Tests after Changeback

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Test Item | Operation Method | Owner | Time |
| 1 | Service test | Check the NE's service :   * Ethernet & microwave interface, check the traffic/throughput * E-LAN service -> advance attribute, check the service, by check the self-learn mac address * Microwave Link Performance : check the parameter of RSL, ES, SES & UAS | Aris (WX544314)  Deden 00738162  Samuel Teguh (WX281796)  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 17:00-17:30 (subject to CR) |
| 2 | Alarm | Check the NE clear from alarms or same as before execution | Aris (WX544314)  Deden 00738162  Samuel Teguh (WX281796)  Samuel Teguh S WX281796  Sigit Wibowo WX903307  Arwan Rianto WX912663  Miki Priyanto WX684662  Saeful Fadli WX813785  Pahruroji WX903309  Dedi Kusuma WX684663  Novel A WX819421  Amran R WX826183  Abdul Rosyid WX684665  Nizar M WX684664  Berto Mando P WX922005  Suherman WX999953 | 17:30-18:00 (subject to CR) |

### Changeback Risk Analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Main Issues and Risks Description\*** | **Possibility** | **Impact** | **Countermeasure** |
| 1 | Existing Board Faulty | Low | Low | Coordination with MS to replace the existing board, by raise TT |
| 2 | After rollback, the NE still loss management | Low | Low | Create a new DCN link for this NE.  Go to site to recover the DCN port |
| 3 | BTS service down | Middle | Low | There is on-site support |

## Change of Spare Parts and Emergency Workstation (optional)

N/A

# Work after Change

## Observation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Observation Item | Observation method | Owner | Observation Time |
| 1. | Alarm | Check current alarm status, make sure alarm clear (or same condition with before)` | RO+MS | 18:00 – 23:00 (subject to CR) |
| 2. | Query Ethernet Port Bandwidth Utilization Report | Check whether configuration of port capacity not match with the plan– Ethernet Interface | RO+MS | 18:00 – 23:00 (subject to CR) |
| 3. | Radio Link Performance (ES, SES & UAS) | Check the radio link performance, send out the report and then coordination to Regional NPM team to monitor and share the performance result from their side | RO+MS | 18:00 – 23:00 (subject to CR) |

## Provision of Materials (optional)

NA

## Provision of Software (optional)

NA

## Training (Optional)

NA

## Matters Needing Attention (Optional)

NA