|  |
| --- |
| **Bangladesh Summit IIG Paltan firewall integrated into the live network.** |
|  |
| |  |  |  |  | | --- | --- | --- | --- | | **Prepared by:** |  | **Date:** |  | | **Reviewer:** |  | **Date:** |  | | **Approver:** |  | **Date:** |  | |

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# Description of Change

## Description of Site

|  |  |
| --- | --- |
| **Network**  **topology diagram** | **Living Network Topology:**  **After operation Topology:** |
| **Key features and business** | 1\*Eudemon1000E-G3 will be integrated in SComm IIG Network, The traffic between the public network and the server is isolated by the firewall.Firewalls bear the customer's office IT network。 |
| **Related business amount** | 2 Gbps |

## Purpose and Requirements

|  |  |
| --- | --- |
| **Basic Requirement** | **Description** |
| **Change scenario\*** | 1\*Eudemon1000E will be integrated in SComm IIG Network at Paltan site |
| **Change purpose\*** | After firewall integration,The traffic between the public network and the server is isolated by the firewall DHPALFW-01 in paltan equipment room.Customer management network traffic will pass through the firewall |
| **Change time\*** | 2021-12-09 00:00-08:00 |

## Description of Change and Change Influence

| **No.\*** | **NE type\*** | **NE ID\*** | **QTY\*** | **Current version\*** | **Target version\*** |
| --- | --- | --- | --- | --- | --- |
| 1 | Eudemon1000E | DHPALFW-01 | 1 | V600R007 | V600R007 |
| 2 | S5332-H48S6Q | DHPALSSW-01 | 1 | V200R020C10 | V200R020C10 |

| **No.** | **Related NE Type** | **Related NE ID** | **QTY\*** | **Current version\*** | **Target version\*** |
| --- | --- | --- | --- | --- | --- |
| 1 | NCE-IP | NCE-IP | 1 | V1R19C00SPC603 | V1R19C00SPC603 |

|  |  |
| --- | --- |
| **Change Influence** | |
| **Impact** | **Risk Description** |
| Hardware Alarm | Hardware alarm will be generated for changing links on DHPALFW-01. |
| Protocol Alarm | During migration, LACP alarms are generated when a physical interface is removed and then inserted. |
| Service Impact | During the migration, service on DHPALFW-01 will be interrupted for 60 minutes. |

# Preparations for Change

## Composition of Change Team and Responsibility of Team Members

### Huawei On-site Change Team

|  |  |  |
| --- | --- | --- |
| **Name** | **Responsibility** | **Telephone No.** |
| caigengxian 00615479  caigengxian@huawei.com | TD | 008801922119435 |
| chenruoyu 00421513  chenruoyu1@huawei.com | TD | 008801708434765 |
| zengcong WX1078940  zengcong17@huawei.com | Support Eng. | 008801922119431 |
| Subrata Sarker 84226847  subrata.sarker@huawei.com  Sajib Nandi 84201558  sajib.nandi@huawei.com | Support Eng  Support Eng | 008801768585203  008801671774290 |

### Change Team of Summit Company

| **Name** | **Responsibility** | **Telephone No.** |
| --- | --- | --- |
| Md Shaihidullah Kaisar | Chief commander | +8801764199220 |
| Md Shaihidullah Kaisar | Devices key information owner | +8801764199220 |
| Md Shaihidullah Kaisar | Owner for devices product change | +8801764199220 |
| Md Shaihidullah Kaisar | Coordination with other NEs | +8801764199220 |
| Md Shaihidullah Kaisar | Test owner | +8801764199220 |
| Md Shaihidullah Kaisar | Charging verification owner | +8801764199220 |

### Huawei Support & Guarantee Team

| **Name** | **Responsibility** | **Telephone No.** |
| --- | --- | --- |
| GTAC | Product support contact person | China GTAC ：GTAC 7\*24h Hotline: +862981770999  GTAC Hotline Backup: +852 30714790, +33 157323311, +44 2030248988  HQ Support: Kanglian 00483558, Liulangzhou 00255418 |

## Remote Access

|  |  |  |
| --- | --- | --- |
| **Item** | **Preparation status** | **Owner** |
| **Remote access solution\*** | ESpace/ We link Meeting/remote jump server | chenruoyu 00421513 |
| **Remote access authorization** |  | chenruoyu 00421513 |
| **Tools and Software** | Laptop windows, Console, putty, compare software. | zengcong wx1078940 |
| **Site permission** | Customer has already acknowledged regarding site permission access. | chenruoyu 00421513 |
| **Three Approvals** | Before operation three approvals will be completed. | chenruoyu 00421513 |

## Platform and Software Preparation

|  |  |  |
| --- | --- | --- |
| **Type** | **Content** | **Owner** |
| Software Tools\* | Device log in software such as putty is ready. | zengcong WX1078940 |
| Material\* | serial cable, fiber and optical module, optical attenuator | chenruoyu 00421513 |
| Communication backup\* | Backup mobile, other operator SIM card | chenruoyu 00421513 |

## Check of Equipment Running

| **Check Item\*** | **Check result or steps\*** |
| --- | --- |
| Hardware operation status | Check before operation that hardware running is normal. To ensure devices run with stability including its logical/physical such CPU/memory usage, expected version, no active alarm & no any logical protocol is mismatch. |

## Change Risks and Countermeasures

| **No.** | **Main Issues and Risks Description** | **Possibility (High/Middle/Low)** | **Impact (High/Middle/Low)** | **Countermeasure** |
| --- | --- | --- | --- | --- |
| 1 | The security policy fails to take effect. | Low | High | Check the security policy configuration and compare it with the pre-configuration.,And Troubleshoot the problem with help of GTAC if required. If issue does not resolve then Rollback configuration |
| 2 | NAT address translation failure | Low | High | Check the NAT configurations and compare the configurations with those of Cisco.,And Troubleshoot the problem with help of GTAC if required. If issue does not resolve then Rollback configuration |

## Check before Change

| **No.** | **Preparations Before Change** | **Owner** | **Completion Date** |
| --- | --- | --- | --- |
| 1 | Change back solution has been prepared, confirmed and authorized by customer | Chenruoyu  Zengcong | 2021-12-08 |
| 2 | Change solution and change back solution have been verified | Chenruoyu  Zengcong | 2021-12-08 |
| 3 | No spares required for this operation | Not Applicable | Not Applicable |
| 4 | As per change scenario, collect data for on server switch | Chenruoyu  Zengcong | 2021-12-08 |
| 5 | Confirm has perform main/standby switchover test | Not Applicable | Not Applicable |
| 6 | Readiness of getting access permission to the site | Chenruoyu  Zengcong | 2021-12-08 |
| 7 | Readiness of remote log-in environment | Chenruoyu  Zengcong | 2021-12-08 |
| 8 | Confirm change risks and emergency measures | Chenruoyu  Zengcong | 2021-12-08 |
| 9 | Confirm data and configuration are backup | Chenruoyu  Zengcong | 2021-12-08 |
| 10 | Confirm network performance is tested and recorded | Chenruoyu  Zengcong | 2021-12-08 |
| 11 | Readiness of change test personnel | Chenruoyu  Zengcong | 2021-12-08 |
| 12 | Readiness of relevant equipment maintenance personnel | Chenruoyu  Zengcong | 2021-12-08 |
| 13 | Readiness of support & guarantee team | Chenruoyu  Zengcong | 2021-12-08 |

# Operation Steps for Change

## Overall Description of Change Steps

|  |  |  |
| --- | --- | --- |
| **No.** | **Main steps** | **Operation time** |
| 1 | Preparation | 2021-12-08 22:00-00:00 |
| 2 | Operation | 2021-12-09 00:00-04:00 |
| 3 | Verification | 2021-12-09 04:00-04:30 |
| 4 | Rollback | 2021-12-09 04:30-06:00 |
| 5 | Complete | 2021-12-09 06:00-08:00 |

## Operation Steps for Change

**Remark:**

* **Please do the operation below step by step and record all operation logs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No. \*** | **Change Step\*** | **Operation\*** | **Implementation Person\*** | **Time\*** |
| 1 | Collection configuration | Before the migration,collect the configuration on the server switch | zengcong WX1078940  chenruoyu 00421513 | Already done |
| 2 | Deploy pre-configuration on device | Deploy following pre-configuration on Firewall    Don't shift any live-link to Firewall during this step. | zengcong WX1078940  chenruoyu 00421513 | Already done |
| 2 | Pre-MOP Alarm Capture | **Please ensure all alarms are captured prior to MOP execution** | zengcong WX1078940  chenruoyu 00421513 | 22:00-00:00 |
| 3 | Data Backup for existing devices | Run the collection command on server switch | zengcong WX1078940  chenruoyu 00421513 | 22:00-00:00 |
| 4 | connect links to firewall | 1、connect all links according to following port-mapping: | zengcong WX1078940  chenruoyu 00421513 | 00:00-04:30 |
| 5 | MOP Related Alarm Clearance | **Remark: Please ensure all alarms generated as a result of this MOP are cleared** | zengcong WX1078940  chenruoyu 00421513 | 00:00-04:30 |
| 6 | Collection information after migration | Run the collection command on Paltan-SW-4, Paltan-AGG&Paltan-policy and archive the collection result. | zengcong WX1078940  chenruoyu 00421513 | 00:00-04:30 |

## Test and Verification

| **No. \*** | **Test Item\*** | **Operation Method\*** | **Owner\*** | **Time\*** |
| --- | --- | --- | --- | --- |
| 1 | Alarm and log check | Check alarm and log comparison in the router.Compare the configurations before and after the cutover and clear the generated alarms. | zengcong WX1078940chenruoyu 00421513 | 04:00-04:30 |
| 2 | Service confirmation from customer | Customer will do service check using monitoring tools such as NCE-IP & CLI. | zengcong WX1078940chenruoyu 00421513 | 04:00-04:30 |
| 3 | Collect post log and save current configuration | Collect post log and save the current configuration to compare.  Check routing table and interface status.  Attachment: | zengcong WX1078940chenruoyu 00421513 | 04:00-04:30 |

**Note:** If there's some verification items cannot pass, please escalate this to team leader immediately to discuss the next step.

## Solution for Changeback In the Case of Failure

### Definition of Change Failure

|  |  |
| --- | --- |
| Changeback time\* | Time: The rollback decision is going to made by 04:30am |
| Changeback decision maker\* | **From Customer:**Md Shaihidullah Kaisar +8801764199220  **From Huawei:** Caigengxian +008801922119435 |
| Change back condition | * If any service which is related to operating nodes goes down and cannot be recovered within operation window, we shall go for rollback. |

### Changeback Steps

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.\*** | **Change back Steps\*** | **Operation content\*** | **Owner\*** | **Time\*** |
| 1 | Shift back all links to firewall. | Shift back all links to firewall device according to following port-mapping(The device is newly integrated and does not need to be rolled back configuration.): | zengcong WX1078940  chenruoyu 00421513 | 04:30-06:00 |

### Tests After Changeback

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Test Item** | **Operation Method.** | **Pass Standard.** | **Owner.** | **Time.** |
| 1 | All Services | Testing all Services including calling, mobile services,Internet,Enterprise services, and NEC-IP management.Check that interface status relationships on the device are normal and route convergence is normal | All service is ok | zengcong WX1078940  chenruoyu 00421513 | 06:00-08:00 |
| 2 | Huawei devices running status | ALL service statuse normal in device | All status is ok | zengcong WX1078940  chenruoyu 00421513 | 06:00-08:00 |
| 3 | Save configuration | If all is ok please save configuration on new devices and cisco devices | The configuration is saved | zengcong WX1078940  chenruoyu 00421513 | 06:00-08:00 |

### Changeback Risk Analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Main Issues and Risks Description** | **Possibility** | **Impact** | **Countermeasure** |
| 1 | Some service is down | Low | High | Compare arp-table with previous backup. And Troubleshoot the problem with help of GTAC if required. If issue does not resolve then Rollback configuration |

## Change of Spare Parts and Emergency Workstation

|  |  |  |
| --- | --- | --- |
| **Type** | **Content** | **Planned Time** |
| Not required for this activity. | Not required for this activity. | Not required for this activity. |

# Work after Change

## Observation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Observation Item\*** | **Observation method\*** | **Observation time\*** | **Owner\*** |
| 1 | Check Datacom  Device Status | Monitors device running indicators, protocol status, port traffic, and routes during the on-duty period. | 2021-12-09 08:00-18:00 | Summit:Md Shaihidullah Kaisar  huawei:chenruoyu 00421513 |
| 2 | Check all Services and KPI | During the on-duty period, the performance indexes of the monitoring device cannot exceed the limit. | 2021-12-09 08:00-18:00 | Summit:Md Shaihidullah Kaisar  huawei:chenruoyu 00421513 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| NE | Monitored KPI | Before Change（Fill in） | After Change（Fill in） | Bias | Accept Bias |
| Paltan-SW-3 | Interface Bandwidth | <70% | <70% | ±10% | ±5% |
| NMS Alarm | No New alarm | No New Alarm | No New Alarm | No New Alarm |
| Interface UP status Count | Number of UP interface before operation | Number of UP interface after operation | 0 | should be same or more |
| CPU and Memory Usage | <50% | <70% | ±5% | ±5% |

## Other work

| **No.** | **Work content** | **Owner** |
| --- | --- | --- |
| 1 | Notify customers of modifying the used of login credentials | chenruoyu 00421513 |