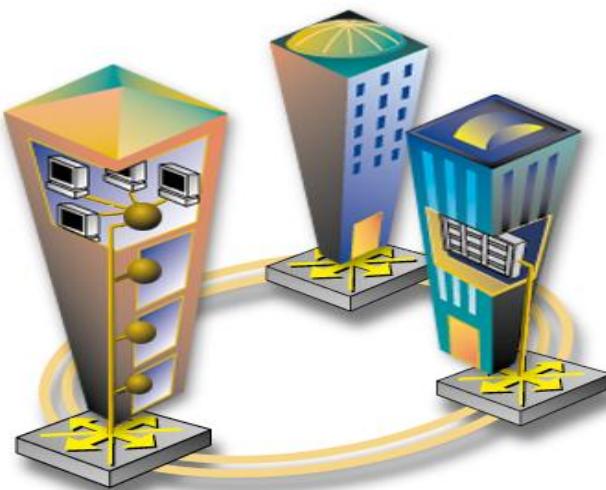


# **HOST OPERATIONAL PROCEDURE**

## **(HOP)**

Perangkat Network Switching  
Nortel & Juniper Network in DRC



**DRC/PAN-04-00-00 : 16:02:02**

Oleh:





DRC/PAN-04-00-00:16.02.02

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## BAB 1 PENDAHULUAN

### 1.1 Tujuan

Dokumen ini di susun sebagai petunjuk standar pengoperasian perangkat *Network Switching* di *Data Recovery Centre* (DRC) PT. Bank Rakyat Indonesia. Diharapkan melalui dokumen ini operator dan administrator jaringan dapat memberikan solusi terhadap permasalahan yang terjadi dalam pengoperasian sehari-hari.

### 1.2 Pemakai

Dokumen ini akan digunakan oleh operator dan administrator jaringan beserta staff pendukung dari Operasional Jaringan Komunikasi dan Operasional Disaster Recovery BRI.

### 1.3 Pengontrolan Versi

*Host Operational Procedure Data Recovery Centre* (HOP-DRC) *Network Switching* merupakan sarana atau alat manajemen BRI dan PT. Wahana Cipta Sinatria untuk melakukan pengendalian terhadap kesinambungan operasional jaringan, baik jaringan komunikasi antara *Data Centre* (SUDIRMAN) dan *Data Center* (RAGUNAN) dengan *Data Recovery Centre* (DRC) maupun jaringan LAN-DRC itu sendiri.

#### 1.3.1 Penjelasan Nomor Versi Dokumen

Nomor versi dokumen ini terbentuk dalam model **SSS /JJJ -GG -PP-QQ:yy-vv-mm** yang akan dijelaskan sebagai berikut :

1. SSS menyatakan Kode Site, mengidentifikasikan IT site penyusun dan berlakunya dokumen HOP ini :
  - DRC : Disaster Recovery Center site
  - GTI : Data Center Ragunan site
  - SUD : Data Center Sudirman site
2. JJJ menyatakan Kode Jenis Dokumen, mengidentifikasikan suatu dokumen yang dipergunakan, yang dibedakan menjadi :.
  - CHL : Checklist



- FLC : *Flowchart*
- FRM : Formulir
- PAN : Panduan: *Host Operation Procedure (HOP)*
- PEN : Penjelasan Umum
- QAP : *Quality Process*

3. GG menyatakan Kode Nomor Grup Proses, mengidentifikasikan jenis aplikasi atau kegiatan berjalan yang ditatalaksanakan oleh tim-tim Management Building (MB), Facility Management System (FMS) dan Maintenance Agreement (MA), dengan kode sbb :

- 01 : Kegiatan *Management Building Utility and Facility* oleh Management Building BKS
- 02 : Kegiatan Aplikasi *Server iSeries* dengan *operating system* OS400 oleh FMS IBM-JTI
- 03 : Kegiatan Aplikasi *Server Intel* dengan *operating system* Microsoft Windows dan Linux oleh MA HPI
- 04 : Kegiatan Perangkat Network Switching Nortel Network MA WCS
- 05 : Kegiatan Management Tape, Backup & Restore perangkat EATL oleh FMS ALTELINDO
- 06 : Kegiatan Aplikasi *Server Intel* dengan *operating system* Microsoft Windows dan Linux oleh MA INTIKOM

4. PP menyatakan Kode Sub-Grup, mengidentifikasikan sub-grup tim dari grup tim yang ada, seperti pada grup Proses 01: Management Building sbb:

- 01 : sub-grup tim Management dari grup tim MB
- 02 : sub-grup tim Security dari grup tim MB
- 03 : sub-grup tim Teknisi dari grup tim MB
- 04 : sub-grup tim Receptionist dari grup tim MB



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- 05 : sub-grup tim Driver dari grup tim MB
  - 06 : sub-grup tim House Keeping dari grup tim MB
  - 07 : sub-grup tim Administrasi dari grup tim MB
5. QQ menyatakan Kode sub-Proses dari sub-grup **PP**, mengidentifikasi kode kegiatan/proses yang menjadi bagian dari kegiatan/proses sub-grup (PP), seperti:
- 01-01 : panduan untuk sub-grup BKS MGT proses Kontrol Utilitas Teknik
  - 01-02 : panduan untuk sub-grup BKS MGT proses pembuatan Jadwal Kerja
  - 02-01 : panduan untuk sub-grup BKS Security kegiatan Koordinator Security
  - 02-02 : panduan untuk sub-grup BKS Security kegiatan Pintu Gerbang DRC
  - 03-01 : panduan untuk sub-grup BKS Teknisi kegiatan Stand Meter PLN Gedung DRC
6. yy menyatakan Kode Tahun, mengidentifikasi 2 digit tahun berjalan saat penyusunan/perubahan HOP
7. vv menyatakan No Versi, mengidentifikasi nomor Versi berjalan, no versi ini akan berubah secara akumulasi bila dalam dokumen HOP ini terdapat perubahan bagian baik itu penambahan/penghapusan bab maupun penambahan/penghapusan sub bab.
8. mm menyatakan nomor modifikasi, nomor modifikasi hanya berubah apabila dokumen HOP ini dirubah isinya baik itu berupa kata-kata ataupun panduan tentang suatu pekerjaan tetapi perubahan itu sendiri tidak merubah (menambah atau menghapus) bab maupun sub.

### 1.3.2 Perubahan Pada Dokumen

Setiap perubahan pada dokumen HOP ini harus menggunakan Form Permintaan Perubahan (*Change Request Form*) yang disetujui pihak ODR dan sepengetahuan OJK BRI. Setiap perubahan pada dokumen ini juga harus merubah versi dan modifikasi sehingga memudahkan dalam tracking perubahan yang terjadi pada



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dokumen ini. Bagian atau halaman yang tidak berlaku diganti dengan bagian atau halaman yang sudah diubah.

Setiap perubahan dari dokumen ini juga harus dicatat pada tabel di bawah ini :

**Berikut adalah tabel detail perubahan isi yang sudah dilakukan.**

No. QAP	Tanggal	Keterangan Perubahan	PIC
DIS/PAN-04-01-00: 09:00:00	30/01/2009	HOP WCS DRC berdasarkan SURAT KEPUTUSAN NO.KEP:194-DIR/TSI/01/2009 tentang Standard Operational Procedure Data Center Divisi Teknologi Informasi RI	
DIS/PAN-04-01-00: 10:01:01	1/10/2010	<p>α. Perubahan Editorial :</p> <ul style="list-style-type: none"><li>■ 72 Poin Penambahan Sub-Judul, 3 Poin Penambahan Judul dan 1 Poin Penambahan Halaman Lampiran</li><li>■ 8 Poin Perubahan Poin dan Sub-Judul, 6 Poin Perubahan Poin Sub-Judul dan 2 Poin Perubahan Judul BAB</li></ul> <p>Perubahan Isi :</p> <ul style="list-style-type: none"><li>1 Poin Perubahan Isi</li><li>17 Poin Penghapusan Sub-Judul</li></ul>	
DIS/PAN-04-01-00: 11:00:00	25/04/2011	■ 4 Poin Perubahan Isi	
DIS/PAN-04-01-00: 11:00:01	16/12/2011	■ 3 Poin Perubahan Isi	
DIS/PAN-04-01-00: 12:00:01	24/05/2012	■ 5 Poin Perubahan Isi	
DIS/PAN-04-01-00: 12:01:00	01/10/2012	■ 2 Poin Perubahan isi	
DIS/PAN-04-01-00: 13:00:00	05/09/2013	■ 5 Poin Perubahan Isi	
DRC/PAN-04-00-00: 14.07.00	24/03/2014	■ 5 Poin Perubahan Isi	



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DRC/PAN-04-00-00:14.07.01	30/09/2014	▪ 3 Poin Perubahan Isi	
DRC/PAN-04-00-00:15.06.00	20/04/2015	▪ 6 Poin Perubahan Isi	
DRC/PAN-04-00-00:16.01.04	27/04/2016	▪ 4 Poin Perubahan Isi	
DRC/PAN-04-00-00:16.02.02	04/10/2016	▪ 4 Poin Perubahan Isi	

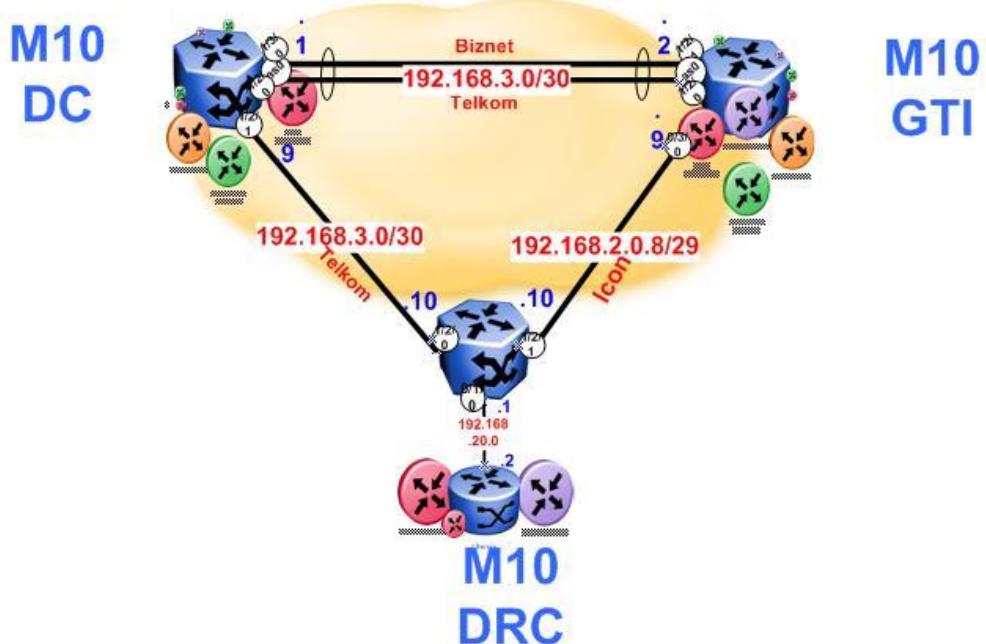
### 1.3.3 Penjelasan Perubahan Isi

Penjelasan Perubahan Isi	
No	DRC/PAN-04-00-00:16.02.02, 04 Oktober 2016
1	Update <b>BAB.2 UMUM point 2.2 Maintenance &amp; Operasional Konektivitas Jaringan GTI-SUD-DRC</b> Update BCN Menjadi Juniper EX2200
2	Perubahan isi <b>BAB.2 UMUM point 2.5 Network Diagram LAN-DRC</b> Update topologi terbaru ke versi terbaru terkait Configurasi Catalyst 45 C
3	Update <b>BAB 3 Menjadi PROSEDURE OPERASIONAL PERANGKAT</b> Update Sub Bab point 3.1 Monitoring Perangkat Network Switching
4	Update <b>BAB 3 PROSEDURE OPERASIONAL PERANGKAT</b> Penambahan Sub Bab point 3.2 COMMAND LINE PERANGKAT NETWORK
5	Update Sub Bab 3.1 Monitoring Perangkat Network Switching point 3.1.4 BCN penghapusan Sub BAB 3.1.4 BCN
6	Update <b>Bab 4 Menjadi PROSEDURE LAPORAN OPERASIONAL</b>
7	Update <b>Bab 4 Penambahan sub bab</b> Penambahan sub bab 4.9 Labeling Koneksi Perangkat

## BAB 2.UMUM

### 2.1 Overview

Jaringan komunikasi Disaster Recovery Center (DRC) PT. Bank Rakyat Indonesia Tbk menggunakan 2 link STM-1, yaitu: Link STM-1 yang mengarah ke Sudirman melalui Gandul PT. Telkom, dan Link STM-1 yang mengarah ke GTI melalui Gandul PT. Icon+ .



Ruang lingkup pekerjaan PT. Wahana Cipta Sinatria untuk proyek Maintenance Network Switching di BRI-DRC, sebagai berikut :

## 2.2 Maintenance & Operasional Konektivitas Jaringan LAN-DRC

- EX8200

EX8200 digunakan sebagai Switch Distribusi untuk Server Farm dan Backhaul Provider

- Catalyst 4506

Catalyst digunakan untuk koneksi ke server-server yang berada di gedung BRI-DRC.

- EX3200

EX3200 digunakan untuk koneksi ke perangkat-perangkat Wide Area Application dan koneksi ke Mesin AS/400 untuk Aplikasi MIMIX.

- BayStack 420

BayStack 420 digunakan untuk koneksi ke User yang berada di gedung BRI.

- BayStack 5510

BayStack 5510 digunakan untuk koneksi ke User yang berada di gedung BRI-DRC melalui BayStack 420.

## 2.3 Maintenance & Operasional Konektivitas Jaringan GTI-SUD-DRC

Juniper EX2200

Juniper EX2200 digunakan Sebagai Security Module LAN-DRC

Juniper M10i.

Juniper M10i digunakan sebagai Gateway koneksi DRC-GTI-SUDIRMAN.

Juniper M10i ini terkoneksi dengan jaringan link Telkom (STM 1) dan jaringan link ICON+ (STM1).



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## 2.4 Sistem Reporting.

Laporan Harian (*Daily Report*)

Laporan Harian dibuat setiap hari dengan format ekstensi .doc dan dikirim melalui email [tsi\\_odr@bri.co.id](mailto:tsi_odr@bri.co.id); sebelum jam 07:30 WITA.

Laporan Bulanan (*Monthly Report*).

Laporan Bulanan dibuat dalam bentuk format ekstensi .doc (berupa *softcopy*). Setelah dokumen Laporan Bulanan selesai dibuat *softcopy* di *upload* ke <\\126.2.0.197\LaporanODR\LaporanBulanan\Tahun\Bulan> untuk diperiksa oleh Supervisor BRI-DRC dan Engineer BRI-DRC sebelum tanggal 3 bulan berikutnya.

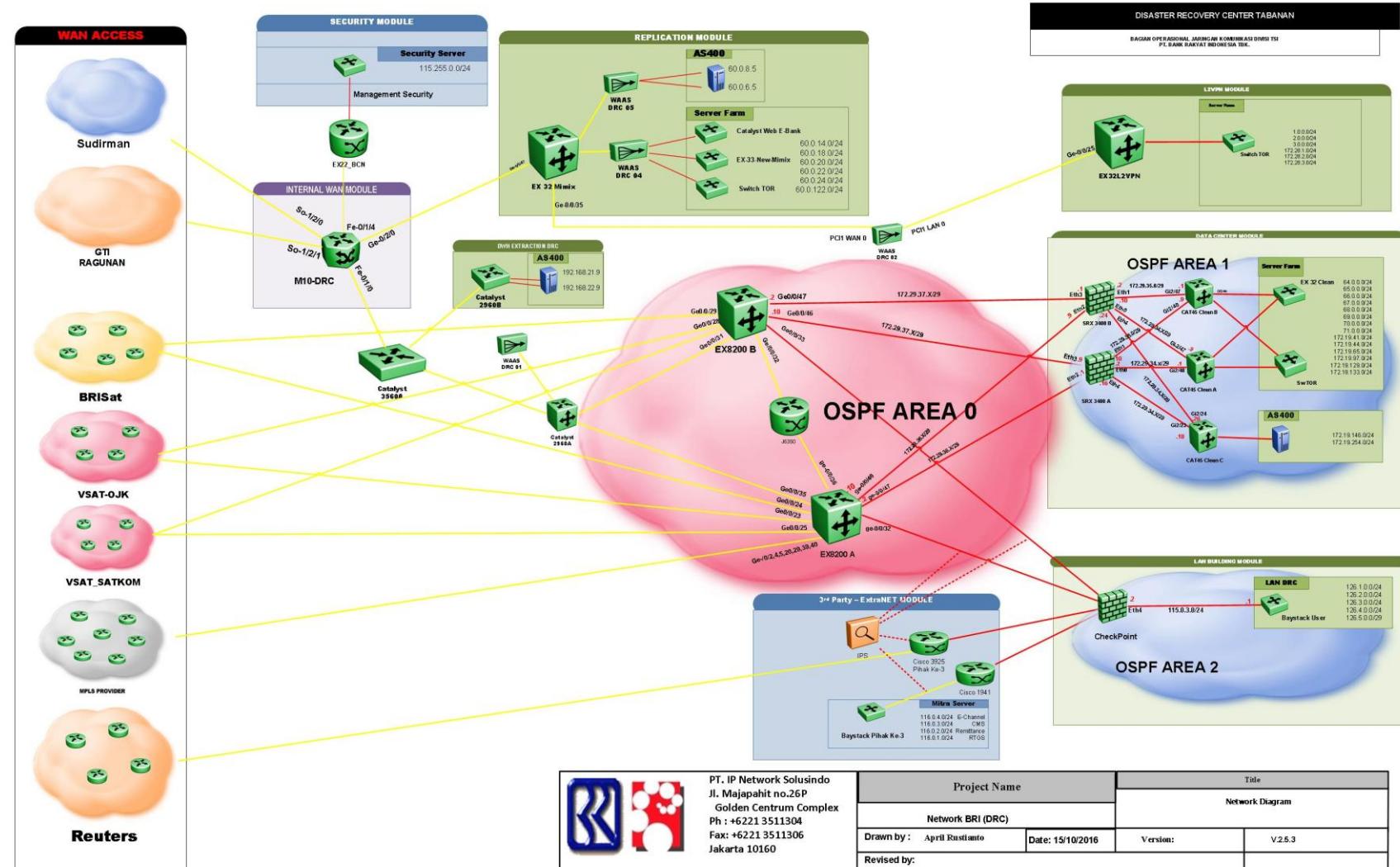


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## 2.5 Network Diagram LAN-DRC



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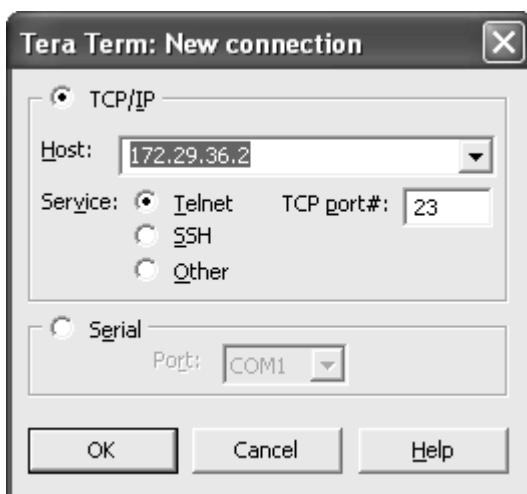


## BAB 3. PROSEDUR OPERASIONAL PERANGKAT

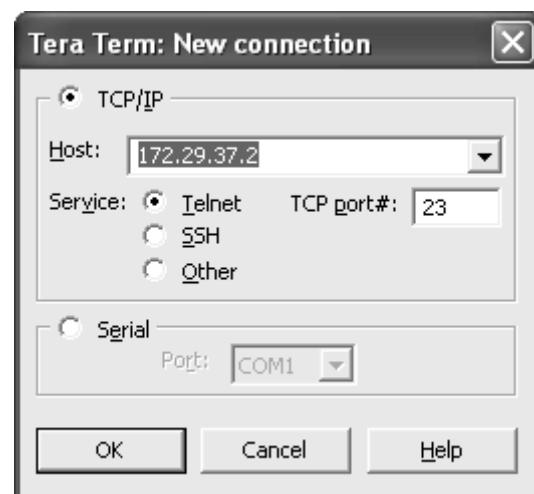
### 3.1 Monitoring Perangkat Network Switching

#### 3.1.1. JUNIPER EX8200

Untuk dapat melihat konfigurasi atau mengkonfigurasi Juniper EX8200, *user* harus *login* ke Juniper EX8200 terlebih dahulu dengan cara console atau telnet ke Juniper EX8200.



EX8208 A



EX8208 B

Kemudian masukkan *username* dan password.

Setiap perubahan konfigurasi atau permintaan perubahan konfigurasi atau permintaan informasi mengenai konfigurasi perangkat Juniper EX8200 harus disetujui oleh Bagian Operasional Jaringan Komunikasi dan atas sepengetahuan Bagian Operasional Disaster Recovery BRI.

Berikut beberapa *command line interface* yang bersifat monitoring pada Juniper EX8200 yang umum digunakan pada proyek Pemasangan Perangkat *Network Switching* BRI.



### 3.1.1.1 Melihat IP Interfaces

Command :

```
ipnet@EX82DRC @% cli
ipnet@EX82DRC > configure
ipnet@EX82DRC# run show interfaces terse / match inet
ge-0/0/0.0      up   up     inet  126.1.0.254/24
ge-0/0/20.0      up   down   inet  100.100.100.1/24
bme0.32768      up   up     inet  128.0.0.1/2
```

### 3.1.1.2 Melihat Status Interfaces

Command :

```
ipnet@EX82DRC# run show interfaces terse
Interface      Admin Link Proto Local          Remote
ge-0/0/0        up   up
ge-0/0/0.0      up   up   inet  126.1.0.254/24
ge-0/0/1        up   down
ge-0/0/1.0      up   down eth-switch
ge-0/0/2        up   down
ge-0/0/2.0      up   down eth-switch
ge-0/0/3        up   down
ge-0/0/3.0      up   down eth-switch
ge-0/0/4        up   down
```

### 3.1.1.3 Melihat Konfigurasi Yang sedang Berjalan

Command :

```
ipnet@EX82DRC# run show configuration
## Last commit: 2009-02-08 03:27:42 UTC by ipnet
version "9.2I0.1 [builder]";
system {
    host-name EX32-MIMIX;
    root-authentication {
```



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```
encrypted-password "$1$7jGQ5K.x$XT5c6E70ekIjWPOQECffI."; ##  
SECRET-DATA  
}  
login {  
    user ipnet {  
        uid 2002;  
        class super-user;  
        authentication {  
            encrypted-  
password"$1$9hhAoqqw$LHCi.XupFgCw3n9JCBVkj0";      ##  
SECRET-DATA  
}  
}  
---(more)---
```

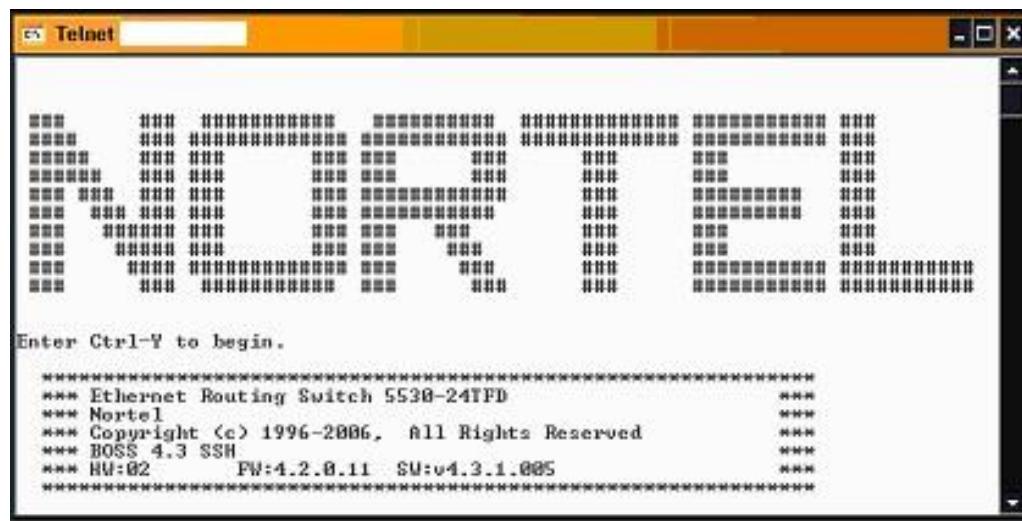
### 3.1.1.4 Melihat Routing

Command :

```
ipnet@EX82DRC # run show route / no-more  
inet.0: 17 destinations, 17 routes (17 active, 0 holddown, 0 hidden)  
+ = Active Route, - = Last Active, * = Both  
0.0.0.0/0      *[Static/5] 3w4d 16:20:04  
                  > to 60.0.197.2 via vlan.200  
60.0.1.0/24    *[Direct/0] 3w4d 16:33:09  
60.0.4.0/24    *[Direct/0] 3w4d 16:33:08  
                  > via vlan.3  
60.0.4.1/32    *[Local/0] 3w4d 16:33:16  
                  Local via vlan.3  
60.0.6.0/24    *[Direct/0] 3w4d 16:32:28  
                  > via vlan.4
```

### 3.1.2. Nortel Baystack 5530 dan Baystack 5510

Untuk dapat melihat konfigurasi atau mengkonfigurasi Baystack 5530 atau Baystack 5510, user harus login ke Baystack 5530 atau Baystack 5510 terlebih dahulu dengan cara console atau telnet ke Baystack 5530 atau Baystack 5510.



Tekan CTRL + Y dan isi password.



Setiap perubahan konfigurasi atau permintaan perubahan konfigurasi atau permintaan informasi mengenai konfigurasi perangkat Baystack 5530 atau Baystack 5510 harus disetujui oleh Bagian Operasional Jaringan Komunikasi BRI-SUDIRMAN dan atas sepenuhnya Bagian Operasional Disaster Recovery BRI.



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Berikut beberapa *command line interface* yang bersifat monitoring pada Baystack 5530 atau Baystack 5510 yang umum digunakan pada proyek Pemasangan Perangkat Network Switching BRI.

### 3.1.2.1 LED Indikator BayStack 5530 dan 5510

#### LED Indicator BayStack 5530

Label	Warna/Status	Deskripsi
Power On	Hijau	Dapat tegangan listrik
	Off	Tidak dapat tegangan listrik
Setelah 20 detik dari saat power on	Hijau	Power on self-test complete dan switch bekerja normal
	Off	Switch gagal melakukan self-test
Base	Hijau	Switch adalah base unit
	Orange	Stack error
	Off	Switch bukan base unit atau bekerja dalam mode standalone
Speed	Hijau	1000 Mbps
	Orange	100 Mbps
Link/Act	Hijau	Port sedang Receive and Transmit data
	Blinking	

#### LED Indicator BayStack 5510

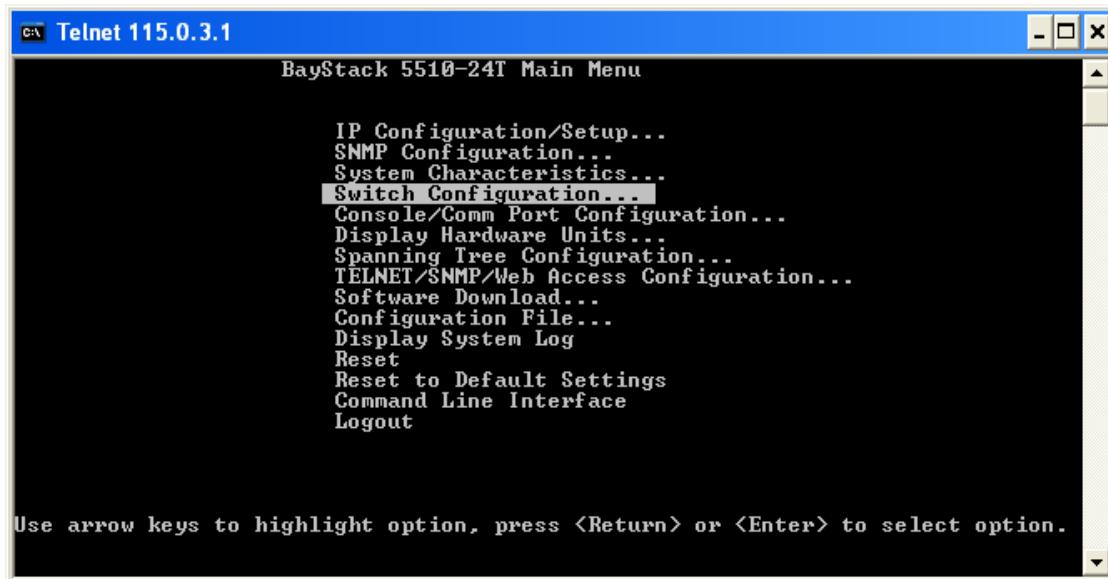
Label	Warna/Status	Deskripsi
Power On	Hijau	Dapat tegangan listrik
	Off	Tidak dapat tegangan listrik
Setelah 20 detik dari saat power on	Hijau	Power on self-test complete dan switch bekerja normal
	Off	Switch gagal melakukan self-test
Base	Hijau	Switch adalah base unit
	Orange	Stack error
	Off	Switch bukan base unit atau bekerja dalam mode standalone
Speed	Hijau	100 Mbps
	Orange	10 Mbps
Link/Act	Hijau Blinking	Port sedang Receive and Transmit data



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### 3.1.2.2 Melihat IP VLAN

## Masuk ke *Command Line Interface*



BS5510-DRC#show vlan ip						
Id	ifIndex	Address	Mask	MacAddress	Offset	
2	10002	126.1.0.1	255.255.255.0	00:11:F9:98:78:41	2	
3	10003	126.2.0.1	255.255.255.0	00:11:F9:98:78:42	3	
4	10004	126.3.0.1	255.255.255.0	00:11:F9:98:78:43	4	
5	10005	115.0.3.1	255.255.255.0	00:11:F9:98:78:44	5	
6	10006	126.4.0.1	255.255.255.0	00:11:F9:98:78:45	6	
7	10007	126.5.0.1	255.255.255.248	00:11:F9:98:78:40	1	
200	10200	60.3.0.1	255.255.255.0	00:11:F9:98:78:46	7	
201	10201	100.100.100.1	255.255.255.0	00:11:F9:98:78:47		8

### **3.1.2.3 Melihat VLAN**

## Masuk ke *Command Line Interface*



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1	VLAN #1	Port	None	0x0000	Yes	IVL	No
Port Members: 1-24							
2	Operator	Port	None	0x0000	Yes	IVL	No
Port Members: 2-4							
3	Staff	Port	None	0x0000	Yes	IVL	No
Port Members: 5-6,12-16,18-19							
4	HelpDesk	Port	None	0x0000	Yes	IVL	No
Port Members: 7-8							
5	Firewall	Port	None	0x0000	Yes	IVL	No
Port Members: 9-10							
6	EMS	Port	None	0x0000	Yes	IVL	No
Port Members: 11							
7	VLAN #7	Port	None	0x0000	Yes	IVL	Yes
Port Members: 17							
8	VLAN 8	Port	None	0x0000	Yes	IVL	No
Port Members: 20							
200 VLAN #							
Port Members: 21							
201 VLAN #201							
Port Members: 22							
BS5510-DRC#							

### 3.1.2.4 Melihat Routing Table

Masuk ke *Command Line Interface*

BS5510-DRC#show ip route							
=====							
Ip Route							
=====							
DST	MASK	NEXT	COST	VLAN	PORT	PROT	TYPE
-----							
172.0.0.0	255.0.0.0	115.0.3.2	1	VLAN5	9	S	IB
131.0.0.0	255.0.0.0	115.0.3.2	1	VLAN5	9	S	IB



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126.5.0.0	255.255.255.248	126.5.0.1	1	VLAN7	----	C	DB
126.4.0.0	255.255.255.0	126.4.0.1	1	VLAN6	----	C	DB
126.3.0.0	255.255.255.0	126.3.0.1	1	VLAN4	----	C	DB
126.2.0.0	255.255.255.0	126.2.0.1	1	VLAN3	----	C	DB
126.1.0.0	255.255.255.0	126.1.0.1	1	VLAN2	----	C	DB
115.0.3.0	255.255.255.0	115.0.3.1	1	VLAN5	----	C	DB

Total Routes: 51

-----  
TYPE Legend:

I=Indirect Route, D=Direct Route, A=Alternative Route, B=Best Route,E=Ecmp Route, U=Unresolved Route, N=Not in HW

BS5510-DRC#

### 3.1.2.5 Melihat Static Route

BS5510-DRC#show ip route static

=====  
Ip Static Route  
=====

DEST MASK NEXT COST PREF LCLNHOP STATUS ENABLE

172.100.30.0	255.255.255.252	172.100.0.2	1	1	TRUE	INACTV	TRUE
172.30.2.0	255.255.255.252	172.100.0.2	1	1	TRUE	INACTV	TRUE
0.0.0.0	0.0.0.0	172.100.0.2	1	1	TRUE	INACTV	TRUE
172.0.0.0	255.0.0.0	115.0.3.2	1	1	TRUE	ACTIVE	TRUE
131.0.0.0	255.0.0.0	115.0.3.2	1	1	TRUE	ACTIVE	TRUE
116.0.1.0	255.255.255.0	115.0.3.2	1	1	TRUE	ACTIVE	TRUE
115.255.0.0	255.255.255.0	115.0.3.2	1	1	TRUE	ACTIVE	TRUE
115.0.4.0	255.255.255.0	115.0.3.2	1	1	TRUE	ACTIVE	TRUE
115.0.0.0	255.0.0.0	115.0.3.2	1	1	TRUE	ACTIVE	TRUE

Total Routes: 46

BS5510-DRC#



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### 3.1.2.6 Melihat Status Interface

BS5510-DRC# *show interfaces*

```
Tera Term Web 3.1 - 115.0.3.1 VT
File Edit Setup Web Control Window Help
BS5510-DRC#show interfaces
      Status          Auto
Port Trunk Admin   Oper Link LinkTrap Negotiation Speed    Duplex Flow
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
 1     Enable  Down  Down Enabled  Enabled      1000Mbps Full   Disable
 2     Enable  Up    Up   Enabled  Enabled      100Mbps  Full
 3     Enable  Up    Up   Enabled  Enabled      100Mbps  Full
 4     Enable  Up    Up   Enabled  Enabled      100Mbps  Full
 5     Enable  Up    Up   Enabled  Enabled      100Mbps  Full
 6     Enable  Up    Up   Enabled  Enabled      100Mbps  Full
 7     Enable  Up    Up   Enabled  Enabled      100Mbps  Full
 8     Enable  Up    Up   Enabled  Enabled      100Mbps  Full
 9     Enable  Up    Up   Enabled  Enabled      100Mbps Half
10    Enable  Down  Down Enabled  Custom
11    Enable  Up    Up   Enabled  Enabled      100Mbps  Full
12    Enable  Up    Up   Enabled  Enabled      1000Mbps Full   Disable
13    Enable  Up    Up   Enabled  Enabled      1000Mbps Full   Disable
14    Enable  Down  Down Enabled  Enabled
15    Enable  Up    Up   Enabled  Enabled      1000Mbps Full   Disable
16    Enable  Up    Up   Enabled  Enabled      1000Mbps Full   Disable
17    Enable  Up    Up   Enabled  Enabled      100Mbps  Full
18    Enable  Up    Up   Enabled  Enabled      1000Mbps Full   Symm
19    Enable  Up    Up   Enabled  Enabled      1000Mbps Full   Symm
----More (q=Quit, space/return=Continue)----
```

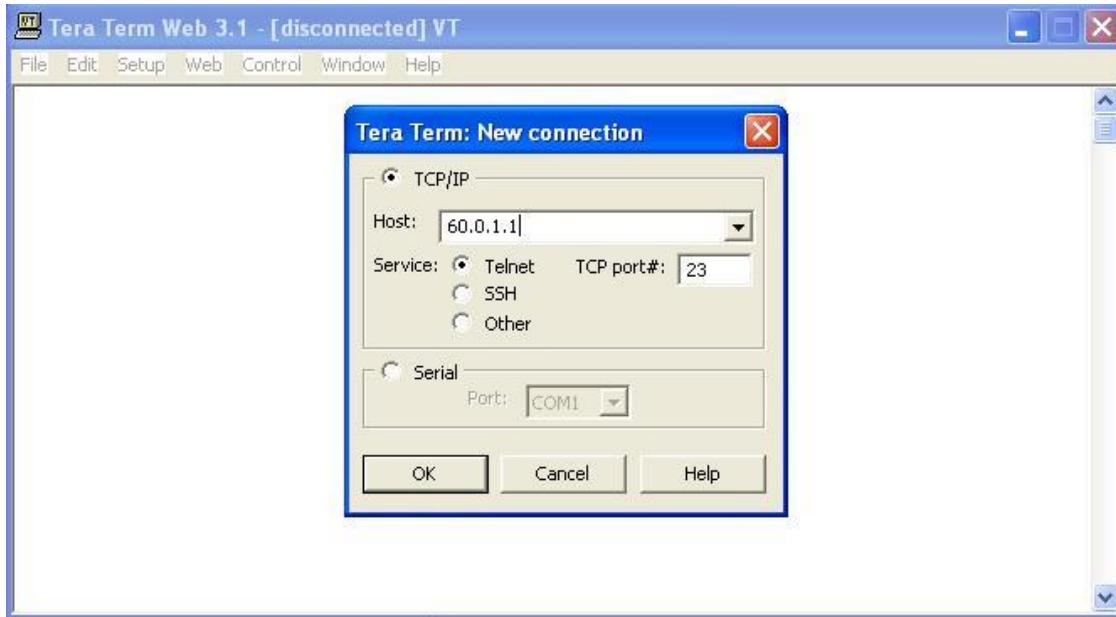
### 3.1.2.7 Melihat ARP

BS5510-DRC# *show ip arp*

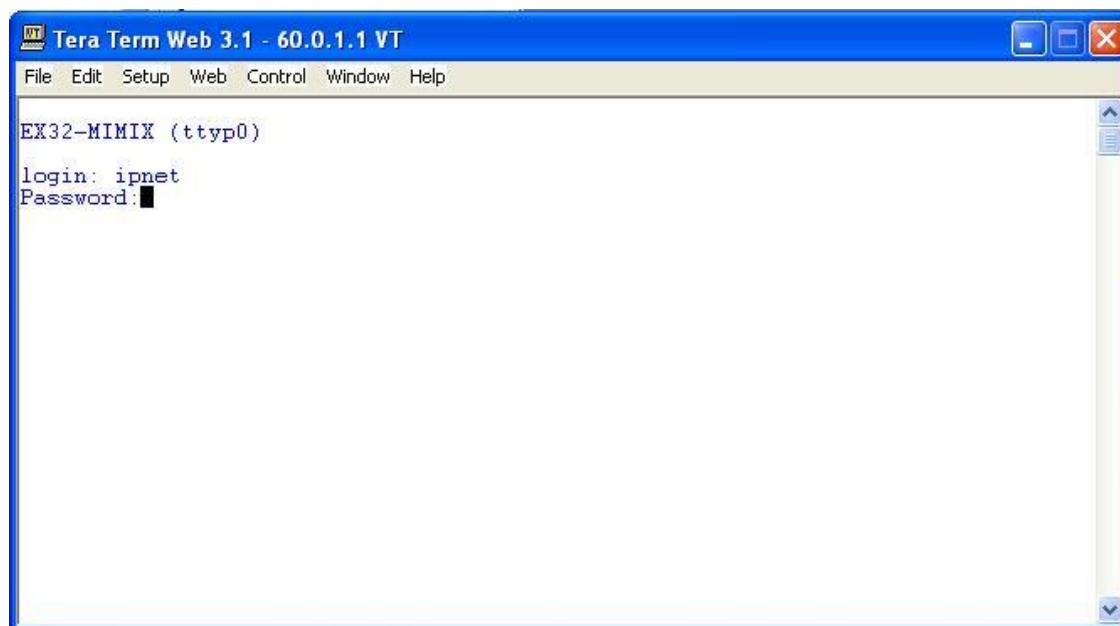
IP Address	Age (min)	MAC Address	VLAN-Port/Trunk Flags
126.1.0.255	0	ff:ff:ff:ff:ff:ff VLAN#2	LB
126.2.0.255	0	ff:ff:ff:ff:ff:ff VLAN#3	LB
126.3.0.255	0	ff:ff:ff:ff:ff:ff VLAN#4	LB
115.0.3.255	0	ff:ff:ff:ff:ff:ff VLAN#5	LB
126.4.0.255	0	ff:ff:ff:ff:ff:ff VLAN#6	LB
126.5.0.7	0	ff:ff:ff:ff:ff:ff VLAN#7	LB
60.3.0.255	0	ff:ff:ff:ff:ff:ff VLAN#200	LB

### 3.1.3. Juniper EX3200

Untuk dapat melihat konfigurasi atau mengkonfigurasi Juniper EX3200, user harus login ke Juniper EX3200 terlebih dahulu dengan cara console atau telnet atau ssh ke Juniper EX3200.



Masukkan *username* dan *Password*.



Setiap perubahan konfigurasi atau permintaan perubahan konfigurasi atau permintaan informasi mengenai konfigurasi perangkat Juniper EX3200 harus



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disetujui oleh Bagian Operasional Jaringan Komunikasi BRI-SUDIRMAN dan atas sepengetahuan Bagian Operasional Disaster Recovery BRI.

### 3.1.3.1 Melihat IP Interfaces

Command :

```
ipnet@EX32-MIMIX@% cli  
ipnet@EX32-MIMIX> configure  
ipnet@EX32-MIMIX# run show interfaces terse / match inet  
ge-0/0/0.0      up   up     inet  126.1.0.254/24  
ge-0/0/20.0     up   down   inet  100.100.100.1/24  
bme0.32768     up   up     inet  128.0.0.1/2  
[edit]
```

### 3.1.3.2 Melihat Status Interfaces

Command :

```
ipnet@EX32-MIMIX# run show interfaces terse  
Interface      Admin Link Proto Local          Remote  
ge-0/0/0        up   up  
ge-0/0/0.0      up   up   inet  126.1.0.254/24  
ge-0/0/1        up   down  
ge-0/0/1.0      up   down eth-switch  
ge-0/0/2        up   down  
ge-0/0/2.0      up   down eth-switch  
ge-0/0/3        up   down  
ge-0/0/3.0      up   down eth-switch  
ge-0/0/4        up   down  
ge-0/0/4.0      up   down eth-switch
```

### 3.1.3.3 Melihat Konfigurasi Yang Sedang Berjalan

Command :

```
ipnet@EX32-MIMIX# run show configuration  
## Last commit: 2009-02-08 03:27:42 UTC by ipnet
```



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```
version "9.2I0.1 [builder]";  
system {  
    host-name EX32-MIMIX;  
    root-authentication {  
        encrypted-password      "$1$7jGQ5K.x$XT5c6E70ekIjWPOQECffI.";  
        ##SECRET-DATA  
    }  
    login {  
        user ipnet {  
            uid 2002;  
            class super-user;  
        authentication {  
            encrypted-password  
            "$1$9hhAoqqw$LHCi.XupFgCw3n9JCBVkj0"; ## SECRET-DATA  
        }  
    }  
---(more)---
```

### 3.1.3.4 Melihat Routing

Command :

```
ipnet@EX32-MIMIX# run show route / no-more  
inet.0: 17 destinations, 17 routes (17 active, 0 holddown, 0 hidden)  
+ = Active Route, - = Last Active, * = Both  
0.0.0.0/0      *[Static/5] 3w4d 16:20:04  
                  > to 60.0.197.2 via vlan.200  
60.0.1.0/24     *[Direct/0] 3w4d 16:33:09  
                  > via vlan.2  
60.0.1.1/32     *[Local/0] 3w4d 16:33:16  
                  Local via vlan.2  
60.0.4.0/24     *[Direct/0] 3w4d 16:33:08  
                  > via vlan.3
```



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```
60.0.4.1/32      *[Local/0] 3w4d 16:33:16
                  Local via vlan.3

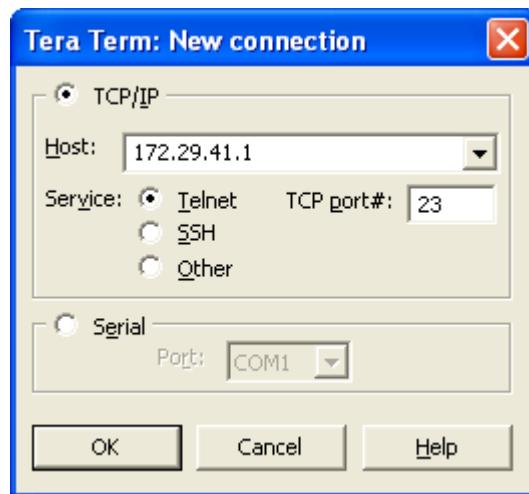
60.0.6.0/24      *[Direct/0] 3w4d 16:32:28
                  > via vlan.4                               Local via
vlan.200_juniper_private1_.inet.0: 4 destinations, 6 routes (1
active, 0 holddown, 3 hidden)
                  + = Active Route, - = Last Active, * = Both

128.0.0.0/2      *[Direct/0] 3w4d 16:33:26
                  > via bme0.32768
[Direct/0] 3w4d 16:33:26
                  > via bme0.32768
[Direct/0] 3w4d 16:33:26
                  > via bme0.32768

[edit]
```

### 3.1.4. Juniper J6350

Untuk dapat melihat konfigurasi atau mengkonfigurasi Juniper J6350, user harus login ke Juniper J6350 terlebih dahulu dengan cara console atau telnet atau ssh ke J6350.



Masukkan *username* dan *Password*.

Setiap perubahan konfigurasi atau permintaan perubahan konfigurasi atau permintaan informasi mengenai konfigurasi perangkat Juniper J6350 harus disetujui



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oleh Bagian Operasional Jaringan Komunikasi BRI-SUDIRMAN dan atas sepengetahuan Bagian Operasional Disaster Recovery BRI.

### 3.1.4.1 Melihat Chassis Hardware

```
root# run show chassis hardware

Hardware inventory:

Item          Version Part number Serial number Description
Chassis                  JN004966AA      J2300
Routing Engine REV 07  750-009992 AA05320475      RE-J.1
FPC 0           REV 04  750-010739 AC04510589      FPC
PIC 0                      2x FE, 2x Serial
Power Supply 0
```

### 3.1.4.2 Melihat Konfigurasi Yang Sedang Berjalan

```
ipnet@J6350-BRI-DRC> show configuration

## Last commit: 2010-08-05 23:06:42 WIT by ipnet
version 9.3R4.4;
system {
    host-name J6350-BRI-DRC;
    time-zone Asia/Jakarta;
    root-authentication {
        encrypted-password "$1$nJoIkNPz$xhKyWKUJNMI4kqgr6NhHE.";
        ## SECRET-DATA
    }
    login {
        user ipnet {
            uid 2000;
            class super-user;
            authentication {
                encrypted-password
                "$1$OQrJAdTl$TdHE.k6YMVtaWoZkGxkVK1"; ## SECRET-
```



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```
DATA
}
}

user wafa {
    uid 2001;
    class super-user;
    authentication {
        encrypted-password
        "$1$Y67aXYg1$nNRM.V2DEnQPk4Y6.1E6V/"; ## SECRET-
DATA
}
}

services {
    ssh {
        connection-limit 10;
        rate-limit 10;
    }
    telnet {
        connection-limit 10;
        rate-limit 10;
    }
}

syslog {
    user * {
        any emergency;
    }
    file messages {
        any any;
        authorization info;
    }
    file interactive-commands {
```



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interactive-commands any;  
---(more 4%)---

### 3.1.4.3 Melihat CPU Utilisasi

```
root# run show chassis routing-engine

Routing Engine status:

Temperature           37 degrees C / 98 degrees F
CPU temperature       42 degrees C / 107 degrees F
DRAM                 256 MB
Memory utilization   87 percent

CPU utilization:

User                 0 percent
Real-time threads    17 percent
Kernel               83 percent
Idle                 0 percent
Model                RE-J.1
Serial ID            AA05320475
Start time           2010-08-18 17:59:04 UTC
Uptime               27 minutes, 43 seconds
Load averages:       1 minute  5 minute 15 minute
                           0.02    0.06    0.06
```

### 3.1.4.4 Melihat IP Interface

```
root# run show interfaces terse / match inet

fe-0/0/0.0      up  down  inet  192.168.10.2/24
sp-0/0/0.16383  up  up   inet
fe-0/0/1.0      up  down  inet  124.124.124.2/24
lo0.0           up  up   inet  10.10.10.2    --> 0/0
lo0.16385       up  up   inet  10.0.0.1     --> 0/0
```



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### 3.1.4.5 Monitoring Interfaces

```
root> monitor interface fe-0/0/1.0
```

### 3.1.4.6 Monitoring traffic interfaces

```
root> monitor traffic interface fe-0/0/1.0
```

```
BIOCSETIF: fe-0/0/1.0: Network is down
```

### 3.1.4.7 Melihat Alarm

```
root> show chassis alarms
```

```
No alarms currently active
```

### 3.1.4.8 Melihat Waktu Aktif Perangkat

```
root# run show system uptime
```

```
Current time: 2010-08-18 18:32:08 UTC
```

```
System booted: 2010-08-18 17:59:04 UTC (00:33:04 ago)
```

```
Protocols started: 2010-08-18 17:59:58 UTC (00:32:10 ago)
```

```
Last configured: 2010-08-05 21:59:29 UTC(1w5d 20:32 ago) by root
```

```
6:32PM up 33 mins, 1 user, load averages: 0.00, 0.03, 0.04
```

### 3.1.4.9 Melihat Suhu Perangkat

```
root# run show chassis temperature-thresholds
```

Item	Fan speed		Yellow alarm		Red alarm	
	Normal	High	Normal	Bad fan	Normal	Bad
Chassis default	48	54	65	55	75	65
Routing Engine	73	78	78	65	85	80



### 3.1.4.10 Melihat Status Suhu dan Status Fan

```
root# run show chassis environment
Class Item          Status     Measurement
Temp Routing Engine OK        37 degrees C / 98 degrees F
Fans Jseries CPU fan   OK        Spinning at high speed
Power Power Supply 0
```

### 3.1.4.11 Melihat Status Interface

```
root# run show interfaces terse
fe-0/0/0.0      up    down  inet  192.168.10.2/24
sp-0/0/0.16383  up    up    inet
fe-0/0/1.0      up    down  inet  124.124.124.2/24
lo0.0           up    up    inet  10.10.10.2      --> 0/0
lo0.16385       up    up    inet  10.0.0.1       --> 0/0
```

### 3.1.4.12 Melihat Interface Ethernet secara spesifik

```
root# run show interfaces fe-0/0/1.0
Logical interface fe-0/0/1.0 (Index 68) (SNMP ifIndex 34)
Flags: Device-Down SNMP-Traps Encapsulation: ENET2
Input packets : 0
Output packets: 0
Protocol inet, MTU: 1500
Flags: None
Addresses, Flags: Dest-route-down Is-Preferred Is-Primary
Destination: 124.124.124/24, Local: 124.124.124.2,
BroaSudirmanast: 124.124.124.255
```

### 3.1.4.13 Melihat Routing

```
ipnet@J6350-BRI-DRC> show route
inet.0: 2097 destinations, 2105 routes (2097 active, 0 holddown, 0 hidden)
+ = Active Route, - = Last Active, * = Both
0.0.0.0/0      *[OSPF/150] 4w2d 07:28:11, metric 0, tag 3489725928
                > to 172.29.44.1 via ge-0/0/0.0
1.0.0.3/32     *[OSPF/150] 4w2d 07:28:11, metric 0, tag 3489725928
                > to 172.29.44.1 via ge-0/0/0.0
1.0.0.70/3     *[OSPF/150] 4w2d 07:28:11, metric 0, tag 3489725928
                > to 172.29.44.1 via ge-0/0/0.0
1.1.1.1/32     *[OSPF/10] 1w5d 02:16:15, metric 2
                > to 172.30.131.2 via ge-0/0/3.20
1.35.33.0/24   *[OSPF/150] 2w6d 23:31:00, metric 20, tag 0
                > to 172.30.133.2 via ge-0/0/3.40
1.38.33.0/24   *[OSPF/150] 2w6d 23:31:00, metric 20, tag 0
                > to 172.30.133.2 via ge-0/0/3.40
1.38.49.0/24   *[OSPF/150] 2w6d 23:31:00, metric 20, tag 0
                > to 172.30.133.2 via ge-0/0/3.40
1.39.17.0/24   *[OSPF/150] 2w6d 23:31:00, metric 20, tag 0
                > to 172.30.133.2 via ge-0/0/3.40
1.40.33.0/24   *[OSPF/150] 2w6d 23:31:00, metric 20, tag 0
                > to 172.30.133.2 via ge-0/0/3.40
1.41.17.0/24   *[OSPF/150] 2w6d 23:31:00, metric 20, tag 0
```

### 3.1.4.14 Melihat ARP

```
ipnet@J6350-BRI-DRC> show arp
MAC Address      Address          Name           Interface  Flags
00:90:fb:23:62:21 172.29.41.2    172.29.41.2      ge-0/0/1.0  none
00:21:5e:75:12:e0 172.29.43.2    172.29.43.2      ge-0/0/2.0  none
00:23:9c:ed:04:1f 172.29.44.1    172.29.44.1      ge-0/0/0.0  none
00:18:18:e2:b8:41 172.30.129.2   172.30.129.2     ge-0/0/3.5  none
```



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00:24:14:00:26:41	172.30.131.2	172.30.131.2	ge-0/0/3.20	none
00:1e:bd:b1:43:1b	172.30.132.2	172.30.132.2	ge-0/0/3.30	none
00:1c:f6:fc:e3:60	172.30.133.2	172.30.133.2	ge-0/0/3.40	none
00:23:ac:98:25:c6	172.30.134.2	172.30.134.2	ge-0/0/3.50	none
00:27:0d:e1:4c:e1	172.30.135.2	172.30.135.2	ge-0/0/3.60	none
00:25:45:4d:63:f1	172.30.136.2	172.30.136.2	ge-0/0/3.70	none
Total entries: 10				

### 3.1.4.15 Melihat Log Messages

```
ipnet@J6350-BRI-DRC> show log messages

Aug 24 15:00:00 J6350-BRI-DRC newsyslog[493]: logfile turned over due
          to size>128K

Aug 24 15:43:02 J6350-BRI-DRC login: LOGIN_INFORMATION: User
          ipnet logged in from host 172.29.44.1 on device ttym0

Aug 24 15:43:02 J6350-BRI-DRC mgd[498]: UI_AUTH_EVENT:
          Authenticated user 'ipnet' at permission level 'j-super-user'

Aug 24 15:43:02 J6350-BRI-DRC mgd[498]: UI_LOGIN_EVENT: User
          'ipnet' login, class 'j-super-user' [498]

Aug      24      15:43:07           J6350-BRI-DRC      mgd[498]:
          UI_CMDLINE_READ_LINE: User   'ipnet', command   'show
          configuration '

Aug      24      15:45:05           J6350-BRI-DRC      mgd[498]:
          UI_CMDLINE_READ_LINE: User 'ipnet', command 'show arp'

Aug 24 15:45:05 J6350-BRI-DRC mgd[498]: UI_CHILD_START: Starting
          child '/usr/sbin/arp'

Aug 24 15:45:05 J6350-BRI-DRC mgd[498]: UI_CHILD_STATUS:
          Cleanup child '/usr/sbin/arp', PID 501, status 0

Aug 24 15:45:29 J6350-BRI-DRC mgd[498]: UI_LOGOUT_EVENT: User
          'ipnet' logout

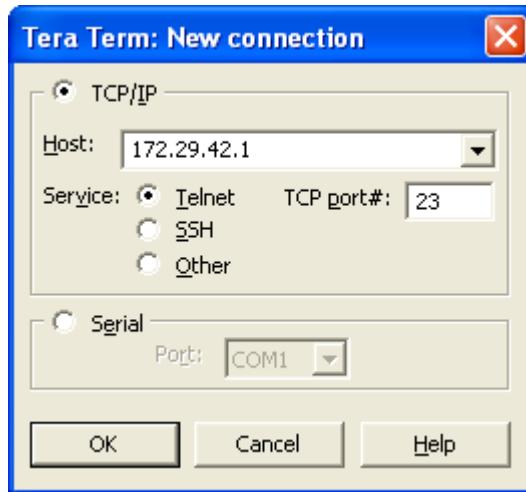
Aug 24 16:00:00 J6350-BRI-DRC cron[503]: (root) CMD (newsyslog)
Aug 24 17:00:00 J6350-BRI-DRC cron[506]: (root) CMD (newsyslog)
Aug 24 17:15:36 J6350-BRI-DRC login: LOGIN_INFORMATION: User
```

```
ipnet logged in from host 172.29.44.1 on device ttys0
```

```
Aug 24 17:15:36 J6350-BRI-DRC mgd[511]: UI_AUTH_EVENT:  
Authenticated user 'ipnet' at permission level 'j-super-user'
```

### 3.1.5. Juniper M10i

Untuk dapat melihat konfigurasi atau mengkonfigurasi Juniper M10i, user harus login ke Juniper M10i terlebih dahulu dengan cara console atau telnet atau ssh ke M10i.



Masukkan username dan Password.

Setiap perubahan konfigurasi atau permintaan perubahan konfigurasi atau permintaan informasi mengenai konfigurasi perangkat Juniper M10i harus disetujui oleh Bagian Operasional Jaringan Komunikasi BRI-SUDIRMAN dan atas sepengetahuan Bagian Operasional Disaster Recovery BRI.

#### 3.1.5.1 Melihat Versi Perangkat

```
admin@M10-DRC> show version  
Hostname: M10-DRC  
Model: m10i  
JUNOS Base OS boot [9.3R4.4]  
JUNOS Base OS Software Suite [9.3R4.4]  
JUNOS Kernel Software Suite [9.3R4.4]  
JUNOS Crypto Software Suite [9.3R4.4]  
JUNOS Packet Forwarding Engine Support (M/T Common) [9.3R4.4]
```



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JUNOS Packet Forwarding Engine Support (M7i/M10i) [9.3R4.4]  
JUNOS Online Documentation [9.3R4.4]  
JUNOS Routing Software Suite [9.3R4.4]

### 3.1.5.2 Melihat ARP

```
admin@M10-DRC> show arp

MAC Address      Address      Name          Interface   Flags
00:23:9c:1b:ae:80 60.0.197.1    60.0.197.1    fe-0/1/5.0  none
00:03:4b:fd:c8:98 60.1.2.21    60.1.2.21    fxp0.0     none
00:03:4b:fd:c8:9b 60.1.2.161   60.1.2.161   fe-0/1/4.0  none
00:04:Sudirman:45:f2:65 60.1.2.166  60.1.2.166   fe-0/1/8.0
                                         none
00:a0:8e:42:cd:57 115.0.1.2    115.0.1.2    fe-0/1/6.0  none
00:90:fb:23:62:20 172.29.42.2  172.29.42.2  fe-0/1/7.0  none
00:24:Sudirman:0f:5b:80 172.29.44.2 172.29.44.2  fe-0/1/0.0
                                         none
Total entries: 7
```

### 3.1.5.3 Melihat Konfigurasi Yang Sedang Berjalan

```
admin@M10-DRC> show configuration

## Last commit: 2010-08-03 07:06:53 GMT+7 by admin
version 9.3R4.4;
system {
    host-name M10-DRC;
    time-zone GMT+7;
    root-authentication {
        encrypted-password  "$1$QY8zJQo7$RF4Layawwcp2724PA6Umz0";
        ## SECRET-DATA
```



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### 3.1.5.4 Melihat Routing

```
admin@M10-DRC> show route
inet.0: 12 destinations, 13 routes (12 active, 0 holddown, 0 hidden)
+ = Active Route, - = Last Active, * = Both
 60.1.2.20/30      *[Direct/0] 8w5d 14:26:55
    > via fxp0.0
 60.1.2.22/32      *[Local/0] 8w5d 14:26:55
    Local via fxp0.0
 131.100.55.153/32 *[Static/5] 8w5d 14:26:55
    > to 60.1.2.21 via fxp0.0
 172.16.7.1/32      *[OSPF/10] 4w4d 18:25:13, metric 2
    > via t3-0/0/1.0
 172.16.11.1/32      *[OSPF/10] 4w2d 07:03:50, metric 4
    > via t3-0/0/1.0
 172.16.21.1/32      *[OSPF/10] 4w4d 18:25:13, metric 3
    > via t3-0/0/1.0
 172.16.31.1/32      *[Direct/0] 8w5d 15:59:08
    > via lo0.31
 192.168.1.4/30      *[OSPF/10] 4w2d 07:03:50, metric 4
    > via t3-0/0/1.0
 192.168.1.8/30      *[Direct/0] 4w4d 18:25:14
    > via t3-0/0/1.0
[OSPF/10] 4w4d 18:25:13, metric 2
```

### 3.1.5.5 Melihat Status Interface

```
admin@M10-DRC> show interfaces terse
Interface      Admin Link Proto  Local          Remote
t3-0/0/0        up    down
t3-0/0/1        up    up
t3-0/0/1.0      up    up    inet   192.168.1.10/30
                  mpls
fe-0/1/0        up    up
```

fe-0/1/0.0	up	up	inet	172.29.44.1/29
fe-0/1/1	up	down		
fe-0/1/2	up	down		
fe-0/1/3	up	down		
fe-0/1/4	up	up		
fe-0/1/4.0	up	up	inet	60.1.2.162/30
fe-0/1/5	up	up		
fe-0/1/5.0	up	up	inet	60.0.197.2/29
fe-0/1/6	up	up		
fe-0/1/6.0	up	up	inet	115.0.1.1/2

### 3.1.5.6 Melihat Interface Routing-Instance

```
admin@M10-DRC> show interfaces routing-instance BRI-VPN-  
PROVIDER  
Logical interface fe-0/1/0.0 (Index 67) (SNMP ifIndex 233)  
Description: To_J6350_DRC  
Flags: SNMP-Traps Encapsulation: ENET2  
Input packets : 66359711  
Output packets: 43361266  
Protocol inet, MTU: 1500  
Flags: Is-Primary  
Addresses, Flags: Is-Default Is-Preferred Is-Primary  
Destination: 172.29.44.0/29, Local: 172.29.44.1, BroaSudirmanast:  
172.29.44.7
```

### 3.1.5.7 Melihat CPU Utilisasi

```
admin@M10-DRC> show chassis routing-engine  
Routing Engine status:  
Slot 0:  
  Current state      Master  
  Election priority  Master (default)  
  Temperature        28 degrees C / 82 degrees F  
  CPU temperature    26 degrees C / 78 degrees F
```



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DRAM	768 MB
Memory utilization	44 percent
CPU utilization:	
User	0 percent
Background	0 percent
Kernel	3 percent
Interrupt	0 percent
Idle	96 percent
Model	RE-5.0
Serial ID	9009027594
Start time	2009-12-15 03:46:01 GMT+7
Uptime	264 days, 15 hours, 28 minutes, 14 seconds
Last reboot reason	Router rebooted after a normal shutdown.
Load averages:	1 minute 5 minute 15 minute
	0.07 0.02 0.01

### 3.1.5.8 Melihat OSPF Neighbor

admin@M10-DRC> show ospf neighbor						
Address	Interface	State	ID	Pri	Dead	
192.168.1.9	t3-0/0/1.0	Full	172.16.7.1	128	37	

### 3.1.5.9 Melihat OSPF Route

admin@M10-DRC> show ospf route / no-more						
Topology default Route Table:						
Prefix	Path	Route	NH	Metric	NextHop	Nexthop
Type	Type	Type	Interface	addr/label		
172.16.7.1	Intra	Router	IP	2	t3-0/0/1.0	
172.16.11.1	Intra	Router	IP	4	t3-0/0/1.0	
172.16.21.1	Intra	Router	IP	3	t3-0/0/1.0	
172.16.7.1/32	Intra	Network	IP	2	t3-0/0/1.0	
172.16.11.1/32	Intra	Network	IP	4	t3-0/0/1.0	
172.16.21.1/32	Intra	Network	IP	3	t3-0/0/1.0	
172.16.31.1/32	Intra	Network	IP	0	lo0.31	



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192.168.1.4/30	Intra	Network	IP	4	t3-0/0/1.0
192.168.1.8/30	Intra	Network	IP	2	t3-0/0/1.0
192.168.20.0/30	Intra	Network	IP	3	t3-0/0/1.0

### 3.1.5.10 Melihat OSPF Interface

admin@M10-DRC> show ospf interface				
Interface	State	Area	DR ID	BDR ID
lo0.31	DROther	0.0.0.0	0.0.0.0	0.0.0.0
t3-0/0/1.0	PtToPt	0.0.0.0	0.0.0.0	0.0.0.0

### 3.1.5.11 Melihat OSPF Database

admin@M10-DRC> show ospf database / no-more								
OSPF database, Area 0.0.0.0								
Type	ID	Adv Rtr	Seq	Age	Opt	Cksum	Len	
Router	172.16.7.1	172.16.7.1	0x8000095b	1590	0x22	0x8d3e	96	
Router	172.16.11.1	172.16.11.1	0x8000090a	320	0x22	0x7fc	60	
Router	172.16.21.1	172.16.21.1	0x800008c8	1353	0x22	0x9744	48	
Router	*172.16.31.1	172.16.31.1	0x80000a72	873	0x22	0x6fe6	60	
Network	192.168.20.2	172.16.21.1	0x800008b0	1953	0x22	0xddbd	32	
OpaqArea	1.0.0.1	172.16.7.1	0x8000085d	590	0x22	0x142d	28	
OpaqArea	1.0.0.1		172.16.11.1	0x800008fc	1150	0x22		0xSudirmanbc 28
OpaqArea	1.0.0.1		172.16.21.1	0x800008bd	753	0x22	0x6f55	28
OpaqArea	*1.0.0.1		172.16.31.1	0x80000968	1714	0x22	0x2bd9	28
OpaqArea	1.0.0.3		172.16.7.1	0x8000085f	1090	0x22	0x464b	136
OpaqArea	1.0.0.3		172.16.11.1	0x800008f4	1916	0x22	0x4fb4	136
OpaqArea	1.0.0.3		172.16.21.1	0x800008b0	153	0x22	0x8ad5	124
OpaqArea	*1.0.0.3		172.16.31.1	0x80000998	73	0x22	0x72c9	136
OpaqArea	1.0.0.4		172.16.7.1	0x80000471	2090	0x22	0x4520	136
OpaqArea	1.0.0.5		172.16.7.1	0x8000085b	90	0x22	0xc214	



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### 3.1.5.12 Melihat MPLS interface

```
admin@M10-DRC> show mpls interface
Interface      State      Administrative groups
t3-0/0/1.0     Up        <none>
```

### 3.1.5.13 Melihat MPLS LSP

```
admin@M10-DRC> show mpls lsp
Ingress LSP: 2 sessions
To          From       State Rt P ActivePath      LSPname
172.16.11.1 172.16.8.1 Up   0 *           TO_ROUTER_SUDIRMAN
172.16.21.1 172.16.31.1 Up   0 *           TO_ROUTER_GDL
Total 2 displayed, Up 2, Down 0
Egress LSP: 2 sessions
To          From       State Rt Style Labelin Labelout LSPname
172.16.31.1 172.16.11.1 Up   0 1 FF         3           - TO_ROUTER_DRC
172.16.31.1 172.16.21.1 Up   0 1 FF         3           -TO_ROUTER_DRC
Total 2 displayed, Up 2, Down 0
Transit LSP: 0 sessions
Total 0 displayed, Up 0, Down 0
```

### 3.1.5.14 Melihat Log Messages

```
admin@M10-DRC> show log messages
Jul 19 04:00:00 M10-DRC newsyslog[97203]: logfile turned over due
tosize>1024K
Jul 19 04:01:17 M10-DRC mgd[97175]: UI_DBASE_LOGIN_EVENT:
User 'admin' entering configuration mode
Jul 19 04:01:38 M10-DRC mgd[97175]: UI_DBASE_LOGOUT_EVENT:
User 'admin' exiting configuration mode
Jul 19 04:01:50 M10-DRC mgd[97198]: UI_DBASE_LOGOUT_EVENT:
User 'root' exiting configuration mode
```



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### 3.1.6. Catalyst 4503

Untuk dapat melihat konfigurasi atau mengkonfigurasi Catalyst 4503, user harus login ke Catalyst 4503 terlebih dahulu dengan cara console, telnet atau ssh ke Catalyst 4503.

```
wcsdrc@cacti: ~  
admin@m10-DRC> Read from remote host m10drc: Connection reset by peer  
Connection to m10drc closed.  
wcsdrc@cacti:~$ ssh 172.29.33.1 -l ipnet  
ipnet@172.29.33.1's password:  
C  
=====  
PT. BANK RAKYAT INDONESIA TBK  
DRC TABANAN  
CATALYST 4503 A  
AUTORIZED USER ONLY  
=====  
BRI-DRC-CAT45-A#
```

Masukkan username dan Password.

Setiap perubahan konfigurasi, permintaan perubahan konfigurasi atau permintaan informasi mengenai konfigurasi perangkat Catalyst harus disetujui oleh Bagian Operasional Jaringan Komunikasi BRI-SUDIRMAN dan atas sepengetahuan Bagian Operasional Disaster Recovery BRI.

#### 3.1.6.1 Melihat Status Interface

BRI-DRC-CAT45-A#show ip interface brief					
Interface	IP-Address	OK?	Method	Status	Protocol
Vlan1	unassigned	YES	NVRAM	down	down
Vlan5	172.30.129.254	YES	manual	up	
Vlan10	172.30.130.1	YES	manual	up	
Vlan20	172.30.131.1	YES	manual	up	
Vlan30	172.30.132.1	YES	manual	administratively down	down
Vlan40	172.30.133.1	YES	manual	up	
Vlan50	172.30.134.1	YES	manual	up	
Vlan60	172.30.135.1	YES	manual	up	
Vlan70	172.30.136.1	YES	manual	up	



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### 3.1.6.2 Melihat Konfigurasi Yang Sedang Berjalan

```
BRI-DRC-CAT45-A#show running-config
Building configuration...
Current configuration : 6474 bytes
!
! Last configuration change at 11:13:09 WIB Fri Sep 7 2012 by ipnet
! NVRAM config last updated at 11:14:17 WIB Fri Sep 7 2012 by ipnet
!
version 12.2
no service pad
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service compress-config
!
hostname BRI-DRC-CAT45-A
!
boot-start-marker
boot-end-marker
!
no logging console
enable secret 5 $1$LQFm$P4kAYAMMqJrSfIEuIJKX3.
!
username      ipnet      privilege      15      secret      5
      $1$CWvG$F/zRT5HdIsgEEbuDSml2L/
username      ojk       privilege      15      secret      5
      $1$.GFC$vcwq8gyO0gKwxa4d1F7cV0
no aaa new-model
clock timezone WIB 7
```



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### 3.1.6.3 Melihat Routing

```
BRI-DRC-CAT45-A#show ip route
```

Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 -  
OSPF NSSA external type 1, N2 - OSPF NSSA external type 2  
E1 - OSPF external type 1, E2 - OSPF external type 2  
i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2  
ia - IS-IS inter area, \* - candidate default, U - per-user static route  
o - ODR, P - periodic downloaded static route

Gateway of last resort is not set

B 192.168.123.0/24 [20/0] via 172.29.44.1, 7w0d  
51.0.0.0/8 is variably subnetted, 145 subnets, 4 masks  
B 51.46.28.0/24 [20/0] via 172.29.44.1, 7w0d  
B 51.39.76.91/32 [20/0] via 172.29.44.1, 6w6d  
B 51.64.44.91/32 [20/0] via 172.29.44.1, 5w2d  
B 51.46.24.0/24 [20/0] via 172.29.44.1, 7w0d  
B 51.39.72.91/32 [20/0] via 172.29.44.1, 6w6d  
B 51.46.20.0/24 [20/0] via 172.29.44.1, 7w0d  
B 51.45.20.0/24 [20/0] via 172.29.44.1, 7w0d  
B 51.46.16.0/24 [20/0] via 172.29.44.1, 7w0d  
B 51.35.0.0/16 [20/0] via 172.29.44.1, 7w0d  
B 51.46.12.0/24 [20/0] via 172.29.44.1, 7w0d  
B 51.34.0.0/17 [20/0] via 172.29.44.1, 7w0d  
B 51.45.12.0/24 [20/0] via 172.29.44.1, 7w0d  
B 51.33.0.0/17 [20/0] via 172.29.44.1, 7w0d  
B 51.32.0.0/17 [20/0] via 172.29.44.1, 7w0d

--More--

### 3.1.6.4 Melihat VLAN

```
BRI-DRC-CAT45-A#show vlan
```

VLAN Name	Status	Ports
-----------	--------	-------

-----



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VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
Trans1	Trans2						
<hr/>							
1	enet 100001	1500	-	-	-	-	0 0
5	enet 100005	1500	-	-	-	-	0 0
10	enet 100010	1500	-	-	-	-	0 0
20	enet 100020	1500	-	-	-	-	0 0
30	enet 100030	1500	-	-	-	-	0 0
40	enet 100040	1500	-	-	-	-	0 0
50	enet 100050	1500	-	-	-	-	0 0



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60	enet	100060	1500	-	-	-	-	0	0						
70	enet	100070	1500	-	-	-	-	0	0						
1002	fddi	101002	1500	-	-	-	-	0	0						
1003	tr	101003	1500	-	-	-	-	0	0						
1004	fdnet	101004	1500	-	-	-	ieee	0	0						
1005	trnet	101005	1500	-	-	-	ibm	0	0						
Remote SPAN VLANs															
-----				Primary Secondary Type Ports											
-----															
BRI-DRC-CAT45-A#															

### 3.1.6.5 Melihat ARP

BRI-DRC-CAT45-A#show ip arp									
Protocol	Address	Age (min)	Hardware Addr	Type	Interface				
Internet	172.30.131.1	-	0026.cb32.fe3f	ARPA	Vlan20				
Internet	172.30.130.1	-	0026.cb32.fe3f	ARPA	Vlan10				
Internet	172.30.129.2	161	0018.18e2.b841	ARPA	Vlan5				
Internet	172.30.129.1	178	0000.0c07.ac37	ARPA	Vlan5				
Internet	172.30.131.2	75	0024.1400.2641	ARPA	Vlan20				
Internet	172.30.135.1	-	0026.cb32.fe3f	ARPA	Vlan60				
Internet	172.30.133.2	95	ecc8.8227.83f2	ARPA	Vlan40				
Internet	172.30.134.1	-	0026.cb32.fe3f	ARPA	Vlan50				
Internet	172.30.133.1	-	0026.cb32.fe3f	ARPA	Vlan40				
Internet	172.30.134.2	101	0023.ac98.25c1	ARPA	Vlan50				
Internet	172.30.135.2	63	0027.0de1.4ce1	ARPA	Vlan60				
Internet	172.30.136.2	79	0025.454d.63f1	ARPA	Vlan70				
Internet	172.30.136.1	-	0026.cb32.fe3f	ARPA	Vlan70				
Internet	115.255.0.200			12	0016.353c.8366	ARPA			
GigabitEthernet2/1									
Internet	115.255.0.201			27	00e0.8602.2271	ARPA			
GigabitEthernet2/									



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### 3.1.6.6 Melihat Suhu Perangkat & Status PSU

```
BRI-DRC-CAT45-A#show environment
```

no alarm

Chassis Temperature = 35 degrees Celsius

Chassis Over Temperature Threshold = 75 degrees Celsius

Chassis Critical Temperature Threshold = 95 degrees Celsius

Power Fan Inline

Supply	Model No	Type	Status	Sensor	Status
--------	----------	------	--------	--------	--------

PS1	PWR-C45-1400AC	AC 1400W	good	good	n.a.
-----	----------------	----------	------	------	------

PS2	PWR-C45-1400AC	AC 1400W	good	good	n.a.
-----	----------------	----------	------	------	------

Power supplies needed by system : 1

Power supplies currently available : 2

Chassis Type : WS-C4506-E

Power consumed by backplane : 0 Watts

Switch Bandwidth Utilization : 0%

Supervisor Led Color : Green

Module 1 Status Led Color : Green

Module 2 Status Led Color : Green

Fantray : Good

Power consumed by Fantray : 120 Watts

### 3.1.6.7 Melihat Log Messages

```
BRI-DRC-CAT45-A# show log
```

Syslog logging: enabled (0 messages dropped, 1 messages rate-limited, 0 flushes, 0 overruns, xml disabled, filtering disabled)

No Active Message Discriminator.

No Inactive Message Discriminator.



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Console logging: disabled

Monitor logging: level debugging, 0 messages logged, xml disabled,  
filtering disabled

Buffer logging: level debugging, 1395 messages logged, xml disabled,  
filtering disabled

Exception Logging: size (8192 bytes)

Count and timestamp logging messages: disabled

Persistent logging: disabled

No active filter modules.

Trap logging: level informational, 3251 message lines logged

Log Buffer (4096 bytes):

s 1 area dummy area: LSA origination prevented by LSA with same LSID  
but a different mask

Existing Type 5 LSA: LSID 172.30.164.0/24

New Destination: 172.30.164.0/32

Sep 16 06:24:23.861: %OSPF-4-CONFLICTING\_LSAID: Process 1 area  
dummy area: LSA origination prevented by LSA with same LSID but  
a different mask Existing Type 5 LSA: LSID 10.10.10.7/29

New Destination: 10.10.10.7/32

Sep 16 06:25:24.487: %OSPF-4-CONFLICTING\_LSAID: Process 1 area  
dummy area: LSA origination prevented by LSA with same LSID but  
a different mask Existing Type 5 LSA: LSID 172.30.164.0/24 New  
Destination: 172.30.164.0/32

Sep 17 04:58:56.176: %OSPF-4-CONFLICTING\_LSAID: Process 1 area  
dummy area: LSA origination prevented by LSA with same LSID but  
a different mask Existing Type 5 LSA: LSID 10.10.10.7/29

New Destination: 10.10.10.7/32

### 3.1.6.8 Melihat Versi Perangkat

BRI-DRC-CAT45-A#show version

Cisco IOS Software, Catalyst 4500 L3 Switch Software (cat4500-



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ENTSERVICESK9-M), Version 12.2(50)SG2, RELEASE  
SOFTWARE (fc2)

Technical Support: <http://www.cisco.com/techsupport>

Copyright (c) 1986-2009 by Cisco Systems, Inc.

Compiled Mon 27-Apr-09 15:09 by prod\_rel\_team

Image text-base: 0x10000000, data-base: 0x11F9E9CC

ROM: 12.2(31r)SGA2

Dagobah Revision 226, Swamp Revision 32

BRI-DRC-CAT45-A uptime is 1 year, 15 weeks, 4 days, 21 minutes

System returned to ROM by power-on

System restarted at 16:11:05 WIB Wed Jun 8 2011

System image file is "bootflash:cat4500-entservicesk9-mz.122-  
50.SG2.bin"



## 3.2 Command Line Perangkat Network

Berikut *Command line* yang umum digunakan pada proyek Pemasangan Perangkat *Network Switching* Bank BRI, sehingga jika ada *Request* dari pihak BRI atau terdapat permasalahan, operator WCS yang sedang bertugas dapat segera menangani masalah tersebut.

### 3.2.1 Juniper EX8200

#### 3.2.1.1 Prosedur Membuat VLAN

```
ipnet@EX82DRC @% cli  
ipnet@EX82DRC > configure  
ipnet@EX82DRC # set vlans vlan_server vlan-id 100  
ipnet@EX82DRC # set vlans vlan_coba vlan-id 101  
ipnet@EX82DRC # commit synchronize
```

#### 3.2.1.2 Prosedur Membuat Port Member VLAN

```
ipnet@EX82DRC @% cli  
ipnet@EX82DRC > configure  
ipnet@EX82DRC # set interfaces fe-0/0/7 unit 0 family ethernet-switching  
vlan member vlan_server  
ipnet@EX82DRC # commit synchronize
```

#### 3.2.1.3 Prosedur Membuat IP VLAN

Command :

```
ipnet@EX82DRC # set interfaces vlan unit 100 family inet address  
10.5.5.1/24  
ipnet@EX82DRC # commit synchronize  
ipnet@EX82DRC # set vlans vlan_server vlan-id 100 l3-interface vlan.100  
ipnet@EX82DRC # commit synchronize
```

#### 3.2.1.4 Prosedur Delete VLAN

Command :

```
ipnet@EX82DRC # delete vlans vlan_server vlan-id 100  
ipnet@EX82DRC # delete vlans vlan_coba vlan-id 101
```



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ipnet@EX82DRC # *commit synchronize*

### 3.2.1.5 Prosedur Disable Port Ethernet

Command :

ipnet@EX82DRC # *set interfaces ge-0/0/28 disable*

ipnet@EX82DRC # *set interfaces ge-0/0/29 disable*

ipnet@EX82DRC # *commit synchronize*

### 3.2.1.6 Prosedur Enable Port Ethernet

Command :

ipnet@EX82DRC # *set interfaces ge-0/0/28 enable*

ipnet@EX82DRC # *set interfaces ge-0/0/29 enable*

ipnet@EX82DRC # *commit synchronize*

### 3.2.1.7 Prosedur Membuat VRRP

Command :

**Untuk configurasi EX82 Primary :**

ipnet@EX82DRC # *set interfaces vlan unit 88 family inet address 10.8.8.1/24 vrrp-group 10 virtual-address 10.8.8.100*

ipnet@EX82DRC # *set interfaces vlan unit 88 family inet address 10.8.8.1/24 vrrp-group 10 priority 150*

ipnet@EX82DRC # *set interfaces vlan unit 88 family inet address 10.8.8.1/24 vrrp-group 10 advertise-interval 5*

ipnet@EX82DRC # *set interfaces vlan unit 88 family inet address 10.8.8.1/24 vrrp-group 10 preempt*

ipnet@EX82DRC # *set interfaces vlan unit 88 family inet address 10.8.8.1/24 vrrp-group 10 accept-data*

ipnet@EX82DRC # *set interfaces vlan unit 88 family inet address 10.8.8.1/24 vrrp-group 10 track interface ge-0/0/47 priority-cost 70*

ipnet@EX82DRC # *commit synchronize*

ipnet@EX82DRC # *run ping 10.8.8.100*

**Untuk configurasi EX82 Secondary:**



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```
ipnet@EX82DRC # set interfaces vlan unit 88 family inet address 10.8.8.2/24 vrrp-group 10 virtual-address 10.8.8.100
ipnet@EX82DRC # set interfaces vlan unit 88 family inet address 10.8.8.2/24 vrrp-group 10 priority 100
ipnet@EX82DRC # set interfaces vlan unit 88 family inet address 10.8.8.2/24 vrrp-group 10 advertise-interval 5
ipnet@EX82DRC # set interfaces vlan unit 88 family inet address 10.8.8.2/24 vrrp-group 10 accept-data
ipnet@EX82DRC # commit synchronize
ipnet@EX82DRC # run ping 10.8.8.100
```

### 3.2.1.8 Prosedur Membuat Static Route

Command:

```
ipnet@EX82DRC # set routing-options static route 70.0.0.0/24 next-hop 10.8.8.2 metric 1
ipnet@EX82DRC # commit synchronize
```

**Untuk configurasi EX82 Secondary:**

```
ipnet@EX82DRC # set routing-options static route 70.0.0.0/24 next-hop 10.8.8.2 metric 10
ipnet@EX82DRC # commit synchronize
```

### 3.2.1.9 Advertise New Segment to OSPF Cloude

Command :

```
ipnet@EX82DRC # set protocols ospf area 0.0.0.1 interface vlan.20 passive
ipnet@EX82DRC # commit synchronize
```

## 3.2.2 Nortel Baystack 5510

### 3.2.2.1 Prosedur Membuat Vlan

Command :

5510-48T>enable

5510-48T#configure terminal

5510-48T(config)# vlan create 60 name TESTING type port



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### 3.2.2.2 Prosedur Membuat member Vlan

Command :

5510-48T>enable

5510-48T#configure terminal

\*note ( Remove port member Vlan )

5510-48T(config)#vlan members remove (Vlan-ID) (Port member)

\*note ( Add port member Vlan yang baru )

5510-48T(config)#vlan members add (Vlan-ID) (Port member)

Contoh :

5510-48T(config)#vlan members remove 1 34-36

5510-48T(config)#vlan members add 60 34-36

### 3.2.2.3 Prosedur Mendelete Vlan

Command :

5510-48T>enable

5510-48T#configure terminal

5510-48T(config)#no vlan ( Vlan-ID )

5510-48T(config)#no vlan 60

### 3.2.2.4 Prosedur Memberikan IP Vlan

Command :

5510-48T>enable

5510-48T#configure terminal

5510-48T(config)#interface vlan ( Vlan-ID )

5510-48T(config)#interface vlan 60

5510-48T(config-if)#

5510-48T(config-if)#ip address (IP address) (Subnet Mask)

5510-48T(config-if)#ip address 60.60.60.1 255.255.255.0



### 3.2.2.5 Prosedur Mendelete IP Vlan

Command :

5510-48T>enable

5510-48T#configure terminal

5510-48T(config)#interface vlan ( Vlan-ID )

5510-48T(config)#interface vlan 60

5510-48T(config-if)#

5510-48T(config-if)#no ip address (IP address) (Subnet Mask)

5510-48T(config-if)#no ip address 60.60.60.1 255.255.255.0

### 3.2.2.6 Prosedur Mengaktifkan L3

Command :

5510-48T>enable

5510-48T#configure terminal

5510-48T(config)#ip routing

### 3.2.2.7 Prosedur Membuat Static Route

Command :

5510-48T>enable

5510-48T#configure terminal

5510-48T(config)#

5510-48T(config)#ip route (IP Destination) (Subnet Mask) (Next-Hop)  
(Cost)

\*note ( nilai Cost makin kecil maka lebih di prioritaskan sebagai primary)

5510-48T(config)#ip route 20.20.20.0 255.255.255.0 198.168.10.2 1

### 3.2.2.8 Prosedur Mendelete Static Route

Command :

5510-48T>enable

5510-48T#configure terminal

5510-48T(config)#



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5510-48T(config)#no ip route (IP Destination) (Subnet Mask) (Next-Hop)  
(Cost)

5510-48T(config)#no ip route 20.20.20.0 255.255.255.0 198.168.10.2 1

### 3.2.3 Juniper EX3200

#### 3.2.3.1 Prosedur Membuat VLAN

Command :

```
ipnet@EX32-MIMIX@% cli  
ipnet@EX32-MIMIX> configure  
ipnet@EX32-MIMIX # set vlans vlan_server vlan-id 100  
ipnet@EX32-MIMIX # set vlans vlan_coba vlan-id 101  
ipnet@EX32-MIMIX # commit
```

#### 3.2.3.2 Prosedur Membuat Port Member VLAN

Command :

```
ipnet@EX32-MIMIX@% cli  
ipnet@EX32-MIMIX> configure  
ipnet@EX32-MIMIX # set interfaces fe-0/0/7 unit 0 family ethernet-switching  
vlan member vlan_server  
ipnet@EX32-MIMIX # commit
```

#### 3.2.3.3 Prosedur Membuat IP VLAN

Command :

```
ipnet@EX32-MIMIX # set interfaces vlan unit 100 family inet address  
10.5.5.1/24  
ipnet@EX32-MIMIX # commit
```

#### 3.2.3.4 Prosedur Mengaktifkan L3

Command :

```
ipnet@EX32-MIMIX # set vlans vlan_server vlan-id 100 l3-interface vlan.100
```

#### 3.2.3.5 Prosedur Delete VLAN

Command :



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```
ipnet@EX32-MIMIX # delete vlans vlan_server vlan-id 100  
ipnet@EX32-MIMIX # delete vlans vlan_coba vlan-id 101  
ipnet@EX32-MIMIX # commit
```

### 3.2.3.6 Prosedur Disable Port Ethernet

Command :

```
ipnet@EX32-MIMIX# set interfaces ge-0/0/28 disable  
ipnet@EX32-MIMIX# set interfaces ge-0/0/29 disable  
ipnet@EX32-MIMIX# commit
```

### 3.2.3.7 Prosedur Enable Port Ethernet

Command :

```
ipnet@EX32-MIMIX# set interfaces ge-0/0/28 enable  
ipnet@EX32-MIMIX# set interfaces ge-0/0/29 enable  
ipnet@EX32-MIMIX# commit
```

## 3.2.4 Juniper M10i

### 3.2.4.1 Membuat VRF Baru

Create VRF di Juniper M10i

Misalkan, akan menambah VRF A yang keluar di M10i SUDIRMAN dan M10i DRC dengan *langkah-langkah sebagai berikut* :

1. Create LSP utk VRF-A tersebut di PE SUDIRMAN dan PE DRC

PE SUDIRMAN:

```
admin@M10-SUDIRMAN# set protocols mpls label-switched-path VRF-A to  
172.16.31.1
```

PE DRC:

```
admin@M10-DRC# set protocols mpls label-switched-path VRF-A to  
172.16.11.1
```

2. Create Community untuk VRF-A pada PE SUDIRMAN dan PE DRC

PE SUDIRMAN:

```
admin@M10-SUDIRMAN# set policy-options community VRF-A members  
target:65000:10
```



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**PE DRC:**

```
admin@M10-DRC#set policy-options community VRF-A members  
target:65000:10
```

3. Create Routing Policy VRF-A di PE SUDIRMAN dan PE DRC

**PE SUDIRMAN:**

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-export term 1  
from protocol static
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-export term 1  
from protocol direct
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-export term 1  
then community add VRF-A
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-export term 1  
then accept
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-export term 2  
then reject
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-import term 1  
from protocol bgp
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-import term 1  
from community VRF-A
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-import term 1  
then accept
```

```
admin@M10-SUDIRMAN# set policy-options policy-statement vpn1-import term 2  
then reject
```

**PE DRC:**

```
admin@M10-DRC# set policy-options policy-statement vpn1-export term 1 from  
protocol static
```

```
admin@M10-DRC# set policy-options policy-statement vpn1-export term 1 from  
protocol direct
```

```
admin@M10-DRC# set policy-options policy-statement vpn1-export term 1 then  
community add VRF-A
```

```
admin@M10-DRC# set policy-options policy-statement vpn1-export term 1 then  
accept
```



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```
admin@M10-DRC# set policy-options policy-statement vpn1-export term 2 then  
reject
```

```
admin@M10-DRC# set policy-options policy-statement vpn1-import term 1 from  
protocol bgp
```

```
admin@M10-DRC# set policy-options policy-statement vpn1-import term 1 from  
community VRF-A
```

```
admin@M10-DRC# set policy-options policy-statement vpn1-import term 1 then  
accept
```

```
admin@M10-DRC# set policy-options policy-statement vpn1-import term 2 then  
reject
```

#### 4. Create Routing Instance VRF-A di PE-SUDIRMAN dan PE DRC:

##### **PE SUDIRMAN:**

```
admin@M10-SUDIRMAN# set routing-instances VRF-A description VRF-A
```

```
admin@M10-SUDIRMAN# set routing-instances VRF-A instance-type vrf
```

```
admin@M10-SUDIRMAN# set routing-instances VRF-A interface ge-0/0/2.0
```

```
admin@M10-SUDIRMAN# set routing-instances VRF-A route-distinguisher  
65000:10
```

```
admin@M10-SUDIRMAN# set routing-instances VRF-A vrf-import vpn1-import
```

```
admin@M10-SUDIRMAN# set routing-instances VRF-A vrf-export vpn1-export
```

##### **PE DRC:**

```
admin@M10-DRC# set routing-instances VRF-A description VRF-A
```

```
admin@M10-DRC# set routing-instances VRF-A instance-type vrf
```

```
admin@M10-DRC# set routing-instances VRF-A interface ge-0/0/2.0
```

```
admin@M10-DRC# set routing-instances VRF-A route-distinguisher 65000:10
```

```
admin@M10-DRC# set routing-instances VRF-A vrf-import vpn1-import
```

```
admin@M10-DRC# set routing-instances VRF-A vrf-export vpn1-export
```

Add Routing Baru ke VRF

Add routing baru ke VRF dilakukan *dengan langkah langkah sebagai berikut :*

1. Static Route

```
admin@M10-SUDIRMAN# set routing-instances VRF-A routing-options static  
route 192.168.10.0/32 next-hop 10.1.1.1
```

2. Dynamic Route (OSPF)



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```
admin@M10-SUDIRMAN# set routing-instances VRF-A protocols ospf  
domain-id disable  
admin@M10-SUDIRMAN# set routing-instances VRF-A protocols ospf export  
vpn1-import  
admin@M10-SUDIRMAN# set routing-instances VRF-A protocols ospf area  
0.0.0.0 interface fe-0/0/0.
```



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## BAB 4 PROSEDURE LAPORAN OPERASIONAL

### 4.1 Membuat Daily Report

Laporan Harian dibuat setiap hari dengan format ekstensi doc dan dikirim melalui email ke [tsi\\_odr@bri.co.id](mailto:tsi_odr@bri.co.id) sebelum jam 07:30 WITA.

Berikut adalah langkah-langkah untuk membuat Daily Report.

No.	Job	Description of Action
1	<b>Template Daily Report</b>	<ul style="list-style-type: none"><li>Buka Template Daily Report di D:\#DOKUMENTASI\MASTER\TEMPLATE\Daily Report atau buka Daily Report hari sebelumnya di D:\#OPERASIONAL\Tahun\Bulan\Tanggal (exp:D:\#OPERASIONAL\2016\05_Mei\01\Daily Report.doc)</li><li>Save As dengan filename Daily Report.doc dengan tanggal hari yang sesuai di folder tanggal berjalan.</li></ul>
2	<b>Capture Network Traffic Monitoring</b>	<ul style="list-style-type: none"><li>Buka index.htm di Web Mozilla atau IE , pada kolom bar address isi 131.100.55.58/cacti , isi login dan password. Kemudian klik Graph\Reporting\DRC\Utilisasi DRC</li></ul>
3	<b>Capture Juniper EX CORE-DRC CPU Utilization</b>	<p><b>Capture Juniper EXCORE82 DRC A - Master CPU Usage</b></p> <ul style="list-style-type: none"><li>Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DRC\Router DRC, klik EXCORE82 DRC A</li><li>klik Gambar Traffic EXCORE82 DRC A - Master CPU Usage</li><li>klik Gambar Traffic EXCORE82 DRC A ( daily-1 minute Average)- Master CPU Usage</li><li>Copy (CTRL+C)</li><li>Kembali ke Daily Report.doc</li></ul>



DRC/PAN-04-00-00:16.02:02

- Select 'Juniper EXCORE-DRC CPU UTILIZATION' pada Daily Report.doc

- Paste (CTRL+V)

- Kembali ke halaman pertama window  
131.100.55.58/cacti

#### **Capture Juniper EXCORE82 DRC A - Backup CPU Usage**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DR<sub>C</sub>\Router DRC, klik EXCORE82 DRC A

- klik Gambar Traffic EXCORE82 DRC A - Backup CPU Usage

- klik Gambar Traffic EXCORE82 DRC A - Backup CPU Usage ( daily-1minute Average)- Backup CPU Usage

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select 'Juniper EXCORE-DRC CPU UTILIZATION' pada Daily Report.doc

- Paste (CTRL+V)

- Kembali ke halaman pertama window  
131.100.55.58/cacti

#### **Capture Juniper EXCORE82 DRC B - Master CPU Usage**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DR<sub>C</sub>\Router DRC, klik EXCORE82 DRC B

- klik Gambar Traffic EXCORE82 DRC B - Master CPU Usage

- klik Gambar Traffic EXCORE82 DRC B - Master CPU Usage ( daily-1minute Average)- Master CPU Usage

- Copy (CTRL+C)



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		<ul style="list-style-type: none"><li>• Kembali ke Daily Report.doc</li><li>• Select 'Juniper EXCORE-DRC CPU UTILIZATION' pada Daily Report.doc</li><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
		<p style="text-align: center;"><b>Capture Juniper EXCORE82 DRC B - Backup CPU Usage</b></p> <ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DR\Router DRC , klik EX CORE DRC B</li><li>• klik Gambar Traffic EX-CORE DRC B - Backup CPU Usage</li><li>• klik Gambar Traffic EX-CORE DRC B( daily-1 minute Average)- Backup CPU Usage</li><li>• Copy (CTRL+C)</li><li>• Kembali ke Daily Report.doc</li><li>• Select 'Juniper EXCORE-DRC CPU UTILIZATION' pada Daily Report.doc</li><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
4	<p style="text-align: center;"><b>Capture Cisco Catalyst 4503-DRC A CPU UTILIZATION</b></p> <p style="text-align: center;"><b>Capture Cisco Catalyst 4503-DRC CPU UTILIZATION</b></p>	<ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DR\Router DRC , klik CAT4503A DRC</li><li>• klik Gambar TrafficCAT 4503A DRC - CPU Usage</li><li>• klik Gambar Traffic CAT4503A DRC - CPU Usage (daily-1 minute Average)</li><li>• Copy (CTRL+C)</li></ul>



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		<ul style="list-style-type: none"><li>• Kembali ke Daily Report.doc</li><li>• Select 'CISCO CATALYST 4503-DRC CPU UTILIZATION' pada Daily Report.doc</li><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
		<p><b>Capture Cisco Catalyst 4503-DRC B CPU UTILIZATION</b></p>
		<ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC , klik CAT4503B DRC</li><li>• klik Gambar Traffic CAT4503B DRC - CPU Usage</li><li>• klik Gambar Traffic CAT4503B DRC - CPU Usage (daily-1 minute Average)</li><li>• Copy (CTRL+C)</li><li>• Kembali ke Daily Report.doc</li><li>• Select 'CISCO CATALYST 4503-DRC CPU UTILIZATION' pada Daily Report.doc</li><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
5	<p><b>Capture EX22_BCN-DRC Utilization (E34-M10)</b></p> <p><b>EX_22_BCN-DRC Utilization</b></p>	<ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX22_SEC_BCN DRC</li><li>• klik Gambar Traffic EX22_SEC_BCN DRC - CPU Usage</li><li>• klik Gambar Traffic EX22_SEC_BCN DRC - CPU - Traffic - 60.1.2.161 (E34-M10)</li></ul>



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- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select 'EX22\_SEC\_BCN DRC - CPU - Traffic - 60.1.2.161 (E34-M10)' pada daily report.doc

- Paste (CTRL+V)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture EX22\_SEC\_BCN DRC - CPU Utilization (E12-PP7400)**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX22\_SEC\_BCN DRC - CPU

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Router DRC , klik EX22\_SEC\_BCN DRC - CPU

- klik Gambar Traffic BCN DRC - CPU Usage

- klik Gambar Traffic BCN DRC - Trafic - 60.1.2.9 (E12-PP7400)

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ' EX22\_SEC\_BCN DRC - CPU TRAFFIC' Trafic - 60.1.2.9 (E12-PP7400) pada daily report.doc

- Paste (CTRL+V)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture EX22\_SEC\_BCN DRC - CPU Utilization (E31-MGT\_M10)**



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- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX22\_SEC\_BCN DRC - CPU

- klik Gambar Traffic EX22\_SEC\_BCN DRC - CPU Usage

- klik Gambar Traffic EX22\_SEC\_BCN DRC - CPU - Traffic - 60.1.2.21 (E31-MGT\_M10)

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select 'EX22\_SEC\_BCN DRC - CPU - Traffic - 60.1.2.21 (E31-MGT\_M10)' pada daily report.doc

- Paste (CTRL+V)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture EX22\_SEC\_BCN DRC - CPU Utilization (E32-Management)**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX22\_SEC\_BCN DRC - CPU

- klik Gambar Traffic EX22\_SEC\_BCN DRC - CPU Usage

- klik Gambar Traffic EX22\_SEC\_BCN DRC - CPU - Traffic - 115.255.0.1 (E32-Management)

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ' EX22\_SEC\_BCN DRC - CPU TRAFFIC' Trafic - 115.255.0.1(E32-Management) pada daily report.doc

- Paste (CTRL+V)



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		<ul style="list-style-type: none"><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
6	<p><b>Capture Juniper EX 3200 DRC Traffic</b></p>	<p><b>Capture Juniper EX 3200 DRC CPU UTILIZATION</b></p> <ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC</li><li>• klik Gambar Traffic EX32-MIMIX-DRC - CPU Usage</li><li>• klik Gambar Traffic EX32-MIMIX-DRC - CPU Usage (daily-1minute Average)</li><li>• Copy (CTRL+C)</li><li>• Kembali ke Daily Report.doc</li><li>• Select 'EX32-MIMIX-DRC - CPU Usage ' pada Daily Report.doc</li><li>• Paste (CTRL+V)</li></ul> <p>• Kembali ke halaman pertama window 131.100.55.58/cacti</p> <p><b>Capture Juniper EX 3200 CLEAN DRC CPU UTILIZATION</b></p> <ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-CLEAN-DRC</li><li>• klik Gambar Traffic EX32-CLEAN-DRC - CPU Usage</li><li>• klik Gambar Traffic EX32-CLEAN-DRC - CPU Usage (daily-1minute Average)</li><li>• Copy (CTRL+C)</li><li>• Kembali ke Daily Report.doc</li><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>



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Capture Juniper EX 3200 L2VPN DRC
<b>CPU UTILIZATION</b>
<ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik <a href="#">EX32-L2VPN-DRC</a></li></ul>
<ul style="list-style-type: none"><li>• klik Gambar Traffic EX32-L2VPN-DRC - CPU Usage</li></ul>
<ul style="list-style-type: none"><li>• klik Gambar Traffic EX32-L2VPN-DRC - CPU Usage (daily-1minute Average)</li></ul>
<ul style="list-style-type: none"><li>• Copy (CTRL+C)</li></ul>
<ul style="list-style-type: none"><li>• Kembali ke Daily Report.doc</li></ul>
<ul style="list-style-type: none"><li>• Select 'EX22-L2VPN-DRC - CPU Usage' pada Daily Report.doc</li></ul>
<ul style="list-style-type: none"><li>• Paste (CTRL+V)</li></ul>
<ul style="list-style-type: none"><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
<b>Capture MIMIX 60.0.8.5</b>
<ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC</li></ul>
<ul style="list-style-type: none"><li>• klik Gambar Traffic EX32-MIMIX-DRC - Traffic - to_MIMIX_60.0.8.5</li></ul>
<ul style="list-style-type: none"><li>• Copy (CTRL+C)</li></ul>
<ul style="list-style-type: none"><li>• Kembali ke Daily Report.doc</li></ul>
<ul style="list-style-type: none"><li>• Select '1. To MIMIX 60.0.8.5 P/34 pada Daily Report.doc</li></ul>
<ul style="list-style-type: none"><li>• Paste (CTRL+V)</li></ul>
<ul style="list-style-type: none"><li>• Save (CTRL+S)</li></ul>
<ul style="list-style-type: none"><li>• Kembali ke halaman pertama window 131.100.55.58/cac</li></ul>
<b>Capture LAN 1 PCI 1 WAAS DRC05 60.0.4.6 P/12</b>



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- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic Mimix GTI to DRC - LAN1\_WAAS\_5

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select '2. To LAN 1 PCI 1 WAAS DRC05 pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture WAN 1 PCI 1 WAAS DRC05 60.0.4.6 P/13**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic MIMIX GTI to DRC- to\_WAN1\_WAAS\_5

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select '3. To WAN 1 PCI 1 WAAS DRC05 pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture MIMIX 60.0.6.5**



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- Buka Web dengan menggunakan Mozilla atau I kemudian isi *bar address* dengan 131.100.55.58/cacti klik Graph\DR<sub>C</sub>\Router DRC, klik EX32-MIMIX DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic to\_MIMIX\_60.0.6.5 ge-0/0/6

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ‘4. To MIMIX 60.0.6.5 P/6’ pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture LAN 1 PCI 1 WAAS DR<sub>C</sub>05 60.0.4.6 P/4**

- Buka Web dengan menggunakan Mozilla atau I kemudian isi *bar address* dengan 131.100.55.58/cacti klik Graph\DR<sub>C</sub>\Router DRC, klik EX32-MIMIX DRC

- klik Gambar Traffic EX32-MIMIX-DRC – Traffic to\_LAN0\_WAAS\_5

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ‘5. To LAN 0 PCI 1 WAAS DR<sub>C</sub>05’ pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture WAN 1 PCI 1 WAAS DR<sub>C</sub>05 60.0.4.6 P/5**



DRC/PAN-04-00-00:16.02:02

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi *bar address* dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic to\_WAN0\_WAAS\_5

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ‘6. To WAN 0 PCI 1 WAAS DRC05 ‘ pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

### Capture NetApp

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi *bar address* dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic - to\_NetApp\_ge-0/0/30

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ‘7. To NetApp P/30 & P/28 pada Daily Report.doc

- Paste (CTRL+V)

- Kembali ke halaman pertama window 131.100.55.58/cacti

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic - to\_NetApp\_ge-0/0/28

- Copy (CTRL+C)



DRC/PAN-04-00-00:16.02:02

- Kembali ke Daily Report.doc

- Select '7. To NetApp P/30 & P/28 pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture NETAPP/ LAN 1 PCI 2 WAAS DRC04**

##### **60.0.8.7/P.18**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic NetApp - to\_LAN1\_WAAS\_4

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select '8. To LAN 1 PCI 2 WAAS DRC04 60.0.8.7 P/18 pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture NETAPP/ WAN 1 PCI 2 WAAS DRC04**

##### **60.0.8.7/P.19**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic - to\_NetApp\_ge-0/0/30



DRC/PAN-04-00-00:16.02:02

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ‘9. To WAN 1 PCI 2 WAAS DRC04 60.0.8.7 P/19 pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture WEB EBANK/ LAN 1 PCI 1 WAAS DRC04 60.0.8.7 P/Ge-0/1 (SW REP WebEbank-DRC)**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi *bar address* dengan 131.100.55.58/cacti klik Graph\DRC\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic SW REP-WebEbank-DRC - Traffic - Gi0/1

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select ‘10. To LAN 1 PCI 1 WAAS DRC04 60.0.8.7 P/Ge-0/1 (SW REP WebEbank-DRC)’ pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### **Capture WEB EBANK/ WAN 1 PCI 1 WAAS DRC04 60.0.8.7 P/17**

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi *bar address* dengan 131.100.55.58/cacti klik Graph\DRC\Router DRC, klik EX32-MIMIX-DRC



DRC/PAN-04-00-00:16.02:02

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic WebEbank - to\_WAN1\_WAAS\_4

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select '11. To WAN 1 PCI 1 WAAS DRC04 60.0.8.7 P/17' pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### Capture WAY4 & Mainframe

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - ge- 0/0/23

- Copy (CTRL+C)

- Kembali ke Daily Report.doc

- Select '12. To Way4 P/23' pada Daily Report.doc

- Paste (CTRL+V)

- Save (CTRL+S)

- Kembali ke halaman pertama window 131.100.55.58/cacti

#### Capture WAY4/LAN 0 PCI 1 WAAS DRC 04 60.0.8.7/P.24

- Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC

- klik Gambar Traffic EX32-MIMIX-DRC - Traffic



DRC/PAN-04-00-00:16.02:02

		<p>LAN WAY4 - to_LAN0_WAAS_4</p> <ul style="list-style-type: none"><li>• Copy (CTRL+C)</li><li>• Kembali ke Daily Report.doc</li><li>• Select '13. To LAN 0 PCI 1 WAAS DRC04 60.0.8.7 P/24' pada Daily Report.doc</li><li>• Paste (CTRL+V)</li><li>• Save (CTRL+S)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
		<p><b>Capture WAY4/WAN 0 PCI 1 WAAS DRC 04 60.0.8.7/P.25</b></p> <ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik EX32-MIMIX-DRC</li><li>• klik Gambar Traffic EX32-MIMIX-DRC - Traffic WAN WAY4 - to_WAN0_WAAS_4</li><li>• Copy (CTRL+C)</li><li>• Kembali ke Daily Report.doc</li></ul>
		<p>Select '14. To WAN 0 PCI 1 WAAS DRC04 60.0.8.7 P/25 pada Daily Report.doc</p> <ul style="list-style-type: none"><li>• Paste (CTRL+V)</li><li>• Save (CTRL+S)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
7	<p><b>Capture M10 DRC Traffic</b></p>	<p><b>Capture M10i DRC To SUD Telkom - so-1/2/0</b></p> <ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\Router DRC, klik <u>Juniper M10i DRC</u></li><li>• klik Gambar Traffic Juniper M10i DRC - Traffic STM-</li></ul>



DRC/PAN-04-00-00:16.02:02

	1 DRC to SUD Telkom- so-1/2/0
	• Copy (CTRL+C)
	• Kembali ke Daily Report.doc
	• Select ' <b>Juniper M10i DRC - Traffic STM-1 DRC to SUD Telkom- so-1/2/0</b> ' pada Daily Report.doc
	• Paste (CTRL+V)
	• Save (CTRL+S)
	• Kembali ke halaman pertama window 131.100.55.58/cacti
<b>Capture M10i DRC To GTI Icon+ - so-1/2/1</b>	
	• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DR\Router DRC, klik <u>Juniper M10i DRC</u>
	• klik Gambar Juniper M10i DRC - Traffic STM-1 DRC to GTI Icon+ - so-1/2/1
	• Copy (CTRL+C)
	• Kembali ke Daily Report.doc
	• Select ' <b>Juniper M10i DRC - Traffic STM-1 DRC to GTI Icon+ - so-1/2/1</b> ' pada Daily Report.doc
	• Paste (CTRL+V)
	• Save (CTRL+S)
	• Kembali ke halaman pertama window 131.100.55.58/cacti

#### 4.2 Mengisi Ceklist Harian BRI

Pengisian ceklist harian BRI ini dilakukan di akhir shift bertugas, yang per tanggal 1 September 2012, checklist harian sudah langsung dilaksanakan pada portal DRC, dengan alamat url: [126.2.0.250/myportaldrc/](http://126.2.0.250/myportaldrc/)



DRC/PAN-04-00-00:16.02:02

Your Login as : Nugraha|WCS - Mozilla Firefox

File Edit View History Bookmarks Tools Help

You're Login as : Nugraha|WCS

126.2.0.250 >Myportaldrc >Main.php >Module = Home |

Google

TSI CDR  
Bank Rakyat Indonesia

KPI ODR Grafik ACLiebert Grafik LVNDP Grafik KWH

LAPORAN KEGIATAN ODR BULAN AGUSTUS 2012

Update Status : Tanggal 24 Sep 2012

Better using Google Chrome  
chrome

IMAGE  
Nugraha Pratama  
WCS

HOME  
BRI DRC  
CHANGE PASSWORD  
DATA HARDWARE  
DATA SERVER DRC  
LAPORAN BULANAN  
RISALAH RAPAT  
SCHEDULE  
PHONE BOOK  
TASK LIST  
MA WCS  
HOP MA WCS  
LAPORAN BULANAN WCS

1	Total Realisasi Biaya 2012	: Rp 1,137,648,237
2	Total Realisasi Biaya (Khusus Bulan Agustus 2012 saja)	: Rp 139,052,385
3	Total Pendapatan Guest House	: Rp 46,500,726
4	Ratas Pencapaian SLA Current BRINETS (Agustus 2012)	: 114.8%
5	Ratas Pencapaian Backup Before BRINETS (Agustus 2012)	: 100%
6	Ratas Pencapaian Up Time Server (Agustus 2012)	: 100%
7	Total Perangkat Server	: 316
	- Server Intel Blade	: 201
	- Server Intel Rackmounted	: 99
	- Server Intel It Blade	: 0
	- Server Intel It Rackmounted	: 4
	- Server IBM pSeries	: 3
	- Server IBM iSeries	: 1
	- Server IBM zSeries	: 0
	- Server IBM xSeries	: 3
	- Server Lain-lain	: 5
8	Total Server Aplikasi Operasional	: 117

Your Login as : Nugraha|WCS - Mozilla Firefox

File Edit View History Bookmarks Tools Help

You're Login as : Nugraha|WCS

126.2.0.250 >Myportaldrc >Main.php >Module = BRI-CheckList |

Google

TSI CDR  
Bank Rakyat Indonesia

CHECK LIST HARIAN DRC

Print

Tanggal Check: List V.BETA

23 September 2012 (shift 3)  
23 September 2012 (shift 2)  
23 September 2012 (shift 1)  
22 September 2012 (shift 3)  
22 September 2012 (shift 2)  
22 September 2012 (shift 1)  
21 September 2012 (shift 3)  
21 September 2012 (shift 2)

Better using Google Chrome  
chrome

IMAGE  
Nugraha Pratama  
WCS

HOME  
BRI DRC  
CHANGE PASSWORD  
DATA HARDWARE  
DATA SERVER DRC  
LAPORAN BULANAN  
RISALAH RAPAT  
SCHEDULE  
PHONE BOOK  
TASK LIST  
MA WCS  
HOP MA WCS  
LAPORAN BULANAN WCS



DRC/PAN-04-00-00:16.02:02

DAILY CHECKLIST (BETA) - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Activity Check: List MA-WCS - Operational Disaster Center V.100912 BETA SHIFT 1

Tabanan - Thursday, MA-WCS berugas: Robert dan

No.	Kegiatan Harian	Perform By	Schedule	Real Time	Status	Paraf PIC	Paraf BRI
1.	Pengecekan Status Jaringan Komunikasi STM1 5	MA-WCS	07:31:00	<span style="background-color: #FFFFCC;">07:31:00</span> Check		✓	✗
2.	Pengecekan Status Jaringan Komunikasi STM1 6	MA-WCS	08:01:00	<span style="background-color: #FFFFCC;">08:01:00</span> Check		✓	✗
3.	FTP Backup Configuration All Network Switching Device	MA-WCS	09:00:00	<span style="background-color: #FFFFCC;">09:00:00</span> Check		✓	✗
4.	Pengecekan Status Jaringan Komunikasi STM1 7	MA-WCS	10:01:00	<span style="background-color: #FFFFCC;">10:01:00</span> Check		✓	✗
5.	capture All bandwidth WAN compression 2	MA-WCS	10:05:00	<span style="background-color: #FFFFCC;">10:05:00</span> Check		✓	✗
6.	Pengecekan Status Jaringan Komunikasi STM1 8	MA-WCS	12:01:00	<span style="background-color: #FFFFCC;">12:01:00</span> Check		✓	✗
7.	capture All bandwidth WAN compression 3	MA-WCS	13:05:00	<span style="background-color: #FFFFCC;">13:05:00</span> Check		✓	✗
8.	Pengecekan Status Jaringan Komunikasi STM1 10	MA-WCS	14:01:00	<span style="background-color: #FFFFCC;">14:01:00</span> Check		✓	✗
9.	Cek LED Indikator panel depan BCN (Power, Run, Boot, Diag )  Back Panel ( Led Fail in module D1000BT, Fall in module SONET/SDH, Fall in module 10/100 BaseT(X, VCC, 12V1, 12V2 in module SRM6, PSU1 and PSU4 )  3	MA-WCS	14:46:00	<span style="background-color: #FFFFCC;">14:46:00</span> Check		✓	✗
10.		MA-WCS	14:47:00	<span style="background-color: #FFFFCC;">14:47:00</span> Check		✓	✗

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Remarks

#### 4.3 Capture Traffic (RPO)

*Capture traffic* ini dilakukan jika ada permintaan dari pihak BRI-DRC. Berikut contoh hasil *capture traffic* RPO with Compression.

MONITORING TRAFFIC JARINGAN KOMUNIKASI GTI-DRC																					
Tanggal : 04 September 2013				M10i (STM1)																	
MIMIX 60.0.8.5(GT11)		MIMIX 60.0.6.5(GT12)		NettApp				WebBank				Way4									
WAAS DRC05 60.0.4.6	WAAS DRC05 60.0.4.6	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	WAAS DRC04 60.0.8.7	STM1 DC-DRC	STM1 GTI-DRC	TOTAL	WAN						
(WIB)	kbps	(WIB)	kbytes	(WIB)	kbytes	(WIB)	kbytes	(WIB)	kbytes	(WIB)	kbytes	(WIB)	kbps	Mbps	kbps	Mbps					
06:00	1730	1.73	06:00	938.49	0.94	06:00	6080	6.08	06:00	2740	2.74	06:00	21960	21.96	06:00	142990	142.99	7050	7.05	150040	150.04
09:00	12590	12.59	09:00	5490	5.49	09:00	5850	5.85	09:00	50.36	0.05	09:00	30900	30.90	09:00	32450	32.45	101200	101.20	133650	133.65
12:00	10050	10.05	12:00	4440	4.44	12:00	4100	4.10	12:00	53.16	0.05	12:00	21820	21.82	12:00	21890	21.89	92210	92.21	114100	114.10
15:00	8820	8.62	15:00	4120	4.12	15:00	2630	2.63	15:00	102.81	0.10	15:00	19570	19.57	15:00	19310	19.31	98620	98.62	117930	117.93
18:00	2990	2.99	18:00	2440	2.44	18:00	3640	3.64	18:00	51.29	0.05	18:00	16200	16.20	18:00	17270	17.27	88050	88.05	105320	105.32
21:00	1440	1.44	21:00	5720	5.72	21:00	2890	2.89	21:00	37.47	0.04	21:00	11280	11.28	21:00	11420	11.42	15950	15.95	27370	27.37
5:04	973.12	0.97	5:04	19310	19.31	05:04	10320	10.32	05:04	6450	6.45	05:04	26610	26.61	05:04	112740	112.74	20820	20.82	133560	133.56
MIMIX Current																					
		Time		Total WAN		Total STM1															
		06:00		33.45		150.04															
		09:00		54.88		133.65															
		12:00		40.46		114.10															
		15:00		35.04		117.93															
		18:00		25.32		105.32															
		21:00		21.37		27.37															
		05:04		63.66		133.56															



DRC/PAN-04-00-00-16.02:02

		MONITORING TRAFFIC JARINGAN KOMUNIKASI GTI-DRC																																						
MIMIX 60.0.8.5								MIMIX 60.0.6.5								NetApp		VebBank		Vay4 & Mainframe		STM1																		
VAAS DRC05 60.0.4.6				VAAS DRC05 60.0.4.6				VAAS DRC04 60.0.8.7				VAAS DRC04 60.0.8.7				VAAS DRC04 60.0.8.7		VAAS DRC04 60.0.8.7		STM1																				
Time				Bandwidth				Bandwidth				Bandwidth				Bandwidth		Bandwidth		STM1																				
(VIB)		from AS400 MIMIX Ex3200 Port 34 (Kbps)		LAN 1 PC11 Ex3200 Port 12 (Kbps)		VAN 1 PC11 Ex3200 Port 13 (Kbps)		from AS400 MIMIX Ex3200 Port 06 (Kbps)		LAN 0 PC11 Ex3200 Port 04 (Kbps)		VAN 0 PC11 Ex3200 Port 05 (Kbps)		Com pres (x)		from SW HPI NetApp Ex3200 Port 30 & Port 28 (Kbps)		LAN 1 PC12 Ex3200 Port 18 (Kbps)		VAN 1 Catalog Ex3200 Port 19 (Kbps)		Com pres (x)		LAN 1 PC11 Ex3200 Port 17 (Kbps)		VAN 1 Bagstac Ex3200 Port 23 (Kbps)		Com pres (x)		LAN 0 PC11 Ex3200 Port 24 (Kbps)		VAN 0 PC11 Ex3200 Port 25 (Kbps)		Com pres (x)		M10i (STM1 DRC- DC Sudirman)		M10i (STM1 DRC- DC GTI)		Total
0:00	9050	9080	1270	7.15	4340	4340	483.92	8.97	64780	64120	8550	7.53	33.44	39.2	0.85	6700	39750	5780	6.88	15970	34900	50670																		
01:00	324460	324780	23380	11.05	152280	152280	19440	7.83	37150	36780	3610	10.19	33.25	38.64	0.98	88550	115040	45390	2.53	53520	136680	190200																		
02:00	361080	364670	36900	3.88	105780	105640	12440	8.51	77760	76360	12730	6.00	19860	4060	101670	12120	21200	4.48	92370	104850	137820																			
03:00	384400	384100	38420	10.00	112950	112870	47850	2.37	59210	58810	7400	7.92	180310	97890	133	91680	143060	21890	5.07	131820	112150	244070																		
04:00	339620	340310	61730	5.51	986700	98580	19180	5.04	68860	11440	6.02	85970	68860	146380	9650	8.17	134730	103210	31560	4.65	53540	82150	135690																	
05:00	6490	6430	97312	6.61	191200	181230	18130	9.33	67410	66700	10320	6.46	57490	6450	8.31	97370	104050	26610	5.28	112740	20820	133560																		
06:00	1510	13000	1730	7.51	14950	14960	93849	15.82	44360	44170	6080	7.26	23670	2740	8.64	74770	33910	21960	4.28	142390	7050	150040																		
07:00	30180	31180	3810	8.8	33260	33250	2030	16.38	63350	62680	5900	10.62	35.41	4105	0.86	43810	48060	17150	2.80	20940	16090	37030																		
08:00	77870	77850	8850	8.80	72800	72800	4660	15.62	54640	53880	6110	8.79	40.38	46.23	0.87	63690	68470	24320	2.82	29020	97370	126390																		
09:00	105510	105820	12590	8.41	89320	89230	5490	16.25	50020	49360	5850	8.44	44.08	50.36	0.88	76020	82640	30900	2.67	32450	101200	133650																		
10:00	104100	104620	12860	8.14	88820	88820	5500	16.15	42450	42110	4310	9.77	46.53	52.31	0.89	85750	72850	27630	2.53	30040	100880	130890																		
11:00	103860	104500	12890	8.11	90230	30280	5890	15.33	52320	51770	5620	9.21	53.49	59.91	0.89	66160	73940	28780	2.57	28970	102040	131910																		
12:00	82390	82130	10050	8.17	71070	71070	4440	16.01	37560	36830	4100	8.98	47.95	53.16	0.90	45680	71740	21820	3.28	21890	92210	114100																		
13:00	83390	86460	10310	8.33	79080	80040	4870	16.44	32430	32880	3160	10.72	46.53	53.35	0.87	44670	49320	19560	2.52	20060	102090	121760																		
14:00	97210	97190	11450	8.49	87650	87650	5530	15.84	45030	44480	5090	8.74	49.01	55.34	0.89	45710	51300	20640	2.48	24670	103150	127820																		
15:00	75470	75700	8620	8.94	85600	65630	4120	15.33	23900	29530	2830	11.23	75	102.81	0.73	42840	48560	19570	2.48	249	19310	98820	117930																	
16:00	52490	52370	5700	9.19	49390	49710	3210	15.49	39460	37990	3850	9.87	65.55	73.76	0.99	39660	45220	82320	2.48	18720	39430	51650																		
17:00	35310	38470	4230	8.97	45760	45820	3050	15.06	40260	39780	4290	9.27	42.62	48.33	0.99	43430	48510	19730	2.46	23730	93040	167770																		
18:00	26680	26600	2990	8.30	35470	35470	2440	14.54	37040	36590	3640	10.05	44.95	51.23	0.88	36570	40820	16200	2.52	17270	88050	105520																		
19:00	35390	35380	9390	3.77	42280	42370	4980	8.58	43470	35000	4800	7.23	34.85	40.34	0.86	42290	47220	18670	2.40	20060	97010	117070																		
20:00	31140	31060	9220	3.37	39610	39500	4530	8.72	36580	36140	3090	11.70	40.72	46.91	0.87	33790	38360	15620	2.46	16760	93350	110110																		
21:00	11430	11430	11440	7.94	24470	24470	5720	4.28	42810	41790	2890	14.46	32.19	37.47	0.86	22990	28470	11280	2.35	11420	15950	23770																		
22:00	9670	9640	1230	7.84	14190	14190	1200	11.83	29070	38580	3220	11.62	40.58	45.63	0.89	16640	18870	7230	2.57	10040	7830	117870																		
23:00	15370	15850	1540	8.17	7320	7310	917.26	7.37	46740	46250	3930	11.77	32.28	37.05	0.87	9230	51680	7230	7.19	29280	5410	34630																		
05:04	6490	6430	97312	8.11	181200	19310	181230	47.65	16	77.76	76.36	12.73	14	130.31	97.89	9	134730	146.88	45.33	7	142.99	136.68	244.07																	

Berikut adalah langkah-langkah untuk men-capture traffic RPO.

No.	Job	Time	Description of Action
1	Template RPO	Sesuai dengan permintaan pihak BRI-DRC	<ul style="list-style-type: none"> <li>Buka file RPO with Compression Template.xls dari <b>D:\#DOKUMENTASI\MASTER\TEMPLATE\RPO with Traffic Compression</b> atau buka RPO hari sebelumnya di <b>D:\#OPERASIONAL\Tahun\Bulan \Tanggal</b></li> <li>Save As dengan filename (GTI-DRC)RPO with traffic Compression.xls pada hari akan dijalankan nya RPO</li> </ul>
	Capture Network Traffic Monitoring	Setiap jam sekali	<ul style="list-style-type: none"> <li>Buka File RPO yang telah disave</li> <li>Buka sheet Capture_Compression dan isi sesuai Capture Network traffic Monitoring yang dibutuhkan</li> </ul>

			<ul style="list-style-type: none"> <li>Kolom Compress merupakan hasil pembagian dari kolom LAN dibagi kolom WAN</li> </ul>
2	<b>Traffic Mimix 60.0.8.5</b>		<ul style="list-style-type: none"> <li>Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE ,klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic Mimix (IP 60.0.8.5) pada jam sesuai dengan yang akan dimasukan</li> <li>Lihat EX32-MIMIX-DRC - Traffic - to_MIMIX_60.0.8.5 untuk traffic 'Current Outbound'</li> <li>Catat Traffic 'Current Outbound' untuk kolom from AS400 MIMIX Ex3200 Port 34 sesuai dengan jamnya</li> <li>Save</li> </ul>
3	<b>Traffic LAN1 PCI 1 WAAS- DRC05 60.0.4.6</b>		<ul style="list-style-type: none"> <li>Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, , untuk melihat traffic LAN CISCO WAAS 5 Disk (IP 60.0.4.6) pada jam sesuai dengan yang akan dimasukan</li> <li>Lihat EX32-MIMIX-DRC - Traffic Mimix GTI to DRC - LAN1_WAAS_5 untuk traffic 'Current Inbound'</li> <li>Catat Traffic 'Current Inbound' untuk kolom LAN 1 PCI1 EX3200 Port 12 pada kolom yang sesuai dengan jamnya</li> <li>Save</li> </ul>
4	<b>Traffic WAN 1 PCI 1WAAS-5 60.0.4.6</b>		<ul style="list-style-type: none"> <li>Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic WAN CISCO WAAS 5 Disk (IP 60.0.4.6) pada jam sesuai dengan yang akan dimasukan</li> <li>Lihat EX32-MIMIX-DRC - Traffic MIMIX GTI to DRC- to_WAN1_WAAS_5 untuk traffic 'Current Outbound '</li> <li>Catat Trafik 'Current Outbound' untuk kolom WAN 1 PCI 1 EX3200 Port 13 pada kolom yang sesuai dengan jamnya</li> <li>Save</li> </ul>
5	<b>Traffic</b>		<ul style="list-style-type: none"> <li>Buka Cacti 131.100.55.58/cacti pada Website</li> </ul>



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	<b>Mimix 60.0.6.5</b>		<p>Mozilla atau IE, klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic Mimix (IP 60.0.6.5) pada jam sesuai dengan yang akan dimasukan</p> <ul style="list-style-type: none"><li>• Lihat EX32-MIMIX-DRC - Traffic - to_MIMIX_60.0.6.5 ge-0/0/6 untuk traffic 'Current Outbound'</li><li>• Catat Traffic 'Current Outbound' untuk kolom from AS400 MIMIX Ex3200 Port 6 sesuai dengan jamnya</li><li>• Save</li></ul>
6	<b>Traffic LAN 0 PCI 1 WAAS- DRC05 60.0.4.6</b>		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, , untuk melihat traffic LAN CISCO WAAS 5 Disk (IP 60.0.4.6) pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat EX32-MIMIX-DRC - Traffic - to_LAN0_WAAS_5 untuk traffic 'Current Inbound'</li><li>• Catat Traffic 'Current Inbound' untuk kolom LAN 0 PCI1 EX3200 Port 04 pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>
7	<b>Traffic WAN 0 PCI 1 WAAS-5 60.0.4.6</b>		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic WAN CISCO WAAS 5 Disk (IP 60.0.4.6) pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat EX32-MIMIX-DRC - Traffic - to_WAN0_WAAS_5 untuk traffic 'Current Outbound '</li><li>• Catat Trafik 'Current Outbound' untuk kolom WAN 0 PCI 1 EX3200 Port 05 pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>
8	<b>Traffic Mimix 60.0.1.4</b>	Ketika replikasi MIMIX yang	<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE ,klik Graph\Reporting\DRC\Replikasi DRC, untuk</li></ul>



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		digunakan Sudirman - DRC	<p>meliihat traffic Mimix (IP 60.0.1.4) pada jam sesuai dengan yang akan dimasukan</p> <ul style="list-style-type: none"><li>• Lihat EX32-MIMIX-DRC - Traffic - to_MIMIX_60.0.1.4 ge-0/0/2 untuk traffic 'Current Outbound'</li><li>• Catat Traffic 'Current Outbound' untuk kolom 'from AS400 MIMIX Ex3200 Port 02' sesuai dengan jamnya</li><li>• Save</li></ul>
9	<b>Traffic LAN 1 PCI 1 WAAS DRC 01</b>	Ketika replikasi MIMIX yang digunakan Sudirman - DRC	<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE ,klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic LAN CISCO WAAS 1 Disk (IP 60.0.4.7) pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat EX32-MIMIX-DRC - Traffic - to_LAN1_WAAS_1 ge-0/0/0 untuk traffic 'Current Inbound'</li><li>• Catat Traffic 'Current Outbound' untuk kolom 'LAN 1 PCI 1 Ex3200 Port 00' sesuai dengan jamnya</li><li>• Save</li></ul>
10	<b>Traffic WAN 1 PCI 1 WAAS DRC 01</b>	Ketika replikasi MIMIX yang digunakan Sudirman - DRC	<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE ,klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic WAN CISCO WAAS 1 Disk (IP 60.0.4.7)</li><li>• Lihat EX32-MIMIX-DRC - Traffic - to_WAN1_WAAS_1 ge-0/0/1 untuk traffic 'Current Outbound'</li><li>• Catat Traffic 'Current Outbound' untuk kolom 'WAN 1PCI1 Ex3200 Port 01' sesuai dengan jamnya</li><li>• Save</li></ul>
11	<b>Traffic NetApp EX 3200 Port 30 &amp; Port 28</b>		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE ,klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic NetApp pada jam sesuai dengan yang akan dimasukan</li></ul>



			<ul style="list-style-type: none"><li>• Lihat 'EX32-MIMIX-DRC – Traffic – to_NetApp_ge-0/0/30' dan 'EX32-MIMIX-DRC – Traffic – to_NetApp_ge-0/0/28' untuk traffic 'Current Outbound' jumlahkan keduanya</li><li>• Catat Traffic 'Current Outbound' untuk kolom NetApp EX3200 port 30 &amp; 28 pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>
12	<p><b>Traffic</b> <b>NetApp</b> <b>LAN 1 PCI 2</b> <b>EX3200 Port</b> <b>18</b></p>		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic NetApp pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat 'EX32-MIMIX-DRC - Traffic NetApp - to_LAN1_WAAS_4' untuk traffic 'Current Inbound'</li><li>• Catat Traffic 'Current Inbound' untuk kolom 'LAN 1 PCI 2 Ex3200 Port 18' pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>
13	<p><b>Traffic</b> <b>NetApp</b> <b>WAN 1 PCI 2</b> <b>EX3200 Port</b> <b>19</b></p>		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic NetApp pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat 'EX32-MIMIX-DRC - Traffic WAN NetApp-to_WAN1_WAAS_4' untuk traffic 'Current Outbound'</li><li>• Catat Traffic 'Current Outbound' untuk kolom 'WAN 1 PCI 2 Ex3200 Port 19' pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>
14	<p><b>Traffic</b> <b>WebEbank</b> <b>Catalyst 2960</b></p>		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic Web Ebank pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat 'SW REP-WebEbank-DRC - Traffic - Gi0/1' untuk traffic 'Current Inbound'</li></ul>



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	port Gi0/1		<ul style="list-style-type: none"><li>Catat Traffic ‘Current Inbound’ untuk kolom ‘LAN 1 PCI 1 Catalyst 2960 port Gi0/1’ pada kolom yang sesuai dengan jamnya</li><li>Save</li></ul>
15	Traffic WebBank <b>EX 3200</b> port 17		<ul style="list-style-type: none"><li>Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi DRC, untuk melihat traffic Web Ebank pada jam sesuai dengan yang akan dimasukan</li><li>Lihat ‘EX32-MIMIX-DRC - Traffic WebBank - to_WAN1_WAAS_4’ untuk traffic ‘Current Outbound’</li><li>Catat Traffic ‘Current Outbound’ untuk kolom ‘WAN 1 PCI 1 Ex3200 Port 17’ pada kolom yang sesuai dengan jamnya</li><li>Save</li></ul>
16	Traffic Way4 <b>EX 3200</b> Port 38		<ul style="list-style-type: none"><li>Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE, klik Graph\Reporting\DRC\Replikasi DRC untuk melihat traffic Way4 pada jam sesuai dengan yang akan dimasukan</li><li>Lihat ‘EX32-MIMIX-DRC - Traffic - ge-0/0/38’ untuk traffic ‘Current Outbound’</li><li>Catat Traffic ‘Current Outbound’ untuk kolom <b>from BS 5530 Way4 Ex3200 Port 38</b> pada kolom yang sesuai dengan jamnya</li><li>Save</li></ul>
17	Traffic Way4 <b>EX 3200</b> port 24		<ul style="list-style-type: none"><li>Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE, klik Graph\Reporting\DRC\Replikasi DRC untuk melihat traffic Way4 pada jam sesuai dengan yang akan dimasukan</li><li>Lihat ‘EX32-MIMIX-DRC - Traffic LAN WAY4 - to_LAN0_WAAS_4’ untuk traffic ‘Current Inbound’</li><li>Catat Traffic ‘Current Inbound’ untuk kolom ‘LAN 0 PCI 1 Ex3200 Port 24’ pada kolom yang sesuai dengan jamnya</li></ul>

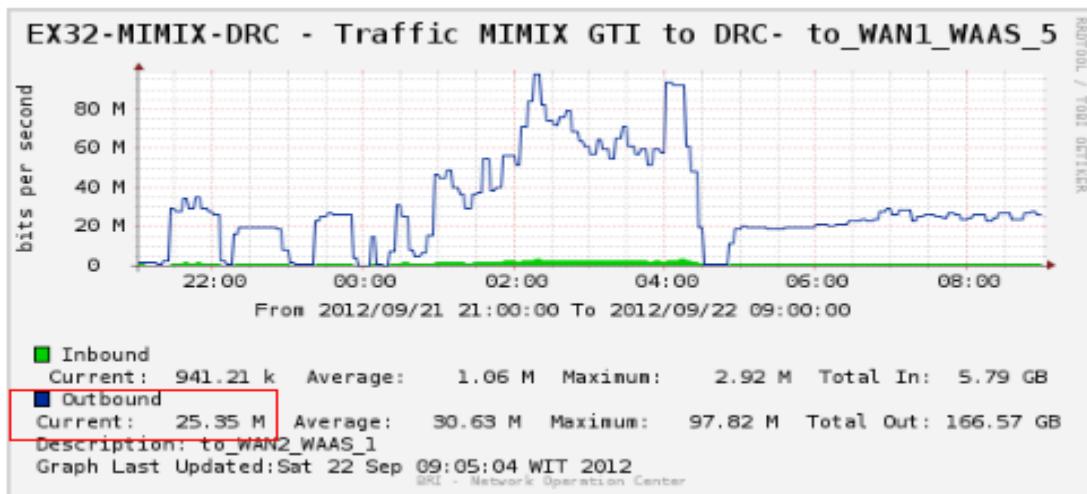


			<ul style="list-style-type: none"><li>• Save</li></ul>
18	Traffic Way4 EX 3200 port 25		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE, klik Graph\Reporting\DRC\Replikasi DRC untuk melihat traffic Way4 pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat 'EX32-MIMIX-DRC - Traffic WAN WAY4 - to_WAN0_WAAS_4' untuk traffic 'Current Outbound'</li><li>• Catat Traffic 'Current Outbound' untuk kolom 'WAN 0 PCI 1 Ex3200 Port 25' pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>
19	Traffic STM1 DRC to SUD		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi untuk melihat traffic STM 1 pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat 'Juniper M10i DRC - Traffic STM-1 DRC to SUD Telkom- so-1/2/0' untuk traffic 'Current Inbound'</li><li>• Catat Traffic 'Current Inbound' untuk kolom 'M10i DRC (STM1 SUDIRMAN-DRC)' pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>
20	Traffic STM1 DRC to GTI		<ul style="list-style-type: none"><li>• Buka Cacti 131.100.55.58/cacti pada Website Mozilla atau IE , klik Graph\Reporting\DRC\Replikasi untuk melihat traffic STM 1 pada jam sesuai dengan yang akan dimasukan</li><li>• Lihat 'Juniper M10i DRC - Traffic STM-1 DRC to GTI Icon+ - so-1/2/1' untuk traffic 'Current Inbound'</li><li>• Catat Traffic 'Current Inbound' untuk kolom 'M10i DRC (STM1 GTI-DRC)' pada kolom yang sesuai dengan jamnya</li><li>• Save</li></ul>

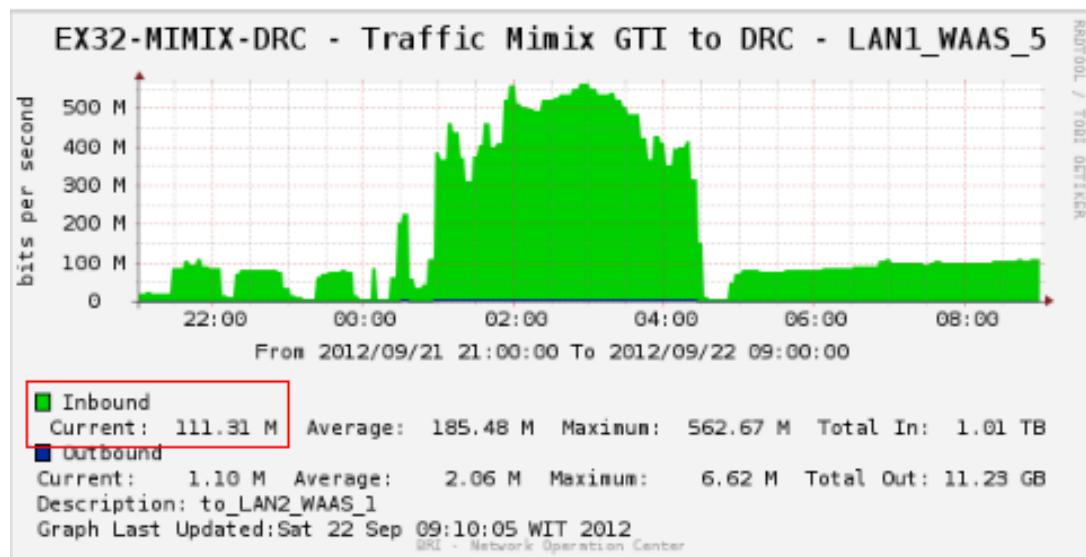
#### 4.4 Kompresi Replikasi

Berikut adalah langkah-langkah untuk menghitung kompresi replikasi untuk mengetahui performa WAAS :

Lihat traffic Outbound dari interface yang mengarah ke interface WAN WAAS, ini adalah traffic hasil kompresi WAAS.



Untuk mengetahui perbandingan kompresi, lihat traffic dari interface yang mengarah ke interface LAN WAAS, lalu dibagi dengan traffic di interface yang mengarah ke interface WAN WAAS.



Dengan membandingkan “traffic LAN (inbound) : traffic WAN (Outbound)” maka akan didapat hasil kompresi untuk replikasi tersebut.

Contoh:

$$\begin{array}{lcl} \text{Traffic LAN (Inbound)} & = 111.31 \text{ M} \\ \text{Traffic WAN (Outbound)} & = 25.35 \text{ M} \end{array}$$

Maka perbandingannya adalah :

$$111.31 \text{ M} : 25.35 \text{ M} = 4.39x$$

Dari perbandingan diatas dapat disimpulkan pada jam 09.00 untuk replikasi MIMIX WAAS melakukan kompresi sebanyak 4.39x

#### 4.5 Preventive Maintenance

Pembuatan laporan PM (*Preventive Maintenance*) ini bertujuan untuk membantu proses pengecekan fisik perangkat secara berkala setiap bulan dimana PM tersebut berisikan tipe perangkat, *serial number*, *OS Version*, *Status Port*, *Routing Table*, serta *SNMP Configuration*. Berikut contoh dari PM tersebut :

Check List Perangkat Core Switch			
Cisco Catalyst 4506 - B			
I. Project Information			
<b>Project Information</b>			
Project Name	Monitoring Perangkat BRI-DRC		
Customer	PT. Bank Rakyat Indonesia		
Date	27-Mar-2015		
Address	Tabanan, Bali		
Phone	0361-819797		
Contact Person	Surya Prianara	HP	081310863195
II. Kondisi HW Sebelumnya			
<b>Device Information</b>			
Type of Devices	Catalyst 4506 E	Location	Rack 27, U#1
Merk	Cisco	Type	Core Switch
Serial Number	FOX1329G5A3	IP Management	172.19.149.2124
Hostname	BRI-DRC-CAT45-B	Temperature	30 degrees Celsius
Firmware Version RE 0	Cisco IOS Software Version 12.2(50)SG2	Remark	
Firmware Version RE 1	Cisco IOS Software Version 12.2(50)SG2		
Power Supply	110VAC Single	240VAC Redundant	OK Pwr Supply Mati Pwr Sply Ok, Fan Problem
III. Hasil Check Perangkat			
<b>Type of Devices</b>	cisco WS-C4506-E (MPC8245)	<b>Location</b>	Rack 27, U#1
Merk	Cisco	Type	Core Switch
Serial Number	FOX1329G5A3	IP Management	172.29.40.80
Hostname	BRI-DRC-CAT45-B	Temperature	30 degrees Celsius
Firmware Version RE 0	Cisco IOS Software Version 12.2(50)SG2	Remark	
Firmware Version RE 1	Cisco IOS Software Version 12.2(50)SG2		



B. Port & VLAN Configuration Status						
No	Port Number	VLAN		IP Address	Status	Destination
		ID	Name			
1	Gi2/1			172.29.47.2/29	Up	Cisco 2960A port 23
2	Gi2/2	9	Vlan-9		Up	EX32L2PVN port 24
3	Gi2/3					
4	Gi2/4	33	VLAN-LEGACY-33	172.18.33.1/24	Up	AS400TBN_172.18.33.10
5	Gi2/5	33	VLAN-LEGACY-33	172.18.33.1/24	Up	AS400TBN_172.18.33.11
6	Gi2/6	35	VLAN-LEGACY-35	172.18.35.1/24	Up	AS400TBN_172.18.35.10
7	Gi2/7	34	Vlan-34	172.18.34.1/24	Down	AS400 IP 172.18.34.10
8	Gi2/8	34	Vlan-34	172.18.34.1/24	Down	AS400 IP 172.18.34.11
9	Gi2/9	35	VLAN-LEGACY-35	172.18.35.1/24	Up	AS400TBN_172.18.35.11
10	Gi2/10	40	Poo_L1	64.0.0.101	Up	Rack IBM Total Storage Tape Controller Frame SMC Switch P.10
		40	Poo_L1			
		50	Poo_L2			
		60	Poo_L3			
		150	VLAN-150			
		151	VLAN-151			
		152	VLAN-152			
		156	VLAN-156			
		161	VLAN-161			
		164	VLAN-164			
		165	VLAN-165			
		3	AS400			
		191	VLAN-191			
		149	VLAN-149			
		11	VLAN_61.12.X			
		10	COM			
		277	VLAN-71-techn			
		252	VLAN-252			
		1337	VLAN-1337			
		68	VLAN_68			
		69	VLAN_69			
		53	VLAN_172.21.53.x			
		553	VLAN-172.19.53.x			
		71	VLAN_70			

C. Tagging			
Vlan Tagging			
No	Tag Name	Port Tag Member	Vlan Members
1	Cadangan to_SW_Rack1_200Server_Port 47	GigabitEthernet2/11	40 50 60 150 151 152 156 161 164 165 3 191 149 11 10 277 252 1337 68 69 53 553 71644 733
2	to_SW2_Rack3_200Server_Port10	GigabitEthernet2/14	40 50 60 150 151 152 156 161 164 165 3 191 149 4 5 14 20 9 10 277 252 1337 1149 220 665
3	to_SW1_Rack5_200Server_Port47	GigabitEthernet2/15	40 50 60 150 151 152 156 161 164 165 3 191 149 20 14 9 11 4 10 252 1337 277 637 644 744 2301
4	to_SW1_Rack2_200Server_Port47	GigabitEthernet2/21	40 50 60 150 151 152 156 161 164 165 3 191 14 5 4 9 11 252 1337 1885 277 149 665 744 2302
5	to_SW1_Rack6_200Server_Port45	GigabitEthernet2/17	40, 50, 60, 150, 151, 152, 156, 161, 164, 165, 3, 191, 149, 20, 11, 10, 9, 277, 252, 56
6	to_SW1_Rack1_200Server_Port47	GigabitEthernet2/18	40, 50, 60, 150, 151, 152, 156, 161, 164, 165, 3, 191, 149, 11, 10, 277, 252, 1337, 68, 69, 53, 553
7	Cisco Catalyst 2950(Sw_HP_13Server)Port 24	GigabitEthernet2/19	152, 149, 50
8	to_SW_Rack2_83Server_Port40	GigabitEthernet2/20	Pool_3, AS400, COM, Pool_1, Pool_2, VLAN-152, VLAN-220, VLAN-227, VLAN-71-techn, VLAN_68, VLAN_69, VLAN_70, VLAN_LPAR_AS400, vlanTrunkPP86, vlan_SNMP,
9	to_SW_Rack1_83Server_Port44	GigabitEthernet2/21	40, 50, 60, 150, 151, 152, 156, 161, 164, 165, 3, 191, 149, 4, 5, 14, 20, 9, 11, 10, 277, 252, 1337, 1139, 53, 527, 927, 932, 933, 553, 2120
10	to_Rak3_83Server_port48	GigabitEthernet2/22	4, 9, 40, 50, 60, 149, 152
11	TO_DIST_SW01_R02_Gi0/0/48	GigabitEthernet2/25	40, 50, 60, 150, 151, 152, 156, 161, 164, 165, 3, 191, 149, 14, 4, 5, 1337
12	TO_DIST_SW02_R06_Gi0/0/48	GigabitEthernet2/26	40, 50, 60, 150, 151, 152, 156, 161, 164, 165, 3, 191, 149, 277, 1337
13	to_encl_24L_rak1_200server_nc3	GigabitEthernet2/27	277, 537
14	Trunk To EX3200 Clean DRC port 0	GigabitEthernet2/44	vlanTrunkPP86, AS400, COM, Pool_1, Pool_2, Pool_3, VLAN_68, VLAN_69, VLAN_70, VLAN_LPAR_AS400, vlan_Default, vlan_Testing, vlan_SNMP, VLAN-71-techn, 36, VLAN-

D. Routing Table		
No	Destination	Next-Hop
1		
2		Dilampirkan
3		

E. NTP Configuration		
No	NTP Server	Time Zone
1	131.100.55.160	GMT+7
2		

F. Syslog Configuration		
No	Syslog Server	Description
1		M... C...J...I...

#### 4.6 Membuat Monthly Report

Berikut adalah langkah-langkah untuk membuat *Monthly Report*.

No.	Job	Description of Action
1	<b>Template Monthly Report</b>	<ul style="list-style-type: none"><li>• Buka Template Monthly Report di D:\MASTER\TEMPLATE\Monthly Report atau buka Monthly Report bulan sebelumnya di E:\#DOKUMENTASI\LAPORAN WCS DRC BULANAN FOR BRI\Tahun\Bulan (exp: E:\#DOKUMENTASI\LAPORAN WCS DRC BULANAN FOR BRI\2013\08. Agustus\WCS Agustus 2013.doc)</li><li>• Save As dengan filename Monthly Reoprt.doc dengan bulan yang sesuai di folder bulan berjalan.</li></ul>
2	<b>Mengisi KPI Performance Report</b>	<ul style="list-style-type: none"><li>• Persentasi kehadiran sesuai SLA</li><li>• Persentasi kehadiran berdasarkan absen = diisi sesuai file “Perhitungan absensi” (E:\#DOKUMENTASI\Absen)</li><li>• Uptime - Plan Downtime dan Uptime - Unplan Downtime = diisi apabila ada downtime, baik plan (direncanakan) ataupun unplan (tidak direncanakan) pada bulan tersebut, perhitungannya ada di file laporan bulanan</li><li>• Jumlah change request = diisi berdasarkan jumlah change request yang ada di bulan tersebut (E:\#DOKUMENTASI\Change request)</li><li>• Jumlah perubahan HOP = diisi berdasarkan change request yang isinya mengacu untuk perubahan HOP, contohnya change request update topologi</li><li>• CPU Utilisasi perangkat = diisi berdasarkan file “UTILISASI Perangkat” (E:\#DOKUMENTASI\LAPORAN TAHUNAN WCS\Tahun)</li></ul>

		<ul style="list-style-type: none"> <li>• Kompresi WAAS = diisi berdasarkan file “Kompresi WAAS” (E:\#DOKUMENTASI\Kompresi WAAS)</li> <li>• Jumlah permasalahan = diisi berdasarkan jumlah email notification di bulan tersebut berdasarkan file “Kumpulan per bulan format email notification trouble beserta no.REG” (E:\#DOKUMENTASI\FORMAT EMAIL NOTIFICATION)</li> <li>• Jumlah kesalahan personil = diisi berdasarkan ada personil yg bermasalah contohnya mendapatkan SP dari pihak BRI pada bulan tersebut</li> <li>• Jumlah turn over personil = diisi berdasarkan jumlah rolling personil, atau penggantian personil pada bulan tersebut</li> <li>• Jumlah pemasangan perangkat = diisi berdasarkan jumlah pemasangan perangkat baru di drc pada bulan tersebut</li> <li>• Jumlah pelepasan perangkat = diisi berdasarkan jumlah pelepasan perangkat di drc pada bulan tersebut</li> </ul>
3	<p><b>Capture Traffic Utilization M10i SUDIRMAN Sudirman (STM1 SUDIRMAN-DRC)</b></p> <p><b>Capture Traffic Utilization M10i SUDIRMAN Sudirman (STM1 SUDIRMAN-DRC)</b></p> <ul style="list-style-type: none"> <li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\SUDIRMAN\Router SUDIRMAN , klik Juniper M10i SUDIRMAN</li> <li>• klik Gambar Juniper M10i SUDIRMAN – Traffic – STM-1 1/2/1 – TO – DRC</li> <li>• klik Gambar Juniper M10i SUDIRMAN – Traffic – STM-1 1/2/1 – TO – DRC (Monthly – 2 Hour Average)</li> <li>• Copy (CTRL+C)</li> <li>• Kembali ke Monthly Report.doc</li> <li>• Select ‘Traffic Utilization M10i SUDIRMAN Sudirman (STM1 SUDIRMAN-DRC)’ pada Monthly Report.doc</li> </ul>	



	<ul style="list-style-type: none"><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
	<b>Capture Traffic Utilization M10i DRC (STM1 DRC-SUDIRMAN)</b>
	<ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DRC\Router DRC , klik Juniper M10i DRC</li></ul>
	<ul style="list-style-type: none"><li>• Klik Gambar Juniper M10i DRC – Traffic STM-1 DRC to SUD Telkom - so-1/2/0</li></ul>
	<ul style="list-style-type: none"><li>• klik Gambar Juniper M10i DRC – Traffic STM-1 DRC to SUD so-1/2/0 (Monthly - 2 Hour Average)</li></ul>
	<ul style="list-style-type: none"><li>• Copy (CTRL+C)</li></ul>
	<ul style="list-style-type: none"><li>• Kembali ke Monthly Report.doc</li></ul>
	<ul style="list-style-type: none"><li>• Select 'Traffic Utilization M10i SUDIRMAN Sudirman (STM1 DRC-SUDIRMAN)' pada Monthly Report.doc</li></ul>
	<ul style="list-style-type: none"><li>• Paste (CTRL+V)</li></ul>
	<ul style="list-style-type: none"><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
	<b>Capture Traffic Utilization M10i SUDIRMAN GTI (STM1 GTI-DRC)</b>
	<ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\SUDIRMAN\Router GTI Ragunan, klik Juniper M10i GTI</li></ul>
	<ul style="list-style-type: none"><li>• Klik Gambar Juniper M10i GTI – Traffic - so-0/3/0</li></ul>
	<ul style="list-style-type: none"><li>• klik Gambar Juniper M10i GTI – Traffic - so-0/3/0 (Monthly - 2 Hour Average)</li></ul>
	<ul style="list-style-type: none"><li>• Copy (CTRL+C)</li></ul>
	<ul style="list-style-type: none"><li>• Kembali ke Monthly Report.doc</li></ul>
	<ul style="list-style-type: none"><li>• Select 'Traffic Utilization in Juniper M10i SUDIRMAN</li></ul>



		<p>GTI (STM1 GTI-DRC)' pada Monthly Report.doc</p> <ul style="list-style-type: none"><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul> <p><b>Capture Traffic Utilization M10i DRC (STM1 DRC-GTI)</b></p> <ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DRC\Router DRC, klik Juniper M10i DRC</li><li>• Klik Gambar Juniper M10i DRC – Traffic STM-1 DRC to GTI Icon+ - so-1/2/1</li><li>• klik Gambar Juniper M10i DRC – Traffic STM-1 DRC to GTI Icon+ - so-1/2/1 (Monthly - 2 Hour Average)</li><li>• Copy (CTRL+C)</li><li>• Kembali ke Monthly Report.doc</li><li>• Select ‘Traffic Utilization in Juniper M10i DRC (STM1 DRC-GTI)’ pada Monthly Report.doc</li><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
4	<p><b>Capture Traffic Utilization EX22-BCN DRC</b></p>	<p><b>Capture EX22_BCN-DRC Utilization (E34-M10)</b></p> <ul style="list-style-type: none"><li>• Buka Web dengan menggunakan Mozilla atau IE kemudian isi bar address dengan 131.100.55.58/cacti klik Graph\DRC\Router DRC, klik EX22_BCN DRC</li><li>• klik Gambar Traffic EX22_BCN DRC - CPU Usage</li><li>• klik Gambar Traffic EX22_BCN DRC - Traffic - 60.1.2.161 (E34-M10) (Monthly -2 Hour Average)</li><li>• Copy (CTRL+C)</li><li>• Kembali ke Monthly Report.doc</li><li>• Select ‘Traffic Utilization EX22_BCN DRC’ pada Monthly Report.doc</li></ul>



		<ul style="list-style-type: none"><li>• Paste (CTRL+V)</li><li>• Kembali ke halaman pertama window 131.100.55.58/cacti</li></ul>
5	<b>Advance Replacement</b>	Diisi jika ada Pengerjaan Maintenance Hardware dalam bulan berjalan.
6	<b>Lampiran</b>	<p><b>Daftar Absensi Personel MA-WCS</b> Daftar absen semua personil WCS</p> <p><b>Daftar Lampiran Change Request</b> Dokumen yang menerangkan bahwa ada change request dalam bulan berjalan.</p> <p><b>Log Email Notifikasi</b> Dokumen yang menjelaskan secara detail kronologis terjadinya suatu masalah sampai selesainya suatu masalah tersebut.</p>

#### 4.7 Cara Melakukan Ftp Backup Configuration

*FTP Backup configuration* dilakukan setiap hari pada pukul 08:00 wita. Data hasil *capture* konfigurasi perangkat dengan menggunakan telnet, ssh atau serial, khusus perangkat WCS. Save file dalam bentuk .txt ( notepad ) dan file bentuk .txt diformat menjadi bentuk .tar ( winzip ). Dan data tersebut disimpan dalam folder D:\#Operasional\Tahun\Bulan\Tanggal\Backup Config Network

Untuk proses *FTP Backup Configuration* ini dilakukan dengan dua cara, yaitu yang pertama dilakukan dengan cara FTP ke server dan yang kedua mengupload folder hasil capture configuration perangkat ke dalam folder sharing di \\126.2.0.197\MA\_Network\Tahun\Bulan\Tanggal.

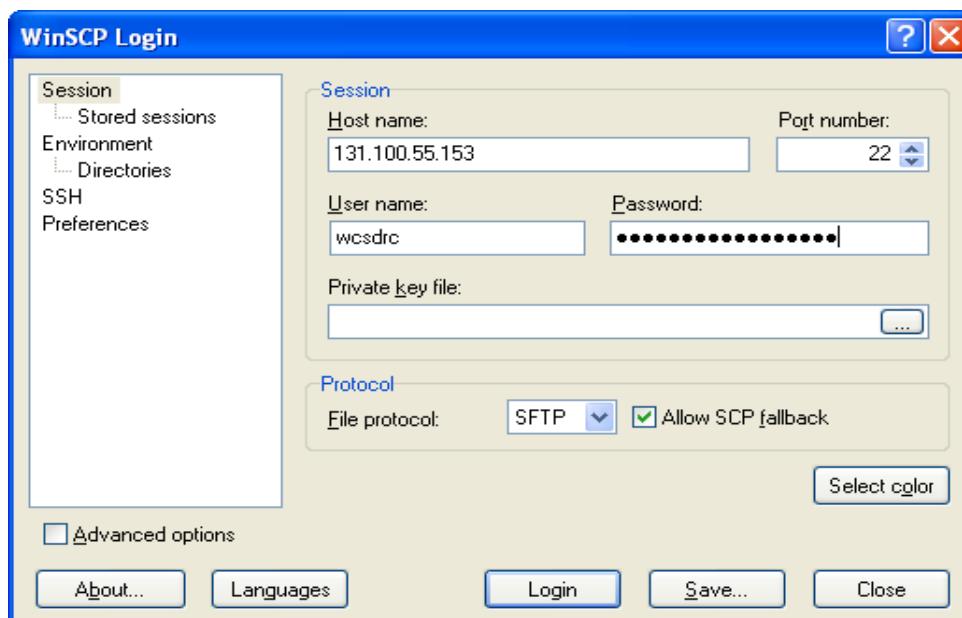
Cara pertama melakukan *FTP Backup Configuration* :

1. Buka aplikasi WinSCP

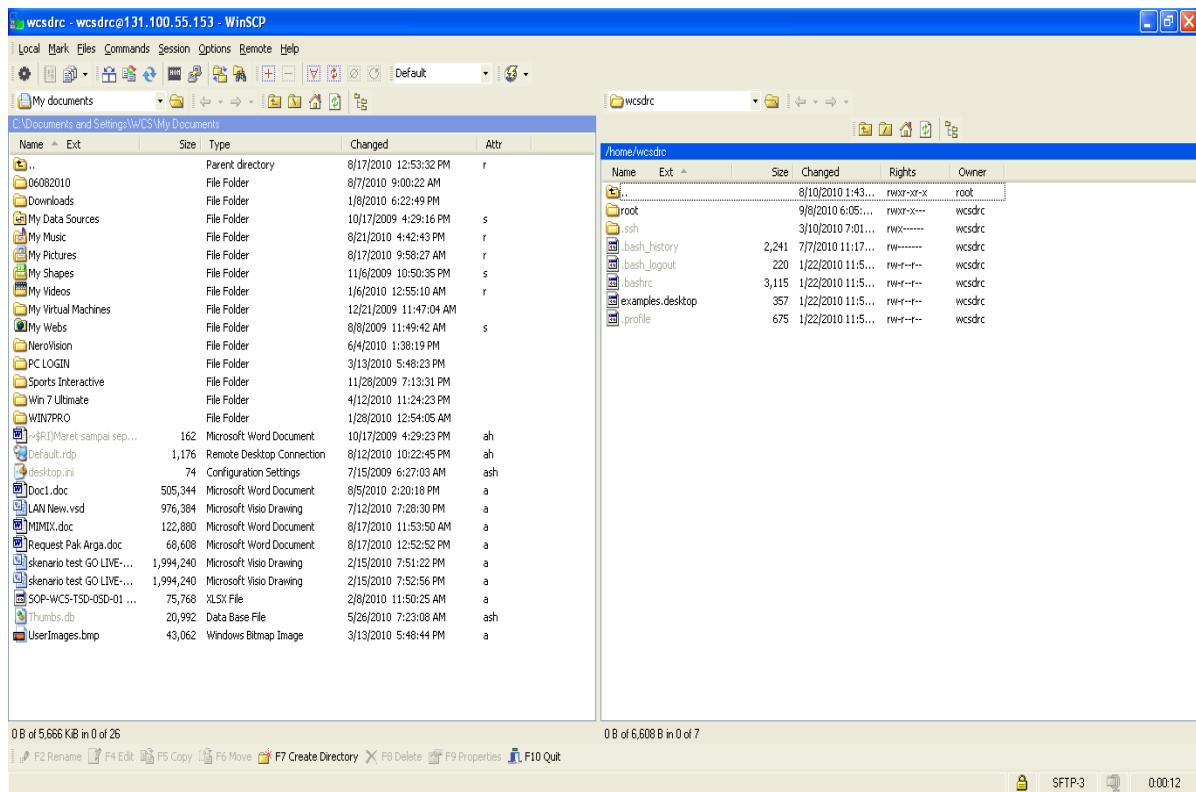
Dapat dibuka dengan cara klik START → All Program → WinSCP Kemudian isi Host name , user name dan passwordnya , klik Login



DRC/PAN-04-00-00:16.02:02



## 2. Setelah login maka akan menampilkan layout seperti dibawah ini



Kemudian untuk kolom kiri merupakan kolom daerah PC WCS DRC dan kolom kanan daerah FTP server, untuk kolom PC WCS DRC masuk kedalam drive D:\Data



DRC/PAN-04-00-00:16.02:02

The screenshot shows a WinSCP session window titled "D:\ - wcsdrc@131.100.55.153 - WinSCP". The left pane displays the local directory structure on drive D:, while the right pane shows the remote directory structure at "/home/wcsdrc/root/2012". Both panes show a list of files and folders with columns for Name, Ext, Size, Type, Changed, Attr, and Rights. The "Attrs" column in the local pane indicates file attributes like "sh" (sticky bit). The "Rights" column in the remote pane shows permissions like "rwxr-xr-x". The bottom status bar indicates "0 B of 8,126 KB in 0 of 28" for the local transfer and "0 B of 0 B in 0 of 13" for the remote transfer.

### 3. Klik folder D:\#Operasional\2012\05\_Mei\24\Backup Config Network

This screenshot is identical to the one above, showing a WinSCP session window with the same local and remote directory structures. The left pane shows the local drive D: with various files and folders, and the right pane shows the remote directory "/home/wcsdrc/root/2012". The status bar at the bottom indicates "0 B of 8,126 KB in 0 of 28" for the local transfer and "0 B of 0 B in 0 of 13" for the remote transfer.



DRC/PAN-04-00-00:16.02:02

Data Terupdate WCS - wcsdrc@131.100.55.153 - WinSCP

Local Mark Files Commands Session Options Remote Help

D:\Data

D:\Data Terupdate WCS

Name	Ext	Size	Type	Changed	Attr
..			Parent directory	5/22/2012 ...	
#DOKUMENTASI			File Folder	5/22/2012 ...	r
Crew WCS DRC			File Folder	5/22/2012 ...	r
Dokumentasi BRI-DRC			File Folder	5/22/2012 ...	r
Operasional			File Folder	5/24/2012 ...	r
131.100.55.224.iaf		698	IAF File	5/16/2012 ...	a

/home/wcsdrc/tool/2012

Name	Ext	Size	Changed	Rights	Owner
..			4/25/2012 4:21...	rw-rw-rwx	wcsdrc
01 Januari 2012			1/31/2012 7:25...	rw-r-xr-x	wcsdrc
02 Februari 2012			2/29/2012 8:11...	rw-r-xr-x	wcsdrc
03 Maret 2012			3/31/2012 10:0...	rw-r-xr-x	wcsdrc
04 April 2012			4/30/2012 2:18...	rw-r-xr-x	wcsdrc
05 Mei 2012			5/24/2012 7:38...	rw-r-xr-x	wcsdrc
06 Juni 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
07 Juli 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
08 Agustus 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
09 September 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
10 Oktober 2012			1/2/2012 7:20...	rw-r-xr-x	wcsdrc
11 November 2012			1/2/2012 7:20...	rw-r-xr-x	wcsdrc
12 Desember 2012			1/2/2012 7:20...	rw-r-xr-x	wcsdrc
ARCHIVE			1/2/2012 7:24...	rw-r-xr-x	wcsdrc

0 B of 698 B in 0 of 5

F2 Rename F4 Edit F5 Copy F6 Move F7 Create Directory F8 Delete F9 Properties F10 Quit

Operation Source Destination Transferred Time/Speed Progress

SFTP-3 0:07:15

Data Terupdate WCS - wcsdrc@131.100.55.153 - WinSCP

Local Mark Files Commands Session Options Remote Help

D:\Data

D:\Data Terupdate WCS\Operasional

Name	Ext	Size	Type	Changed	Attr
..			Parent directory	5/24/2012 ...	
2012			File Folder	5/16/2012 ...	
Report End Of Year 2012			File Folder	5/24/2012 ...	
Software Operasional			File Folder	5/22/2012 ...	

/home/wcsdrc/tool/2012

Name	Ext	Size	Changed	Rights	Owner
..			4/25/2012 4:21...	rw-rw-rwx	wcsdrc
01 Januari 2012			1/31/2012 7:25...	rw-r-xr-x	wcsdrc
02 Februari 2012			2/29/2012 8:11...	rw-r-xr-x	wcsdrc
03 Maret 2012			3/31/2012 10:0...	rw-r-xr-x	wcsdrc
04 April 2012			4/30/2012 2:18...	rw-r-xr-x	wcsdrc
05 Mei 2012			5/24/2012 7:38...	rw-r-xr-x	wcsdrc
06 Juni 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
07 Juli 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
08 Agustus 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
09 September 2012			1/2/2012 7:19...	rw-r-xr-x	wcsdrc
10 Oktober 2012			1/2/2012 7:20...	rw-r-xr-x	wcsdrc
11 November 2012			1/2/2012 7:20...	rw-r-xr-x	wcsdrc
12 Desember 2012			1/2/2012 7:20...	rw-r-xr-x	wcsdrc
ARCHIVE			1/2/2012 7:24...	rw-r-xr-x	wcsdrc

0 B of 0 B in 1 of 3

F2 Rename F4 Edit F5 Copy F6 Move F7 Create Directory F8 Delete F9 Properties F10 Quit

Operation Source Destination Transferred Time/Speed Progress

SFTP-3 0:08:09



DRC/PAN-04-00-00:16.02:02

2012 - wcsdrce@131.100.55.153 - WinSCP

Local Mark Files Commands Session Options Remote Help

D:\Data Terupdate WCSOperational\2012

Name	Ext	Type	Size	Changed	Attr
..		Parent directory		5/16/2012 ...	
05_Mei		File Folder		5/16/2012 ...	
06_Juni		File Folder		5/16/2012 ...	

0 B of 0 B in 1 of 2

F2 Rename F4 Edit F5 Copy F6 Move F7 Create Directory F8 Delete F9 Properties F10 Quit

Operation Source Destination Transferred Time/Speed Progress

/home/wcsdrce/root/2012

Name	Ext	Type	Size	Changed	Rights	Owner
..		Parent directory		4/25/2012 4:21...	rwxrwxrwx	wcsdrce
01 Januari 2012		File Folder		1/31/2012 7:25...	rwxr-xr-x	wcsdrce
02 Februari 2012		File Folder		2/29/2012 8:11...	rwxr-xr-x	wcsdrce
03 Maret 2012		File Folder		3/31/2012 10:0...	rwxr-xr-x	wcsdrce
04 April 2012		File Folder		4/30/2012 2:18...	rwxr-xr-x	wcsdrce
05 Mei 2012		File Folder		5/24/2012 7:38...	rwxr-xr-x	wcsdrce
06 Juni 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
07 Juli 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
08 Agustus 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
09 September 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
10 Oktober 2012		File Folder		1/2/2012 7:20...	rwxr-xr-x	wcsdrce
11 November 2012		File Folder		1/2/2012 7:20...	rwxr-xr-x	wcsdrce
12 Desember 2012		File Folder		1/2/2012 7:20...	rwxr-xr-x	wcsdrce
ARCHIVE		File Folder		1/2/2012 7:24...	rwxr-xr-x	wcsdrce

0 B of 0 B in 0 of 13

SFTP-3 0:09:18

24 - wcsdrce@131.100.55.153 - WinSCP

Local Mark Files Commands Session Options Remote Help

D:\Data Terupdate WCSOperational\2012\05\_Mei\24

Name	Ext	Type	Size	Changed	Attr
..		Parent directory		5/24/2012 ...	
Backup Config Network		File Folder		5/24/2012 ...	
shift 1		File Folder		5/23/2012 ...	
shift 2		File Folder		5/23/2012 ...	
shift 3		File Folder		5/23/2012 ...	
(GTI-DRC) RPO DC with traffic Compression 240...	.xls	Microsoft Excel ...	57,344	5/24/2012 ...	a
~lock_(GTI-DRC) RPO DC with traffic Compress...	.xlst	File	140	5/24/2012 ...	ah

0 B of 57,484 B in 1 of 6

F2 Rename F4 Edit F5 Copy F6 Move F7 Create Directory F8 Delete F9 Properties F10 Quit

Operation Source Destination Transferred Time/Speed Progress

/home/wcsdrce/root/2012

Name	Ext	Type	Size	Changed	Rights	Owner
..		Parent directory		4/25/2012 4:21...	rwxrwxrwx	wcsdrce
01 Januari 2012		File Folder		1/31/2012 7:25...	rwxr-xr-x	wcsdrce
02 Februari 2012		File Folder		2/29/2012 8:11...	rwxr-xr-x	wcsdrce
03 Maret 2012		File Folder		3/31/2012 10:0...	rwxr-xr-x	wcsdrce
04 April 2012		File Folder		4/30/2012 2:18...	rwxr-xr-x	wcsdrce
05 Mei 2012		File Folder		5/24/2012 7:38...	rwxr-xr-x	wcsdrce
06 Juni 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
07 Juli 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
08 Agustus 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
09 September 2012		File Folder		1/2/2012 7:19...	rwxr-xr-x	wcsdrce
10 Oktober 2012		File Folder		1/2/2012 7:20...	rwxr-xr-x	wcsdrce
11 November 2012		File Folder		1/2/2012 7:20...	rwxr-xr-x	wcsdrce
12 Desember 2012		File Folder		1/2/2012 7:20...	rwxr-xr-x	wcsdrce
ARCHIVE		File Folder		1/2/2012 7:24...	rwxr-xr-x	wcsdrce

0 B of 0 B in 0 of 13

SFTP-3 0:09:51



DRC/PAN-04-00-00:16.02:02

#### 4. Untuk kolom FTP Server klik folder root → ARCHIVE → bulan → tanggal

The screenshot shows the WinSCP interface with two panes. The left pane displays files in the local directory E:\DATA, while the right pane shows files in the remote directory /home/wcsdrc. In the right pane, the 'root' directory is selected, and its contents are listed in a table:

Name	Ext	Size	Type	Changed	Attr	Rights	Owner
..			Parent directory	9/10/2010 5:43:31 AM			
BCN.tar		15,872	WinRAR archive	9/10/2010 5:39:36 AM	a		
Cat 4500 A.tar		7,168	WinRAR archive	9/10/2010 5:39:55 AM	a		
Cat 4500 B.tar		7,168	WinRAR archive	9/10/2010 5:40:14 AM	a		
EX 8200 A.tar		15,872	WinRAR archive	9/10/2010 5:37:41 AM	a		
EX 8200 B.tar		15,360	WinRAR archive	9/10/2010 5:42:47 AM	a		
EX3200IMIX.tar		18,944	WinRAR archive	9/10/2010 5:40:39 AM	a		
Jseries.tar		30,720	WinRAR archive	9/10/2010 5:41:10 AM	a		
M10.tar		18,432	WinRAR archive	9/10/2010 5:41:29 AM	a		
PP8600.tar		17,408	WinRAR archive	9/10/2010 5:41:51 AM	a		

The screenshot shows the WinSCP interface with two panes. The left pane displays files in the local directory E:\DATA, while the right pane shows files in the remote directory /home/wcsdrc/root. In the right pane, the 'ARCHIVE' directory is selected, and its contents are listed in a table:

Name	Ext	Size	Type	Changed	Attr	Rights	Owner
..			Parent directory	9/10/2010 5:43:31 AM			
BCN		15,872	WinRAR archive	9/10/2010 5:39:36 AM	a		
Cat 4500 A		7,168	WinRAR archive	9/10/2010 5:39:55 AM	a		
Cat 4500 B		7,168	WinRAR archive	9/10/2010 5:40:14 AM	a		
EX 8200 A		15,872	WinRAR archive	9/10/2010 5:37:41 AM	a		
EX 8200 B		15,360	WinRAR archive	9/10/2010 5:42:47 AM	a		
EX3200IMIX		18,944	WinRAR archive	9/10/2010 5:40:39 AM	a		
Jseries		30,720	WinRAR archive	9/10/2010 5:41:10 AM	a		
M10		18,432	WinRAR archive	9/10/2010 5:41:29 AM	a		
PP8600		17,408	WinRAR archive	9/10/2010 5:41:51 AM	a		



DRC/PAN-04-00-00:16.02:02

The screenshot shows a WinSCP session window with two panes. The left pane displays files from a local drive (E:\) and the right pane displays files from a remote server. Both panes show a list of tar archive files.

**Local (Left Pane):**

Name	Ext	Type	Size	Changed	Attr
..		Parent directory		9/10/2010 5:43:31 AM	
BCN.tar	.tar	WinRAR archive	15,872	9/10/2010 5:39:36 AM	a
Cat 4500 A.tar	.tar	WinRAR archive	7,168	9/10/2010 5:39:55 AM	a
Cat 4500 B.tar	.tar	WinRAR archive	7,168	9/10/2010 5:40:14 AM	a
EX 8200 A.tar	.tar	WinRAR archive	15,872	9/10/2010 5:37:41 AM	a
EX 8200 B.tar	.tar	WinRAR archive	15,360	9/10/2010 5:42:47 AM	a
EX3200MMIX.tar	.tar	WinRAR archive	18,944	9/10/2010 5:40:39 AM	a
Jseries.tar	.tar	WinRAR archive	30,720	9/10/2010 5:41:10 AM	a
M10.tar	.tar	WinRAR archive	18,432	9/10/2010 5:41:29 AM	a
PP8600.tar	.tar	WinRAR archive	17,408	9/10/2010 5:41:51 AM	a

**Remote (Right Pane):**

Name	Ext	Type	Size	Changed	Rights	Owner
..		Parent directory		9/8/2010 6:05...	rwxr-x---	wcsdrc
07 - Juli 2010		Directory		8/4/2010 9:34...	rwxr-xr-x	wcsdrc
08 - Agustus 2010		Directory		8/17/2010 8:21...	rwxr-xr-x	wcsdrc
09 - September 2010		Directory		9/9/2010 8:33...	rwxr-xr-x	wcsdrc

**Bottom Status Bar:**

0 B of 143 KB in 0 of 9      0 B of 0 B in 1 of 3      SFTP-3      0:05:04

**Taskbar:**

start    3 Micro...    1 DC - Outl...    2 Micro...    Notepad    Graphs >...    Tera Te...    Traffic Anal...    Backup Con...    ARCHIVE - ...    8:29 AM

**Second Session (Bottom):**

The second session shows a similar layout to the first, with two panes displaying file lists. The left pane shows local files and the right pane shows remote files. The taskbar and status bar are also present at the bottom.

**Local (Left Pane):**

Name	Ext	Type	Size	Changed	Attr
..		Parent directory		9/10/2010 5:43:31 AM	
BCN.tar	.tar	WinRAR archive	15,872	9/10/2010 5:39:36 AM	a
Cat 4500 A.tar	.tar	WinRAR archive	7,168	9/10/2010 5:39:55 AM	a
Cat 4500 B.tar	.tar	WinRAR archive	7,168	9/10/2010 5:40:14 AM	a
EX 8200 A.tar	.tar	WinRAR archive	15,872	9/10/2010 5:37:41 AM	a
EX 8200 B.tar	.tar	WinRAR archive	15,360	9/10/2010 5:42:47 AM	a
EX3200MMIX.tar	.tar	WinRAR archive	18,944	9/10/2010 5:40:39 AM	a
Jseries.tar	.tar	WinRAR archive	30,720	9/10/2010 5:41:10 AM	a
M10.tar	.tar	WinRAR archive	18,432	9/10/2010 5:41:29 AM	a
PP8600.tar	.tar	WinRAR archive	17,408	9/10/2010 5:41:51 AM	a

**Remote (Right Pane):**

Name	Ext	Type	Size	Changed	Rights	Owner
01092010		File		9/1/2010 9:40...	rwxr-x---	wcsdrc
02092010		File		9/4/2010 12:26...	rwxr-x---	wcsdrc
03092010		File		9/4/2010 12:26...	rwxr-x---	wcsdrc
04092010		File		9/5/2010 12:00...	rwxr-x---	wcsdrc
05092010		File		9/5/2010 11:31...	rwxr-x---	wcsdrc
06092010		File		9/6/2010 9:39...	rwxr-x---	wcsdrc
07092010		File		9/7/2010 8:45...	rwxr-x---	wcsdrc
08092010		File		9/8/2010 12:38...	rwxr-x---	wcsdrc
09092010		File		9/9/2010 8:32...	rwxr-x---	wcsdrc
10092010		File		9/1/2010 9:46...	rwxr-x---	wcsdrc
11092010		File		9/9/2010 8:32...	rwxr-xr-x	wcsdrc
12092010		File		9/9/2010 8:33...	rwxr-xr-x	wcsdrc
13092010		File		9/9/2010 8:33...	rwxr-xr-x	wcsdrc
14092010		File		9/9/2010 8:33...	rwxr-xr-x	wcsdrc
15092010		File		9/9/2010 8:33...	rwxr-xr-x	wcsdrc

**Bottom Status Bar:**

0 B of 143 KB in 0 of 9      0 B of 0 B in 1 of 15      SFTP-3      0:05:15

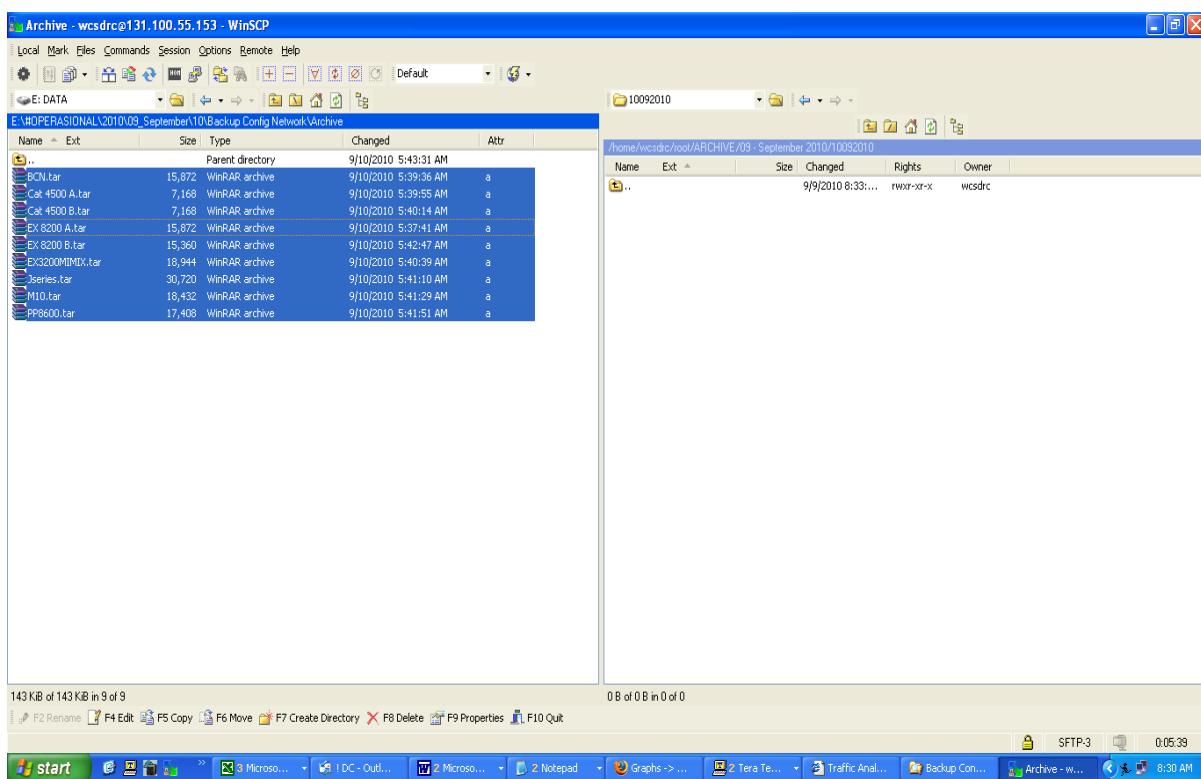
**Taskbar:**

start    3 Micro...    1 DC - Outl...    2 Micro...    Notepad    Graphs >...    Tera Te...    Traffic Anal...    Backup Con...    09 - Septe...    8:29 AM

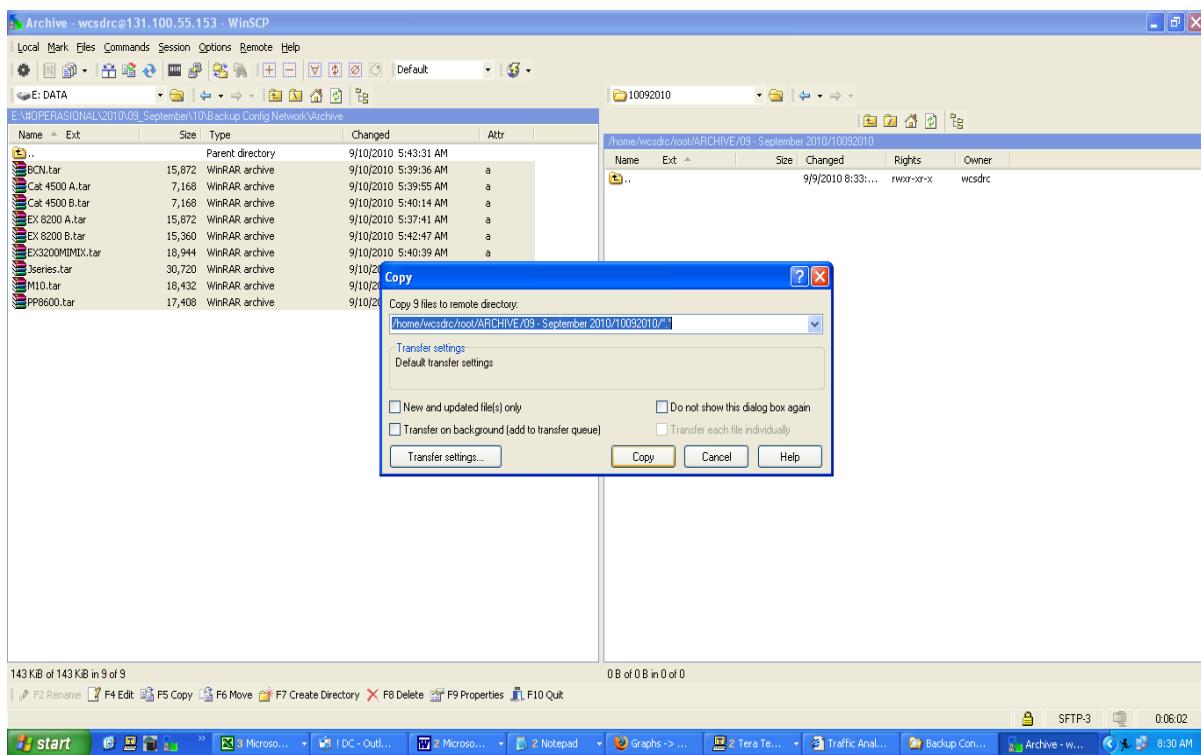
5. Untuk kolom daerah PC WCS DRC dalam folder **archive**, block semua file format .tar



DRC/PAN-04-00-00:16.02:02

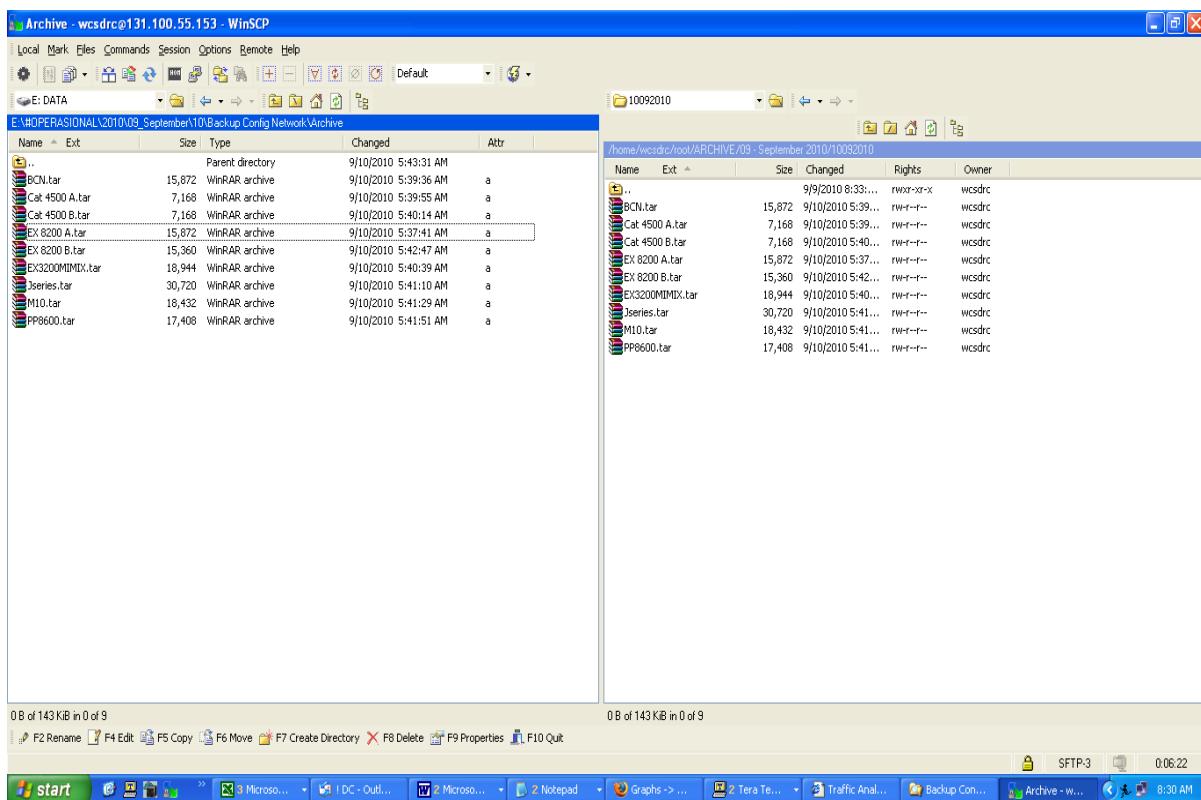


## 6. Kemudian drag file tersebut ke kolom daerah FTP Server

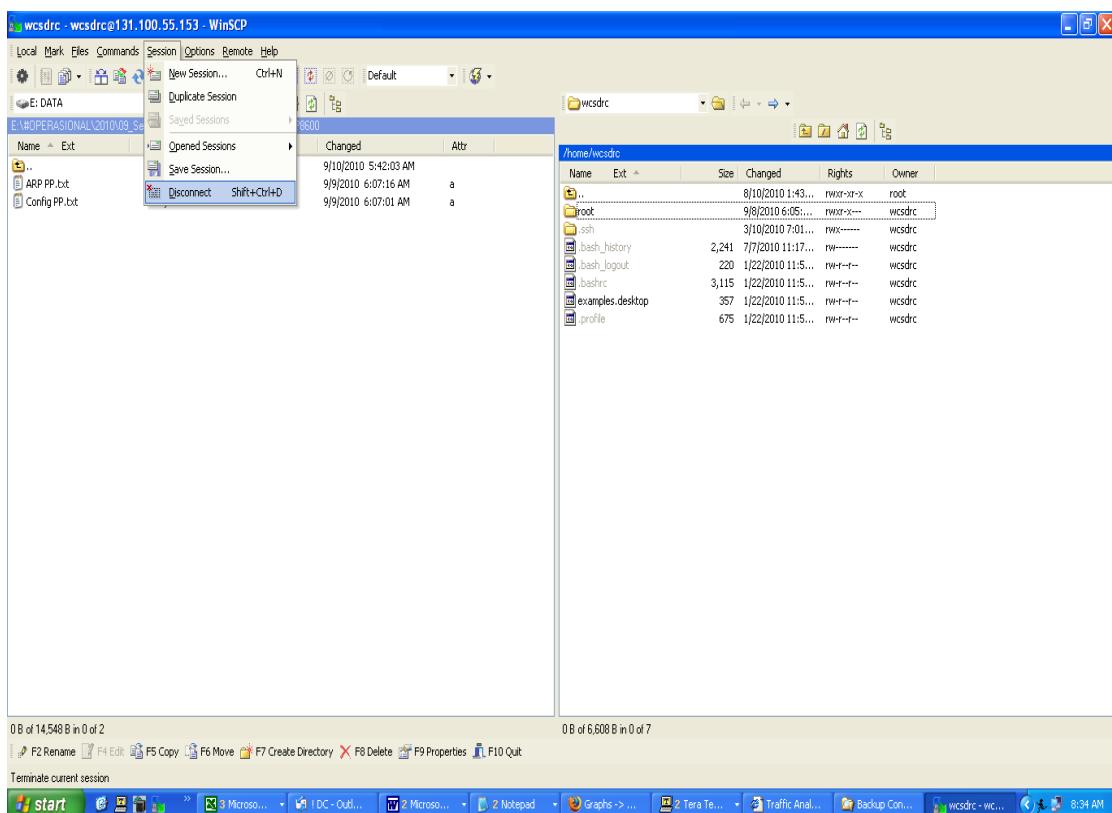




DRC/PAN-04-00-00:16.02:02



## 7. Setelah selesai melakukan FTP, close aplikasi WinSCP

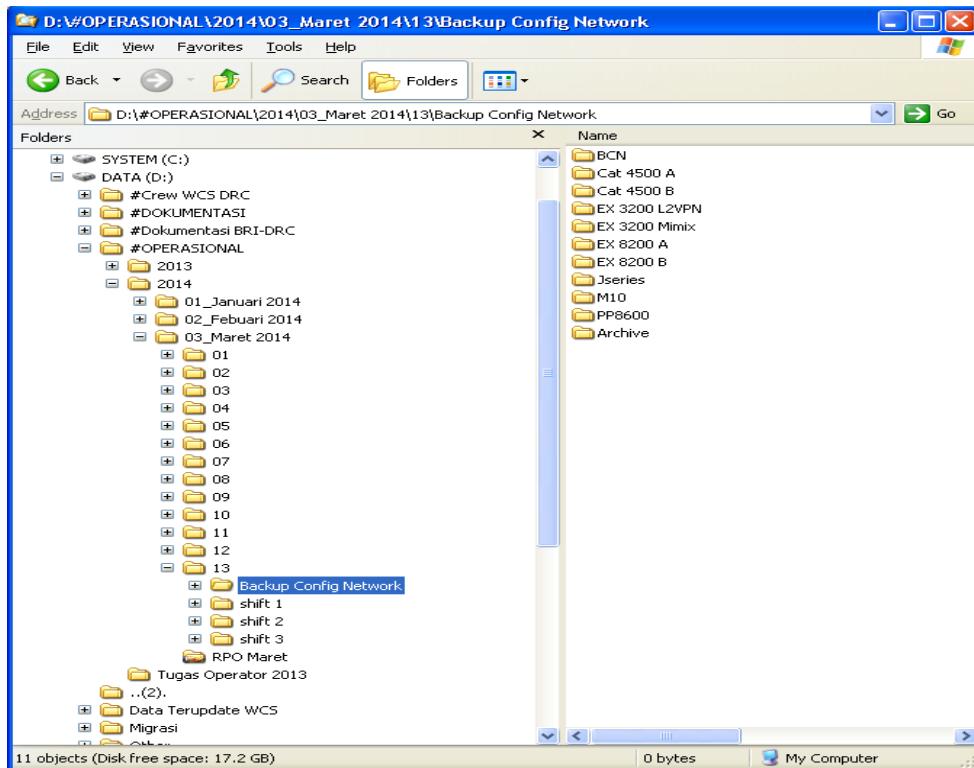




DRC/PAN-04-00-00:16.02:02

Cara kedua melakukan FTP Backup Configuration :

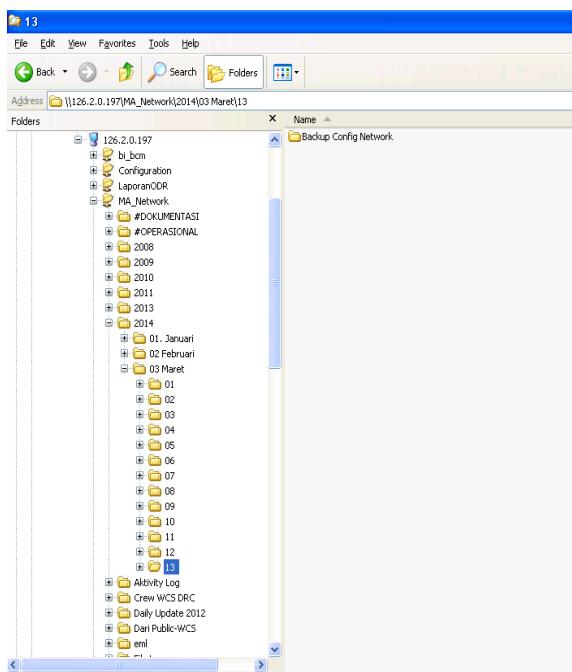
1. Pada Windows Explorer, buka folder backup configuration di D:\#OPERASIONAL\2014\03\_Maret 2014\13\Backup Config Network. Copy folder Backup Config Network.



2. Lalu buka folder sharing MA\_Network dengan IP Address berikut ini : \\126.2.0.197\MA\_Network. Buat folder untuk menyimpan file backup configuration sesuai tanggal pengambilannya, lalu simpan di dalam folder tanggal yang sudah dibuat tadi.



DRC/PAN-04-00-00:16.02:02



## 4.8 Eskalasi Masalah

Jika dalam monitoring jaringan ditemukan masalah maka operator WCS yang bertugas wajib untuk segera melakukan eskalasi kerusakan kepada pihak BRI, dalam hal ini Engineer DRC atau Supervisor DRC, kemudian mengkonfirmasikan masalahnya dengan operator WCS di SUDIRMAN untuk kemudian dikonfirmasikan ke pihak OJK SUDIRMAN.

### 4.8.1 Event Log

Form “Event Log” ini tidak hanya mencatat masalah yang terjadi di DRC saja, tetapi mencatat semua masalah yang berhubungan dengan jaringan komunikasi DRC-SUDIRMAN maupun DRC-GTI

Berikut contoh form “Event Log”.



DRC/PAN-04-00-00:16.02:02

Spreadsheets - [Event Log 2014.xls]												
File Edit View Insert Format Tools Data Window Help Feedback												
NEW-RPO DRC to GTI w...compression 110314.xls UTILISASI per...glat 2014.xls 03 Update Status Te...WCS_Maret_2014.xls Event Log 2014.xls												
N15	A	B	C	D	E	F	G	H	I	J	K	L
1		PT. WAHANA CIPTA SINATRIA	Network System Integrator, Communications & Services									
2		Wisma Comic Jl. Suryopranoto No 1-9										
3		Tel : 62-21-3501555 Fax : 62-21-3866128										
7	No.	Case open (VITTA)	Case Close (VITTA)	Total Time	Caller Name	Caller Org	Category	Sub Category	Product Name	Description	Helpdesk-WCS	
8	1	4/3/2014 11:46	4/3/2014 11:46	11 Detik	Rajman	WCS-GTI	Network	Flapping	M10	Flapping Link STM-1 DRC to GTI		
9	2	4/3/2014 11:48	4/3/2014 11:48	20 Detik	Rajman	WCS-GTI	Network	Flapping	M10	Flapping Link STM-1 DRC to GTI		
10	3	4/3/2014 11:54	4/3/2014 11:55	27 Detik	Rajman	WCS-GTI	Network	Flapping	M10	Flapping Link STM-1 DRC to GTI	Munu	
11	4	4/3/2014 12:16	4/3/2014 12:16	24 Detik	Rajman	WCS-GTI	Network	Flapping	M10	Flapping Link STM-1 DRC to GTI		
12	5	4/3/2014 13:20	4/3/2014 13:20	19 Detik	Rajman	WCS-GTI	Network	Flapping	M10	Flapping Link STM-2 DRC to GTI		
13	6	6/3/2014 10:17:57	6/3/2014 10:17:57	22 Detik	Indra	WCS-GTI	Network	Flapping	M10	Flapping Link STM-1 DRC to GTI	Munu	
14	7	8/3/2014 14:42	8/3/2014 16:19:00	1 Jam 36 Menit 51 Detik	Iwan	WCS-DC	Network	Link Down	M10	Link Down STM-1 DC to DRC		
15	8	8/3/2014 18:30	8/3/2014 19:03	32 Menit 50 detik	Iwan	WCS-DC	Network	Link Down	M10	Link Down STM-1 DC to DRC	Michael	
16	9	8/3/2014 19:22:29	8/3/2014 20:52:17	1 Jam 29 Menit 49 Detik	Iwan	WCS-DC	Network	Link Down	M10	Link Down STM-1 DC to DRC		
17	10	8/3/2014 19:36:56	8/3/2014 20:52:17	1 Jam 29 Menit 48 Detik	Iwan	WCS-DC	Network	Link Down	M10	Link Down STM-1 DC to DRC		
18	11	8/3/2014 21:00:55	8/3/2014 21:26:43	25 Menit 48 detik	Iwan	WCS-DC	Network	Link Down	M10	Link Down STM-1 DC to DRC		
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												

#### 4.8.2 Email Notifikasi

Email Notifikasi ditujukan untuk menginformasikan sekaligus *escalasi* untuk penanganan masalah yang berhubungan dengan link STM-1. Berikut ini contoh email notifikasi STM1:

Original Message -----

**From:** [dailydrc\\_wcs](#)

**To :** [cs@iconpln.co.id](#); [cl@iconpln.co.id](#); [dailyops\\_wcs@bri.co.id](#); [dailygti\\_wcs@corp.bri.co.id](#); [eos.bri@iconpln.co.id](#)

**Cc :** [tsi\\_odr@bri.co.id](#); [tsi\\_ojk@bri.co.id](#); [indra.kurniawan@ipnetsolusindo.com](#); [malvin.derrick@ipnetsolusindo.com](#); [eris.maryon@ipnetsolusindo.com](#); [ediyanto@ipnetsolusindo.com](#)

**Sent :** Wednesday, May 30, 2012 12:14 AM

**Subject :** Email Notifikasi : Link STM-1 DRC to GTI Down



DRC/PAN-04-00-00:16.02:02

Dear All,

berikut kronologis link STM-1 DRC to GTI Down

		Log Problem DRC		
No	Tgl/bln/thn	Kasus	Kronologis	Waktu Kejadian
12	4/3/2014	Flapping Link STM-1 DRC to GTI	Flapping Link STM-1 DRC to GTI pada pukul 11:46:04 - 11:46:15; 11:48:39 - 11:48:59; 11:54:44 - 11:55:11; 12:16:15 - 12:16:39 WIB. Tim WCS DRC mengirim email notifikasi.	Tgl. 04.03.2014 13:07 WITA
			Email dari pihak Icon+ : Open tiket dan di investigasi lebih lanjut.	Tgl. 04.03.2014 14:17 WITA
			Flapping kembali terjadi pada pukul 13:20:18 - 13:20:37 WIB. Tim WCS DRC kembali mengirim email notifikasi.	Tgl. 04.03.2014 15:26 WITA
			Email dari pihak Icon+ : Terkait flapping yang terjadi, link mengalami gangguan card modul di POP kebasen. Dan sudah dilakukan perbaikan modul oleh tim Icon+.	Tgl. 04.03.2014 15:38 WITA
			Link terpantau normal. Tim WCS DRC dan WCS GTI terus melakukan monitoring (Case Closed).	Tgl.04.03.2014 18:00 WITA

Hasil Capture M10 yang terlampir :

```
wcsdrc@cacti: ~
so-1/2/1           STM_TELKOM
so-1/2/1.0

admin@M10-GTI> show interfaces so-0/3/0
Physical interface: so-0/3/0, Enabled, Physical link is Down
  Interface index: 164, SNMP ifIndex: 725
  Description: STM_ICON_to_TBN
  Link-level type: PPP, MTU: 4474, Clocking: Internal, SDH mode, Speed: OC3,
  Loopback: None, FCS: 16, Payload scrambler: Enabled
  Device flags   : Present Running Down
  Interface flags: Hardware-Down Point-To-Point SNMP-Traps Internal: 0x4000
  Link flags     : Keepalives
  Keepalive settings: Interval 10 seconds, Up-count 1, Down-count 3
  Keepalive: Input: 734460 (00:59:50 ago), Output: 734486 (00:59:59 ago)
  LCP state: Down
  NCP state: inet: Down, inet6: Not-configured, iso: Not-configured, mpls: Down
  CHAP state: Closed
  PAP state: Closed
  CoS queues    : 4 supported, 4 maximum usable queues
Last flapped      : 2012-05-30 13:10:52 WIT (00:59:50 ago)
  Input rate     : 0 bps (0 pps)
  Output rate    : 0 bps (0 pps)
  SDH alarms    : HP-AIS
  SDH defects   : HP-AIS
```

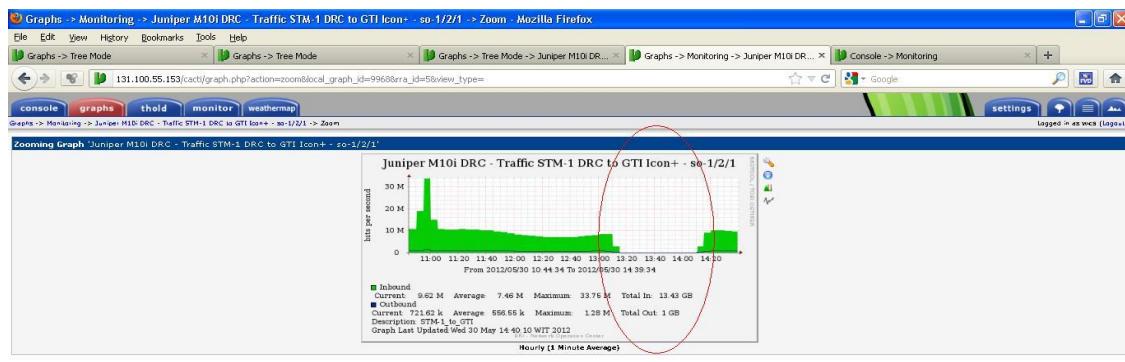


DRC/PAN-04-00-00:16.02:02

```
wcsdrc@cacti: ~
(realm ospfv2 so-0/3/0.0 area 0.0.0.0) state changed from Full to Down due to KillNbr (event reason: interface went down)
May 30 13:10:52 M10-GTI rpd[1433]: RPD_RSVP_NBRDOWN: RSVP neighbor 192.168.2.10 down on interface so-0/3/0.0, triggered by IGP neighbor down event
May 30 13:10:52 M10-GTI rpd[1433]: RPD_MPLS_LSP_SWITCH: MPLS LSP TO_ROUTER_DRC switch from primary(to-drc-direct) to secondary(to-drc-via-sud), Route 192.168.3.1 192.168.3.10: lsp bandwidth 0 bps
May 30 13:10:53 M10-GTI rpd[1433]: RPD_MPLS_PATH_DOWN: MPLS path to-drc-direct down on LSP TO_ROUTER_DRC
May 30 13:10:55 M10-GTI /kernel: so-0/3/0 link 0: Asserting SDH alarm(s) HP-AIS
May 30 13:11:12 M10-GTI rpd[1433]: RPD_LDP_SESSIONDOWN: LDP session 172.16.31.1 is down, reason: hold time expired
May 30 13:11:12 M10-GTI rpd[1433]: RPD_LAYER2_VC_DOWN: State of Layer 2 VC (Neighbor : 172.16.31.1, VC-ID : 800) changed from UP to DELETED
May 30 13:11:12 M10-GTI rpd[1433]: RPD_LAYER2_VC_DOWN: State of Layer 2 VC (Neighbor : 172.16.31.1, VC-ID : 910) changed from UP to DELETED
May 30 13:11:12 M10-GTI mib2d[1489]: SNMP_TRAP_LINK_DOWN: ifIndex 1068, ifAdminStatus down(2), ifOperStatus down(2), ifName lsi.1049738
May 30 13:11:12 M10-GTI mib2d[1489]: SNMP_TRAP_LINK_DOWN: ifIndex 1066, ifAdminStatus down(2), ifOperStatus down(2), ifName lsi.1049736
May 30 14:10:37 M10-GTI login: LOGIN_INFORMATION: User admin logged in from host 131.100.55.153 on device ttys1
May 30 14:13:17 M10-GTI rpd[1433]: RPD_MPLS_PATH_UP: MPLS path to-drc-direct up on LSP TO_ROUTER_DRC path bandwidth 0 bps
May 30 14:13:18 M10-GTI /kernel: so-0/3/0 link 0: Clearing SDH alarm(s) HP-AIS
May 30 14:13:50 M10-GTI rpd[1433]: RPD_RSVP_NBRUP: RSVP neighbor 192.168.2.10 up on interface so-0/3/0.0
May 30 14:14:17 M10-GTI rpd[1433]: RPD_MPLS_LSP_SWITCH: MPLS LSP TO_ROUTER_DRC switch from secondary(to-drc-via-sud) to primary(to-drc-direct), Route 192.168.2.10: lsp bandwidth 0 bps
May 30 14:15:45 M10-GTI rpd[1433]: RPD_MPLS_PATH_DOWN: MPLS path to-drc-via-sud down on LSP TO_ROUTER_DRC

admin@M10-GTI>
```

Hasil Capture Cacti :



Regards

Nugraha Pratama

WCS DRC



DRC/PAN-04-00-00:16.02:02

#### 4.9 Labeling Koneksi Perangkat

Untuk Pelabelan Koneksi antar perangkat dibuat dengan format sebagai berikut:

Koordinat Rak-Source-port-dtra-Koordinat Rak-Destination-port

Berikut contoh Labeling Koneksi Perangkat

B28/EX82-B/2/0/B24/BS-470/P.7	B28/EX82-B/2/0/B24/BS-470/P.7
B25/BS-USER/9/0/B27/C.POINT/4	B25/BS-USER/9/0/B27/C.POINT/4
B24/BS-470/3/0/B27/Mgnt/C.POINT	B24/BS-470/3/0/B27/Mgnt/C.POINT
B24/S.FIRE/1/0/B27/C.POINT/1	B24/S.FIRE/1/0/B27/C.POINT/1
B19/EX32MIMIX/11/0/U23/RAK1/83SER/E2/P23	B19/EX32MIMIX/11/0/U23/RAK1/83SER/E2/P23
B19/WEB-EBANK/13/0/U23/RAK1/SW/42/83SER	B19/WEB-EBANK/13/0/U23/RAK1/SW/42/83SER
B19/WEB-EBANK/6/0/U23/RAK1/SW/43/83SER	B19/WEB-EBANK/6/0/U23/RAK1/SW/43/83SER
B19/WEB-EBANK/18/0/U23/RAK1/SW/41/83SER	B19/WEB-EBANK/18/0/U23/RAK1/SW/41/83SER
B28/CAT45B/26/96/Rak 6/SW-2/P.48/200SER	B28/CAT45B/26/96/Rak 6/SW-2/P.48/200SER

Dibaca dengan

**Rak B28 Ex8200 port 2 direct ke Rak B24 BS-470 Management port 7**

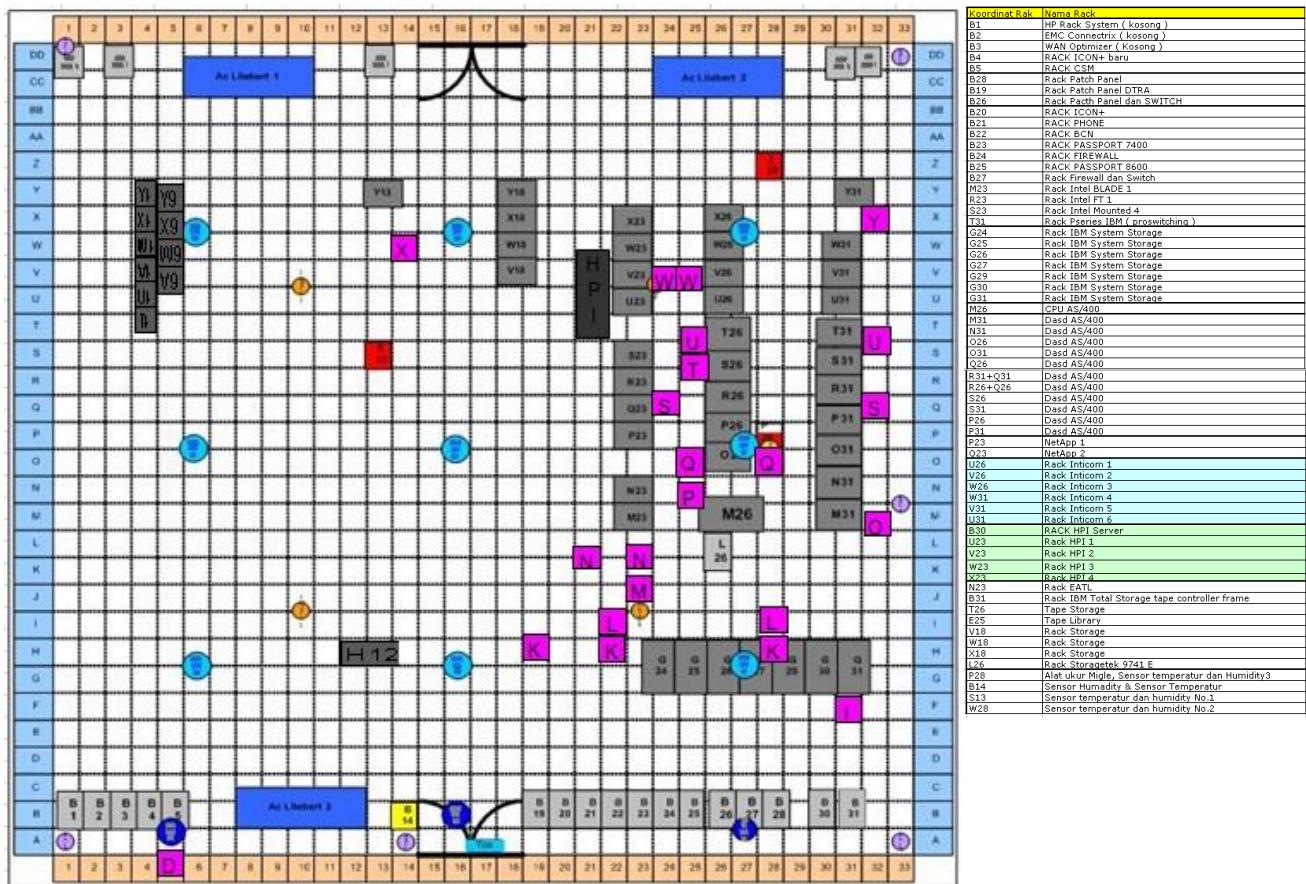
**Rak B19 Ex32-Mimix port 11 direct ke Rak U23 Rak 1 83 Server Enclosure 2 port 23**

## BAB 5 REQUEST DAILY OPERATIONAL

*Request daily operational* merupakan permintaan tugas tambahan dari pihak BRI ODR kepada team WCS DRC untuk melakukan *update* data mengenai data ruang server DRC secara *continue*.

### 5.1 Update Layout Ruang Server DRC

Bentuk *layout* ruang server DRC yang dikerjakan MA-WCS





## 5.2 Update Mapping Server

Bentuk tabel data *Mapping Server* yang dikerjakan MA-WCS

No	Jenis	Merek	Nama Perangkat	Power Supply	Lokasi		Fungsi
					Rack	Lemak US	
1	Optic	Huawei	Slot Card DS 3	2	B4	U2	Jalur Utama DNS3 dari Gandul
2	Optic	Huawei	Optis Metro 655/622(metro 2050)	2	B4	U8	ICON+
3	Switch	Cisco	Catalyst 3560	1	B5	U14	L3 Switch MPLS CSM
4	Converter	Ether Access	Ether Access RJ-EI	1	B5	U15	Converter E1to RJ
5	Converter	Ether Access	Ether Access RJ-EI	1	B5	U16	Converter E1to RJ
6	Switch	Cisco	Cisco Catalyst 2950	1	B19	U1	L2 switch
7	Switch	Nortel	Nortel Baystack 420-24T Switch	1	B19	U2	Pass Through 60.0,4.8
8	Switch	Nortel	Nortel Baystack 5530-24 TFD	1	B19	U7	Switch
9	Switch	Juniper	Juniper EX3200 48 Port I (for mimix and VAAS ) (alias: ExMimix)	1	B19	U9	Replikasi Mimix AS400
10	Switch	3Com	3Com Switch 2225 (webbank)	1	B19	U10	Switch Web Ebank
11	Switch	Cisco	Cisco Catalyst 2960 (alias Switch Web E-Bank baru)	1	B19	U12	Untuk FTP Web Ebank
12	Switch	3Com	3Com Switch 2824 (management)	1	B19	U13	Switch untuk KVM dan Avocent
13	Switch	Nortel	Nortel Baystack 5510 Switch Pihak Ke-3 (RTGS)	1	B19	U14	Access Switch
14	Switch	Cisco	Cisco Catalyst 2950 Web E-Bank lama	1	B19	U17	L2 Web Ebank
15	Switch	Cisco	Cisco Catalyst 2950 AC UPS	1	B19	U18	AC UPS
16	Modem	Ether Access	Modem RAD RJ-EI	1	B20	U0	Modem untuk Production
17	Modem	Ether Access	Modem RAD RJ-EI DS	1	B20	U1	Modem untuk Production
18	Converter	Cisco	Converter Optic to Eth	1	B20	U10	keperluan BPJSyariah
19	Router	Cisco	Cisco System 7200 series VR	2	B20	U20	Untuk Production
20	Converter	Telways	Telways Media Converter	1	B20	U21#1	Media Converter Dual Speed
21	Modem	Ether Access	PAD RJ11-8E1	1	B20	U21#2	Untuk Production
22	Optic	ICON+	Card ET Fiber Home		B20	U22	Untuk Production
23	Switch	Cisco	Cisco Catalyst 2960 Series SI	1	B20	U22	Modem Router
24	Converter	Adva	Adva Converter FO to UTP	1	B20	U23	untuk routers
25	Router	Cisco	Cisco 8900 FX-10/3997-D-JKT	1	B21	U3	Router Lintas Artha
26	Switch	Hewlett-Packard (HP)	1.2 Switch HP 2520G-8 SNI CN231UD30C	1	B21	U4	Back-up Backhaul MPLS Telkom
27	Modem	Juniper	Modem VPN Juniper SSG 5/B	1	B21	U5	Modem VPN
28	Modem	Juniper	Modem VPN Juniper SSG 5/A	1	B21	U6	Modem VPN
29	Optic	ICON+	Fiber Home icon-to-BPJSYARIAH		B21	U6	to SDH Huawei ICON
30	Optic	ICON+	Fiber Home icon-to-BRI		B21	U7	to SDH Huawei ICON

## 5.3 Update Data DTRA Patch Panel DRC

Bentuk Tabel Data DTRA Patch Panel DRC yang dikerjakan MA-WCS

DAFTAR DTRA								
DTRAI	Kordinat	Source	Kordinat	Source IP	Destination	Kordinat	Destination IP	Keterangan
DTRAI84	X04							tidak Aktif
DTRAI85	X04							tidak Aktif
DTRAI86	X05	EX2200 B port 22			Rack3 Ser200 Switch Abx Port46			Aktif
DTRAI87	X05	CAT 48 B port 14			Rack3 Ser200 Switch Bawah Port10			Aktif
DTRAI88	X05	Cat 48 B port 16			Rack2 Ser200 Switch Abx Port47			Aktif
DTRAI89	X05	EX2200 B port 24			Rack2 Ser200 Switch Abx Port48			Aktif
DTRAI90	X05	CAT 48 B port 11			Rack1 Ser200 Switch Abx Port47			Aktif
DTRAI91	X05	EX2200 B port 26			Rack1 Ser200 Switch Abx Port48			Aktif
DTRAI92	X05	EX2200 A port 28			Rack3 Ser200 Switch Bawah Port16			Aktif
DTRAI93	X05	EX2200 A port 29			Rack3 Ser200 Switch Bawah Port49			Aktif
DTRAI94	X06	Baystack User Port 23	126.2.0.x		Ser200 Introm Rak3 SW#(bawah) Port37	126.2.0.222		Aktif
DTRAI95	X06	Catalyst 2950 Web Ebank port 13	61.1.1.x		Catalyst 2950 HPI SW#1#Rack1 Port.42	61.1.1.x		Aktif
DTRAI96	X06	Catalyst 2950 Web Ebank port 16	61.1.0.x		Catalyst 2950 HPI SW#1#Rack1 Port.41	61.1.0.x		Aktif
DTRAI97	X06	Catalyst 2950 Web Ebank port 6	61.1.2.x		Catalyst 2950 HPI SW#1#Rack1 Port.43	61.1.2.x		Aktif
DTRAI98	X14	AS ABRI Rack Y13			Catalyst 3925 Pihak Ke-3 Port 12			Aktif
DTRAI99	X14	Cisco ASA 5520 port 2			Cisco 2950 port 1 Rak B20			Aktif
DTRAI200	X14	Modem Telkom	B19		Rak ASABRI	Y12		Aktif
DTRAI201	X14							
DTRAI202	X14							
DTRAI203	X14							
DTRAI204	X14							
DTRAI205	X14							
DTRAI206	X14							
DTRAI207	X14							
DTRAI208	X14							
DTRAI209	X14							
DTRAI210	X14							
DTRAI211	X14							
DTRAI212	X14							
DTRAI213	X14							
DTRAI214	X14							
DTRAI215	X14							
DTRAI216	X14							
DTRAI217	X14							
DTRAI218	X14							
DTRAI219	X14							
DTRAI220	X14							
DTRAI221	X14							
DTRAI222	X14							
DTRAI223	X14							
DTRAI224	X14							
DTRAI225	X14							
DTRAI226	X14							
DTRAI227	X14							
DTRAI228	X14							
DTRAI229	X14							
DTRAI230	X14							
DTRAI231	X14							
DTRAI232	X14							
DTRAI233	X14							
DTRAI234	X14							
DTRAI235	X14							
DTRAI236	X14							
DTRAI237	X14							
DTRAI238	X14							
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DTRAI240	X14							
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DTRAI242	X14							
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DTRAI245	X14							
DTRAI246	X14							
DTRAI247	X14							
DTRAI248	X14							
DTRAI249	X14							
DTRAI250	X14							
DTRAI251	X14							
DTRAI252	X14							
DTRAI253	X14							
DTRAI254	X14							
DTRAI255	X14							
DTRAI256	X14							
DTRAI257	X14							
DTRAI258	X14							
DTRAI259	X14							
DTRAI260	X14							
DTRAI261	X14							
DTRAI262	X14							
DTRAI263	X14							
DTRAI264	X14							
DTRAI265	X14							
DTRAI266	X14							
DTRAI267	X14							
DTRAI268	X14							
DTRAI269	X14							
DTRAI270	X14							
DTRAI271	X14							
DTRAI272	X14							
DTRAI273	X14							
DTRAI274	X14							
DTRAI275	X14							
DTRAI276	X14							
DTRAI277	X14							
DTRAI278	X14							
DTRAI279	X14							
DTRAI280	X14							
DTRAI281	X14							
DTRAI282	X14							
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DTRAI285	X14							
DTRAI286	X14							
DTRAI287	X14							
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DTRAI289	X14							
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DTRAI291	X14							
DTRAI292	X14							
DTRAI293	X14							
DTRAI294	X14							
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DTRAI296	X14							
DTRAI297	X14							
DTRAI298	X14							
DTRAI299	X14							
DTRAI300	X14							
DTRAI301	X14							
DTRAI302	X14							
DTRAI303	X14							
DTRAI304	X14							
DTRAI305	X14							
DTRAI306	X14							
DTRAI307	X14							
DTRAI308	X14							
DTRAI309	X14							
DTRAI310	X14							
DTRAI311	X14							
DTRAI312	X14							
DTRAI313	X14							
DTRAI314	X14							
DTRAI315	X14							
DTRAI316	X14							
DTRAI317	X14							
DTRAI318	X14							
DTRAI319	X14							
DTRAI320	X14							
DTRAI321	X14							
DTRAI322	X14							
DTRAI323	X14							
DTRAI324	X14							
DTRAI325	X14							
DTRAI326	X14							
DTRAI327	X14							
DTRAI328	X14							
DTRAI329	X14							
DTRAI330	X14							
DTRAI331	X14							
DTRAI332	X14							
DTRAI33								



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Cara membaca Data DTRA Patch Panel DRC dibedakan dengan warna,

## Contoh :

DTRA 1 – DTRA 12 dalam satu BOX DTRA sedangkan DTRA 13 – DTRA 24 dalam satu BOX DTRA lain dengan letak koordinat yang berbeda.

Setiap BOX DTRA terletak pada koordinat berbeda dengan pusat DTRA ada pada Rack Patch Panel.



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## 5.4 Update Data Detail Perangkat Network

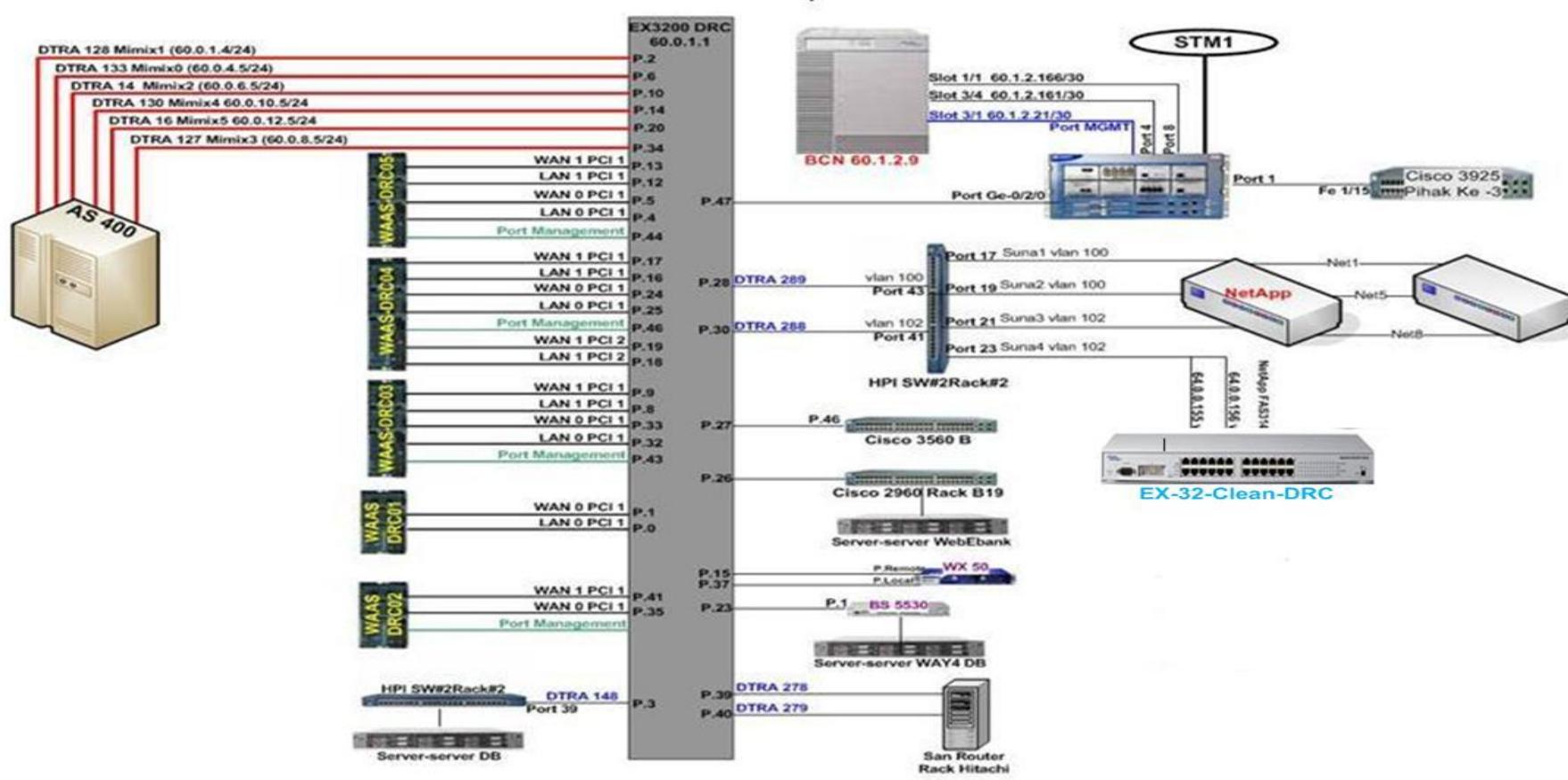
Bentuk Tabel Data Detail Perangkat Network yang dikerjakan MA-WCS

Name	CATALYST 4506 B							
IP Address	172.19.149.2							
MAC Address								
Merk	Cisco Catalyst 4506							
S/N	FOX13296SA3							
Firmware	Cisco IOS Software Version 12.2(50)S62							
CATALYST 4506 B								
Port Num	VLAN ID	VLAN Name	IP	Speed	Duplex	DTR	Label	Status
1			172.29.47.2/29				Up	to_C2960A port_23
2							Up	EX32L2PVN port 24
3		Default					Down	
4	33	VLAN-LEGACY-33	178.18.35.1/24				Up	A5400 ip 172.18.35.10
5	33	VLAN-LEGACY-33	178.18.35.1/24				Up	A5400 ip 172.18.35.11
6	35	VLAN-LEGACY-35	178.18.35.1/24				Up	A5400 ip 172.18.35.10
7	34	vlan 34						A5400 IP 172.18.34.10
8	34	vlan 34						A5400 IP 172.18.34.11
9	35	VLAN-LEGACY-35	178.18.35.1/24				Up	A5400 ip 172.18.35.11
10	40	Pool_1	64.0.0.101				Up	Rack IBM Total Storage Tape Controller Frame SMC Switch P.10
11	Trunk						Up	Switch Rack 1 200 Server port 47
12	1	Default						
13	149.77	149.NETAPP				123		Catalyst 2960 (Sw_NetApp) Rack P23 Port 24
14	3	A5400						6-Apr-16
	4	Vlan-4						6-Apr-16
	5	Vlan-5						6-Apr-16
	9	Vlan-61.1.1.x	61.1.1.1/24					6-Apr-16
	10	COM	61.1.0.1/24					6-Apr-16
	11	Vlan-61.1.2.x						6-Apr-16
	14	Vlan-14						6-Apr-16
	20	VLAN-20						6-Apr-16
	40	Pool_1	64.0.0.4/24					6-Apr-16
	50	Pool_2	65.0.0.2/24					6-Apr-16
	60	Pool_3	66.0.0.2/24					6-Apr-16
	149	Vlan-149	172.19.149.1/24					6-Apr-16
	150	Vlan-150	172.21.150.1/24					6-Apr-16
	151	Vlan-151	172.21.151.1/24					6-Apr-16
	152	Vlan-152	172.21.152.1/24					6-Apr-16
					187			Switch 2 Rak 3 Intikom port 10

Cara membaca Data Detail Perangkat Network dibedakan dengan *port member aktif* (green) dan non-aktif (red colour) dengan data detail yang ada dalam setiap perangkat diruang server DRC.

## 5.5 Update Gambar Network DRC

Bentuk Gambar Network DRC secara detail yang dikerjakan MA-WCS



## 5.6 Update Gambar Visualisasi Rack

Bentuk Gambar Visualisasi Rack yang dikerjakan MA-WCS



PT. Wahana Cipta Sinatra		Project Name		Title	
		Network Switching BRI		Visualisasi RAK-1 in DRC	
Drawn by	Version	Date	Approved		
WCS Team	Ver 1.1	April 2015			



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## LAMPIRAN

A. JADWAL MA - WCS



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## B. Change Request MA – WCS



### Change Request Form WCS

#### Requested by :

Name : Ref.# : 00X-MA/DRC/03/20XX

Dept : Date received : XX/XX/20XX

Phone : Date closed : XX/XX/20XX

Date Required : XX/XX/20XX

---

#### Change type :

Application     Software     Other (\*)  
 Hardware     Network     HOP

#### Change Impact:

#### Change Approval :

*Bank Rakyat Indonesia*

*Requester :*

*WCS*

#### Operation :

---

Date : XX/XX/20XX  
XX/XX/20XX

Date : XX/XX/20XX

Date :



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**\*) Please specify**

Requested by : nama yang meminta request beserta departemen nya .

Ref.# : nomor urutan pencatatan **XXX-MA/DRC/bulan/Tahun**

Date received : tanggal request .

Date closed : tanggal selesai melakukan pekerjaan diruang server DRC.

Change Impact : jenis perubahan yang terjadi dalam ruang server DRC.

*Change Approval – Requester Manager* , ditanda tangani oleh Pgs. Kabag –ODR, sebelum Pgs. Kabag –ODR melakukan penanda tanganan terlebih dahulu melakukan approval pada Spv BRI DRC yang sedang bertugas , kemudian aprroval dari Engineer-ODR DRC.

*WCS Operation* , ditanda tangani oleh Spv Team MA-WCS.



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**C. Bentuk Berita Acara Serah Terima ID – Card MA - WCS**

**BERITA ACARA**  
**SERAH TERIMA BADGE ID BRI**  
**NO. 013/BRI-DRC /IPNET-TECH/VIII/2010**

Tabanan, 31 Agustus 2010

Berdasarkan surat keputusan PT.Wahana Cipta Sinatria NO. 013/BRI-DRC /IPNET-TECH/VIII/2010 tertanggal 31 Agustus 2010, yang menyatakan bahwa Sdr. Gunawan ditempatkan di Gedung BRI DRC Bali untuk menggantikan Sdr. Dwi Agung Sumpeno , maka hari ini Selasa 31 Agustus 2010 dilakukan serah terima Badge ID BRI.

Yang menyerahkan	Yang menerima	#Badge ID

Demikian berita acara ini kami sampaikan.

Yang menyerahkan	Yang menerima
( ..... )	( ..... )
Mengetahui,	
( ..... )	
Pgs. Kabag –ODR	



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#### **D. Bentuk Berita Acara Serah Terima Jabatan MA-WCS**

**BERITA ACARA**  
**SERAH TERIMA JABATAN TEAM LEADER**  
NO. /BRI-DRC/IPNET-TECH/VIII/20XX

Sehubungan dengan pelaksanaan Cuti tanggal ..... 20xx, maka yang bertanda tangan dibawah ini :

I. **N a m a** :  
**Jabatan** : **Team Leader WCS**

Yang selanjutnya dalam Berita Acara Serah Terima ini disebut sebagai Pihak I (yang menyerahkan).

II. **N a m a** :  
**Jabatan** : **Team Support**

Yang selanjutnya dalam Berita Acara Serah Terima ini disebut sebagai PIHAK II (yang menerima penyerahan).

1. Pada hari ini ..... , ..... 20xx PIHAK KE I menyerahkan tugas dan tanggung jawab Team Leader WCS DRC - Bali kepada PIHAK KE II.
2. Pihak ke II menerima tugas dan tanggung jawab Team Leader WCS DRC - Bali dari Pihak KE I.

Demikian Berita Acara Serah Terima Tugas ini dibuat dan ditanda tangani kedua belah pihak, dan selanjutnya untuk diketahui dan disampaikan kepada :

1. Masing-masing yang bersangkutan.

Tabanan, ..... 20xx

<b>Yang menyerahkan</b>	<b>Yang menerima</b>
( ..... )	( ..... )
<b>Mengetahui,</b>	
<u>(.....)</u> <b>Pgs. Kabag –ODR</b>	



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## E. Bentuk Berita Acara Preventive Maintenance MA-WCS

**BERITA ACARA**  
**PREVENTIVE MAINTENANCE PERANGKAT NETWORK DRC BRI**  
**NO. 004/BRI/WCS/III/2011**

**Tabanan, 31 Maret 2011**

Pada hari ini tanggal 31 Maret 2011 bertempat di BRI ODR Tabanan, Saya yang bertanda tangan dibawah ini :

Nama : .....

Jabatan : .....

Selanjutnya disebut **Pihak Pertama**.

Nama : .....

Jabatan : .....

Selanjutnya disebut **Pihak Kedua**.

**Pihak Pertama** menyerahkan Laporan Preventive Maintenance untuk periode bulan Februari 2011 ke **Pihak Kedua**. **Pihak kedua** menerima penyerahan Laporan Preventive Maintenance MA-WCS BRI – ODR untuk periode bulan Februari 2011 dari **Pihak Pertama**.

Berita Acara Serah Terima ini dibuat dan ditandatangani pada tanggal dan tahun tersebut di atas oleh kedua belah pihak.

<b>Pihak Pertama</b>	<b>Pihak Kedua</b>
(.....)	(.....)



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Mengetahui,

(.....)

Pgs. Kabag – ODR

**Kolom Paraf BRI ODR**

N	Tan	Na	Jab	P	Ketera n g a n

ng menyerahkan



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**F. Bentuk Berita Acara Laporan Bulanan**



**BERITA ACARA**  
**SERAH TERIMA LAPORAN BULANAN**  
**NO. XXX/BRI/WCS/X/XXXX**

**Tabanan, XX - XX - XXX**

**Pihak Pertama** menyerahkan Laporan Bulanan MA-WCS ODR untuk bulan XX tahun XXXX kepada **Pihak Kedua**. **Pihak kedua** menerima penyerahan Laporan Bulanan MA-WCS BRI – ODR untuk Bulan XX tahun XXXX dari **Pihak Pertama**.

Berita Acara Serah Terima ini dibuat dan ditandatangani pada hari tanggal dan tahun tersebut di atas oleh kedua belah pihak.

Demikian Berita Acara ini dibuat agar dipergunakan sebagaimana mestinya.

<b>Pihak Pertama</b>	<b>Pihak Kedua</b>
<u>XXXXXXXX</u> MA - WCS	<u>XXXXXXXXXX</u> Engineer - ODR
<b>Mengetahui,</b>	
	<u>XXXXXXXXXX</u>



DRC/PAN-04-00-00:16.02.00

**Pgs. Kabag –ODR**

**Kolom Paraf BRI ODR**

No	Tanggal	Nama	Jabatan	Pa	Keterangan



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## G. Bentuk Checklist MA – WCS

### CHECKLIST WCS DRC

Shift : :

Time : :

Device Name : BCN Firmware : 3.5.1.0

BCN	Indicator	Normal	January																																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
			Power	Green																																
			Run	Green																																
			Boot	Off																																
			Dig	Off																																
Slot 1	Module DI00BT	Fail	Off																																	
Slot 2	Module SONET SDH	Fail	Off																																	
Slot 3	Module 10/100 Base TX	Fail	Off																																	
Slot 7	Module SRM1L	VCC	Green																																	
		12V1	Green																																	
		12V2	Green																																	
PSU1	Power Supply	PSU-1	Green																																	
PSU2	Power Supply	PSU-2	Green																																	
PSU3	Power Supply	PSU-3	Green																																	
PSU4	Power Supply	PSU-4	Green																																	
CPU Utilization																																				
Slot 1																																				
Slot 2																																				
Slot 3																																				

Device Name : Juniper M10i

Slot	Module	Indicator	Normal	January																																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
RJ10	PICC module	Major	Off																																	
		Minor	Off																																	
		Pwr	Green																																	
		Master	Blue																																	
RJ11	PICC module	Major	Off																																	
		Minor	Off																																	
		Pwr	Green																																	
		Master	Off																																	
RJ10	RE-400	HDD	Off																																	
		Fail	Off																																	
		Master	Blue																																	
		Online	Green																																	
0/1	Ethernet 10/100 Base-TX	Status	Green																																	
CPU Utilization																																				



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Device Name : Juniper J6350

J6350	Indicator	Normal	January																																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
			Power	Green																																
			Alarm	Orange																																
			Status	Green																																
			NA	Off																																
Slot	Module	Indicator	Normal	Green																																
Back Panel				CPU Utilisation																																
Slot	Module	Indicator	Normal	Check																																
PSU 1	Power Supply	Status	Green																																	
PSU 2	Power Supply	Status	Green																																	

Device Name : Passport 8600 Firmware : 3.5.1.0

Slot	Module	Indicator	Normal	January																																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
1	8648TKE	Online	Green																																		
3	8601GBE	Online	Green																																		
5	8691SF236	Online	Green																																		
		Power Supply 1	Green																																		
		Power Supply 2	Green																																		
		Fan 1	Green																																		
		Fan 2	Green																																		
		Temp	Green																																		
		Master	Blinking																																		
6	8691SF236	Online	Green																																		
		Power Supply 1	Green																																		
		Power Supply 2	Green																																		
		Fan 1	Green																																		
		Fan 2	Green																																		
		Temp	Green																																		
		Master	Off																																		
PSU	Power Supply 1	PSU-1	Green																																		
PSU	Power Supply 2	PSU-2	Green																																		
CPU Utilisation																																					



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Device Name : Juniper EX 3200 Mimix

Indicator	Normal	January																															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Power	Green																																
Alarm	Red																																
SVS	Green																																
MBT	Green																																
CPU Utilisation																																	

Device Name : Juniper EX 3200 L2VPN

Indicator	Normal	January																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Power	Green																																	
Alarm	Red																																	
SVS	Green																																	
MBT	Green																																	
CPU Utilisation																																		

Device Name : Baystack 5510 User      Firmware : 1.0.0.19

Indicator	Normal	January																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Power	Green																																	
Base	Off																																	
Up +	Off																																	
Down -	Off																																	
CPU Utilisation																																		

Device Name : Baystack 5510 RTGS      Firmware : 1.0.0.19

Indicator	Normal	January																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Power	Green																																	
Base	Off																																	
Up +	Off																																	
Down -	Off																																	
CPU Utilisation																																		



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Device Name : Juniper EX 8208 A

		Indicator	Normal	January																																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
EX 8208	Slot 0	Alarm	Red																																		
		VTS	Orange																																		
		MST	Green																																		
		ON	Green																																		
Slot SRE 0	Module EX8208 SRE 320	ST	Green																																		
		ON	Green																																		
		ST	Green																																		
		MS	Green																																		
Slot SF	Module EX8208 SF 320	SF	Green																																		
		ON	Green																																		
		ST	Green																																		
		MS	Green Blinking																																		
Slot SRE 1	Module EX8208 SRE 320	SF	Green Blinking																																		

PSU0	Power Supply	Enable Power	ON																																		
		Input OK	Green																																		
		Output OK	Green																																		
		Fail	Off																																		
	Power Supply	Enable Power	ON																																		
		Input OK	Green																																		
		Output OK	Green																																		
		Fail	Off																																		
PSU1	Power Supply	Enable Power	Standby																																		
		Input OK	Off																																		
		Output OK	Off																																		
		Fail	Off																																		
PSU2	Power Supply	Enable Power	Standby																																		
		Input OK	Off																																		
		Output OK	Off																																		
		Fail	Off																																		
CPU Utilisation Slot SRE 0																																					
CPU Utilisation Slot SRE 1																																					



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Device Name : Juniper EX8208 B

		Indicator	Normal	January																																		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
EX 8208	Slot 0	Alarm	Red																																			
		SYS	Orange																																			
		MBT	Green																																			
	Slot 0	Module EX8208 SRE 44t	ON	Green																																		
Slot SRE 0	Slot SRE 0	ON	Green																																			
		ST	Green																																			
		MS	Green																																			
	Slot SF	Module EX8208 SRE 32t	ON	Green																																		
Slot SRE 1	Slot SRE 1	ON	Green																																			
		ST	Green																																			
		MS	Green Blinking																																			
	Slot SF	Module EX8208 SRE 32t	ON	Green Blinking																																		

PSU0	Power Supply	Enable Power	ON																																					
		Input OK	Green																																					
		Output OK	Green																																					
		Fail	Off																																					
PSU1	Power Supply	Enable Power	ON																																					
		Input OK	Green																																					
		Output OK	Green																																					
		Fail	Off																																					
PSU2	Power Supply	Enable Power	Standby																																					
		Input OK	Off																																					
		Output OK	Off																																					
		Fail	Off																																					
PSU3	Power Supply	Enable Power	Standby																																					
		Input OK	Off																																					
		Output OK	Off																																					
		Fail	Off																																					
CPU Utilisation Slot SRE 0																																								
CPU Utilisation Slot SRE 1																																								



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Device Name : Juniper SRX3400 A

	Indicator	Normal	January																															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SRX	Alarm Yellow	Off																																
	Alarm Red	Off																																
	SFB	Green																																
	HA	Off																																
	CFM Services	Green																																
	CFM OK/Fail	Green																																
	REO RE1	Green																																
	PWR	Off																																
	FAN	Green																																

Slot	Module	Indicator	Normal	January																																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
PSU PEN10	Power Supply	Status	Green																																	
PSU PEN11	Power Supply	Status	Green																																	
Slot 5	SRX3K-NPC	Services	Green																																	
Slot 6	SRX3K-SPC-1-10-40	OK/Fail	Green																																	
RE 0	Online	OK/Fail	Green Blinking																																	
	Master	Blue																																		
	Routing Engine	Status	Green																																	
	HDD	Off																																		
	PFE Controller	Status	Green																																	

Device Name : Juniper SRX3400 B

	Indicator	Normal	January																																
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
SRX	Alarm Yellow	Off																																	
	Alarm Red	Off																																	
	SFB	Green																																	
	HA	Off																																	
	CFM Services	Green																																	
	CFM OK/Fail	Green																																	
	REO RE1	Green																																	
	PWR	Off																																	
	FAN	Green																																	

Slot	Module	Indicator	Normal	January																																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
PSU PEN10	Power Supply	Status	Green																																	
PSU PEN11	Power Supply	Status	Green																																	
Slot 5	SRX3K-NPC	Services	Green																																	
Slot 6	SRX3K-SPC-1-10-40	OK/Fail	Green																																	
RE 0	Online	OK/Fail	Green Blinking																																	
	Master	Blue																																		
	Routing Engine	Status	Green																																	
	HDD	Off																																		
	PFE Controller	Status	Green																																	



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Device Name : Cisco Catalyst 4506 A

Cisco 4506		Indicator	Normal	January																															
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		Fan Status	Green																																
Slot 1	Module WS-X4211 Supervisor Engine IV	Status	Green																																
Slot 2	Module 48 port Multi-Speed Gigabit Ethernet Switching Module	Status	Green																																
PSU 1	Power Supply	Input OK	Green																																
		Fan OK	Green																																
		Output Fail	Off																																
PSU 2	Power Supply	Input OK	Green																																
		Fan OK	Green																																
		Output Fail	Off																																
CPU Utilisation																																			

Device Name : Cisco Catalyst 4506 B

Cisco 4506		Indicator	Normal	January																																
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Fan Status	Green																																			
Slot 1	Module WS-X4211 Supervisor Engine IV	Status	Green																																	
Slot 2	Module 48 port Multi-Speed Gigabit Ethernet Switching Module	Status	Green																																	
PSU 1	Power Supply	Input OK	Green																																	
		Fan OK	Green																																	
		Output Fail	Off																																	
PSU 2	Power Supply	Input OK	Green																																	
		Fan OK	Green																																	
		Output Fail	Off																																	
CPU Utilisation																																				

Paraf WCS

Paraf Supervisor BRI



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## H. Contoh *Change Request* MA – WCS

**Change Request Form WCS**

Requested by :

Name : I Wayan Surya Prianara Ref.# : 003-MA/DRC/03/2016  
Dept : TSI-ODR Date received : 25/03/2016  
Phone : Date closed : 25/03/2016  
Date Required : 25/03/2016

Change type :

Application     Software     Other (\*)  
 Hardware     Network     HOP

Change Impact :

- 1 Tarikan Kabel Langsung dari EX3200 Mimix (B19) ke switch 1 Rak 1 200 Server (port 14), difungsikan untuk Replikasi aplikasi RTGS

Change Approval :

<b>Bank Rakyat Indonesia</b>  Pandu Purbasany	<b>Requester</b>  I Wayan Surya Prianara	<b>WCS Operation :</b>  Eka Asyari Ismail
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Date : 25/03/2016      Date : 25/03/2016      Date : 25/03/2016

*(\* Please specify)*