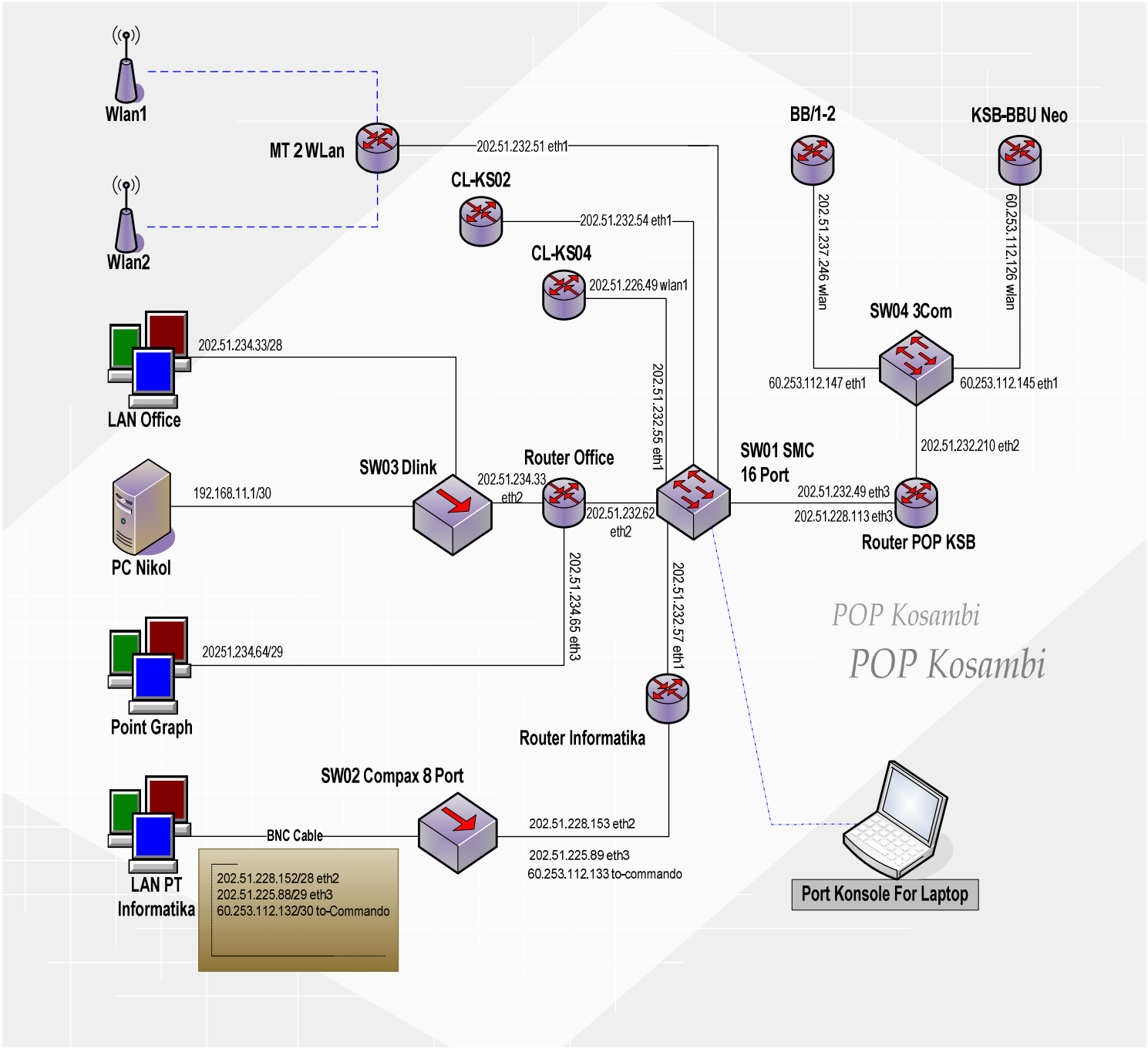
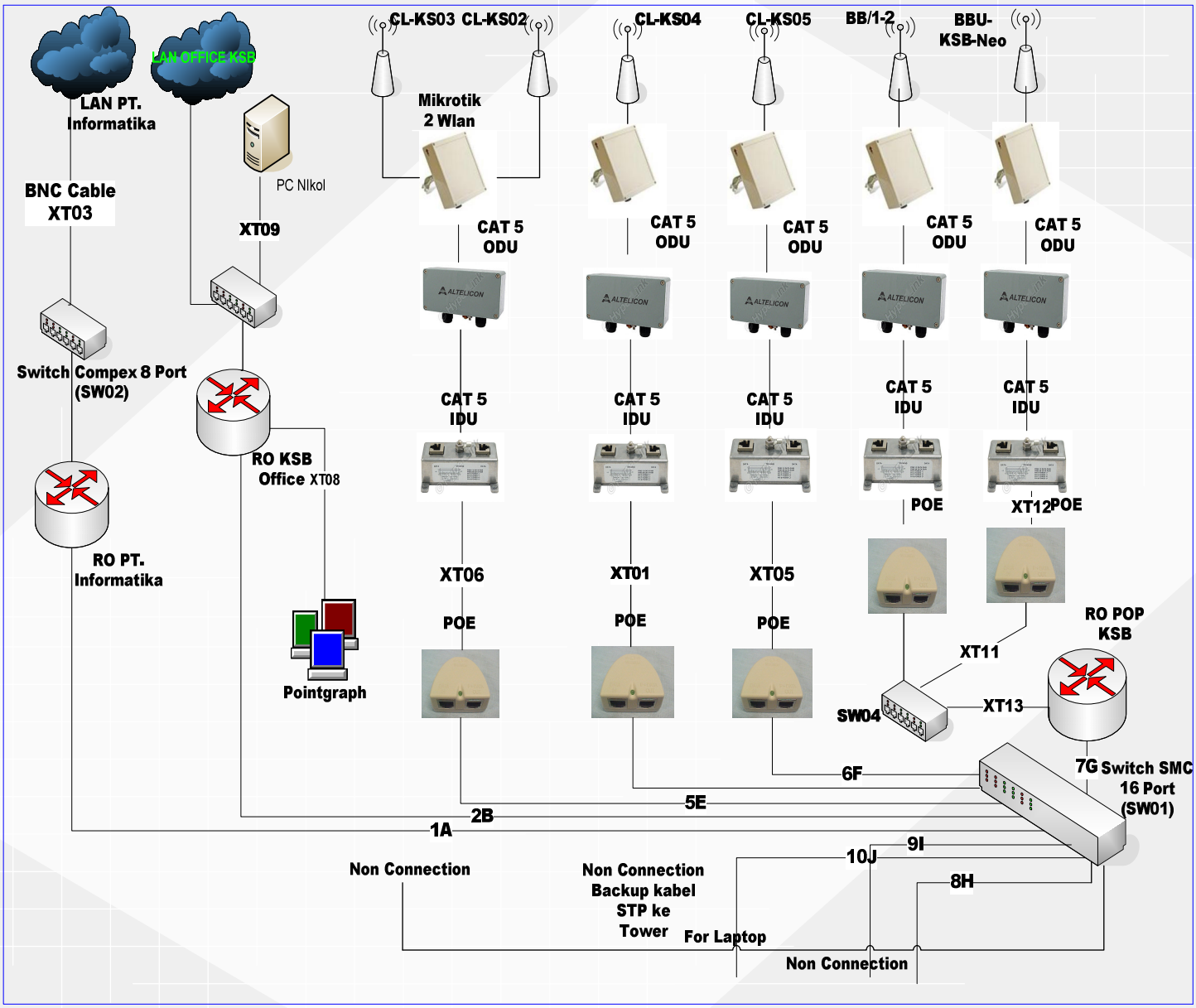
3. AS BUILD DRAW

3.1. Topologi Logic



3.2. Topologi Fisik



4. DESKRIPSI GAMBAR

Kode	Deskripsi
SW01	Switch SMC 16 Port
SW02	Switch Compex 8 Port
SW03	Switch Dlink 8 Port
SW04	Switch 3Com 8 Port
1A	Kabel RO PT. Informatika to SW01
2B	Kabel RO KSB Office to SW01
3C	Kabel SW01 for Laptop
4D	Kabel Backup POE Ke SW01
5E	Kabel MT 2 Wlan (CL-KS03 & CL-KS05) to SW01
6F	Kabel MT CL-KS02 to SW01
7G	Kabel RO POP KSB to SW01
8H	Kabel SW01 to Non Connection
9I	Kabel SW01 to Non Connection
10J	Kabel SW01 to Non Connection
XT01	Kabel MT CL-KS04 to SW01
XT02	Kabel RO PT. Informatika to SW02
XT03	Kabel BNC SW02 to LAN Informatika
XT04	Kabel CAT 5 IDU to POE RO POP KSB
XT05	Kabel CAT 5 IDU to POE MT CL-KS02
XT06	Kabel CAT 5 IDU to POE MT 2 Wlan (CL-KS03 & CL-KS05)
XT07	Kabel CAT5 IDU to POE Back UP
XT08	Kabel RO KSB Office to SW03
XT09	Kabel Pcuser Nicol to SW03
XT10	Kabel dari SW04 ke POE injektor backbone KSB-BBU
XT11	Kabel dari SW04 ke POE KSB-BBU NEO
XT12	Kabel dari POE ke CAT 5 indoor KSB-BBU NEO
XT13	Kabel dari SW04 Ke router POP KSB

5. IP ADDRESS PERANGKAT

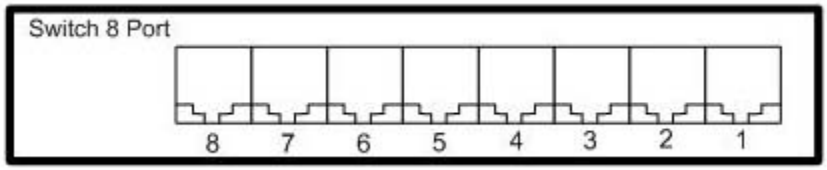
LIST IP ADDRESS PERANGKAT

Perangkat	IP Address	Interface	Deskripsi
MT BB/1-2	60.253.112.147/29	ether1	to BBU
	202.51.237.246/30	wlan1	to BBU
MT KSB-BBU Neo	60.253.112.145/29	ether1	to BBU
	60.253.112.126/30	wlan1	to BBU
MT CL-KS02	202.51.232.54/28	ether1	
		wlan1	to Harmoni
MT CL-KS04	202.51.232.55/28	ether1	
	202.51.226.49/29	wlan1	to Universal Travel
MT 2 Wlan	202.51.232.51/28	ether1, wlan1	to Brothers
	202.51.232.51/28	ether1, wlan2	to Double Lynk
RO POP KSB	202.51.228.113/28	ether3	to SW01
	202.51.232.49/28	ether3	to SW01
	202.51.232.210/30	ether2	to SW04
RO OFFICE KSB	202.51.232.62/28	ether1	to SW01
	202.51.234.33/28	ether2	to LAN OFFICE KSB
	202.51.234.65/29	ether3	to PointGraph
RO PT. INFORMATIKA	202.51.232.57/28	ether1	to SW01
	202.51.228.153/29	ether2	to LAN INFORMATIKA
	202.51.225.89/30	ether3	to LAN INFORMATIKA

6. KONFIGURASI SWITCH

6.1. Switch04

Fungsi : Untuk menghubungkan link backbone utama, link back-up dan Router POP Kosambi.
Merk : 3Com
Jumlah : 8 Port
Kode : **SW04**
Tanggal Revisi : 3-Sept-2008
Lokasi : POP Kosambi



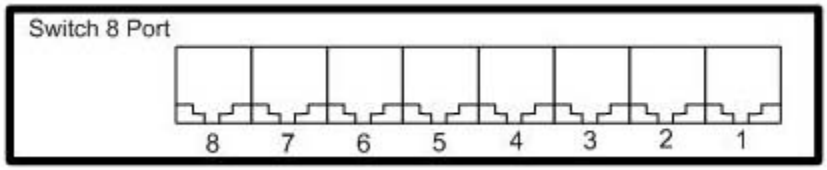
Keterangan :

1	NC	NC
2	NC	NC
3	NC	NC
4	NC	NC
5	NC	NC
6	XT11	Radio MT Ksb-BBU Neo
7	XT13	Router POP KSB (Eth2)
8	XT10	Radio MT BB/1-2

NC : No Connection

6.2. Switch03

Fungsi : Untuk menghubungkan Router Office Ksb dengan LAN Kosambi dan PC User(Nicol)
Merk : D-Link
Jumlah : 8 Port
Kode : **SW03**
Tanggal Revisi : 3-Sept-2008
Lokasi : POP Kosambi



Keterangan :

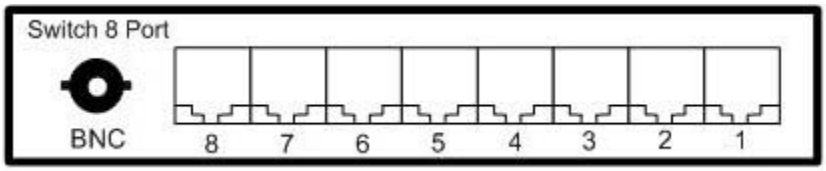
Port	Kode Kabel	Terhubung
1	NC	NC
2	NC	NC
3	XT09	PC User (Nicol)
4	XT08	Router Office KSB (Eth2)
5	XT14	LAN Kosambi (switch Lt4)
6	NC	NC
7	NC	NC
8	NC	NC

NC : No Connection

6.3. Switch02

Fungsi : Untuk menghubungkan router Informatika dan LAN Informatic/di B7(Hub ini diperlukan Port BNC nya karena antara router dan Lan Informatic masih menggunakan kabel BNC

Merk : COMPEX type TP1008C
Jumlah : 8 Port
Kode : **SW02**
Tanggal Revisi : 3-Sept-2008
Lokasi : POP Kosambi



Keterangan :

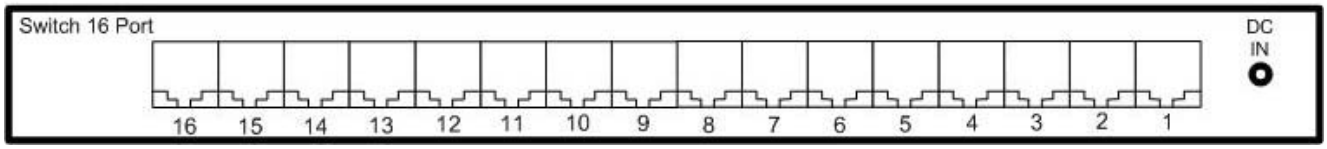
Port	Kode Kabel	Terhubung
1	NC	NC
2	NC	NC
3	NC	NC
4	NC	NC
5	XT02	Router Informatika
6	NC	NC
7	NC	NC
8	NC	NC
BNC	XT03	LAN Informatika/di B7 (BNC kabel)

NC : No Connection

6.4. Switch01

Fungsi : Untuk menghubungkan router POP Kosambi dengan perangkat perangkat pelanggan berupa Radio Mikrotik, Mikrotik router Indoor dan router office kosambi.

Merk : SMC
Jumlah : 16 Port
Kode : **SW01**
Tanggal Revisi : 3-Sept-2008
Lokasi : POP Kosambi

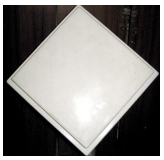


Keterangan :

Port	Kode Kabel	Terhubung
1	NC	NC
2	3C	Untuk Konfigurasi (notebook)
3	NC	NC
4	NC	NC
5	NC	NC
6	NC	NC
7	NC	Router Informatika (eth1)
8	NC	NC
9	NC	NC
10	NC	NC
11	NC	NC
12	2B	Router Office Ksb (eth1)
13	6F	Radio MT AP CL-KS02
14	7G	Router POP KSB (eth3)
15	5E	Radio MT AP CL-KS03/CL-KS05
16	4D	Radio MT AP CL-KS04

NC : No Connection

7. DAFTAR PERANGKAT/ ANTENNA

No	SSID	Coverage	Pelanggan	Antenna		
				Jenis Antenna	Spesifikasi	Gambar
1	CL-BB/1-2	Barat	Backbone to BBU	Flat Antenna 5.8 Ghz	Gain : 23 dBi Beam Width : 11	
2	BBUKOSAMSAM	Barat	Backbone to BBU	Integrated Antenna 5.8 Ghz	Gain : 19 dBi	
3	CL-KS02	Timur	Harmoni	Grid Antenna 2.4 Ghz	Gain : 24 dBi Beam Width : 8	
4	CL-KS04	Utara	Universal	Integrated Antenna 5.8 Ghz	Gain : 22 dBi Beam Width : 10	
5	CL-KS05	Selatan	Double Link	Grid Antenna 2.4 Ghz	Gain : 24 dBi Beam Width : 8	
6	CL-KS03	Selatan	Brother Net	Flat Pannel Antenna 5.8 Ghz	Gain :	

8. DETAIL KONFIGURASI

8.1. Office KSB

```
MikroTik v2.9.51
Login: admin
Password:

  MMM       MMM        KKK                            TTTTTTTTTTT      KKK
  MMMM     MMMM        KKK                            TTTTTTTTTTT      KKK
  MMM MMMM MMM  III   KKK  KKK  RRRRRR     OOOOOO      TTT     III  KKK  KKK
  MMM  MM  MMM  III   KKKKK     RRR  RRR  OOO  OOO     TTT     III  KKKKK
  MMM      MMM  III   KKK KKK   RRRRRR    OOO  OOO     TTT     III  KKK KKK
  MMM      MMM  III   KKK  KKK  RRR  RRR   OOOOOO      TTT     III  KKK  KKK

  MikroTik RouterOS 2.9.51 (c) 1999-2007       http://www.mikrotik.com/


Terminal ansi detected, using single line input mode
[admin@office-kosambi] > interface print
Flags: X - disabled, D - dynamic, R - running
 #    NAME                          TYPE             RX-RATE    TX-RATE    MTU
 0  R ether1                        ether            0          0          1500
 1  R ether2                        ether            0          0          1500
 2  R ether3                        ether            0          0          1500
 3  R bridge1                       bridge           0          0          1500
 4  R 2BBU                          eoip-tunnel      0          0          1500
 5    pptp-in1                      pptp-in          0          0
[admin@office-kosambi] > interface bridge print
Flags: X - disabled, R - running
 0  R name="bridge1" mtu=1500 arp=enabled mac-address=00:00:5E:80:00:02 stp=no
      priority=32768 ageing-time=5m forward-delay=15s
      garbage-collection-interval=4s hello-time=2s max-message-age=20s
[admin@office-kosambi] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #    ADDRESS            NETWORK         BROADCAST       INTERFACE
 0    202.51.232.62/28   202.51.232.48   202.51.232.63   ether1
 1    202.51.234.33/28   202.51.234.32   202.51.234.47   ether2
 2    202.51.234.65/29   202.51.234.64   202.51.234.71   ether3
 3    ;;; ptp Nikol
      192.168.11.1/30    192.168.11.0    192.168.11.3    ether2
 4    192.168.0.6/24     192.168.0.0     192.168.0.255   ether2
 5    ;;; ;;HOSTPOT;
      192.168.4.1/24     192.168.4.0     192.168.4.255   ether2
 6    ;;; tes voip
      60.253.118.33/30   60.253.118.32   60.253.118.35   ether2
[admin@office-kosambi] > system routerboard print
       routerboard: yes
             model: "532A"
     serial-number: "0B8301D45DFE"
  current-firmware: "1.12"
  upgrade-firmware: "2.12"
[admin@office-kosambi] >
```

8.2. POP Router

```
[admin@POP-KSB] > interface print
Flags: X - disabled, R - running, D - dynamic, S - slave
 #    NAME                                                TYPE                MTU
 0 X  ether1                                              ether               1500
 1 R  ether2                                              ether               1500
 2 R  ether3                                              ether               1500
[admin@POP-KSB] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #   ADDRESS            NETWORK         BROADCAST       INTERFACE
 0   202.51.228.113/28  202.51.228.112  202.51.228.127  ether3
 1   202.51.232.49/28   202.51.232.48   202.51.232.63   ether3
 2   60.253.112.146/29  60.253.112.144  60.253.112.151  ether2
[admin@POP-KSB] > system routerboard print
  routerboard: no
[admin@POP-KSB] >
```

8.3. BB/1-2

```
Password:

  MMM       MMM        KKK                          TTTTTTTTTTT      KKK
  MMMM     MMMM        KKK                          TTTTTTTTTTT      KKK
  MMM MMMM MMM  III   KKK  KKK  RRRRRR     OOOOOO      TTT     III  KKK  KKK
  MMM  MM  MMM  III   KKKKK     RRR  RRR  OOO  OOO     TTT     III  KKKKK
  MMM       MMM  III   KKK KKK   RRRRRR    OOO  OOO     TTT     III  KKK KKK
  MMM       MMM  III   KKK  KKK  RRR  RRR   OOOOOO      TTT     III  KKK  KKK

  MikroTik RouterOS 2.8.24 (c) 1999-2005       http://www.mikrotik.com/


Terminal ansi detected, using single line input mode
[barudax@5,2 Kosambi] > interface print
Flags: X - disabled, D - dynamic, R - running
 #    NAME                        TYPE            RX-RATE    TX-RATE    MTU
 0  R ether1                      ether           0          0          1500
 1  R wlan1                       wlan            0          0          1500
[barudax@5,2 Kosambi] > interface wireless print
Flags: X - disabled, R - running
 0  R name="wlan1" mtu=1500 mac-address=00:01:24:70:56:A9 arp=enabled
      disable-running-check=no interface-type=Atheros AR5211
      radio-name="Kosambi and The Backbone" mode=station ssid="BB/1-2"
      frequency=5320 band=5ghz scan-list=default-ism rate-set=configured
      supported-rates-b=""
      supported-rates-a/g=6Mbps,9Mbps,12Mbps,18Mbps,24Mbps basic-rates-b=""
      basic-rates-a/g=6Mbps,9Mbps,12Mbps,18Mbps,24Mbps max-station-count=2007
      ack-timeout=dynamic tx-power=20 noise-floor-threshold=default
      periodic-calibration=disabled burst-time=disabled fast-frames=no
      dfs-mode=none antenna-mode=ant-a wds-mode=disabled
      wds-default-bridge=none wds-ignore-ssid=yes
      update-stats-interval=disabled default-authentication=yes
      default-forwarding=yes hide-ssid=no 802.1x-mode=none
      disconnect-timeout=3s on-fail-retry-time=100ms
[barudax@5,2 Kosambi] > interface wireless registration-table print
 # INT... RADIO-NAME       MAC-ADDRESS       AP  SIGNAL... TX-RATE
 0 wlan1  BBU-KSB          00:0B:6B:37:60:7A yes -51       24Mbps
[barudax@5,2 Kosambi] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #   ADDRESS            NETWORK         BROADCAST       INTERFACE
 0   202.51.237.246/30  202.51.237.244  202.51.237.247  wlan1
 1   60.253.112.147/29  60.253.112.144  60.253.112.151  ether1
[barudax@5,2 Kosambi] > system routerboard print
         routerboard: yes
               model: 220
       serial-number: 015F008AB179
    current-firmware: 1.3.4 (Feb/10/2005 15:36:44)
    upgrade-firmware: 1.3.4 (Feb/10/2005 15:36:44)
[barudax@5,2 Kosambi] > _
```

8.4. KSB-BBU Neo

```
[barudax@KSB-BBU-NEO] > interface print
Flags: D - dynamic, X - disabled, R - running, S - slave
 #     NAME                                                TYPE                MTU
 0  R  ether1                                              ether               1500
 1     ether2                                              ether               1500
 2     ether3                                              ether               1500
 3  R  wlan1                                               wlan                1500
[barudax@KSB-BBU-NEO] > interface wireless print
Flags: X - disabled, R - running
 0  R name="wlan1" mtu=1500 mac-address=00:0C:42:18:0F:50 arp=enabled
      interface-type=Atheros AR5413 mode=station ssid="BBUKOSAMSAM"
      frequency=5600 band=5ghz scan-list=default antenna-mode=ant-a
      wds-mode=disabled wds-default-bridge=none wds-ignore-ssid=no
      default-authentication=yes default-forwarding=yes default-ap-tx-limit=0
      default-client-tx-limit=0 hide-ssid=no security-profile=profile1
      compression=no
[barudax@KSB-BBU-NEO] > interface wireless registration-table print
 # INTERFACE            RADIO-NAME       MAC-ADDRESS        AP  SIGNAL... TX-RATE
 0 wlan1                RB333 BBU-KSB    00:0C:42:18:0F:88  yes -63dBm... 18Mbps
[barudax@KSB-BBU-NEO] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #   ADDRESS             NETWORK         BROADCAST       INTERFACE
 0   60.253.112.145/29   60.253.112.144  60.253.112.151  ether1
 1   60.253.112.126/30   60.253.112.124  60.253.112.127  wlan1
[barudax@KSB-BBU-NEO] > system routerboard print
       routerboard: yes
             model: "333"
     serial-number: "154201C04E1D"
  current-firmware: "2.10"
  upgrade-firmware: "2.16"
[barudax@KSB-BBU-NEO] >
```

8.5. MT 2 Wlan

```
[barudax@MT 2 Wlan-KSB] > interface print
Flags: X - disabled, D - dynamic, R - running
 #    NAME                        TYPE            RX-RATE    TX-RATE    MTU
 0  R ether1                      ether           0          0          1500
 1 X  ether2                      ether           0          0          1500
 2 X  ether3                      ether           0          0          1500
 3  R wlan1                       wlan            0          0          1500
 4  R wlan2                       wlan            0          0          1500
 5  R bridge1                     bridge          0          0          1500
[barudax@MT 2 Wlan-KSB] > interface wireless print
Flags: X - disabled, R - running
 0  R name="wlan1" mtu=1500 mac-address=00:0C:42:15:21:05 arp=enabled
      disable-running-check=no interface-type=Atheros AR5413
      radio-name="AP CL-KS03" mode=ap-bridge ssid="CL-KS03" area=""
      frequency-mode=manual-txpower country=no_country_set antenna-gain=0
      frequency=5240 band=5ghz scan-list=default rate-set=configured
      supported-rates-b="" supported-rates-a/g=6Mbps,9Mbps,12Mbps,18Mbps
      basic-rates-b="" basic-rates-a/g=6Mbps,9Mbps,12Mbps,18Mbps
      max-station-count=2007 ack-timeout=dynamic tx-power=22
      tx-power-mode=card-rates noise-floor-threshold=default
      periodic-calibration=default periodic-calibration-interval=60
      burst-time=disabled dfs-mode=none antenna-mode=ant-a wds-mode=disabled
      wds-default-bridge=none wds-default-cost=100 wds-cost-range=50-150
      wds-ignore-ssid=no update-stats-interval=disabled
      default-authentication=yes default-forwarding=yes default-ap-tx-limit=0
      default-client-tx-limit=0 proprietary-extensions=pre-2.9.25
      hide-ssid=no security-profile=new disconnect-timeout=3s
      on-fail-retry-time=100ms hw-retries=15 preamble-mode=long
      compression=no allow-sharedkey=no

 1  R name="wlan2" mtu=1500 mac-address=00:0C:42:15:21:0E arp=enabled
      disable-running-check=no interface-type=Atheros AR5413
      radio-name="AP CL-K05" mode=ap-bridge ssid="CL-KS05" area=""
      frequency-mode=manual-txpower country=japan antenna-gain=0
      frequency=2432 band=2.4ghz-b scan-list=default rate-set=configured
      supported-rates-b=5.5Mbps supported-rates-a/g="" basic-rates-b=5.5Mbps
      basic-rates-a/g="" max-station-count=2007 ack-timeout=dynamic
      tx-power=22 tx-power-mode=card-rates noise-floor-threshold=default
      periodic-calibration=default periodic-calibration-interval=60
      burst-time=disabled dfs-mode=none antenna-mode=ant-a wds-mode=disabled
      wds-default-bridge=none wds-default-cost=100 wds-cost-range=50-150
      wds-ignore-ssid=no update-stats-interval=disabled
      default-authentication=no default-forwarding=yes default-ap-tx-limit=0
      default-client-tx-limit=0 proprietary-extensions=post-2.9.25
      hide-ssid=no security-profile=default disconnect-timeout=3s
      on-fail-retry-time=100ms hw-retries=15 preamble-mode=both
      compression=no allow-sharedkey=no

[barudax@MT 2 Wlan-KSB] > interface wireless registration-table print
 # INTE... RADIO-NAME       MAC-ADDRESS       AP  SIGNAL... TX-RATE
 0 ;;; Double Linx
   wlan2   Double Lynk      00:0C:42:15:21:1E no  -58dBm... 5.5Mbps
 1 wlan1   Brother-Net      00:0C:42:05:88:59 no  -76dBm... 18Mbps
[barudax@MT 2 Wlan-KSB] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #   ADDRESS            NETWORK         BROADCAST       INTERFACE
 0   202.51.232.51/28   202.51.232.48   202.51.232.63   ether1
[barudax@MT 2 Wlan-KSB] > system routerboard print
       routerboard: yes
             model: "532"
     serial-number: "111301D349EF"
  current-firmware: "2.4"
  upgrade-firmware: "2.12"
[barudax@MT 2 Wlan-KSB] > _
```

8.6. CL-KS02

```
Password:

  MMM      MMM       KKK                          TTTTTTTTTTT      KKK
  MMMM    MMMM       KKK                          TTTTTTTTTTT      KKK
  MMM MMMM MMM  III  KKK  KKK  RRRRRR     OOOOOO      TTT     III  KKK  KKK
  MMM  MM  MMM  III  KKKKK     RRR  RRR  OOO  OOO     TTT     III  KKKKK
  MMM      MMM  III  KKK KKK   RRRRRR    OOO  OOO     TTT     III  KKK KKK
  MMM      MMM  III  KKK  KKK  RRR  RRR   OOOOOO      TTT     III  KKK  KKK

  MikroTik RouterOS 2.9.50 (c) 1999-2007       http://www.mikrotik.com/


Terminal ansi detected, using single line input mode
[barudax@POP CL-KS02] > interface print
Flags: X - disabled, D - dynamic, R - running
 #    NAME                        TYPE            RX-RATE    TX-RATE    MTU
 0  R ether1                      ether           0          0          1500
 1  R wlan1                       wlan            0          0          1500
 2  R bridge1                     bridge          0          0          1500
[barudax@POP CL-KS02] > interface wireless print
Flags: X - disabled, R - running
 0  R name="wlan1" mtu=1500 mac-address=00:0B:6B:37:69:B8 arp=enabled
      disable-running-check=no interface-type=Atheros AR5213
      radio-name="AP CL-KS02" mode=ap-bridge ssid="CL-KS02" area=""
      frequency-mode=manual-txpower country=japan antenna-gain=0
      frequency=2484 band=2.4ghz-b scan-list=default rate-set=configured
      supported-rates-b=2Mbps,5.5Mbps supported-rates-a/g=""
      basic-rates-b=2Mbps,5.5Mbps basic-rates-a/g="" max-station-count=2007
      ack-timeout=dynamic tx-power=22 tx-power-mode=card-rates
      noise-floor-threshold=default periodic-calibration=default
      periodic-calibration-interval=60 burst-time=disabled dfs-mode=none
      antenna-mode=ant-a wds-mode=disabled wds-default-bridge=none
      wds-default-cost=100 wds-cost-range=50-150 wds-ignore-ssid=no
      update-stats-interval=disabled default-authentication=no
      default-forwarding=yes default-ap-tx-limit=0 default-client-tx-limit=0
      proprietary-extensions=post-2.9.25 hide-ssid=no security-profile=new
      disconnect-timeout=3s on-fail-retry-time=100ms hw-retries=15
      preamble-mode=both compression=no allow-sharedkey=no
[barudax@POP CL-KS02] > interface wireless registration-table print
 # INTE... RADIO-NAME       MAC-ADDRESS       AP  SIGNAL... TX-RATE
 0 ;;; Harmoni
   wlan1   Chicago          00:0C:42:05:88:25 no  -56dBm... 5.5Mbps
[barudax@POP CL-KS02] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #   ADDRESS            NETWORK         BROADCAST       INTERFACE
 0   202.51.232.54/28   202.51.232.48   202.51.232.63   ether1
[barudax@POP CL-KS02] > ip route print
Flags: X - disabled, A - active, D - dynamic,
C - connect, S - static, r - rip, b - bgp, o - ospf
 #      DST-ADDRESS        PREF-SRC        G GATEWAY         DISTANCE INTERFACE
 0 ADC 202.51.232.48/28   202.51.232.54                               bridge1
 1 A S 0.0.0.0/0                          r 202.51.232.49            bridge1
[barudax@POP CL-KS02] > system routerboard print
       routerboard: yes
             model: "512"
     serial-number: "0ABC01D90F1D"
  current-firmware: "2.9"
  upgrade-firmware: "2.12"
[barudax@POP CL-KS02] >
```

8.7. CL-KS04

```
  MMM      MMM       KKK                          TTTTTTTTTTT      KKK
  MMMM    MMMM       KKK                          TTTTTTTTTTT      KKK
  MMM MMMM MMM  III  KKK  KKK  RRRRRR     OOOOOO      TTT     III  KKK  KKK
  MMM  MM  MMM  III  KKKKK     RRR  RRR  OOO  OOO     TTT     III  KKKKK
  MMM      MMM  III  KKK KKK   RRRRRR    OOO  OOO     TTT     III  KKK KKK
  MMM      MMM  III  KKK  KKK  RRR  RRR   OOOOOO      TTT     III  KKK  KKK

  MikroTik RouterOS 3.10 (c) 1999-2008       http://www.mikrotik.com/

sep/15/2008 15:06:55 system,error,critical login failure for user barudax from 202.5
1
.232.49 via telnet

[barudax@POP CL-KS04] > interface print
Flags: X - disabled, R - running, D - dynamic, S - slave
 #    NAME                                                TYPE               MTU
 0 R  ether1                                              ether              1500
 1 R  wlan1                                               wlan               1500
[barudax@POP CL-KS04] > interface wireless print
Flags: X - disabled, R - running
 0  R name="wlan1" mtu=1500 mac-address=00:0C:42:15:21:09 arp=enabled
      interface-type=Atheros AR5413 mode=ap-bridge ssid="CL-KS04" frequency=2432
      band=2.4ghz-b scan-list=default antenna-mode=ant-a wds-mode=disabled
      wds-default-bridge=none wds-ignore-ssid=no default-authentication=yes
      default-forwarding=yes default-ap-tx-limit=0 default-client-tx-limit=0
      hide-ssid=no security-profile=new compression=no
[barudax@POP CL-KS04] > interface wireless registration-table print
 # IN RADIO-NAME       MAC-ADDRESS       AP  SIGNAL... TX-RATE UPTIME
 0 ;;; Universal Travel
   wl Universal Soldie 00:0C:42:05:86:F9 no  -66dBm... 11Mb... 1w1h16m54s
[barudax@POP CL-KS04] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #    ADDRESS            NETWORK         BROADCAST       INTERFACE
 0    202.51.232.55/28   202.51.232.48   202.51.232.63   ether1
 1    202.51.226.49/29   202.51.226.48   202.51.226.55   wlan1
[barudax@POP CL-KS04] > ip route print
Flags: X - disabled, A - active, D - dynamic,
C - connect, S - static, r - rip, b - bgp, o - ospf, m - mme,
B - blackhole, U - unreachable, P - prohibit
 #      DST-ADDRESS        PREF-SRC        G GATEWAY               DISTANCE INT...
 0 A S  0.0.0.0/0                          r 202.51.232.49         1        ether1
 1 A S  60.253.118.24/29                   r 202.51.226.51         1        wlan1
 2 ADC  202.51.226.48/29   202.51.226.49                           0        wlan1
 3 ADC  202.51.232.48/28   202.51.232.55                           0        ether1
[barudax@POP CL-KS04] > system routerboard print
       routerboard: yes
             model: "112"
     serial-number: "0F4D01D67211"
  current-firmware: "2.6"
  upgrade-firmware: "2.15"
[barudax@POP CL-KS04] >
```

8.8. Router Informatika

```
MikroTik v2.9.42
Login: barudax
Password:

  MMM       MMM        KKK                            TTTTTTTTTTT       KKK
  MMMM     MMMM        KKK                            TTTTTTTTTTT       KKK
  MMM MMMM MMM  III   KKK  KKK  RRRRRR     OOOOOO       TTT      III   KKK  KKK
  MMM  MM  MMM  III   KKKKK     RRR  RRR  OOO  OOO      TTT      III   KKKKK
  MMM      MMM  III   KKK KKK   RRRRRR    OOO  OOO      TTT      III   KKK KKK
  MMM      MMM  III   KKK  KKK  RRR  RRR   OOOOOO       TTT      III   KKK  KKK

  MikroTik RouterOS 2.9.42 (c) 1999-2007       http://www.mikrotik.com/


Terminal ansi detected, using single line input mode
[barudax@PT Informatika] > interface print
Flags: X - disabled, D - dynamic, R - running
 #    NAME                                TYPE            RX-RATE    TX-RATE    MTU
 0  R ether1                              ether           0          0          1500
 1  R ether2                              ether           0          0          1500
 2  R ether3                              ether           0          0          1500
 3 X  ether4                              ether           0          0          1500
 4 X  ether5                              ether           0          0          1500
 5 X  to-commando                         ipip            0          0          1480
[barudax@PT Informatika] > ip address print
Flags: X - disabled, I - invalid, D - dynamic
 #   ADDRESS            NETWORK         BROADCAST       INTERFACE
 0   ;;; Backbone
     202.51.232.57/28   202.51.232.48   202.51.232.63   ether1
 1   202.51.228.153/29  202.51.228.152  202.51.228.159  ether2
 2   202.51.225.89/30   202.51.225.88   202.51.225.91   ether3
 3   60.253.112.133/30  60.253.112.132  60.253.112.135  to-commando
[barudax@PT Informatika] > ip route print
Flags: X - disabled, A - active, D - dynamic,
C - connect, S - static, r - rip, b - bgp, o - ospf
 #     DST-ADDRESS        PREF-SRC        G GATEWAY          DISTANCE INTERFACE
 0  DC 60.253.112.132/30  60.253.112.133                                to-commando
 1 ADC 202.51.225.88/30   202.51.225.89                                 ether3
 2 X S 202.51.225.96/29                   u 60.253.112.134
 3 X S 202.51.228.144/29                  u 60.253.112.134
 4 ADC 202.51.228.152/29  202.51.228.153                               ether2
 5 ADC 202.51.232.48/28   202.51.232.57                                ether1
 6 A S 0.0.0.0/0                          r 202.51.232.49             ether1
[barudax@PT Informatika] > system routerboard print
       routerboard: yes
             model: "153"
     serial-number: "109901D014F8"
  current-firmware: "2.6"
  upgrade-firmware: "2.7"
[barudax@PT Informatika] > _
```