

WIRELESS MULTI-SERVICES USING CAPs MAN WITH IP MANAGEMENT

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PRESENTER INFORMATION

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<http://mikrotik.kapnetwork.com>

OBJECTIVE

why must have the IP Address for all cAP

how to create different services from CAPsMAN to cAP

CAPs MAN BASIC

CAPs MAN's Controlled Access Point system Manager

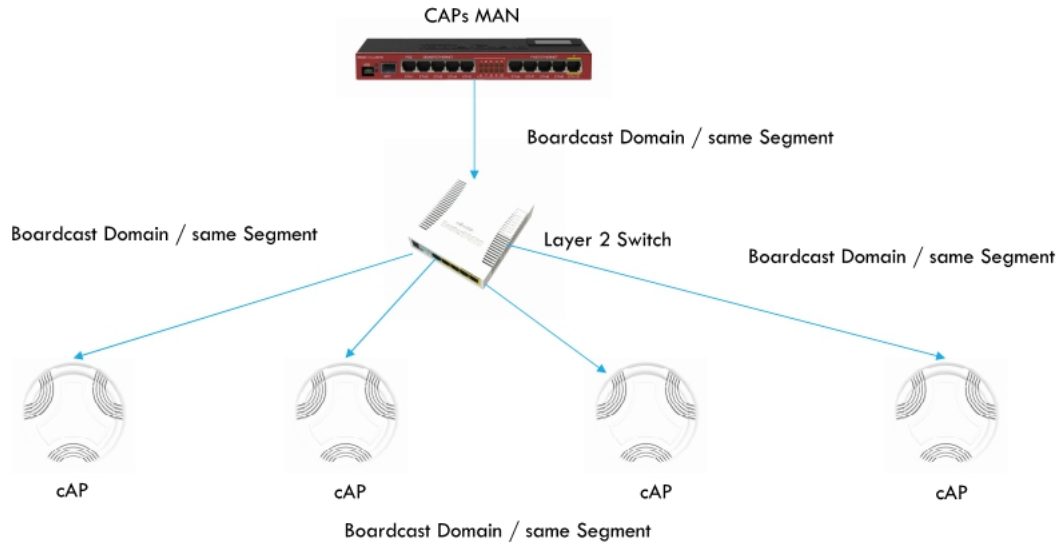
CAP's Controlled Access Points

CAPsMAN to CAP Connection can be via Layer2 (MAC connection) and Layer3 (IP connection)

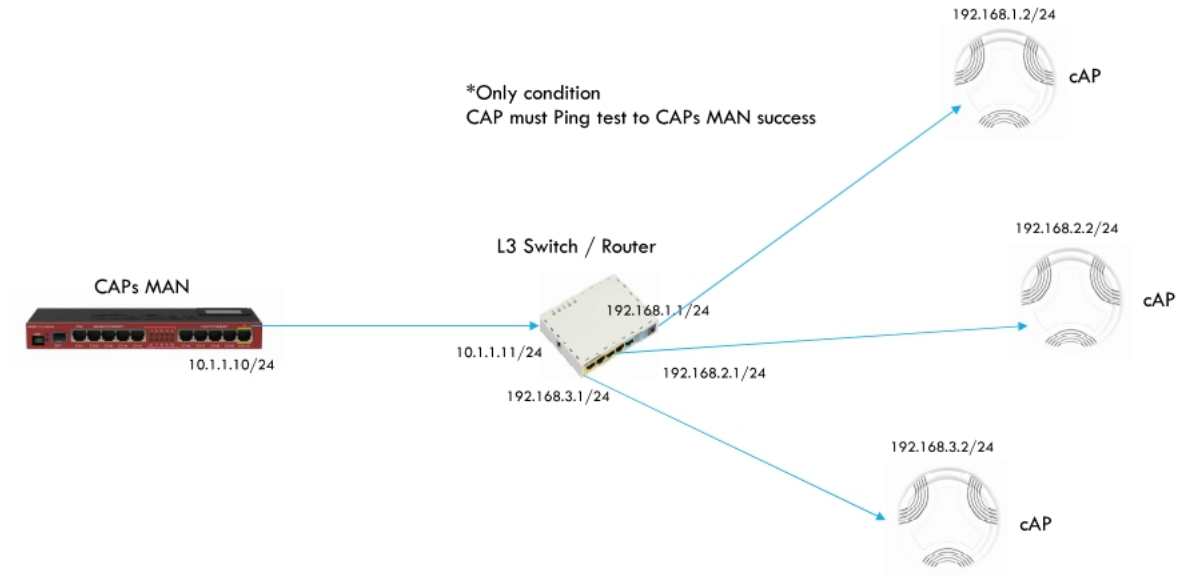
*MoreDetail for CAPs MAN

<http://wiki.mikrotik.com/wiki/Manual:CAPsMAN>

CAPs MAN TO CAP CONNECTION VIA MAC



CAPs MAN TO CAP CONNECTION VIA IP ADDRESS



NETWORK DIAGRAM



CAPs MAN

IP Address : 10.1.1.1/24

Management IP Address

Coffee Shop Service

IP Address 192.168.10.1/24

Services 1

Canteen Service

IP Address 192.168.20.1/24

Services 2

Class Room Service

IP Address 192.168.30.1/24

Services 3



CAP 1

IP Address : 10.1.1.2/24

Coffee Shop



SSID : Coffee Shop

Assign IP Address
192.168.10.2-192.168.10.254
Gateway 192.168.10.1



CAP 2

IP Address : 10.1.1.3/24

Canteen



SSID : Canteen

Assign IP Address
192.168.20.2-192.168.20.254
Gateway 192.168.20.1



CAP 3

IP Address : 10.1.1.4/24

Class Room



SSID : Class Room

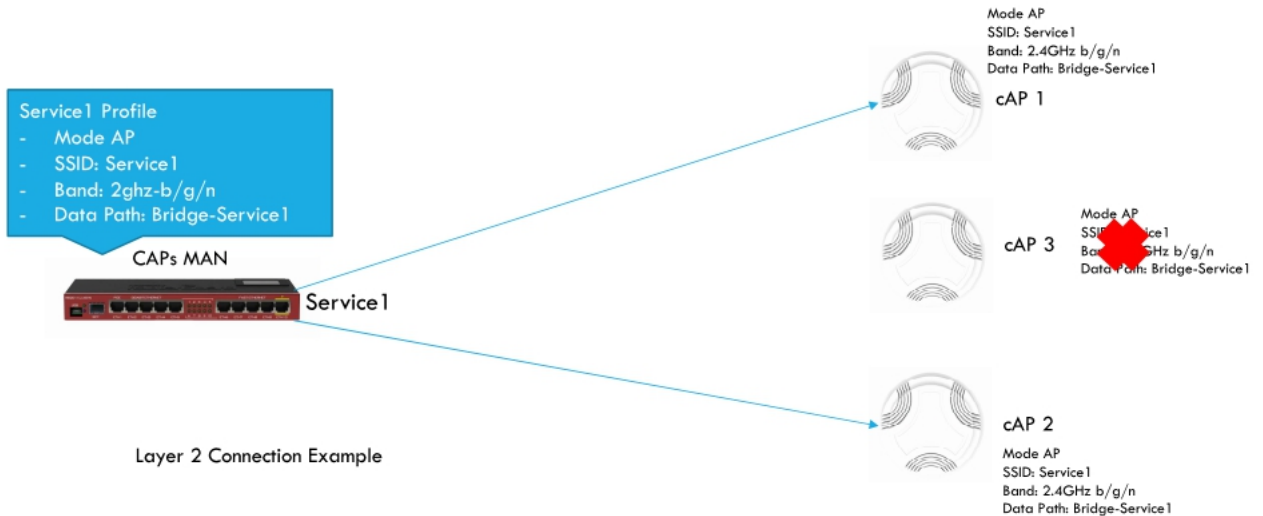
Assign IP Address
192.168.30.2-192.168.30.254
Gateway 192.168.30.1



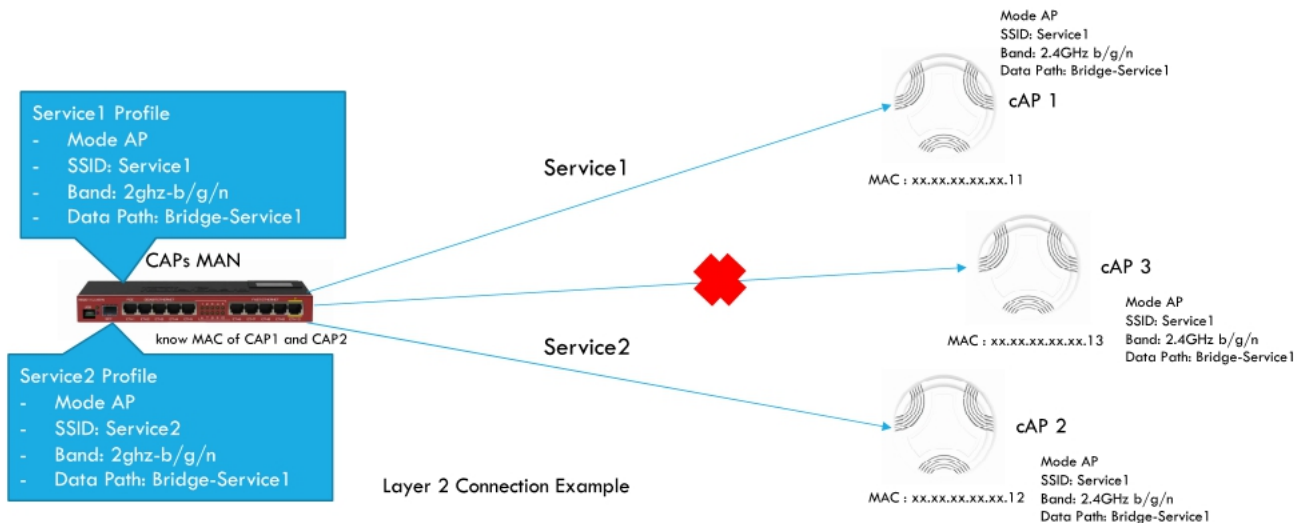
EASY TO UNDERSTAND CAPs MAN

CAPs MAN and CAP

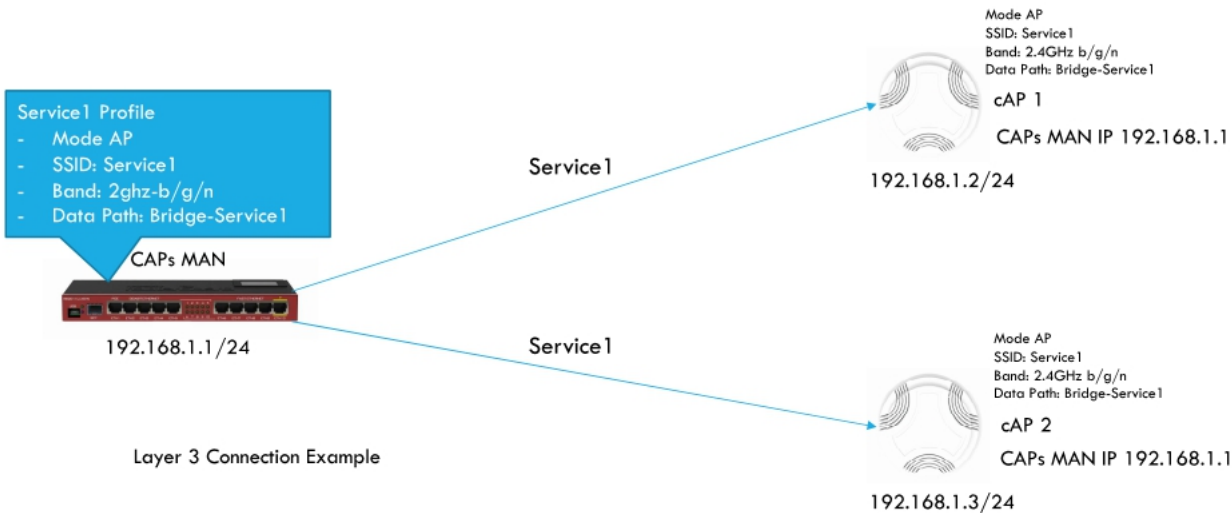
EASY TO UNDERSTAND CAPs MAN'S CONCEPT



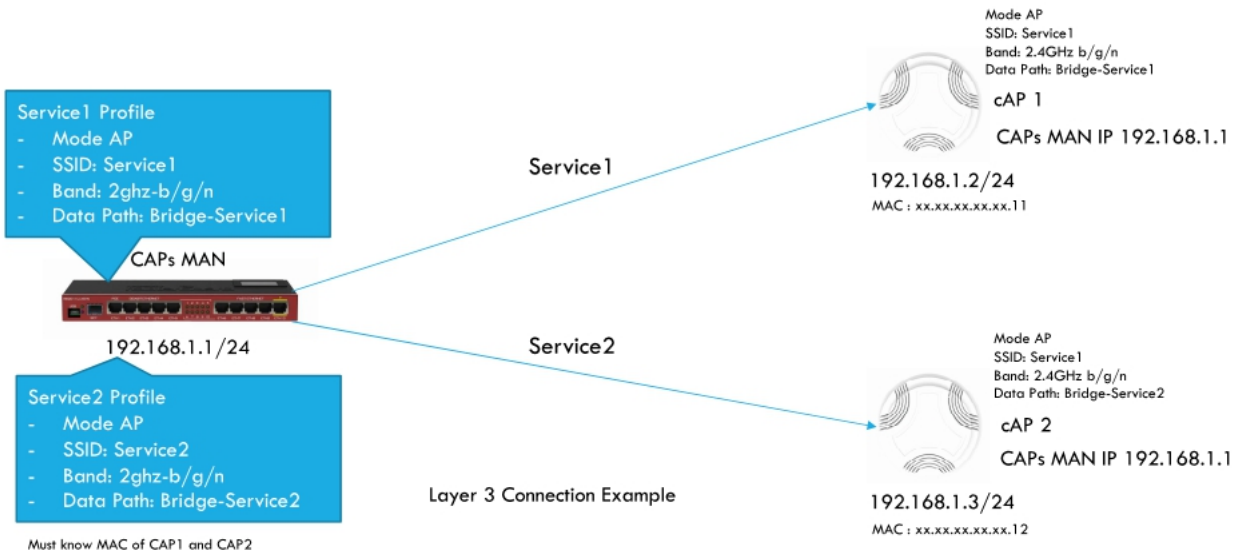
EASY TO UNDERSTAND CAPs MAN'S CONCEPT



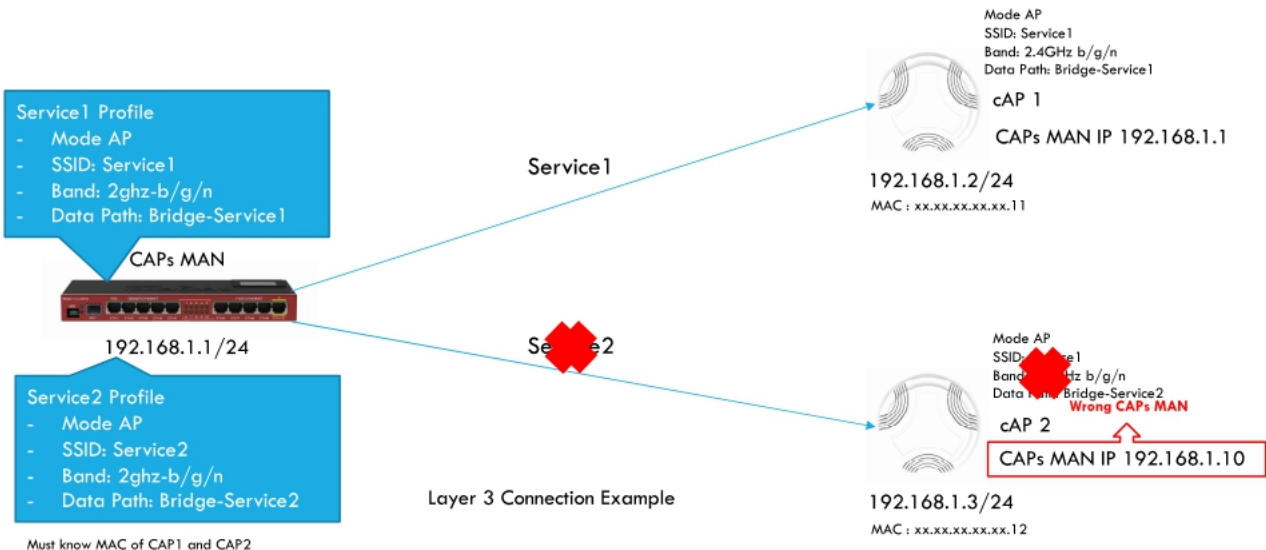
EASY TO UNDERSTAND CAPs MAN'S CONCEPT



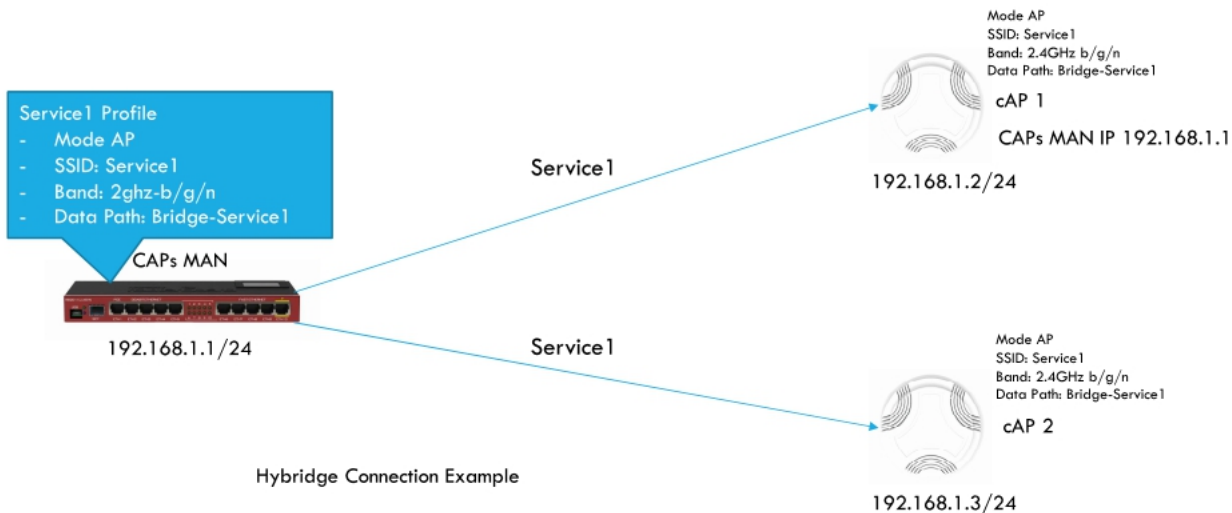
EASY TO UNDERSTAND CAPs MAN'S CONCEPT



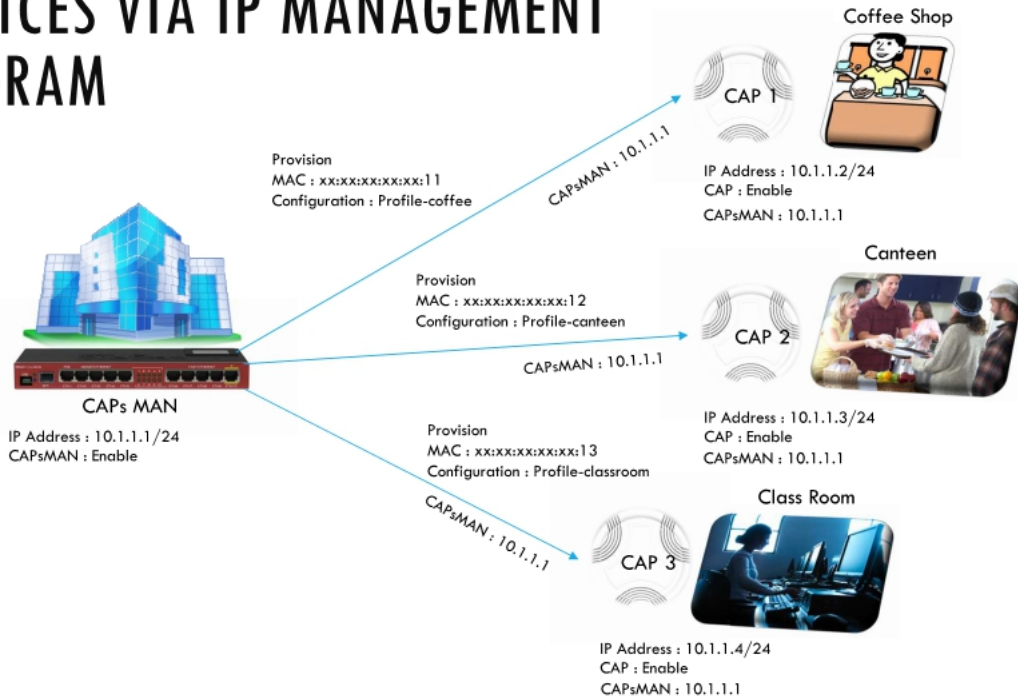
EASY TO UNDERSTAND CAPs MAN'S CONCEPT



EASY TO UNDERSTAND CAPs MAN'S CONCEPT



SERVICES VIA IP MANAGEMENT DIAGRAM



CAPs MAN SERVICE CONFIGURE DIAGRAM



CAPs MAN

Provision

MAC : xx:xx:xx:xx:xx:11

Configuration : Profile-coffee

Provision

MAC : xx:xx:xx:xx:xx:12

Configuration : Profile-canteen

Provision

MAC : xx:xx:xx:xx:xx:13

Configuration : Profile-classroom

Management :

IP Address : 10.1.1.1/24

CAPsMAN : Enable

- Profile-coffee
 - Mode : AP
 - Band : 2ghz-b/g/n
 - SSID : Coffee Shop
 - Data Path : br-coffee
- Profile-canteen
 - Mode : AP
 - Band : 2ghz-b/g/n
 - SSID : Canteen
 - Data Path : br-canteen
- Profile-classroom
 - Mode : AP
 - Band : 2ghz-b/g/n
 - SSID : Class Room
 - Data Path : br-classroom

Bridge Configure

- br-coffee
 - IP Address : 192.168.10.1/24
 - DHCP Server : On
 - DHCP Pool : 192.168.10.2-192.168.10.254
- br-canteen
 - IP Address : 192.168.20.1/24
 - DHCP Server : On
 - DHCP Pool : 192.168.10.2-192.168.10.254
- br-classroom
 - IP Address : 192.168.30.1/24
 - DHCP Server : On
 - DHCP Pool : 192.168.10.2-192.168.10.254

CAP CONFIGURE DIAGRAM



Coffee Shop



Management :
Ip Address : 10.1.1.2/24
CAP : Enable
Interface : wlan1
CAPsMAN Address : 10.1.1.1



Canteen



Management :
Ip Address : 10.1.1.3/24
CAP : Enable
Interface : wlan1
CAPsMAN Address : 10.1.1.1



Class Room



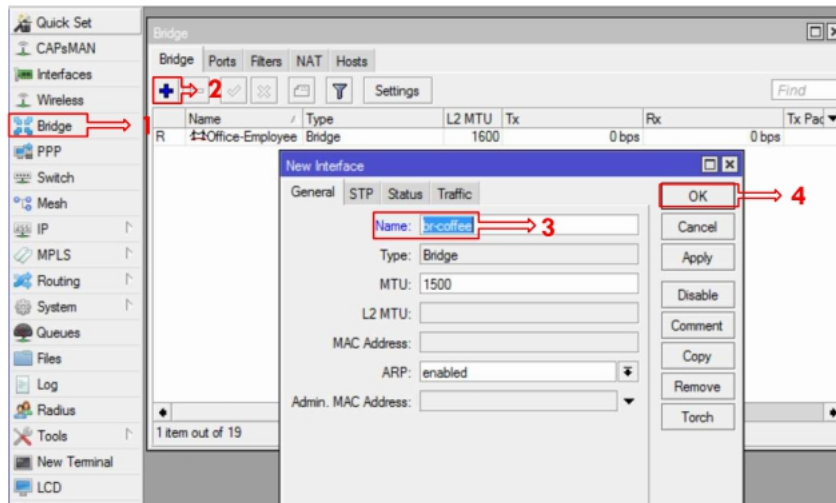
Management :
Ip Address : 10.1.1.4/24
CAP : Enable
Interface : wlan1
CAPsMAN Address : 10.1.1.1

STEP CONFIGURE CAPs MAN

Create bridge interface

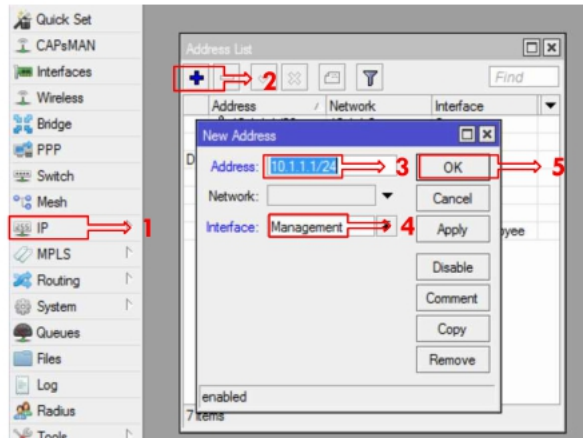
- do it 3 time

- First time at step 3
 - The name's br-coffee
- Second time at step 3
 - The name's br-canteen
- Third time at step 3
 - The name's br-classroom



STEP CONFIGURE CAPs MAN

Create management IP Address at Local Interface



STEP CONFIGURE CAPS MAN

Create Service IP Address on Bridge Interface and DHCP Server Enabled

Br-coffee

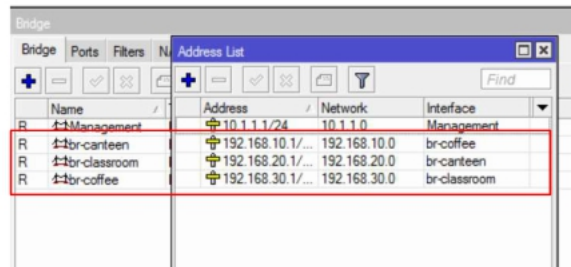
IP Address : 192.168.10.1/24

Br-canteen

IP Address : 192.168.20.1/24

Br-classroom

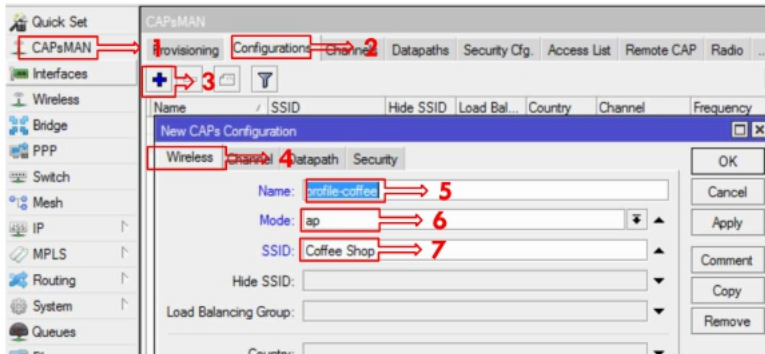
IP Address : 192.168.30.1/24



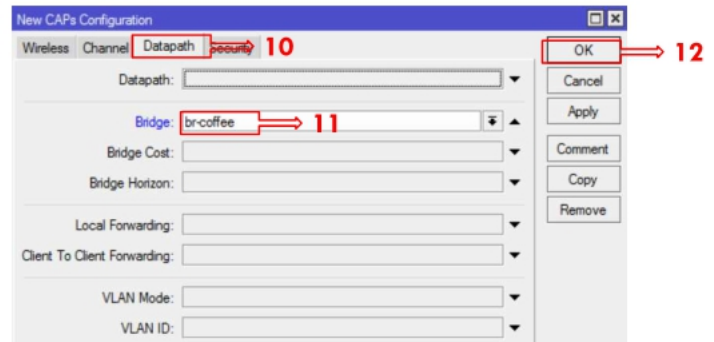
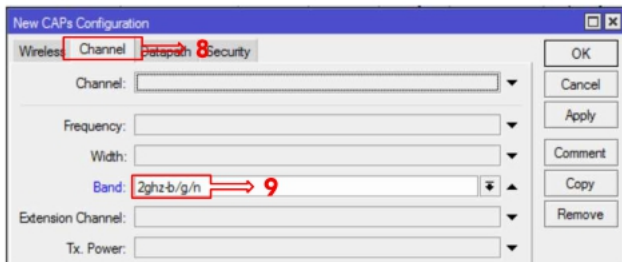
Name	Address	Network	Interface
Management	10.1.1.1/24	10.1.1.0	Management
br-canteen	192.168.10.1/...	192.168.10.0	br-coffee
br-classroom	192.168.20.1/...	192.168.20.0	br-canteen
br-coffee	192.168.30.1/...	192.168.30.0	br-classroom

STEP CONFIGURE CAPs MAN

Create CAPs MAN Profile 3 time, name (Step 5) and Data path (Step 11) different



STEP CONFIGURE CAPs MAN



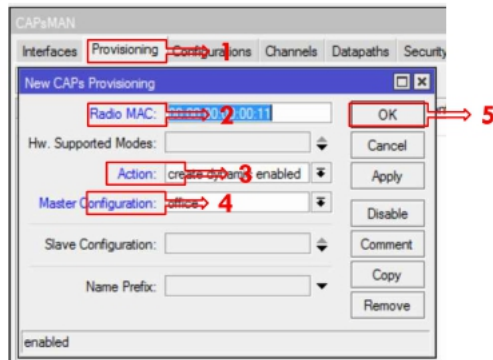
STEP CONFIGURE CAPs MAN

Create CAPs MAN Provisioning for 3 services, 3 time by different Master Configuration Profile and Radio MAC

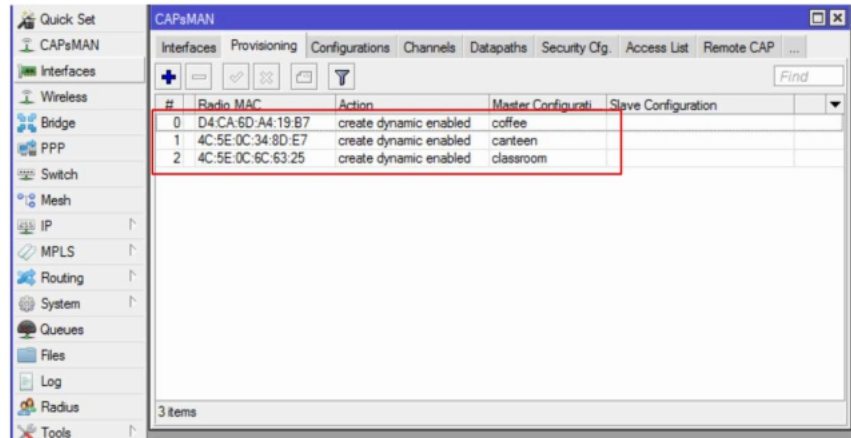
First time use profile-coffee

Second time use profile-canteen

Third time use profile-classroom



STEP CONFIGURE CAPs MAN



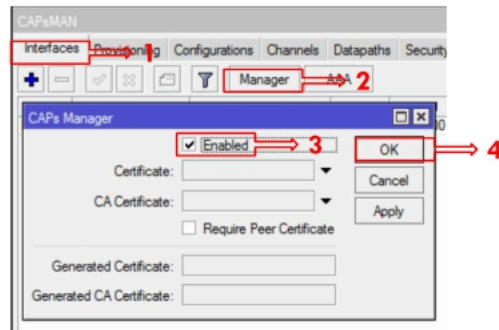
The screenshot displays the CAPsMAN configuration window with the 'Configurations' tab selected. A table lists three dynamic configurations, with the first three rows highlighted by a red box. The table has columns for '#', 'Radio MAC', 'Action', 'Master Configuration', and 'Slave Configuration'.

#	Radio MAC	Action	Master Configuration	Slave Configuration
0	D4:CA:6D:A4:19:B7	create dynamic enabled	coffee	
1	4C:5E:0C:34:8D:E7	create dynamic enabled	canteen	
2	4C:5E:0C:6C:63:25	create dynamic enabled	classroom	

3 items

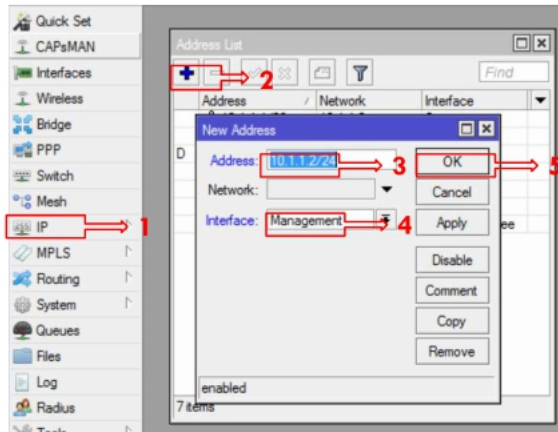
STEP CONFIGURE CAPs MAN

Enable service for CAPs MAN



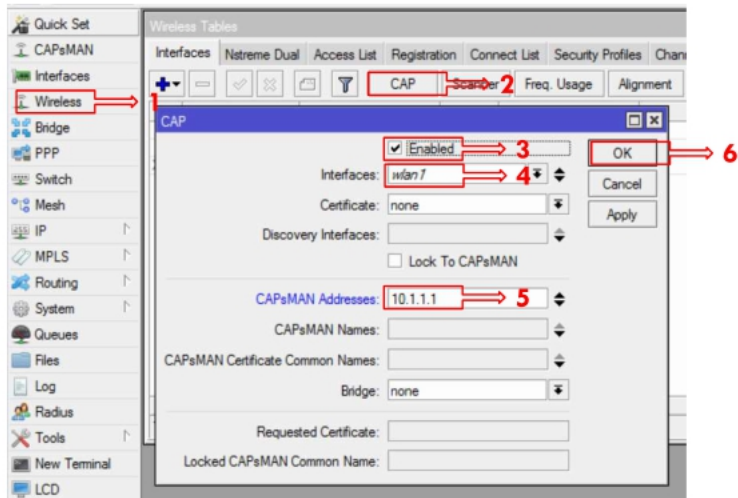
STEP CONFIGURE CAP

Create management IP Address at Local Interface

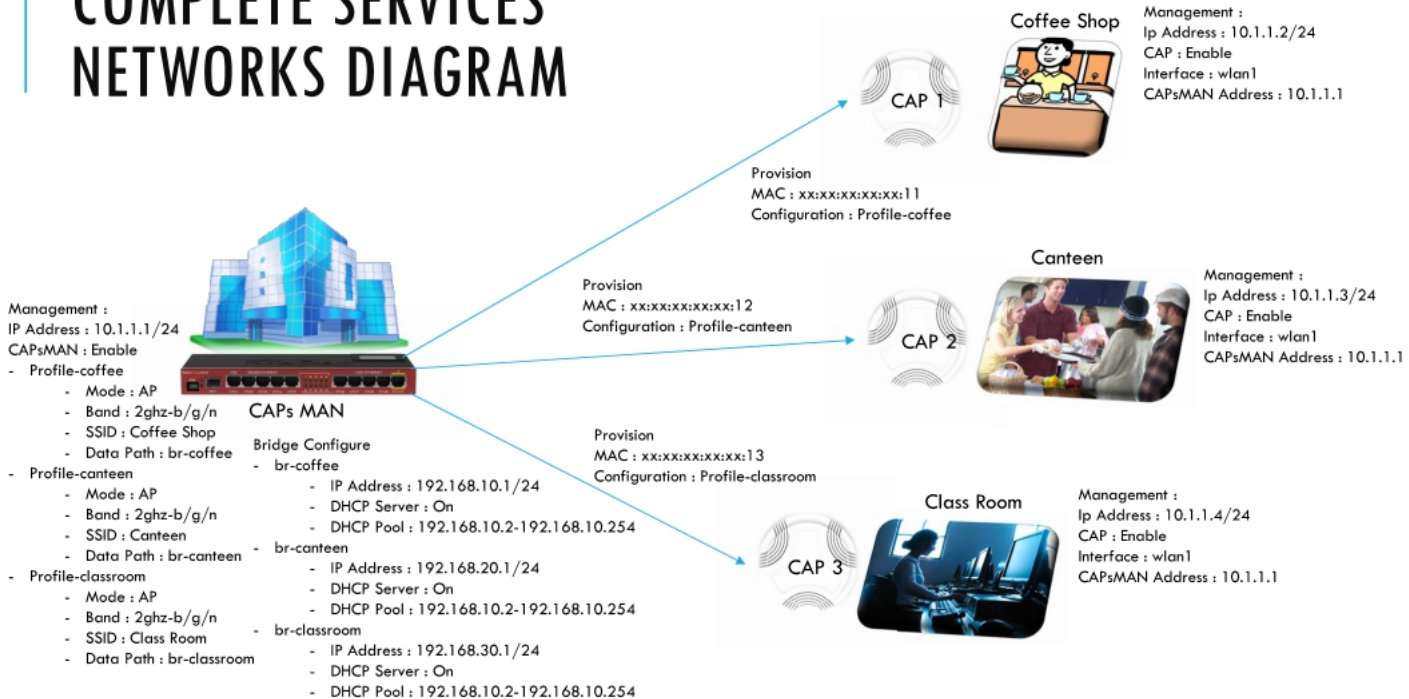


STEP CONFIG CAP

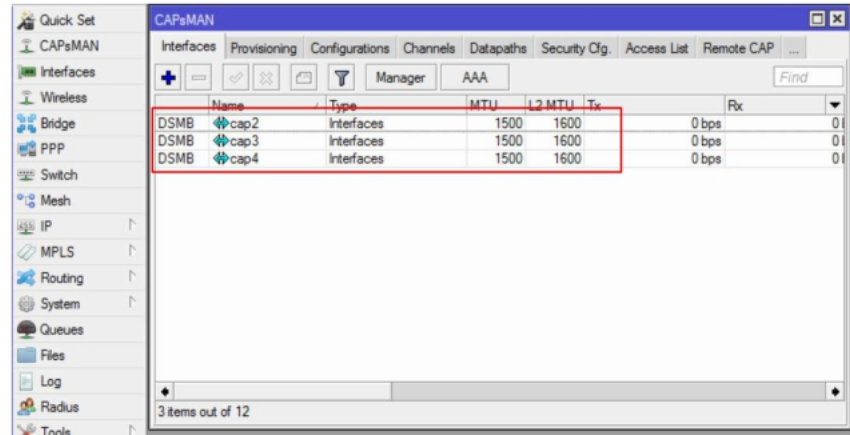
Enabled service CAP



COMPLETE SERVICES NETWORKS DIAGRAM



STATUS FOR SUCCESS PROVISIONING

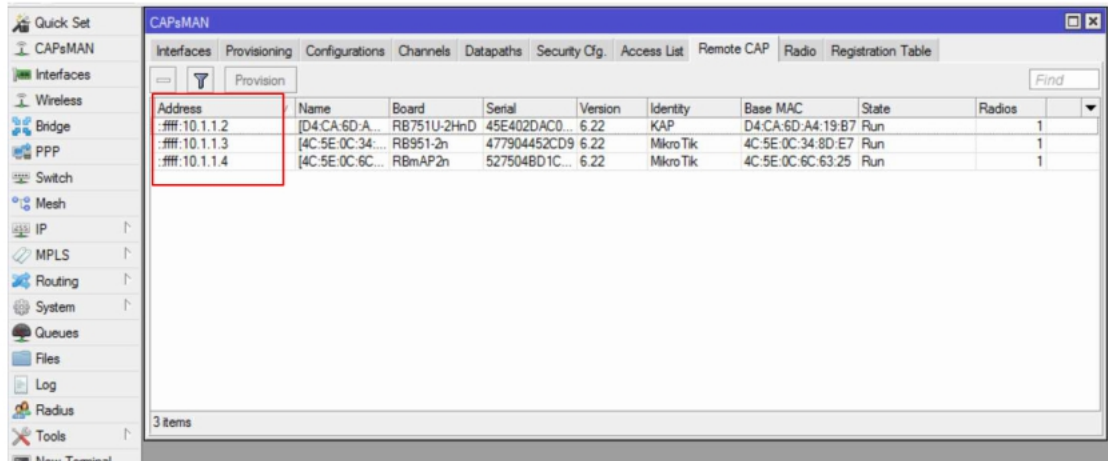


The screenshot displays the CAPsMAN configuration window with the 'Interfaces' tab selected. A table lists three provisioned interfaces, which are highlighted with a red box. The table columns are Name, Type, MTU, L2 MTU, Tx, and Rx. The status for each interface is '0', indicating successful provisioning.

Name	Type	MTU	L2 MTU	Tx	Rx	Status
DSMB cap2	Interfaces	1500	1600		0 bps	0
DSMB cap3	Interfaces	1500	1600		0 bps	0
DSMB cap4	Interfaces	1500	1600		0 bps	0

3 items out of 12

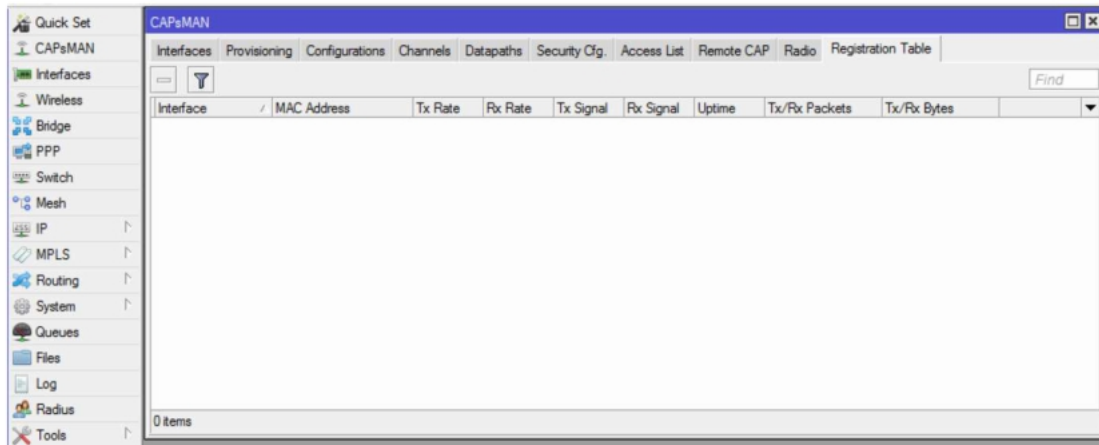
STATUS OF ALL CAP CONNECTION



The screenshot shows the Mikrotik WinBox CAPsMAN interface. The left sidebar contains navigation options: Quick Set, CAPsMAN, Interfaces, Wireless, Bridge, PPP, Switch, Mesh, IP, MPLS, Routing, System, Queues, Files, Log, Radius, and Tools. The main window is titled 'CAPsMAN' and has several tabs: Interfaces, Provisioning, Configurations, Channels, Datapaths, Security Cfg., Access List, Remote CAP, Radio, and Registration Table. The 'Provisioning' tab is active, displaying a table of connections. A red box highlights the first three rows of the table. The table has columns for Address, Name, Board, Serial, Version, Identity, Base MAC, State, Radios, and a dropdown menu. At the bottom of the table, it indicates '3 items'.

Address	Name	Board	Serial	Version	Identity	Base MAC	State	Radios	
::ffff:10.1.1.2	[D4-CA-6D-A...	RB751U-2HnD	45E402DAC0...	6.22	KAP	D4-CA-6D-A4-19-B7	Run	1	
::ffff:10.1.1.3	[4C-5E-0C-34...	RB951-2n	477904452CD9	6.22	Mikro Tik	4C-5E-0C-34-8D-E7	Run	1	
::ffff:10.1.1.4	[4C-5E-0C-6C...	RBmAP2n	527504BD1C...	6.22	Mikro Tik	4C-5E-0C-6C-63-25	Run	1	

STATUS OF CLIENTS CONNECTION





THANKS YOU

Question?????

You can download this document from

<http://mikrotik.kapnetwork.com>