Konfigurasi Jaringan WDS (Wireless Distribution system) Pada PT. Wadin Pertiwi

A. Konfigurasi Wireless Router di kantor pusat PT.Wadin Pertiwi(gedung1).

Hal yang perlu diperhatikan sebelum menggunakan *Wireless Router* untuk koneksi antar jaringan computer secara wireless adalah SSID (*Service Set Identifier*). Adapun cara untuk mengeset SSID dan alamat IP dari AP tersebut, berikut ini adalah cara mengeset SSID, alamat IP serta *set* WDS pada Wireless-G 2.4Ghz broadband Router Linksys- WRT54GL:

- 1. klik start, *connect to*, lalu pilih *show all connection* pada computer
- 2. klik kanan pada Local Area Connection
- 3. klik properties pada *Local Area Connection* Status, lalu klik properties pada *Internet Protocol TCP/IP*.



Gambar : Local Area Connection

4. Setting IP Address komputer and a dengan IP 192.168.0.5 Subnet mask 255.255.255.0 default gateway 192.168.1.1, lalu klik Ok.

eneral	
You can get IP settings assigned this capability. Otherwise, you ne the appropriate IP settings.	automatically if your network supports ed to ask your network administrator fo
Obtain an IP address autom	atically
Use the following IP addres	s:
IP address:	192 . 168 . 1 . 5
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192.168.1.1
O Obtain DNS server address	automaticallu
Use the following DNS serv	er addresses:
Preferred DNS server:	
Alternate DNS server:	· · · ·
	Advanced.

Gambar : Setting IP Address Wireless Connection

- 5. Buka Internet browser (Internet Expoler, Mozila, google chrome dll) dan pastikan proxy pada internet browser anda kosong
- 6. Ketik <u>http://192.168.1.1</u> dalam *field Address Internet browser* pada *google chrome* untuk memanggil *Wireless Router* Linksys ini

- 7. Setting Wireless setup seperti dibawah ini
 - Operating mode:

Pada conection Type pilih Automatic Configuration-DHCP, lalu set *ip address* berikut dengan 192.168.1.1 dengan kondisi type DHCP server.

ietup Wireless	Services Security	Access Restriction	ns NAT	/ QoS Ad	ministration	Status
Basic Setup DDNS	MAC Address Clone	Advanced Routing	VUANs	Networking	EoIP Tunr	nel
WAN Setup						Help more
WAN Connection Type	·					Automatic Configuration - DHCP
Connection Type	Automatic	. Configuration - DHCP				This setting is most commonly used b Cable operators.
STP	O Enabl	e 💿 Disable				
						Host Name: Enter the host name provided by
Optional Settings						your ISP.
Router Name	DD-WRT					Domain Name:
Host Name						Enter the domain name provided by your ISP.
Domain Name						
MTU	Auto	1500				Local IP Address: This is the address of the router.
Network Setup						Subnet Mask:
Router IP						This is the subnet mask of the router
Local IP Address	192 .	168 . 1 . 1				DHCP Server:
Subnet Mask	255 .	255 . 255 . 0				Allows the router to manage your IP addresses.
Gateway	0.	0.0.0				
Local DNS	0.	0.0.0				Start IP Address: The address you would like to start
Network Address Ser	ver Settings (DHCP)					with.
DHCP Type	DHCP Set	rver 💌				Maximum DHCP Users:
DHCP Server	Enabl	e O Disable				addresses your router hands out. 0
Start IP Address	192.168.1.	100				be handed out.
Maximum DHCP Users	50					Time Settings:
Client Lease Time	1440 n	ninutes				Choose the time zone you are in and
Static DNS 1	0.	0.0.0				router can use local time or UTC time
Static DNS 2	0.	0.0.0				
Static DNS 3	0.	0.0.0				

Gambar : setting IP address wireless router pada gedung1

8) setting wireless mode menjadi *Acces Point(AP)* dengan *network type mode Mixed*

dd-wrt.cor	n control panel	Firmware: DD-WRT v24-sp2 (10/10/09) mini Time: 01:27:43 up 1:27, load average: 0.00, 0.05, 0.07 WAN IP: 0.0.0.0
Setup Wireless Services	Security Access Restrictions NAT / QoS Adm	ministration Status
Basic Settings Radius Wirele	iss Security MAC Filter Advanced Settings WDS	
Wireless Physical Interface	: w10	Help more
Physical Interface wild - SSID (g Wireless Node Wireless Network Node Wireless Channel Wireless SSID Broadcast Senabyby Range (AC): Timing) Network: Configuration	edung1] 1994/ddr [002535(23759751)] AP ■ Wrodd w @edung1 6 - 2.407 GHz ₩ ③ Enable ○ Deable 2000 (Default: 2000 meters) ◯ Urbinliged ◎ Bridged	Wareless Network Mode: If you with the enclude Wareless-G dents, choose & Chily mode, if you would like to baddle methods access, some advanced parameters are aucceptable to be unofiled Castlengthe in the unofiled Castlengthe interpretation of the source advanced in the source of the source Sensitivity Banget Adjusts the ack timing, O disables ack timing unceptetely for the addom firmwares, On Althrefo baddom firmwares, Wall Durit No ado on Ack
Virtual Interfaces		
Saw	Add Apply Settings Cancel Changes	

Gambar : Wireless SSID dan channel

9). Penulis menggunakan *security* WEP *standarisasi* yang ada pada *wireless router* dengan authentication untuk koneksi

dd-wrt.c	om control panel	Firmwan Time: 01:52:13 up 1:	e: DD-WRT v24-sp2 (10/10/09 52, load average: 0.03, 0.05, WAN IP: 0.
Setup Wireless Ser	ices Security Access Restrictions NAT / QoS	Administration S	tatus
Basic Settings Radius N	Vireless Security MAC Filter Advanced Settings WDS		
Wireless Security wl0		Hel	p more.
Physical Interface wl0 SSID	[gedung1] HWAddr [00:25:9C:2F:9F:91]	Secu	rity Mode:
Security Mode	WEP	You m WPA F	ay choose from Disable, WEP, Personal, WPA Enterprise, or
Default Transmit Key		RADIU must u	IS. All devices on your network use the same security mode.
Encryption	64 bits 10 hex digits 💌		
Passphrase	wahadinn Generate		
Key 1	72598EE006		
Key 2	71076EB1B2		
Key 3	C10FA49717		
Key 4	41B6AC3313		
	Save Apply Settings		

Gambar : security standart wireless yang digunakan WEP

10). *Set* MAC *Address* pada request yang di distribusikan pada kantor pusat dengan mengisi MAC *Address* gedung2 dan gedung3

-		0.0		11		CO	mtr	noi panei			WAN IP: 0.0.
Setup	Wireles:	s 9	iervice	6	Securi	ty	Acce	ss Restrictions NAT / QoS	Administration	Status	
Basic Setting	s R	adius	Wirel	less Sei	unity	MAG	Fiter	Advanced Settings WDS			
Wireless	Distri	butior	n Syst	em						Help	more
WDS Settin	ngs										
Wireless MA	ç			c	0:25:9	C:2F:9F	:91				
LAN		00 :	1D :	7E :	53	CE	85	gedung2			
LAN		00 :	1E :	E5 :	42	A8 :	BF	gedung3			
Disable	[*]	00 ;	00 :	00 :	00 :	00 ;	00				
Disable	~	00 :	00 :	00 :	00:	00 :	00				
Disable	~	00 :	00 :	00 :	00 :	00 :	00				
Disable		00 :	00 :	00 :	00:	00 :	00				
Disable	~	00 :	00 :	00 :	00 :	00 :	00				
Disable		00 :	00	00 :	00	00 :	00				
Disable	~	00 :	00 :	00 :	00 :	00 :	00				
Disable		00:	00 :	00 :	00 :	00 :	00				
Extra Optio	ons										
Lazy WDS					O Ent	ble G	Disa	ble (Default: Disable)			
WDS Subnet					O Ena	ble @	Disa	ble			
NAT				0	Disable						
IP Address					0.			a). a			
C. back Manual	e la				255						

Gambar : set MAC Adreess wireless

 Pengetesan dengan menggunakan *command promt* dengan ping 192.168.2 sebagai gedung2, ping 192.168.1.3 sebagai gedung3, ping 192.168.1.1 sebagai IP *Route*



Gambar :: Testing dengan instruksi ping pada Command Prompt

12). Merupakan *report* sinyal koneksi, *signal quality, received*(RX) *Transmitted* (TX), *cached*, TX *power* dan *rate*. Mengkondisikan kekuatan sinyal *load average ,buffer, signal , Noise*, SNR

Setup Wireless Ser	vices Security Access Restri	ctions NAT/QoS Ad	ministration Status	further to form at			
Router WAN LAN				System Information			
Router Information			Help more	Router Name	DD.WPT	DHCD Services	Enabled
Sustem			Router Name:	Router Model	Linksys WPTS4GIGLIGS	WPT-radauth	Disabled
Router Name	DD-WRT		This is the specific name for the	IAN MAC	00:25:9C:2E:9E:8E	Soutoik Agent	Disabled
Router Model	Linksvs WRT54G/GL/GS		tab.	WAN MAC	00;25;9C;2F;9F;90		
Firmware Version	DD-WRT v24-sp2 (10/10/09) mini -	build 13064	MAC Address	Wireless MAC	00:25:9C:2F:9F:91	Memory	
MAC Address	00/25/9C/2F/9F/90		This is the router's MAC Address, as	WAN IP	0.0.0.0	Total Available	12.7 MB / 16.0 MB
Host Name			seen by your ISP.	LAN IP	192.168.1.1	Free	3.5 MB / 12.7 MB
WAN Domain Name			Firmware Version:	1		Used	9.2 MB / 12.7 MB
LAN Domain Name			This is the router's current firmware.	Wireless		Buffers	1.3 MB / 9.2 MB
Current Time	Not available		Current Time:	Radio	Radio is On	Cached	3.9 MB / 9.2 MB
Untime	1:29		This is time received from the ntp	Mode	AP	Active	3.8 MB / 9.2 MB
			Server set on the Serup / Basic Serup tab.	Network	Mixed	Inactive	1.4 MB / 9.2 MB
CPU				SSID	gedung1		
CPU Model	Broadcom BCM5352 chip rev 0		This is a measure of the time the	Channel	6	Space Usage	200 0020
CPU Clock	200 MHz		router has been "up" and running.	TX Power	71 mW	JFFS2	(Not mounted)
Load Average	0.00, 0.03, 0.06	3%	Load Average:	Rate	54 Mbps		
			This is given as three numbers that	un de peder velo			
Memory			last one, five, and fifteen minute	wireless Packet Info	10053 OV		
Total Available	13004 kB / 16384 kB	79%	periods.	Received (RA)	10052 OK, no erfor		
Free	3576 kB / 13004 kB	27%	1	Transmixed (TA)	12251 OK, 25 enors		
Used	9428 kB / 13004 kB	73%		Wireless			
Buffers	1344 kB / 9428 kB	1416		Clients			
Cached	3996 kB / 9428 kB	42%		MAC Address Total		Press Grand Noir	e SNR Signal Ousling
Active	3888 kB / 9428 kB	4196		THEC HOWESS 106	enate Opnine IN-Rale R	None -	e Larro Larginar Quarky
Inactive	1476 kB / 9428 kB	16%					
				WDS Nodes			
Space Usage				MAC Address Inte	erface Description	Signal Noise	e SNR Signal Quality
JFFS2	(Not mounted)			mmmmmCFaS whi	gedung3 gedung2	-37 -91	54 70% 61 7%
No. of Contract					Anonida	-34 -31	10
rvetwork				DHCP			
IP Filter Maximum Ports	4036	201		DHCP Clients			
HOUVE IP Connections	02	670		Mart Marsa	TC Addment	MAC Address	Chart Laste Titte

Gambar : Router Information

Gambar : koneksi sinyal strength WDS

B. Konfigurasi Wireless Router di kantor Wadin Pertiwi II(gedung2)

Hal yang perlu diperhatikan sebelum menggunakan *Wireless Router* untuk koneksi antar jaringan computer secara wireless adalah SSID (*Service Set Identifier*). Adapun cara untuk mengeset SSID dan alamat IP dari AP tersebut, berikut ini adalah cara mengeset SSID, alamat IP serta *set* WDS pada Wireless-G 2.4Ghz broadband Router Linksys- WRT54GL:

- 1. klik start, *connect to*, lalu pilih *show all connection* pada computer
- 2. klik kanan pada *Local Area Connection*
- 3. klik properties pada *Local Area Connection* Status, lalu klik properties pada *Internet Protocol TCP/IP*.



Gambar : Local Area Connection

 Setting IP Address komputer and dengan IP 192.168.0.10 Subnet mask 255.255.255.0 lalu klik Ok.

ieneral	
You can get IP settings assigne this capability. Otherwise, you n the appropriate IP settings.	d automatically if your network supports eed to ask your network administrator fo
Obtain an IP address auto	matically
🛞 Use the following IP addre	\$5:
IP address:	192.168.1.10
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	6 6 6
Obtain DNS server addres	s automatically
Ose the following DNS ser	ver addresses:
Preferred DNS server:	ad z z a od

Gambar : Setting IP Address Wireless Connection

- 5. Buka *Internet browser* (*Internet Expoler, Mozila, google chrome* dll) dan pastikan proxy pada *internet browser* and a kosong
- Ketik <u>http://192.168.1.2</u> dalam *field Address Internet browser* pada google chrome untuk memanggil IP route Wireless Router Linksys ini.

- 7. Setting Wireless setup seperti dibawah ini
 - Operating mode:

Pada conection Type pilih Automatic Configuration-DHCP, lalu set *ip address* berikut dengan 192.168.1.2 dengan kondisi type DHCP server.

Setup Wireless Service	s Security Access Restrictions NAT / QoS Administra	tion Status
Basic Setup DDNS MAC /	Address Clone Advanced Routing VLANs Networking EoIP	Tunnel
WAN Setup		Help more
WAN Connection Type		Automatic Configuration - DHCP:
Connection Type	Disabled	This setting is most commonly used by Cable operators.
STP	🖱 Enable 🧕 Disable	Host Name
Optional Settings		Enter the host name provided by your ISP.
Router Name	DD-WRT	Domain Name:
Host Name		Enter the domain name provided by
Domain Name		your ISP.
мти	Auto 💌 1500	Local IP Address:
		This is the address of the router.
Network Setup		Subnet Mask:
Router IP		This is the subnet mask of the router.
Local IP Address	192 . 168 . 1 . 2	DHCP Server:
Subnet Mask	255 . 255 . 0	Allows the router to manage your IP addresses.
Gateway	192. 168. 1. 1	
Local DNS	0.0.0	Start IP Address: The address you would like to start
WAN Port		with.
Assign WAN Port to Switch	Evide the host name privation image: imag	
	hand -	addresses your router hands out. 0
Network Address Server Setti	ngs (DHCP)	means only predefined static leases will be handed out.
DHCP Type	DHCP Server	Time Sellings
DHCP Server	💿 Enable 💿 Disable	Choose the time zone you are in and
Start IP Address	192.168.1. 100	summer Time (DST) period. The router can use local time or UTC time.
Maximum DHCP Users	50	
Client Lease Time	1440 minutes	
Static DNS 1	0.0.0	
Static DNS 2	0, 0, 0, 0	
Static DNS 3	0, 0, 0, 0	
WINS		

Gambar : setting IP address wireless router pada gedung2

8. setting wireless mode menjadi Acces Point(AP) dengan network type mode Mixed

etup Wireless Service	s Security	Access Restrictions	NAT / QoS	Administration	Status	
asic Settings Radius Wirel	ess Security MA	Filter Advanced S	ettings WDS			
Vireless Physical Interfac	e wl0				Help	more
hysical Interface wild – SSID (Vireless Mode Vireless Network Mode Vireless Channel Vireless Channel Vireless SSID Broadcast ensibility Range (ACK Timing) letwork Configuration	AP Mixed • gedung2 6 - 2.437 GHz © Enable © 2000 © Unbridged	(DU:TD: /#:S3CL:85)	fault: 2000 meter:	5)	Wireless Network IF you wish to exclue clients, choose <i>B-OM</i> would like to disable choose <i>Daable</i> . Note : when changi some advanced para succeptible to be mo ("Afterburner", Bas Burst"). Sensitivity Range Adjusts the ack timin timing completely for firmwares. On Ather firmwares. On Ather	Mode: te Wireless-G ty/mode. If you wireless access, rg wireless mode, smeters are dified ic Rate" or "Frame " rg. 0 disables ack: t broadcom ros based into auto ack.
irtual Interfaces					timing mode	
		Add				

Gambar : Wireless SSID dan channel

9) *Set* MAC *Address* pada request yang di distribusikan pada gedung2 dengan mengisi MAC *Address* kantor pusat gedung1

dd-vv	Ĩ	t.		ייי רר			ntr	rol pane		Time: 01:	Firn 23:03	nware: DD-WRT v2+ up 1:23, load avera	+-sp2 (10/10/09) ige: 0.02, 0.06, 0 WAN: Disal
ietup Wir	eless	5		5		ty.							
Basic Settings	Rat	lius	Wirel	less Ser	urity	MA	C Filter	Advanced Sett	ngs WDS	1			
Wireless Di	strib	ution	Syst	em								Help	more
WDS Settings Wireless MAC	6			č	0:1D:7	E:53:C	E:85						
LAN		00:	25 :	9C :	2F :	9F :	91	gedung1		1			
Disable		00 :	00 ;	00:	00 :	00 :	00			1			
Disable		00 :	00:	00 :	00 :	00 :	00			1			
Disable	•	00 :	00 :	00 :	00 :	00 :	00]			
Disable	-	00 :	00 :	00 :	00 :	00 :	00			1			
Disable	-	00 :	00 :	00:	00 :	00 :	00			Ľ			
Disable	-	00 :	00 :	00:	00 :	00 :	00			1			
Disable		00:	00 :	00 :	00 :	00 :	00			1			
Disable		00:	00 :	00:	00 :	00 :	00			1			
Disable		00 :	00:	00:	00:	00 :	00			1			
ixtra Options azy WDS WDS Subnet NAT P Address					C Ene Ene Disable	ible @	Disal	ble (Defa	ult: Disable)				

Gambar : Security standart wireless yang digunakan WEP

10). Merupakan report sinyal koneksi, signal quality, received(RX) Transmitted (TX), cached, TX power dan rate. Mengkondisikan kekuatan sinyal load average ,buffer, signal , Noise, SNR

der 19971 5421	rmaints Randwidth System		System Information			
lauter Information		Halp million	Paulor		Services	
Nature Tolaren ation (justem Itoner Mind) Usare Mind Usare Mind Ac Address Mit Costan Hanne (Art Costan Hanne (Art Costan Hanne (Art Costan Hanne (Art Costan Hanne (Art Costan Hanne (Art Costan Hanne) (Art Costan Hanne (Art Costan Hanne) (Art Costan Hanne (Art Costan Hanne) (Art	CO-MET Liskeys METASAUUGS DO-MET rickeys (1001005/mei-badf 1004 Billion BO-RET) (201005/mei-badf 1004 Billion BO-RET) (20105/mei-badf 1004 Billion BO-RET) (201	Idlp Non- Half Non- Half The schedure schedule schedu	Restr Nater Model Laket Model Laket Model Welsen MOC Walk MP Laket Nater Nater SEDE Channel The Nove SEDE Channel The Nove SEDE Channel The Nove SEDE Channel The Nove SEDE Channel The Nove SEDE Channel The Nove SEDE Channel The Nove SEDE Channel The Nove SEDE Channel The Nove SEDE Channel SEDE SEDE SEDE SEDE SEDE SEDE SEDE SED	DO-WAT Linking NURTOSAGEULIS Microsoftware Microsoftware Docksoft TR2 2011.12 Redicis Con AD Mied gedrog2 4 4 72% CSC no server. 4911 DC, 13 encors 20% SC 100 server.	Service DHCP Server URT+radiuth Spalink Agent Manary Tod Avadish Fire Unde Dudie Dudie Dudie Space Unge Space Unge	Ender Deskel Deskel 12740 / Schitte 3494 / 12740 13494 / 12740 13494 / 12740 13494 / 13440 13494 / 13440 13494 / 13440 <i>(Schitter)</i> <i>(Schitter)</i>

Gambar : Router Information

Gambar : koneksi sinyal *strength* WDS

- 11). Pengetesan dengan menggunakan *command promt* dengan ping
 - 192.168.2 sebagai gedung2, ping 192.168.1.3 sebagai gedung3, ping
 - 192.168.1.1 sebagai IP Route

	Satup Wireless	SAPVICAS	security	Access Restriction:	MAT / I	Que Admini	stration 5	catur		1
	System Informatio	••							1	
	Router				Servicer					
	Router Name		DD-WRT		DHCP Ser	ver	E	nabled		
	Router Model		Linksys WRT	s4g/gL/gs	WRT-rada	waths	D	isabled		
	LAN MAC		0011D17E153	CE183	Sputnik A	gent	D	isabled		
	WAN MAC		0011D17E153	ICE184						
	Wireless MAC		0011D17E153	ICE185	INWINDOWS	\system32\cm	d.exe - ping	192.168.1.2 -1		- 0
	WAN IP		Disabled	GIN	ping 19	2.168.1.2				
	LAN IP		192.168.1.2	Pin	ring 192	.168.1.2 %	ith 32 b	ytes of data		
	Wireless			Rep Rep	ly from	192.168.1.	2: bytes 2: bytes	=32 time<1ma -32 time<1ma	TTL=64 TTL=64	
	Radio		Radio is On	Rep	ly from	192.168.1.	2: bytes 2: bytes	-32 time<1ms =32 time<1ms	TTL=64	
	Mode		AP	Rep Ben	y from	192.168.1.	2: bytes 2: bytes	=32 time<1ms =32 time<1ms	TTL=64	
	Network		Mixed	Rep	y from	192.168.1.	2: bytes	-32 time<1ms	TTL=64	
	SSID		gedung2				a. ayaaa			
	Channel		6	1						
	TX Power		71 mW		201.226			·ormoarneoj	11	-
C:WINDOWS\system32\cr	nd.exe - ping 192.168	1.1.1 -t		- 🗆 × 🔤 🤇	:WINDOWS	system32\cm	d.exe - ping 1	92.168.1.3 ·t		- 0
ping 192.168.1.1				- GIN	ping 192	2.168.1.3				
ging 192.168.1.1	with 32 butes	of data:		Pine	ing 192	.168.1.3 w	ith 32 by	tes of data		
Lu from 192 168 1	1: huter=32 t	ime=5mg	TTL=64	Repl	v from	92.168.1.	3: bytes-	-32 time-5ms	TTL-64	
y from 192.168.1	.1: bytes=32 t	ime-2ms	TTL-64	Rep	y from	192.168.1.	3: bytes: 3: bytes:	-32 time=3ms -32 time=1ms	TTL=64	
ly from 192.168.1	.1: bytes=32 t	ime=1ms	TTL=64	Rept	y from	92.168.1.	3: bytes-	-32 time=1ms	TTL=64	
y from 192.168.1	1: bytes=32 t	ime-1ms	TTL-64	Rep	y from	192.168.1.	3: bytes	32 time=1mg	TTL-64	
ly from 192.168.1 Ly from 192.168.1	.1: bytes=32 t	ime=1ms	TTL = 64 TTL = 64		y rron .			-32 6106-106		
				-1						
				1 11 1						
	WDS Nodes			- Utraceter						-
	MAC Address:	Interface	Description	ý.	Signal	Noise	SNR Sig	nal Quality	-	
						the second se				

Gaunhar : Testing dengan instruksi ping pada Command Prompt

C. Konfigurasi Wireless Router di kantor Wadin Pertiwi III(gedung3)

Hal yang perlu diperhatikan sebelum menggunakan *Wireless Router* untuk koneksi antar jaringan computer secara wireless adalah SSID (*Service Set Identifier*). Adapun cara untuk mengeset SSID dan alamat IP dari AP tersebut, berikut ini adalah cara mengeset SSID, alamat IP serta *set* WDS pada Wireless-N 2.4Ghz broadband Router Linksys-WRT300N:

- 1. klik start, *connect to*, lalu pilih *show all connection* pada computer
- 2. klik kanan pada Local Area Connection
- 3. klik properties pada *Local Area Connection* Status, lalu klik properties pada *Internet Protocol TCP/IP*.

Connect using:	in normood	
Bealtek RTL8	139 Family PCI Fast Et	Configure
This connection use	s the following items:	
File and Pri	nter Sharing for Microsoft et Scheduler stocol (TCP/IP)	Networks
<	ш	>
Install	Uninstall	Properties
Description		Contraction of the
Transmission Con wide area network across diverse int	trol Protocol/Internet Prol < protocol that provides c erconnected networks.	ocol. The default ommunication
Show icon in not	fication area when conne his connection has limited	ected I or no connectivity

Gambar : Local Area Connection

4. Setting IP Address komputer and a dengan IP 192.168.0.15 Subnet mask 255.255.255.0 lalu klik Ok.

itomatically if your network supports to ask your network administrator fo
cally
192 . 168 . 1 . 15
255 . 255 . 255 . 0
E 2 3
itomatically
addresses:
E E 0

Gambar : Setting IP Address Wireless Connection

- 5. Buka *Internet browser* (*Internet Expoler, Mozila, google chrome* dll) dan pastikan proxy pada *internet browser* and a kosong
- Ketik <u>http://192.168.1.3</u> dalam *field Address Internet browser* pada google chrome untuk memanggil IP route Wireless Router Linksys ini.

- Konfigurasi gedung3 kantor pusat wadin pertiwi Wireless Router sebagai AP(Acesst Point).
- 8). Setting menggunakan web browser dengan Mozilla Firefox dengan ketik 192.168.1.3 sebagai ip route

etup Wireless Service	s Security	Access Restri	ictions NA	T/QoS Ad	ministration	Status
Basic Setup DDNS MAC	Address Clone	Advanced Routi	ng VLANs	Networking	EoIP Tunn	el
WAN Setup			-			Help m
WAN Connection Type						Automatic Configuration - D
Connection Type	Disabled		•			This setting is most commonly u Cable operators,
STP	Enab	e 🔘 Disable				
						Host Name: Enter the host name provided h
Optional Settings					1	your ISP.
Router Name	DD-WRT					Domain Name:
Host Name						Enter the domain name provide
Domain Name						your ISP.
мти	Auto					Local IP Address:
						This is the address of the router
Network Setup						Subnet Mask:
Router IP						This is the subnet mask of the ro
Local IP Address	192 .	168 . 1 .	3			DHCP Server:
Subnet Mask	255 .	255 . 255 .	0			Allows the router to manage yo
Gateway	192 .	168 . 1 .	1			euuresses.
Local DNS	0.	0. 0.	0			Start IP Address:
						with.
WAN Port						Manimum DUCD Uname
Assign WAN Port to Switch						You may limit the number of
						addresses your router hands ou means only predefined static lea
Network Address Server Setti	ngs (DHCP)					be handed out.
DHCP Type	DHCP Se	erver 👻				Time Settings:
DHCP Server	Enab	ole 🔘 Disable				Choose the time zone you are in Summer Time (DST) period. Th
Start IP Address	192.168.1.	100				router can use local time or UTC
Maximum DHCP Users	50					
Client Lease Time	1440	minutes				
Static DNS 1	0.	0. 0.	0			
Static DNS 2	0.	0.0.	0			
Static DNS 3	0.	0.0.	0			
WINS	0.	0. 0.	0			
	1000					

Gambar : setting IP address wireless router pada gedung2

9). setting wireless mode menjadi *Acces Point(AP)* dengan *network type mode Mixed*

Setup Wireless Services	Security Access Restrictions NAT / QoS Ac	Immistration Status
kisk Settings Radius Wrele	a Security MAC Filter Advanced Settings WDS	
Wireless Physical Interface	010	Help more
Physical Interface wild - SSID [ge Wreiss Mode Wreiss Network Mode Wreiss Network Name (SSID) Wreiss Channel Channel With Wreiss SSID Broadcast Senstwty Range (ACX Timing) Network Configuration	dung3 HWAddr [00:1:FI5:42:AB:8F] AP - gedung3 6 - 2.437 GM2 - 20 MHz - 8 Enable Disable 2000 (Default: 2000 maters) © Unbrdged ® Brdged	Wireless Network Mode: If you wish to ackide Wireless-G clents, choose # Ank mode. If you would like to diable wireless access Note: when changing wireless modi- some advanced parameters are succeptible to be modified ("Afterburner", "Basic Rate" or "Fram- burst"). Sensitivity Range: Adjust the ack training, diables add frimwares to all turn into auto ack timing mode
Virtual Interfaces		
	Add	

Gambar : Wireless SSID dan channel

10). Set MAC Address pada request yang di distribusikan pada gedung3 dengan mengisi MAC Address kantor pusat gedung1

			VILLAGE		inter i	PACES		scriccions man / gos	Administration	status	
Basic Settings	Ra	dius	Wrale	ss Secu	ity	MAC FI	ttar	Advanced Settings WDS			
Wireless Di	strib	ution s	yster	m						Help	more.
WDS Setting	9										
Wireless MAC				00:	1E:E5:4	2:A8:B	F				
LAN	•	00:	25 :	9C :	2F :	9F :	91	gedung1			
Disable	•	00:	00:	00:	00:	00:	00				
Disable	•	00:	00:	00 :	00:	00:	00				
Disable	•	00:	00:	00:	00:	00:	00				
Disable	•	00:	00:	00:	00:	00:	00				
Disable	•	00:	00:	00:	00:	00:	00				
Disable	*	00:	00:	00:	00:	00:	00				
Disable		00:	00:	00:	00:	00:	00				
Disable	•	00:	00:	00:	00:	00:	00				
Disable	•	00:	00:	00:	00:	00:	00				
Extra Option:						-					
Lazy WDS					Enable		Disable	(Default: Disable)			
WDS Subnet				0	Enable		Disable				
NAT				Dis	able						
IP Address				-	0.	0	0				
Subnet Mask					255	255	255	. 0			

Gambar : Security standart wireless yang digunakan WEP

11). Merupakan *report* sinyal koneksi, *signal quality*, *received*(RX) *Transmitted* (TX), *cached*, TX *power* dan *rate*. Mengkondisikan kekuatan sinyal *load average*, *buffer*, *signal*, *Noise*, SNR

ddwet.			Firmware: DD-WRT v24-sp2 (10/10/09) mini se: 00:06:31 up 6 min, load average: 0.09, 0.14, 0.08 W414: Dawblad	Setup Wireless Servi	ces Security Access Restrictions IIAT / QoS i	Administration Status
Setup Wireless Se	ervices Security Access Restric	tions NAT / QoS Admin	stration Status	Router Information	Transa amondar aya ana	Help more
System Information				System		Router Name:
Router		Services		Router Name	DD-WRT	This is the specific name for the router, which you set on the Setup
Router Name	DD-WRT	DHCP Server	Enabled	Router Model	Linksys WRT300N v1.1	tab.
Router Model	Linksys WRT300N v1.1	WRT-radauth	Disabled	Firmware Version	DD-WRT v24-sp2 (10/10/09) mini - build 13064	MAC Address:
LAN MAC	00:1E:E5:42:AB:BD	Sputnik Agent	Diabled	MAC Address	02:1E:E5:42:48:8E	This is the router's MAC Address, a
WAN MAC	00:1E:E5:42:AB:BE			Host Name		and by your said
Wireless MAC	00:1E:E5:42:A8:8F	Hemory	1	WAN Domain Name		Firmware Version:
WAN IP	Disabled	Total Available	28.5 MB / 32.0 MB	LAN Domain Name		
LAN IP	192.168.1.3	Free	19.2 MB / 28.5 MB	Current Time	Not available	Current Time:
		Used	9.3 MB / 28.5 MB	Uptime	14 min	server set on the Setup / Basic Set
Wireless		Buffers	1.4 MB / 9.3 MB			
Radio	Radio is On	Cached	4.0 MB / 9.3 MB	CPU		Uptime:
Mode	AP	Active	3.7 MB / 9.3 MB	CPU Model	Broadcom BCM4785 chip rev 2	This is a measure of the time the router has been "up" and running
Network	Mixed	Inactive	1.6 MB / 9.3 MB	CPU Clock	300 MHz	
SSID	gedung3			Load Average	0.03, 0.07, 0.07	This is given as three numbers that
Channel	6	Space Usage				represent the system load during t last one, five, and fifteen minute
TX Power	71 mW	34452	(Nat mounted)	Tabl A stable	waster in a state in	periods.
Rate	5.5 Mbps			Total Atlantic	Incas La / New La	
				line line	1996 A.D./ 2522 A.D.	
Wireless Packet Info	AND ALL -			D. Herr	100 kg / 000 kg	
Received (RA)	237 OK, no error			Carbad	4100 kB / 9564 kB	
(ransmitted (1.0)	600 ON, 21 errors			Active	3864 kR / 9564 kR	
Wiseless				Institut		
Cliente						
	and an I taken I to have I to		City Card Cards	Space Usage		
ANC NOCION 1 ST	menace populate provide pro-	- None -	Sin Signa Quary	3FF52	(Not mounted)	
WDS Nodes				Network		
MAC Address Ir	rdeface Description	Signel Noise	SNR Signal Quality	IP Filter Maximum Ports	40%	
xxxxxxxxxxfF:91 eth	10 gedung1	-29 -92 6	80%	Active IP Connections	20	
				-		

Gambar : Router Information

Gambar : koneksi sinyal *strength* WDS

12). Pengetesan dengan menggunakan *command promt* dengan ping 192.168.3 sebagai gedung2, ping 192.168.1.2 sebagai gedung3, ping 192.168.1.1 sebagai IP *Route*

	System Information		Administrator C/Windows/uystem32/cmd.exe - ping 192.165.12 4
	Router Name Router Name Router Model LAN MAC WAN MAC WAN MAC WAN 10 LAN 10	DO-WRT Linkeys WRTHON - E.1 ODIELES-SAME DOIELES-SAME DIELES-SAME DIELES-SAME DIELES-SAME DIELES-SAME DIELES-SAME DIELES-SAME	Cryping 192-168-1.2 -4 Propage 192-168-1.2 -121 Propage of data Propage 192-168-1.2 -121 Propage of data Propage 192 Propage 192 Propage 192 Propage 192 Propage Propage 192 Propage 192 Propage 192 Propage 192 Propage Propage 192 Propage 192 Propage 192 Propage 192 Propage Propage 192 Propage 192 Pro
	07/25/25		
2 Administration C \Windows\ught	em]2.cmd.exe - ping 192.168.1.1 -		Administrator. C/Windows/system32/cmd.exe - ping 192168.13 at
TT Administration (1997) C:>>ping 192,160,1,1, -t Pinging 192,160,1,1 with Reply from 192,160,1,1 Reply from 192,160,1,1	32 Dytes of data: 92 bytes of data: 94 bytes cime cime rine 95 bytes cime cime rine rine 94 bytes cime cime rine rine		Administrature C. (Windowskystem):Conditions point 122 (2010) Conditional System 2000 (2010) Conditional Sy
TT 4.5000 10 100 40000 000000 CT>ping 192.160 1.1 -t Ping 192.160 1.1 -t Ping 192.100 1.1 -t Ping 192.1 -t Ping 192.1 -t Ping 192	2010/00 32 bytes of data bytes of lamo-2ne TL-6 bytes 24 lamo-2ne TL-6 bytes 25 lamo-2ne TL-6		Administrator C:Windowskyster/S/Condows prog 122 (31.2 ±) Condowskyster/S/Condows prog 122 (31.2 ±) Condowskyster/S/Condows prog 122 (31.2 ±) Condowskyster/S/Condows prog 122 (31.2 ±) Condowskyster/S/

Gambar : Testing dengan instruksi ping pada Command Prompt





Gambar : akses key WEP sebagai security pada Wireless



14). Perhitungan NetStumbler chan, speed ,type, SNR Signal, Noise SNR

Gambar : sinyal transmit netstlumber