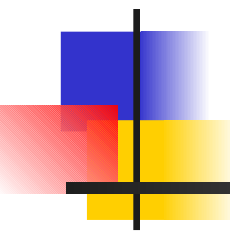


Implementasi 802.1x EAP-TLS & PEAP-MSCHAPv2 , FreeRADIUS + dialupadmin + MySQL



Hardware :

- Wireless Client Adapter (USB Senao SL-2511UB4)
- Access Point (Compex WP11B+)
- PCMCIA Samsung SWL-2100N dengan hostap daemon (sebagai Access Point)
- Laptop DellC400 (Server Autentikasi)



Software

- OS Linux Mandrake 10.0 Official dengan FreeRADIUS + dialupadmin, Apache+mod_php, MySQL-server, OpenSSL sebagai Authentikasi Server.
- OS Windows XP SP2 digunakan sebagai Supplicant (Client)
- Software Administrasi AP berbasis Web dari Complex WP11B+

Gambar Demo I

2. Wireless Access Point WP11B+ sebagai Authenticator



1. Wireless Client Windows XP sebagai Supplicant



KABEL UTP



3. Laptop dengan freeRadius Sebagai Authentication Server

Gambar Demo 2

1. Wireless Client Windows XP sebagai Supplicant



2. Linux dengan PCMCIA Card yang berfungsi sebagai AP authenticator (hostAP dan menyediakan freeRadius sebagai Authentication Server



Tahap-tahap : Instalasi Server Autentikasi

1. Install MySQL server dan library MySQL-devel (CD Mandrake 10.0 Official)

Nama paket RPM :

- MySQL-client-4.0.18-1mdk
- MySQL-4.0.18-1mdk
- MySQL-common-4.0.18-1mdk
- libmysql12-4.0.18-1mdk
- php-mysql-4.3.4-1mdk
- perl-Mysql-1.22_19-9mdk
- libmysql12-devel-4.0.18-1mdk

Pastikan paket paket diatas sudah terinstall dengan mengetik

:

```
rpm -qa |grep sql
```

```
rpm -qa |grep SQL
```



Tahap-tahap : Instalasi Server Autentikasi

2. Install Apache + mod_php (CD Mandrake 10.0 Official)
Nama paket RPM :
- apache2-common-2.0.48-6mdk
 - apache2-modules-2.0.48-6mdk
 - apache-conf-2.0.48-2mdk
 - apache2-2.0.48-6mdk
 - apache2-mod_php-2.0.48_4.3.4-1mdk
 - php-ini-4.3.4-1mdk

Pastikan paket paket diatas sudah terinstall dengan menetik
:

```
rpm -qa |grep apache
```

```
rpm -qa |grep php
```



Tahap-tahap : Instalasi Server Autentikasi

3. Install OpenSSL (CD Mandrake 10.0 Official)

Nama paket RPM :

- openssl-0.9.7c-3mdk
- libopenssl0.9.7-0.9.7c-3mdk
- libopenssl0.9.7-devel-0.9.7c-3mdk

Pastikan paket paket diatas sudah terinstall dengan menetik

:

```
rpm -qa |grep ssl
```



Tahap-tahap : Instalasi Server Autentikasi

4. Install FreeRadius (tarball)

Nama Paket tarball : - freeradius-1.0.0.tar.gz

<http://www.freeradius.org>

Tahap Instalasi FreeRadius

```
[root@lognight root]# mv freeradius-1.0.0.tar.gz /usr/local/
```

```
[root@lognight root]# cd /usr/local/
```

```
[root@lognight local]# tar -zxvf freeradius-1.0.0.tar.gz
```

```
[root@lognight local]# cd freeradius-1.0.0
```

```
[root@lognight freeradius-1.0.0]# ./configure --prefix=/usr/local/radius
```

```
[root@lognight freeradius-1.0.0]# make
```

```
[root@lognight freeradius-1.0.0]# make install
```




Tahap-tahap : Instalasi Server Autentikasi

Menyiapkan database radius di mysql server dengan cara :

Pastikan mySQL server aktif

```
[root@lognight freeradius-1.0.0]# /etc/init.d/mysql restart
```

```
Stopping MySQL Server
```

```
(pid 1638)
```

```
[ OK ]
```

```
Starting MySQL Server
```

```
[ OK ]
```

```
[root@lognight freeradius-1.0.0]# mysql -uroot -p<passwordrootsql>  
radius < src/modules/rlm_sql/drivers/rlm_sql_mysql/db_mysql.sql
```

Untuk mempermudah gunakan MySQL admin seperti phpMyAdmin untuk membuat user khusus menangani database radius..

Misal dengan phpMyAdmin create user "radius" dengan password "radius", maka untuk menyiapkan database radius dengan cara :

```
[root@lognight freeradius-1.0.0]# mysql -uradius -pradius radius <  
src/modules/rlm_sql/drivers/rlm_sql_mysql/db_mysql.sql
```



Tahap-tahap : Instalasi Server Autentikasi

5. Instalasi DialAdmin (dari source FreeRadius diatas)

```
[root@lognight freeradius-1.0.0]# ls
acconfig.h      configure*      INSTALL        Makefile       README
aclocal.m4      configure.in    install-sh*    Make.inc       redhat/
config.cache    COPYRIGHT      libltdl/       Make.inc.in    scripts/
config.guess*   CREDITS        libtool*       man/           share/
config.log      debian/        LICENSE        mibs/          src/
config.status* dialup_admin/  ltconfig*      missing*       suse/
config.sub*     doc/           ltmain.sh*     raddb/         todo/
```

```
[root@lognight freeradius-1.0.0]# mv dialup_admin
/usr/local/dialup_admin
```



Tahap-tahap : Instalasi Server Autentikasi

Menyiapkan table-table database radius untuk dapat menggunakan dialupadmin

```
[root@lognight freeradius-1.0.0]# cd /usr/local/dialup_admin/  
[root@lognight dialup_admin]# ls  
bin/ Changelog conf/ doc/ htdocs/ html/ lib/ README sql/  
[root@lognight dialup_admin]# mysql -uradius -pradius radius <  
sql/badusers.sql  
[root@lognight dialup_admin]# mysql -uradius -pradius radius <  
sql/mtotacct.sql  
[root@lognight dialup_admin]# mysql -uradius -pradius radius <  
sql/totacct.sql  
[root@lognight dialup_admin]# mysql -uradius -pradius radius <  
sql/userinfo.sql
```



Tahap-tahap : Instalasi Server Autentikasi

6. Setting konfigurasi FreeRadius untuk Implementasi EAP-TLS dan PEAP-MSCHAPv2 dengan MySQL sebagai database

- `cd /usr/local/radius/etc/raddb/`
- `vi radiusd.conf`

`user = nobody`

`group = nobody`

`port = 1812`



radiusd.conf

```
authorize {  
    preprocess  
    auth_log  
    chap  
    mschap  
    suffix  
    sql  
    eap  
}
```

```
accounting {  
    detail  
    sql  
    radutmp  
}
```



sql.conf

```
sql {  
    driver = "rlm_sql_mysql"  
    server = "localhost"  
    port = "3306"  
    login = "radius"  
    password = "radius"  
    radius_db = "radius"  
    acct_table1 = "radacct"  
    acct_table2 = "radacct"  
    postauth_table = "radpostauth"  
    authcheck_table = "radcheck"  
    authreply_table = "radreply"  
    groupcheck_table = "radgroupcheck"  
    groupreply_table = "radgroupreply"  
    usergroup_table = "usergroup"  
    sql_user_name = "%{User-Name}"  
    ... dst ...  
}
```



clients.conf

```
client 127.0.0.1 {
    secret      = rahasia
    shortname   = DellC400
    nastype    = other    # localhost isn't usually a NAS...
}

client 172.20.2.62 {
    secret      = 1234rahas14
    shortname   = cisco
    nastype     = cisco
}

client 172.20.2.0/26 {
    secret      = rahasia
    shortname   = compex
    nastype     = other
}

client 172.16.1.0/24 {
    secret      = rahasia
    shortname   = DellC400
    nastype     = other
}
```



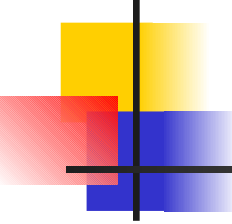
naslist

# NAS Name	Short Name	Type
#-----	-----	----
localhost	local	portslave
172.20.2.59	compex	other
127.0.0.1	local	portslave
lognight.te.ugm.ac.id	DellC400	other
172.20.2.62	cisco	cisco



eap.conf (untuk EAP-TLS)

```
eap {  
    default_eap_type = tls  
    timer_expire     = 60  
    ignore_unknown_eap_types = no  
  
    tls {  
        private_key_password = rahasiaeuy  
        private_key_file = ${raddbdir}/certs/cert-srv.pem  
        certificate_file = ${raddbdir}/certs/cert-srv.pem  
        # Trusted Root CA list  
        CA_file = ${raddbdir}/certs/demoCA/cacert.pem  
        dh_file = ${raddbdir}/certs/dh  
        random_file = ${raddbdir}/certs/random  
    }  
}
```



eap.conf (untuk PEAP- MSCHAPv2)

```
eap {  
    default_eap_type = peap  
    timer_expire     = 60  
    ignore_unknown_eap_types = no  
  
    tls {  
        private_key_password = rahasiaeuy  
        private_key_file = ${raddbdir}/certs/cert-srv.pem  
        certificate_file = ${raddbdir}/certs/cert-srv.pem  
        # Trusted Root CA list  
        CA_file = ${raddbdir}/certs/demoCA/cacert.pem  
        dh_file = ${raddbdir}/certs/dh  
        random_file = ${raddbdir}/certs/random  
    }  
  
    peap {  
        default_eap_type = mschapv2  
    }  
}
```



Membuat Sertifikat

- FreeRADIUS menyediakan script CA.all (Interactive Script) dan CA.cert (Non-Interactive Script)
- `cp /path/to/freeradius-1.0.0/scripts/CA.cert /usr/local/radius/etc/radadb/cert/`
- `cd /usr/local/radius/etc/radadb/certs/`
- `vi CA.certs`



CA.certs

```
COUNTRY="ID"  
PROVINCE="D.I.Yogyakarta"  
CITY="Yogyakarta"  
ORGANIZATION="Gadjah Mada University"  
ORG_UNIT="Teknik.Elektro.UGM"  
PASSWORD="rahasia"
```

```
COMMON_NAME_CLIENT="KPLI-Jogja"  
EMAIL_CLIENT="jogja-linux@yahoogroups.com"  
PASSWORD_CLIENT=$PASSWORD
```

```
COMMON_NAME_SERVER="nightlogin"  
EMAIL_SERVER="nightlogin@gmail.com"  
PASSWORD_SERVER=$PASSWORD
```

```
COMMON_NAME_ROOT="Teknik Elektro UGM"  
EMAIL_ROOT="josh@ugm.ac.id"  
PASSWORD_ROOT=$PASSWORD
```



xpextensions

```
[root@lognight certs]# vi xpextensions  
[ xpclient_ext]  
extendedKeyUsage = 1.3.6.1.5.5.7.3.2.2.2  
[ xpserver_ext ]  
extendedKeyUsage = 1.3.6.1.5.5.7.3.1.2.1
```



Create Certs

- sh CA.certs or ./CA.certs

```
#####  
create private key  
name : name-root  
CA.pl -newcert  
#####
```

Generating a 1024 bit RSA private key

.....++++++++++++

.... dst

Create Certs

```
root@lognight.te.ugm.ac.id: /usr/local/radius/etc/raddb/certs/test - Shell - Konsole
Session Edit View Bookmarks Settings Help

    Not Before: Oct  7 04:17:20 2004 GMT
    Not After  : Oct  7 04:17:20 2005 GMT
Subject:
countryName           = ID
stateOrProvinceName  = D.I.Yogyakarta
localityName          = Yogyakarta
organizationName      = Gadjah Mada University
organizationalUnitName = Teknik.Elektro.UGM
commonName            = Teknik Elektro UGM
emailAddress          = josh@ugm.ac.id
X509v3 extensions:
X509v3 Extended Key Usage:
    1.3.6.1.5.5.7.3.1.2.1
Certificate is to be certified until Oct  7 04:17:20 2005 GMT (365 days)
Sign the certificate? [y/n]:

1 out of 1 certificate requests certified, commit? [y/n]Write out database with 1 new entrie
Data Base Updated
MAC verified OK

#####
DONE. Thank you for your patience.
#####

[root@lognight test]#
```



Hasil Sertifikat

```
[root@lognight certs]# ls
CA.certs*  cert-clt.p12  cert-srv.der  cert-srv.pem  newcert.pem  root.der
root.pem
cert-clt.der  cert-clt.pem  cert-srv.p12  demoCA/      newreq.pem  root.p12
xpextensions
[root@lognight certs]#
```

Siap di gunakan untuk Radius Server dan Client/Supplicant



Mengaktifkan Radiusd

Mode debugging

```
#!/usr/local/radius/sbin/radiusd -Xxx
```

Mode Background

```
#!/usr/local/radius/sbin/radiusd
```

```
[root@lognight radius]# /usr/local/radius/sbin/radiusd -Xxx
Thu Oct  7 12:09:31 2004 : Info: Starting - reading configuration files ...
Thu Oct  7 12:09:31 2004 : Debug: reread_config: reading radiusd.conf
Thu Oct  7 12:09:31 2004 : Debug: Config: including file: /usr/local/radius/etc/raddb/proxy.conf
Thu Oct  7 12:09:31 2004 : Debug: Config: including file: /usr/local/radius/etc/raddb/clients.conf
Thu Oct  7 12:09:31 2004 : Debug: Config: including file: /usr/local/radius/etc/raddb/snmp.conf
Thu Oct  7 12:09:31 2004 : Debug: Config: including file: /usr/local/radius/etc/raddb/eap.conf
Thu Oct  7 12:09:31 2004 : Debug: Config: including file: /usr/local/radius/etc/raddb/sql.conf
Thu Oct  7 12:09:31 2004 : Debug: main: prefix = "/usr/local/radius"
Thu Oct  7 12:09:31 2004 : Debug: main: localstatedir = "/usr/local/radius/var"
Thu Oct  7 12:09:31 2004 : Debug: main: logdir = "/usr/local/radius/var/log/radius"
Thu Oct  7 12:09:31 2004 : Debug: main: libdir = "/usr/local/radius/lib"
Thu Oct  7 12:09:31 2004 : Debug: main: radacctdir = "/usr/local/radius/var/log/radius/radacct"
Thu Oct  7 12:09:31 2004 : Debug: main: hostname_lookups = no
Thu Oct  7 12:09:31 2004 : Debug: main: max_request_time = 30
Thu Oct  7 12:09:31 2004 : Debug: main: cleanup_delay = 5
Thu Oct  7 12:09:31 2004 : Debug: main: max_requests = 1024
Thu Oct  7 12:09:31 2004 : Debug: main: delete_blocked_requests = 0
Thu Oct  7 12:09:31 2004 : Debug: main: port = 1812
Thu Oct  7 12:09:31 2004 : Debug: main: allow_core_dumps = no
Thu Oct  7 12:09:31 2004 : Debug: main: log_stripped_names = no
Thu Oct  7 12:09:31 2004 : Debug: main: log_file = "/usr/local/radius/var/log/radius/radius.log"
Thu Oct  7 12:09:31 2004 : Debug: main: log_auth = no
Thu Oct  7 12:09:31 2004 : Debug: main: log_auth_badpass = no
Thu Oct  7 12:09:31 2004 : Debug: main: log_auth_goodpass = no
Thu Oct  7 12:09:31 2004 : Debug: main: pidfile = "/usr/local/radius/var/run/radiusd/radiusd.pid"
Thu Oct  7 12:09:31 2004 : Debug: main: user = "nobody"
Thu Oct  7 12:09:31 2004 : Debug: main: group = "nobody"
Thu Oct  7 12:09:31 2004 : Debug: main: usercollide = no
Thu Oct  7 12:09:31 2004 : Debug: main: lower_user = "no"
Thu Oct  7 12:09:31 2004 : Debug: main: lower_pass = "no"
Thu Oct  7 12:09:31 2004 : Debug: main: nospace_user = "no"
Thu Oct  7 12:09:31 2004 : Debug: main: nospace_pass = "no"
Thu Oct  7 12:09:31 2004 : Debug: main: checkrad = "/usr/local/radius/sbin/checkrad"
Thu Oct  7 12:09:31 2004 : Debug: main: proxy_requests = yes
Thu Oct  7 12:09:31 2004 : Debug: proxy: retry_delay = 5
```



```
Thu Oct 7 12:09:31 2004 : Debug: Module: Loaded eap
Thu Oct 7 12:09:31 2004 : Debug: eap: default_eap_type = "peap"
Thu Oct 7 12:09:31 2004 : Debug: eap: timer_expire = 60
Thu Oct 7 12:09:31 2004 : Debug: eap: ignore_unknown_eap_types = no
Thu Oct 7 12:09:31 2004 : Debug: eap: cisco_accounting_username_bug = no
Thu Oct 7 12:09:31 2004 : Debug: rlm_eap: Loaded and initialized type md5
Thu Oct 7 12:09:31 2004 : Debug: rlm_eap: Loaded and initialized type leap
Thu Oct 7 12:09:31 2004 : Debug: gtc: challenge = "Password: "
Thu Oct 7 12:09:31 2004 : Debug: gtc: auth_type = "PAP"
Thu Oct 7 12:09:31 2004 : Debug: rlm_eap: Loaded and initialized type gtc
Thu Oct 7 12:09:31 2004 : Debug: tls: rsa_key_exchange = no
Thu Oct 7 12:09:31 2004 : Debug: tls: dh_key_exchange = yes
Thu Oct 7 12:09:31 2004 : Debug: tls: rsa_key_length = 512
Thu Oct 7 12:09:31 2004 : Debug: tls: dh_key_length = 512
Thu Oct 7 12:09:31 2004 : Debug: tls: verify_depth = 0
Thu Oct 7 12:09:31 2004 : Debug: tls: CA_path = "(null)"
Thu Oct 7 12:09:31 2004 : Debug: tls: pem_file_type = yes
Thu Oct 7 12:09:31 2004 : Debug: tls: private_key_file = "/usr/local/radius/etc/raddb/certs/cert-srv.pem"
Thu Oct 7 12:09:31 2004 : Debug: tls: certificate_file = "/usr/local/radius/etc/raddb/certs/cert-srv.pem"
Thu Oct 7 12:09:31 2004 : Debug: tls: CA_file = "/usr/local/radius/etc/raddb/certs/demoCA/cacert.pem"
Thu Oct 7 12:09:31 2004 : Debug: tls: private_key_password = "rahasia"
Thu Oct 7 12:09:31 2004 : Debug: tls: dh_file = "/usr/local/radius/etc/raddb/certs/dh"
Thu Oct 7 12:09:31 2004 : Debug: tls: random_file = "/usr/local/radius/etc/raddb/certs/random"
Thu Oct 7 12:09:31 2004 : Debug: tls: fragment_size = 1024
Thu Oct 7 12:09:31 2004 : Debug: tls: include_length = yes
Thu Oct 7 12:09:31 2004 : Debug: tls: check_crl = no
Thu Oct 7 12:09:31 2004 : Debug: tls: check_cert_cn = "(null)"
Thu Oct 7 12:09:31 2004 : Debug: rlm_eap: Loaded and initialized type tls
Thu Oct 7 12:09:31 2004 : Debug: peap: default_eap_type = "mschapv2"
Thu Oct 7 12:09:31 2004 : Debug: peap: copy_request_to_tunnel = no
Thu Oct 7 12:09:31 2004 : Debug: peap: use_tunneled_reply = no
Thu Oct 7 12:09:31 2004 : Debug: peap: proxy_tunneled_request_as_eap = yes
Thu Oct 7 12:09:31 2004 : Debug: rlm_eap: Loaded and initialized type peap
Thu Oct 7 12:09:31 2004 : Debug: mschapv2: with_ntdomain_hack = no
Thu Oct 7 12:09:31 2004 : Debug: rlm_eap: Loaded and initialized type mschapv2
Thu Oct 7 12:09:31 2004 : Debug: Module: Instantiated eap (eap)
```



```
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): Connected new DB handle, #1
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): starting 2
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): Attempting to connect rlm_sql_mysql #2
Thu Oct 7 12:09:31 2004 : Info: rlm_sql_mysql: Starting connect to MySQL server for #2
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): Connected new DB handle, #2
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): starting 3
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): Attempting to connect rlm_sql_mysql #3
Thu Oct 7 12:09:31 2004 : Info: rlm_sql_mysql: Starting connect to MySQL server for #3
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): Connected new DB handle, #3
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): starting 4
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): Attempting to connect rlm_sql_mysql #4
Thu Oct 7 12:09:31 2004 : Info: rlm_sql_mysql: Starting connect to MySQL server for #4
Thu Oct 7 12:09:31 2004 : Debug: rlm_sql (sql): Connected new DB handle, #4
Thu Oct 7 12:09:31 2004 : Debug: Module: Instantiated sql (sql)
Thu Oct 7 12:09:31 2004 : Debug: Module: Loaded Acct-Unique-Session-Id
Thu Oct 7 12:09:31 2004 : Debug: acct_unique: key = "User-Name, Acct-Session-Id, NAS-IP-Address, Client-IP-Address
, NAS-Port"
Thu Oct 7 12:09:31 2004 : Debug: Module: Instantiated acct_unique (acct_unique)
Thu Oct 7 12:09:31 2004 : Debug: detail: detailfile = "/usr/local/radius/var/log/radius/radacct/{Client-IP-Address}/detail-%Y%m%d"
Thu Oct 7 12:09:31 2004 : Debug: detail: detailperm = 384
Thu Oct 7 12:09:31 2004 : Debug: detail: dirperm = 493
Thu Oct 7 12:09:31 2004 : Debug: detail: locking = no
Thu Oct 7 12:09:31 2004 : Debug: Module: Instantiated detail (detail)
Thu Oct 7 12:09:31 2004 : Debug: Module: Loaded radutmp
Thu Oct 7 12:09:31 2004 : Debug: radutmp: filename = "/usr/local/radius/var/log/radius/radutmp"
Thu Oct 7 12:09:31 2004 : Debug: radutmp: username = "%{User-Name}"
Thu Oct 7 12:09:31 2004 : Debug: radutmp: case_sensitive = yes
Thu Oct 7 12:09:31 2004 : Debug: radutmp: check_with_nas = no
Thu Oct 7 12:09:31 2004 : Debug: radutmp: perm = 384
Thu Oct 7 12:09:31 2004 : Debug: radutmp: callerid = yes
Thu Oct 7 12:09:31 2004 : Debug: Module: Instantiated radutmp (radutmp)
Thu Oct 7 12:09:31 2004 : Debug: Listening on authentication *:1812
Thu Oct 7 12:09:31 2004 : Debug: Listening on accounting *:1813
Thu Oct 7 12:09:31 2004 : Debug: Listening on proxy *:1814
Thu Oct 7 12:09:31 2004 : Info: Ready to process requests.
```





Setting DialupAdmin

7. Setting DialupAdmin

- `cd /usr/local/dialup_admin/conf`
- `ls`

```
accounting.attrs  auth.request  default.vals    sql.attrmap  
user_edit.attrs
```

```
admin.conf        captions.conf  extra.ldap-attrmap  sql.attrs  
username.mappings
```

```
admin.conf.default  config.php3  naslist.conf    sql.attrs.default
```



admin.conf

```
general_base_dir: /usr/local/dialup_admin
general_radiusd_base_dir: /usr/local/radius/sbin/
general_radius_server: localhost
general_domain: te.ugm.ac.id
general_radius_server_port: 1812
sql_type: mysql
sql_server: localhost
sql_port: 3306
sql_username: radius
sql_password: radius
sql_database: radius
sql_accounting_table: radacct
sql_badusers_table: badusers
sql_check_table: radcheck
sql_reply_table: radreply
sql_user_info_table: userinfo
sql_groupcheck_table: radgroupcheck
sql_groupreply_table: radgroupreply
sql_usergroup_table: usergroup
sql_total_accounting_table: totacct
sql_nas_table: nas
sql_command: /usr/bin/mysql
```



naslist.conf

```
#nas1_name: lantai_1. %{general_domain}
#nas1_model: Compex WP11B+
#nas1_ip: 172.16.0.201
#nas1_community: public
#nas2_name: lantai_2. %{general_domain}
#nas2_model: Compex WP11B+
#nas2_ip: 172.16.80.201
#nas2_community: public
#nas2_type: cisco
#nas3_name: lantai_3. %{general_domain}
#nas3_model: Compex WP11B+
#nas3_ip: 172.16.160.201
#nas3_community: public
nas4_name: DellC400
nas4_model: HostAP
nas4_type: other
nas4_ip: 172.16.1.1
nas4_community: public
nas5_name: compex
nas5_model: Compex WP11B+
nas5_type: other
nas5_ip: 172.20.2.59
nas5_community: public
```



- Setting Apache untuk dialupadmin

```
# grep DocumentRoot /etc/httpd/conf/httpd2.conf  
DocumentRoot /var/www/html
```

```
# ln -s /usr/local/dialupadmin/htdocs  
/var/www/html/dialadmin
```

```
# /etc/init.d/httpd restart
```

```
Shutting down httpd2: [ OK ]
```

```
Starting httpd2: [ OK ]
```


DialupAdmin interface

The image shows a screenshot of a web browser window titled "dialup administration - Konqueror". The browser's address bar displays the URL "http://127.0.0.1/dialadmin/". The main content area of the browser shows the DialupAdmin interface, which has a green background. On the left side, there is a navigation menu with a "Main Menu" header and the following items: Home, Accounting, Statistics, User Statistics, Online Users, RADIUS Clients, Bad Users, Failed Logins, and Find Users. The main content area features a large, pixelated "DIALUP ADMIN" title and a subtitle below it: "A web based administration interface for the freeradius radius server". At the bottom left of the browser window, a status bar indicates "Page loaded."

Menambah User

dialup administration - Konqueror

Location Edit View Go Bookmarks Tools Settings Window Help

Location: http://172.20.2.19/dialadmin/

DIALUP ADMIN

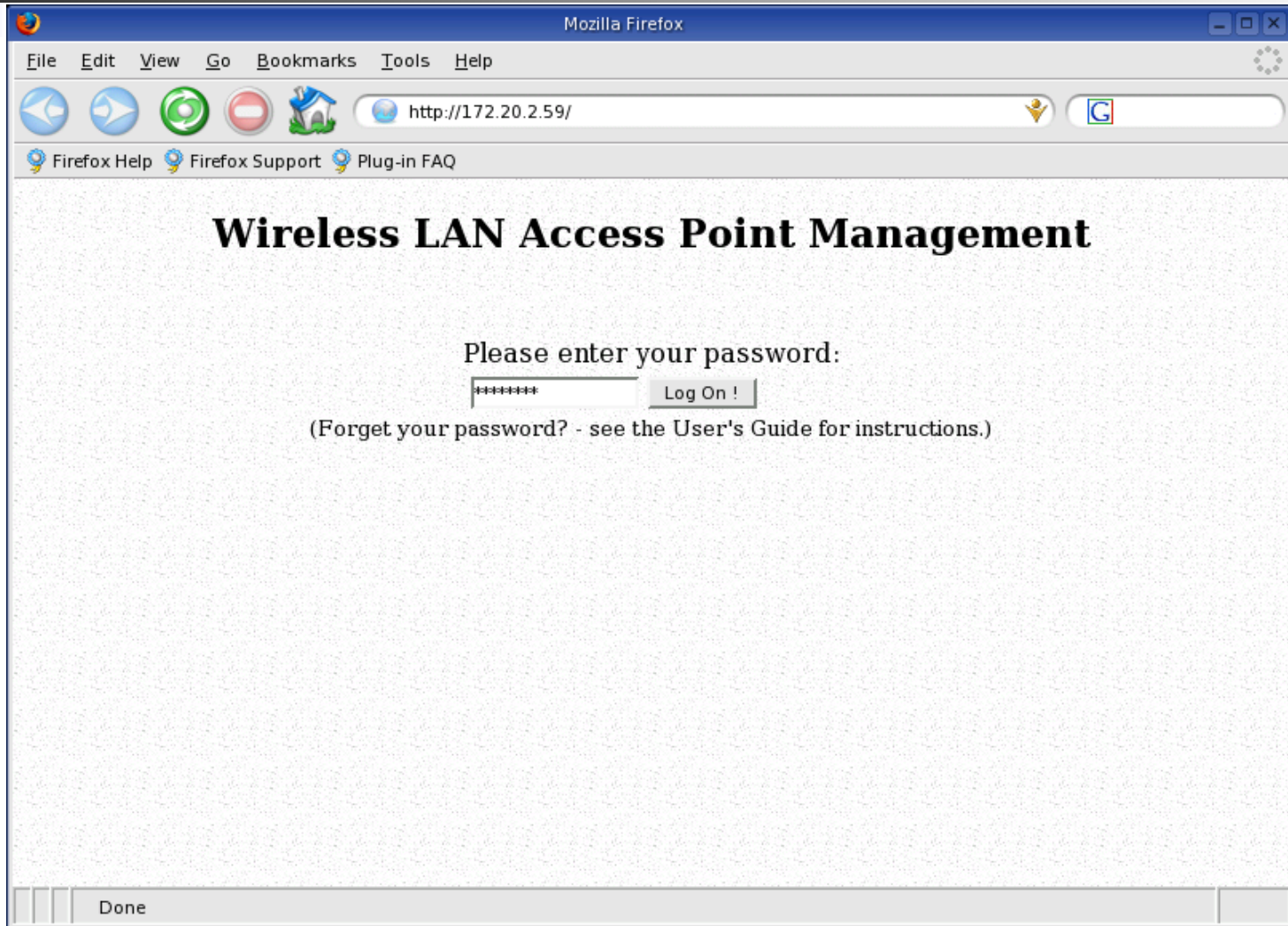
Main Menu

- Home
- Accounting
- Statistics
- User Statistics
- Online Users
- RADIUS Clients
- Bad Users
- Failed Logins
- Find User
- Edit User -
- New User
- Show Groups
- Edit Group -
- New Group
- Check Server

User Preferences for new user

Username	<input type="text" value="nightlogin"/>
Password	<input type="text" value="nightloginpassword"/>
Group	admin
Name (First Name Surname)	<input type="text" value="Night Login"/>
Mail	<input type="text" value="nightlogin@gmail.com"/>
Department	<input type="text" value="TE UGM"/>
Home Phone	<input type="text" value="8969869"/>
Work Phone	<input type="text" value="969698"/>
Mobile Phone	<input type="text" value="699696"/>
Protocol	=
IP Address	=
IP Netmask	=
Framed-MTU	=
Compression Used	=
Service Type	=
Session Timeout	=

Setting Authenticator Access Point Compex WP11B+



Setting Authenticator Access Point CompeX WP11B+

Wireless LAN Access Point - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://172.20.2.59/act_login

Firefox Help Firefox Support Plug-in FAQ

COMPEX NetPassage WP11B+
networks@work

CONFIGURATION

- Mode Selection
- Management Port
- SNMP Setup
- IEEE 802.1X/ RADIUS

SYSTEM TOOLS

- System Identity
- Set System's Clock
- Firmware Upgrade
- Save or Reset Settings
- Reboot System
- Change Password
- Logout

HELP

- Get Technical Support
- About System

NetWork Mode Setup

Network Mode

Note: NetMode switched will automatically reboot the system.

Apply Help

Message Window

Done

Setting Authenticator Access Point Complex WP11B+

The screenshot shows the 'Access Point Setup' web interface for a NetPassage WP11B+ access point. The browser window title is 'Wireless LAN Access Point - Mozilla Firefox' and the address bar shows 'http://172.20.2.59/act_login'. The interface is divided into a left sidebar and a main content area.

Left Sidebar:

- NetPassage WP11B+ logo and 'networks@work' email.
- CONFIGURATION** section:
 - Mode Selection
 - Management Port
 - SNMP Setup
 - IEEE 802.1X RADIUS
- SYSTEM TOOLS** section:
 - System Identity
 - Set System's Clock
 - Firmware Upgrade
 - Save or Reset Settings
 - Reboot System
 - Change Password
 - Logout
- HELP** section:
 - Get Technical Support
 - About System

Main Content Area:

Access Point Setup

Access Point Name	WP11B+
ESSID	complex
Channel	5
Tx Rate	Fully Auto
RTS Threshold	2346
Frag Threshold	2346
Closed System	Disable
Radio Off When Ethernet Link Down	Disable

Note: Changes made will only take effect after rebooting.

Buttons: Save, Reboot, Help

Access Control

Message Window

Current NetWork Mode is AP Mode

Done

Setting Authenticator Access Point Complex WP11B+

The screenshot shows the configuration page for a Comex WP11B+ wireless LAN access point. The browser window title is "Wireless LAN Access Point - Mozilla Firefox" and the address bar shows "http://172.20.2.59/act_login".

NetPassage WP11B+
networks@work

CONFIGURATION

- Mode Selection
- Management Port
- SNMP Setup
- IEEE 802.1X/ RADIUS

SYSTEM TOOLS

- System Identity
- Set System's Clock
- Firmware Upgrade
- Save or Reset Settings
- Reboot System
- Change Password
- Logout

HELP

- Get Technical Support
- About System

Configuration Fields:

- Tx Rate: Fully Auto
- RTS Threshold: 2346
- Frag Threshold: 2346
- Closed System: Disable
- Radio Off When Ethernet Link Down: Disable

Note: Changes made will only take effect after rebooting.

Buttons: Save, Reboot, Help

Access Control

Access Control: Disable

WEP encryption method: Disable

Buttons: Apply, WDS Configuration, Help

Message Window

Current NetWork Mode is AP Mode

Done

Setting Authenticator Access Point Complex WP11B+

The screenshot shows the web interface for the NetPassage WP11B+ wireless LAN access point. The browser window title is "Wireless LAN Access Point - Mozilla Firefox" and the address bar shows "http://172.20.2.59/act_login". The interface is divided into a left sidebar and a main content area.

Left Sidebar:

- COMPLEX logo and "networks@work" email address.
- NetPassage WP11B+ title.
- CONFIGURATION** section:
 - Mode Selection
 - Management Port (highlighted)
 - SNMP Setup
 - IEEE 802.1X/ RADIUS
- SYSTEM TOOLS** section:
 - System Identity
 - Set System's Clock
 - Firmware Upgrade
 - Save or Reset Settings
 - Reboot System
 - Change Password
 - Logout
- HELP** section:
 - Get Technical Support
 - About System

Main Content Area:

Management Port Setup

IP Address	172	20	2	59
Network Mask	255	255	255	192
Management Gateway Ip	172	20	2	2
DHCP Start IP Address	172	20	2	29
DHCP End IP Address	172	20	2	40
DHCP Gateway IP Address	172	20	2	2
<input type="checkbox"/> Always use these DNS servers:				
Primary DNS IP Address	172	16	30	7
Secondary DNS IP Address	0	0	0	0
DHCP Server	<input checked="" type="radio"/> Enable <input type="radio"/> Disable			

Note: Changes made will only take effect after rebooting.

Buttons: Save, Reboot, Help

Message Window: Current NetWork Mode is AP Mode

Done

Setting Authenticator Access Point Complex WP11B+

The screenshot shows the configuration page for the IEEE 802.1X/RADIUS setup on a NetPassage WP11B+ access point. The browser window title is "Wireless LAN Access Point - Mozilla Firefox" and the address bar shows "http://172.20.2.59/act_login".

NetPassage WP11B+
networks@work

CONFIGURATION

- Mode Selection
- Management Port
- SNMP Setup
- IEEE 802.1X/ RADIUS**

SYSTEM TOOLS

- System Identity
- Set System's Clock
- Firmware Upgrade
- Save or Reset Settings
- Reboot System
- Change Password
- Logout

HELP

- Get Technical Support
- About System

IEEE 802.1X/RADIUS Setup

MAC Authentication	Disable
802.1X Security Mode	802.1x
Primary RADIUS Server IP	172.20.2.19
Secondary RADIUS Server IP	0.0.0.0
Authentication Port	1812
Shared Secret Key	*****
Authorization Lifetime (seconds)	900
Maximum Retransmissions	3 (1~10)
Transient Key Length	128 bits
MD5 Authentication	Disable

Note: Changes made will only take effect after rebooting.

Save Reboot Help

Message Window

Current NetWork Mode is AP Mode

http://172.20.2.59/dot1x.htm

Setting Authenticator Access Point Complex WP11B+

Wireless LAN Access Point - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://172.20.2.59/act_login

Firefox Help Firefox Support Plug-in FAQ

COMPLEX
networks@work
NetPassage
WP11B+

CONFIGURATION

- Mode Selection
- Management Port
- SNMP Setup**
- IEEE 802.1X RADIUS

SYSTEM TOOLS

- System Identity
- Set System's Clock
- Firmware Upgrade
- Save or Reset Settings
- Reboot System
- Change Password
- Logout

HELP

- Get Technical Support
- About System

SNMP Setup

SNMP State	Enable
Read Password	*****
Read/Write Password	*****

Apply

Message Window

The current security mode is Enabled
EAP-MD5 authentication changed to Enabled
Parameters saved, please reboot the system
The current security mode is Enabled
Parameters saved, please reboot the system

Done

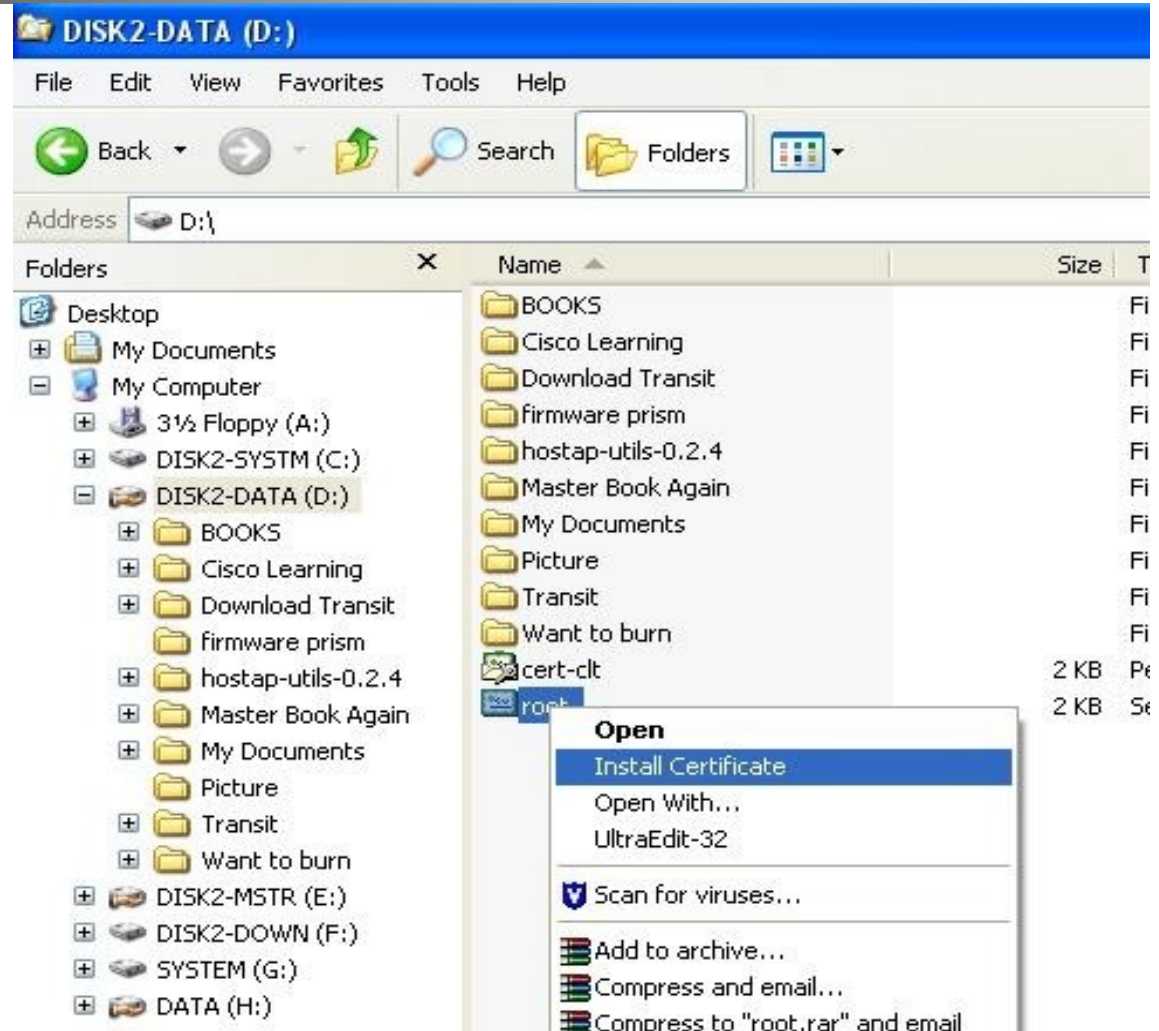


Setting Supplicant WinXP SP2 menggunakan 802.1x EAP-TLS

- Untuk menggunakan EAP-TLS, Supplicant Windows XP membutuhkan sertifikat public (root.der) dan sertifikat private client (cert-clt.p12)
- Sedangkan Server autentikasi menggunakan private key, sertifikat public dan private server (cert-srv.pem) dan CA (cacert.pem)

Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install root.der

Install
ROOT Certificate
Public
File : root.der



Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install root.der



Klik NEXT

Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install root.der



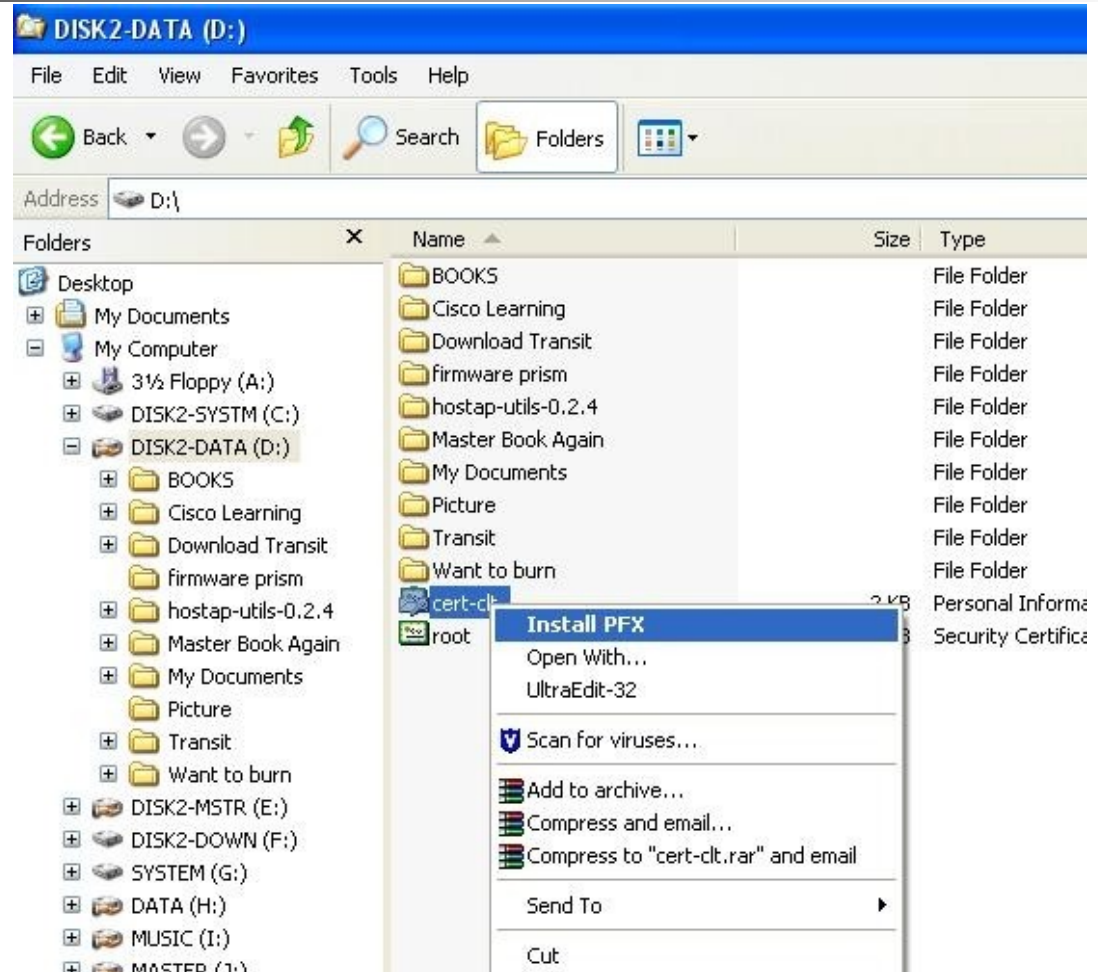
Klik NEXT

Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install root.der

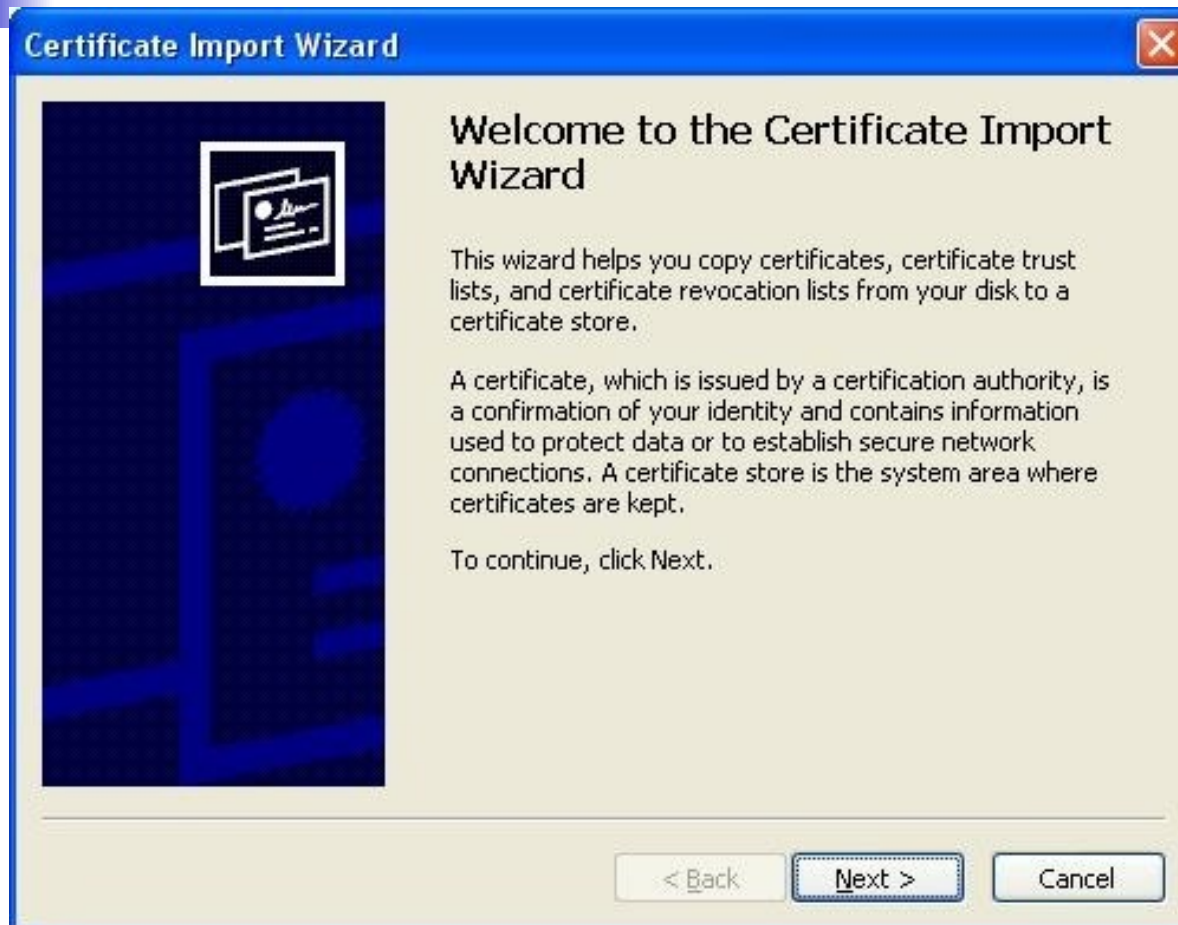


Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install client.p12

KLIK KANAN
Private Key Client
File : cert-ct.p12



Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install client.p12



Klik NEXT

Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install client.p12



Klik NEXT

Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install client.p12

Masukkan Kunci
Private Client
Lalu Klik NEXT



The screenshot shows the 'Certificate Import Wizard' dialog box. The title bar reads 'Certificate Import Wizard'. The main heading is 'Password'. Below the heading, it states: 'To maintain security, the private key was protected with a password.' A horizontal line separates this from the next section. The text says: 'Type the password for the private key.' Below this is a label 'Password:' followed by a text input field containing '*****'. There are two checkboxes below the input field. The first checkbox is unchecked and has the label 'Enable strong private key protection. You will be prompted every time the private key is used by an application if you enable this option.' The second checkbox is also unchecked and has the label 'Mark this key as exportable. This will allow you to back up or transport your keys at a later time.' At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Tahap tahap setting Supplicant EAP-TLS di WinXP SP2 : Install client.p12





Certificate Import Wizard

Completing the Certificate Import Wizard

You have successfully completed the Certificate Import wizard.

You have specified the following settings:

Certificate Store Selected	Automatically determined by t
Content	PFX
File Name	D:\cert-clt.p12

< Back Finish Cancel



Certificate Import Wizard

i The import was successful.

OK



LOGO STAMP

Wireless Network Connection

Network Tasks

- Refresh network list
- Set up a wireless network for a home or small office

Related Tasks

- Learn about wireless networking
- Change the order of preferred networks
- Change advanced settings

Choose a wireless network

Click an item in the list below to connect to a wireless network in range or to get more information.

complex Attempting to authenticate

Security-enabled wireless network

This network requires a network key. You are currently connected to this network. To disconnect from this network, click Disconnect below.

Wireless Network Connection

Click here to process your logon information for the network complex

Validate Server Certificate

The Root Certification Authority for the server's certificate is:
KPLI-Jogja
If this is the correct certificate, click OK to connect and you will not see this message again. Click CANCEL to drop connection.

[View Server Certificate](#)

OK

Cancel

Certificate

General Details Certification Path

Show: <All>

Field	Value
Serial number	02
Signature algorithm	md5RSA
Issuer	jogja-linux@yahoogroups.com...
Valid from	Tuesday, September 28, 2004...
Valid to	Wednesday, September 28, 2...
Subject	josh@ugm.ac.id, Teknik Elektr...
Public key	RSA (1024 Bits)
Enhanced Key Usage	Server Authentication (1.3.6....

E = jogja-linux@yahoogroups.com
CN = KPLI-Jogja
OU = Teknik.Elektro.UGM
O = Gajah Mada University
L = Yogyakarta
S = D.I.Yogyakarta
C = ID

[Edit Properties...](#)

[Copy to File...](#)

OK

My Documents Mozilla Firefox

My Computer XTNDConnect Blue Manager

My Network Places Download Accelerator

Recycle Bin my laptop

Internet Explorer Network Stumbler

3500 printer assistant Shortcut to Bluetooth

ACD FotoCan Shortcut to ebooks - se...

ACDSee 5.0 WinSCP3

Acrobat Reader 5.0 Wireless

LOGO STAMP

Wireless Network Connection

Network Tasks

- Refresh network list
- Set up a wireless network for a home or small office

Related Tasks

- Learn about wireless networking
- Change the order of preferred networks
- Change advanced settings

Choose a wireless network

Click an item in the list below to connect to a wireless network in range or to get more information.

complex Validating identity

Click here to select a certificate or other credentials for connection to the network complex

...y connected to this network below.

Disconnect

Wireless Network Connection

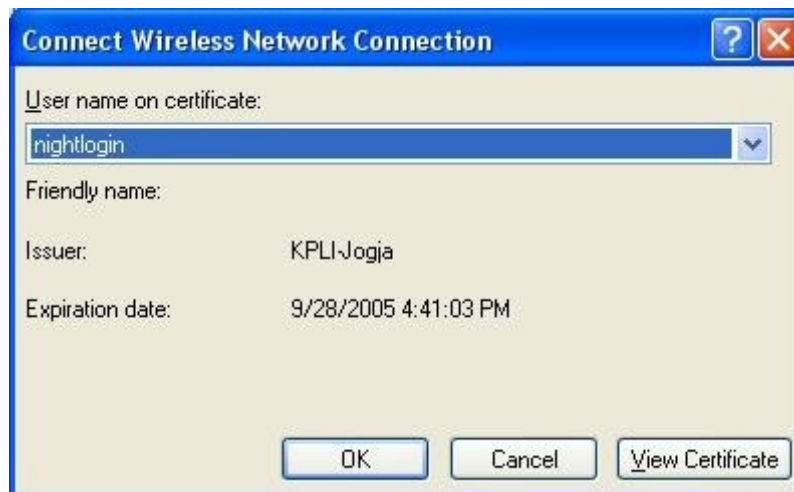
Please wait while Windows connects to the 'complex' network.

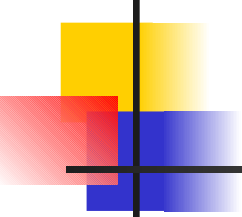
Waiting for network to be ready...

Cancel

Wireless Network Connection

Click here to select a certificate or other credentials for connection to the network complex





Wireless Network Connection

Network Tasks

- Refresh network list
- Set up a wireless network for a home or small office

Related Tasks

- Learn about wireless networking
- Change the order of preferred networks
- Change advanced settings

Choose a wireless network

Click an item in the list below to connect to a wireless network in range or to get more information.

complex Connected ★

Security-enabled wireless network

This network requires a network key. You are currently connected to this network. To disconnect from this network, click Disconnect below.

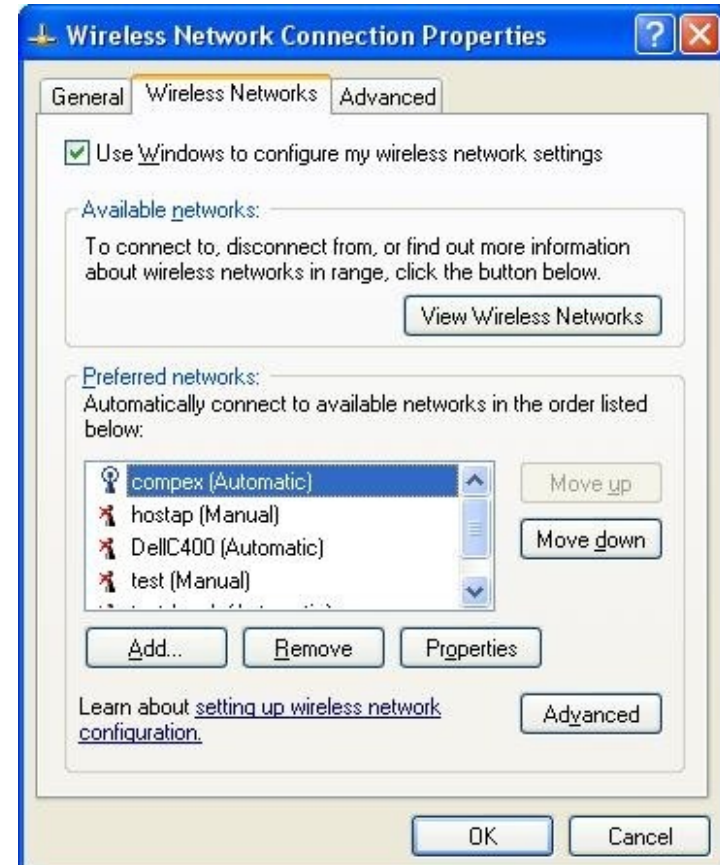
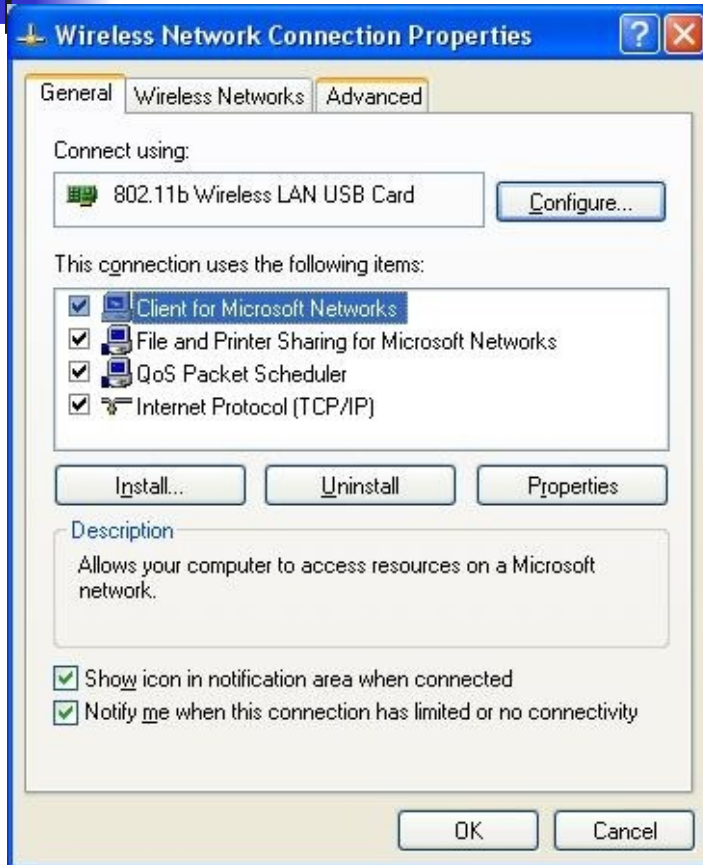
Disconnect



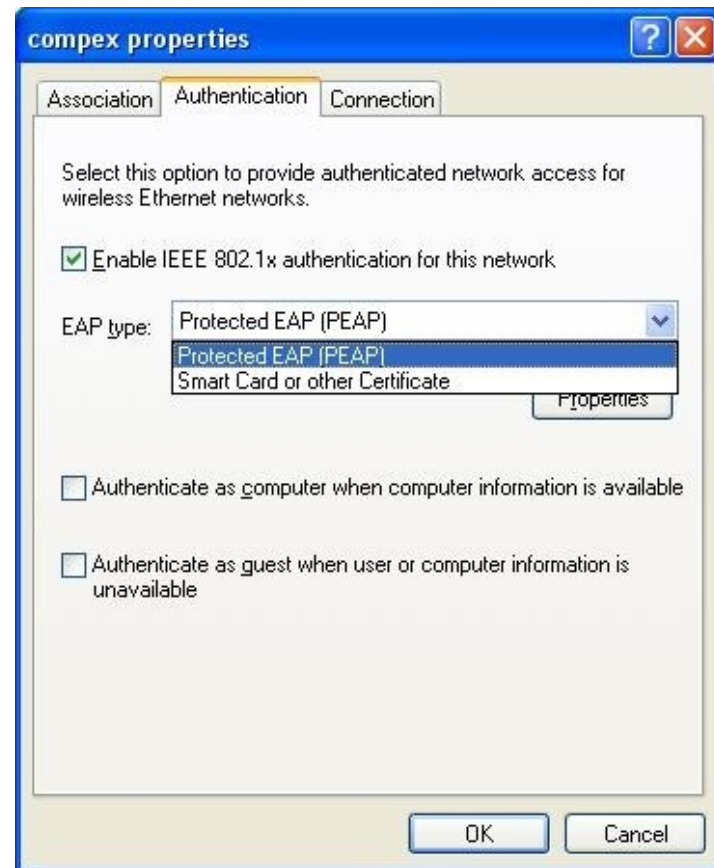
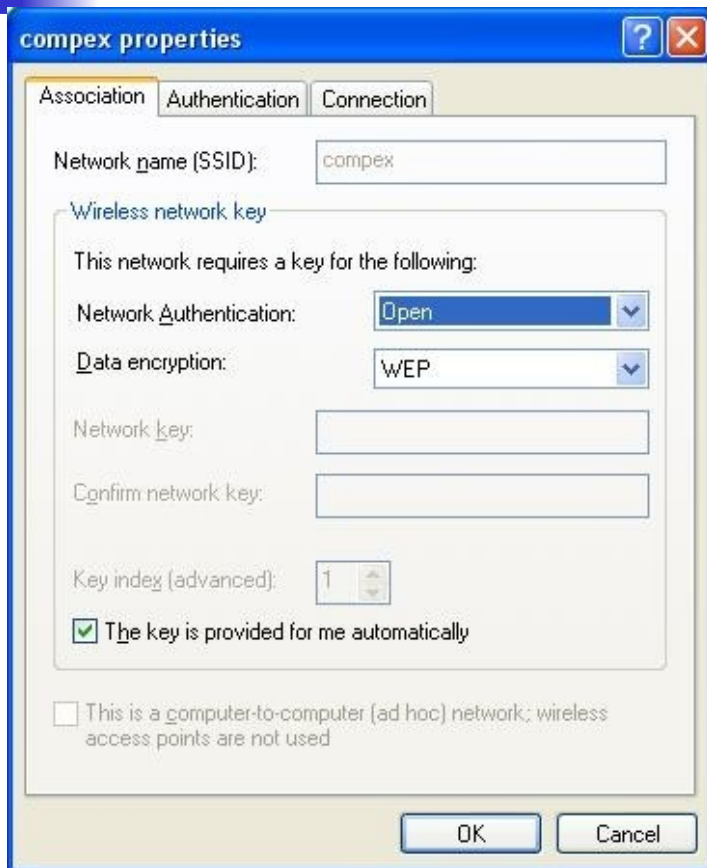
Setting Supplicant WinXP SP2 menggunakan 802.1x PEAP- MSCHAPv2

- Untuk menggunakan PEAP-MSCHAPv2, Supplicant Windows XP hanya membutuhkan sertifikat public root (root.der)
- Sedangkan Server autentikasi menggunakan private key, sertifikat public dan private server (cert-srv.pem) dan CA (cacert.pem)

Setting Supplicant WinXP SP2 menggunakan 802.1x PEAP-MSCHAPv2



Setting Supplicant WinXP SP2 menggunakan 802.1x PEAP-MSCHAPv2



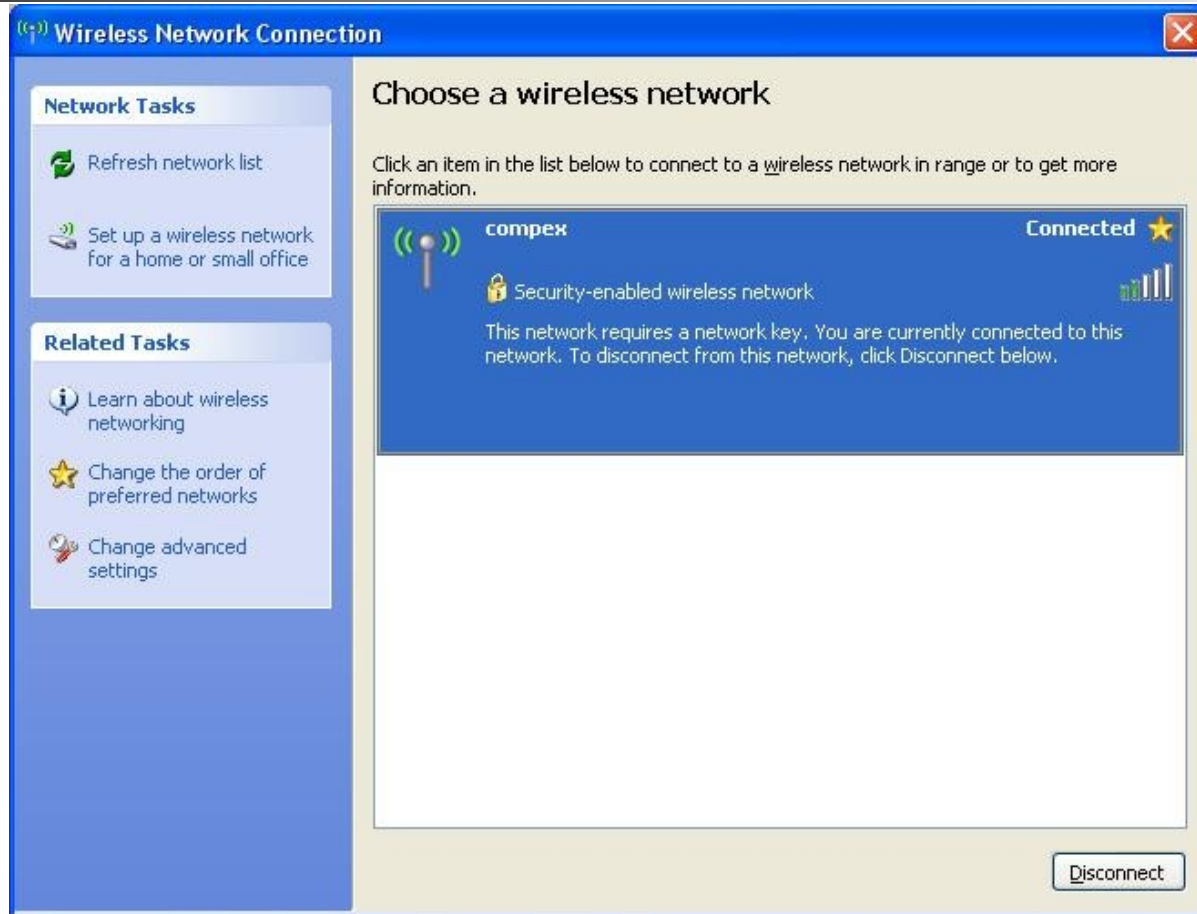
Setting Supplicant WinXP SP2 menggunakan 802.1x PEAP-MSCHAPv2



Setting Supplicant WinXP SP2 menggunakan 802.1x PEAP-MSCHAPv2



Setting Supplicant WinXP SP2 menggunakan 802.1x PEAP-MSCHAPv2





Setting Client selesai..

Berikut ini hasil debugging
radiusd :


```
Wed Sep 29 07:08:41 2004 : Debug: Finished request 20
Wed Sep 29 07:08:41 2004 : Debug: Going to the next request
Wed Sep 29 07:08:41 2004 : Debug: Waking up in 6 seconds...
rad_recv: Access-Request packet from host 172.20.2.59:1024, id=45, length=190
  User-Name = "nightlogin"
  NAS-IP-Address = 172.20.2.59
  NAS-Port = 1
  Called-Station-Id = "00-80-48-2B-7A-1A:compex"
  Calling-Station-Id = "00-02-6F-33-7C-07"
  Service-Type = Framed-User
  Framed-MTU = 1400
  NAS-Port-Type = Wireless-802.11
  NAS-Identifier = "COMPEX WP11B+"
  Connect-Info = "CONNECT 11Mbps 802.11b"
  EAP-Message = 0x021300060d00
  State = 0x9724a1a411dfc02a34128b8b7e10d282
  Message-Authenticator = 0x6e349a9f7baed1dae205b0f397cf060f
Wed Sep 29 07:08:45 2004 : Debug: Processing the authorize section of radiusd.conf
Wed Sep 29 07:08:45 2004 : Debug: modcall: entering group authorize for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: calling preprocess (rlm_preprocess) for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: returned from preprocess (rlm_preprocess) for request 21
Wed Sep 29 07:08:45 2004 : Debug: modcall[authorize]: module "preprocess" returns ok for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: calling chap (rlm_chap) for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: returned from chap (rlm_chap) for request 21
Wed Sep 29 07:08:45 2004 : Debug: modcall[authorize]: module "chap" returns noop for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: calling mschap (rlm_mschap) for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: returned from mschap (rlm_mschap) for request 21
Wed Sep 29 07:08:45 2004 : Debug: modcall[authorize]: module "mschap" returns noop for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: calling suffix (rlm_realm) for request 21
Wed Sep 29 07:08:45 2004 : Debug: rlm_realm: No '@' in User-Name = "nightlogin", looking up realm NULL
Wed Sep 29 07:08:45 2004 : Debug: rlm_realm: No such realm "NULL"
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: returned from suffix (rlm_realm) for request 21
Wed Sep 29 07:08:45 2004 : Debug: modcall[authorize]: module "suffix" returns noop for request 21
Wed Sep 29 07:08:45 2004 : Debug: modsingle[authorize]: calling sql (rlm_sql) for request 21
Wed Sep 29 07:08:45 2004 : Debug: radius_xlat: 'nightlogin'
```



```
Wed Sep 29 07:05:19 2004 : Info: rlm_eap_tls: Length Included
Wed Sep 29 07:05:19 2004 : Debug: eaptls_verify returned 11
Wed Sep 29 07:05:19 2004 : Debug: rlm_eap_tls: <<< TLS 1.0 Handshake [length 030a], Certificate
Wed Sep 29 07:05:19 2004 : Info: chain-depth=1,
Wed Sep 29 07:05:19 2004 : Info: error=0
Wed Sep 29 07:05:19 2004 : Info: --> User-Name = nightlogin
Wed Sep 29 07:05:19 2004 : Info: --> BUF-Name = KPLI-Jogja
Wed Sep 29 07:05:19 2004 : Info: --> subject = /C=ID/ST=D.I.Yogyakarta/L=Yogyakarta/O=Gadjah Mada University/OU=Teknik.
Elektro.UGM/CN=KPLI-Jogja/emailAddress=jogja-linux@yahoogroups.com
Wed Sep 29 07:05:19 2004 : Info: --> issuer = /C=ID/ST=D.I.Yogyakarta/L=Yogyakarta/O=Gadjah Mada University/OU=Teknik.
Elektro.UGM/CN=KPLI-Jogja/emailAddress=jogja-linux@yahoogroups.com
Wed Sep 29 07:05:19 2004 : Info: --> verify return:1
Wed Sep 29 07:05:19 2004 : Info: chain-depth=0,
Wed Sep 29 07:05:19 2004 : Info: error=0
Wed Sep 29 07:05:19 2004 : Info: --> User-Name = nightlogin
Wed Sep 29 07:05:19 2004 : Info: --> BUF-Name = nightlogin
Wed Sep 29 07:05:19 2004 : Info: --> subject = /C=ID/ST=D.I.Yogyakarta/L=Yogyakarta/O=Gadjah Mada University/OU=Teknik.
Elektro.UGM/CN=nightlogin/emailAddress=nightlogin@gmail.com
Wed Sep 29 07:05:19 2004 : Info: --> issuer = /C=ID/ST=D.I.Yogyakarta/L=Yogyakarta/O=Gadjah Mada University/OU=Teknik.
Elektro.UGM/CN=KPLI-Jogja/emailAddress=jogja-linux@yahoogroups.com
Wed Sep 29 07:05:19 2004 : Info: --> verify return:1
Wed Sep 29 07:05:19 2004 : Info: TLS_accept: SSLv3 read client certificate A
Wed Sep 29 07:05:19 2004 : Debug: rlm_eap_tls: <<< TLS 1.0 Handshake [length 0086], ClientKeyExchange
Wed Sep 29 07:05:19 2004 : Info: TLS_accept: SSLv3 read client key exchange A
Wed Sep 29 07:05:19 2004 : Debug: rlm_eap_tls: <<< TLS 1.0 Handshake [length 0086], CertificateVerify
Wed Sep 29 07:05:19 2004 : Info: TLS_accept: SSLv3 read certificate verify A
Wed Sep 29 07:05:19 2004 : Debug: rlm_eap_tls: <<< TLS 1.0 ChangeCipherSpec [length 0001]
Wed Sep 29 07:05:19 2004 : Debug: rlm_eap_tls: <<< TLS 1.0 Handshake [length 0010], Finished
Wed Sep 29 07:05:19 2004 : Info: TLS_accept: SSLv3 read finished A
Wed Sep 29 07:05:19 2004 : Debug: rlm_eap_tls: >>> TLS 1.0 ChangeCipherSpec [length 0001]
Wed Sep 29 07:05:19 2004 : Info: TLS_accept: SSLv3 write change cipher spec A
Wed Sep 29 07:05:19 2004 : Debug: rlm_eap_tls: >>> TLS 1.0 Handshake [length 0010], Finished
Wed Sep 29 07:05:19 2004 : Info: TLS_accept: SSLv3 write finished A
Wed Sep 29 07:05:19 2004 : Info: TLS_accept: SSLv3 flush data
Wed Sep 29 07:05:19 2004 : Info: (other): SSL negotiation finished successfully
```

```
Wed Sep 29 07:08:45 2004 : Debug:   rlm_eap: processing type tls
Wed Sep 29 07:08:45 2004 : Debug:   rlm_eap_tls: Authenticate
Wed Sep 29 07:08:45 2004 : Debug:   rlm_eap_tls: processing TLS
Wed Sep 29 07:08:45 2004 : Info:   rlm_eap_tls: Received EAP-TLS ACK message
Wed Sep 29 07:08:45 2004 : Debug:   rlm_eap_tls: ack handshake is finished
Wed Sep 29 07:08:45 2004 : Debug:   eaptls_verify returned 3
Wed Sep 29 07:08:45 2004 : Debug:   eaptls_process returned 3
Wed Sep 29 07:08:45 2004 : Debug:   rlm_eap: Freeing handler
Wed Sep 29 07:08:45 2004 : Debug:   modsingle[authenticate]: returned from eap (rlm_eap) for request 21
Wed Sep 29 07:08:45 2004 : Debug:   modcall[authenticate]: module "eap" returns ok for request 21
Wed Sep 29 07:08:45 2004 : Debug:   modcall: group authenticate returns ok for request 21
Wed Sep 29 07:08:45 2004 : Debug:   Processing the post-auth section of radiusd.conf
Wed Sep 29 07:08:45 2004 : Debug:   modcall: entering group post-auth for request 21
Wed Sep 29 07:08:45 2004 : Debug:   modsingle[post-auth]: calling sql (rlm_sql) for request 21
Wed Sep 29 07:08:45 2004 : Debug:   rlm_sql (sql): Processing sql_postauth
Wed Sep 29 07:08:45 2004 : Debug:   radius_xlat: 'nightlogin'
Wed Sep 29 07:08:45 2004 : Debug:   rlm_sql (sql): sql_set_user escaped user --> 'nightlogin'
Wed Sep 29 07:08:45 2004 : Debug:   radius_xlat: 'INSERT into radpostauth (id, user, pass, reply, date) values ('', 'nightlogin', 'Chap-Password', 'Access-Accept', NOW())'
Wed Sep 29 07:08:45 2004 : Debug:   radius_xlat: '/usr/local/radius/var/log/radius/sqltrace.sql'
Wed Sep 29 07:08:45 2004 : Debug:   rlm_sql (sql) in sql_postauth: query is INSERT into radpostauth (id, user, pass, reply, date) values ('', 'nightlogin', 'Chap-Password', 'Access-Accept', NOW())
Wed Sep 29 07:08:45 2004 : Debug:   rlm_sql (sql): Reserving sql socket id: 1
Wed Sep 29 07:08:45 2004 : Debug:   rlm_sql_mysql: query: INSERT into radpostauth (id, user, pass, reply, date) values ('', 'nightlogin', 'Chap-Password', 'Access-Accept', NOW())
Wed Sep 29 07:08:45 2004 : Debug:   rlm_sql (sql): Released sql socket id: 1
Wed Sep 29 07:08:45 2004 : Debug:   modsingle[post-auth]: returned from sql (rlm_sql) for request 21
Wed Sep 29 07:08:45 2004 : Debug:   modcall[post-auth]: module "sql" returns ok for request 21
Wed Sep 29 07:08:45 2004 : Debug:   modcall: group post-auth returns ok for request 21
Sending Access-Accept of id 45 to 172.20.2.59:1024
MS-MPPE-Recv-Key = 0xa08a4ecb71e05760a6362a2ac812334cf6f06ad3c841a5f4460c9c53c02fd902
MS-MPPE-Send-Key = 0xf84488b4b1416b9ac6a671c2eededd1e62dba3cd374be5f0f465c200fdf6ce0b
EAP-Message = 0x03130004
Message-Authenticator = 0x00000000000000000000000000000000
User-Name = "nightlogin"
```



Jika terdapat Error/Failed

```
root@lognight.te.ugm.ac.id: /usr/local/radius/etc/raddb - Shell No. 2 - Konsole
Session Edit View Bookmarks Settings Help
Wed Sep 29 06:29:53 2004 : Info: chain-depth=0,
Wed Sep 29 06:29:53 2004 : Info: error=20
Wed Sep 29 06:29:53 2004 : Info: --> User-Name = wayan
Wed Sep 29 06:29:53 2004 : Info: --> BUF-Name = wayan
Wed Sep 29 06:29:53 2004 : Info: --> subject = /C=ZZ/ST=Zorro Provice/L=KotaKU/0=DellLatitude/OU=testdoank/CN=wayan/ema
ilAddress=wayan@gmail.com
Wed Sep 29 06:29:53 2004 : Info: --> issuer = /C=ZZ/ST=Zorro Provice/L=KotaKU/0=DellLatitude/OU=testdoank/CN=ZorroClie
nt/emailAddress=test@zorro.com
Wed Sep 29 06:29:53 2004 : Info: --> verify return:0
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap_tls: >>> TLS 1.0 Alert [length 0002], fatal unknown_ca
Wed Sep 29 06:29:53 2004 : Error: TLS Alert write:fatal:unknown CA
Wed Sep 29 06:29:53 2004 : Error: TLS_accept:error in SSLv3 read client certificate B
4359:error:140890B2:SSL routines:SSL3_GET_CLIENT_CERTIFICATE:no certificate returned:s3_srvr.c:2009:
Wed Sep 29 06:29:53 2004 : Error: rlm_eap_tls: SSL_read failed in a system call (-1), TLS session fails.
Wed Sep 29 06:29:53 2004 : Debug: In SSL Handshake Phase
Wed Sep 29 06:29:53 2004 : Debug: In SSL Accept mode
Wed Sep 29 06:29:53 2004 : Debug: eaptls_process returned 13
Wed Sep 29 06:29:53 2004 : Debug: modsingle[authenticate]: returned from eap (rlm_eap) for request 8
Wed Sep 29 06:29:53 2004 : Debug: modcall[authenticate]: module "eap" returns handled for request 8
Wed Sep 29 06:29:53 2004 : Debug: modcall: group authenticate returns handled for request 8
Sending Access-Challenge of id 12 to 172.20.2.59:1024
EAP-Message = 0x010400110d800000000715030100020230
Message-Authenticator = 0x00000000000000000000000000000000
State = 0x2a1ede188e2c15ad36bab94a38211aab
Wed Sep 29 06:29:53 2004 : Debug: Finished request 8
Wed Sep 29 06:29:53 2004 : Debug: Going to the next request
Wed Sep 29 06:29:53 2004 : Debug: Waking up in 6 seconds...
rad_recv: Access-Request packet from host 172.20.2.59:1024, id=13, length=185
User-Name = "wayan"
NAS-IP-Address = 172.20.2.59
NAS-Port = 1
Called-Station-Id = "00-80-48-2B-7A-1A:compex"
Calling-Station-Id = "00-02-6F-33-7C-07"
Service-Type = Framed-User
Framed-MTU = 1400
```

Jika terdapat Error/Failed

```
root@lognight.te.ugm.ac.id: /usr/local/radius/etc/raddb - Shell No. 2 - Konsole
Session Edit View Bookmarks Settings Help
Wed Sep 29 06:29:53 2004 : Debug: Processing the authenticate section of radiusd.conf
Wed Sep 29 06:29:53 2004 : Debug: modcall: entering group authenticate for request 9
Wed Sep 29 06:29:53 2004 : Debug: modsingle[authenticate]: calling eap (rlm_eap) for request 9
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap: Request found, released from the list
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap: EAP/tls
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap: processing type tls
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap_tls: Authenticate
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap_tls: processing TLS
Wed Sep 29 06:29:53 2004 : Info: rlm_eap_tls: Received EAP-TLS ACK message
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap_tls: ack alert
Wed Sep 29 06:29:53 2004 : Debug: eaptls_verify returned 4
Wed Sep 29 06:29:53 2004 : Debug: eaptls_process returned 4
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap: Handler failed in EAP/tls
Wed Sep 29 06:29:53 2004 : Debug: rlm_eap: Failed in EAP select
Wed Sep 29 06:29:53 2004 : Debug: modsingle[authenticate]: returned from eap (rlm_eap) for request 9
Wed Sep 29 06:29:53 2004 : Debug: modcall[authenticate]: module "eap" returns invalid for request 9
Wed Sep 29 06:29:53 2004 : Debug: modcall: group authenticate returns invalid for request 9
Wed Sep 29 06:29:53 2004 : Debug: auth: Failed to validate the user.
Wed Sep 29 06:29:53 2004 : Debug: Delaying request 9 for 1 seconds
Wed Sep 29 06:29:53 2004 : Debug: Finished request 9
Wed Sep 29 06:29:53 2004 : Debug: Going to the next request
Wed Sep 29 06:29:53 2004 : Debug: Waking up in 6 seconds...
rad_recv: Access-Request packet from host 172.20.2.59:1024, id=13, length=185
Sending Access-Reject of id 13 to 172.20.2.59:1024
EAP-Message = 0x04040004
Message-Authenticator = 0x00000000000000000000000000000000
Wed Sep 29 06:29:53 2004 : Debug: Waking up in 6 seconds...
Wed Sep 29 06:29:59 2004 : Debug: --- Walking the entire request list ---
Wed Sep 29 06:29:59 2004 : Debug: Cleaning up request 5 ID 9 with timestamp 4159f3f1
Wed Sep 29 06:29:59 2004 : Debug: Cleaning up request 6 ID 10 with timestamp 4159f3f1
Wed Sep 29 06:29:59 2004 : Debug: Cleaning up request 7 ID 11 with timestamp 4159f3f1
Wed Sep 29 06:29:59 2004 : Debug: Cleaning up request 8 ID 12 with timestamp 4159f3f1
Wed Sep 29 06:29:59 2004 : Debug: Cleaning up request 9 ID 13 with timestamp 4159f3f1
Wed Sep 29 06:29:59 2004 : Debug: Nothing to do. Sleeping until we see a request.
```





Accounting Report Generator

Accounting Stop Delay	Download	Login Time	Logout Time	NAS IP Address	Start Connect Info	Stop Connect Info	Terminate Cause	Upload	User Name
0 seconds	7.91 KBs	2004-09-26 10:03:16	2004-09-26 10:08:22	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	22.55 KBs	server
0 seconds	2.70 KBs	2004-09-26 10:08:55	2004-09-26 10:17:04	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	12.24 KBs	server
0 seconds	0.64 MBs	2004-09-26 10:19:17	2004-09-26 10:56:44	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	152.93 KBs	server
0 seconds	8.71 KBs	2004-09-27 08:11:11	2004-09-27 08:19:27	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	26.27 KBs	google
0 seconds	2.45 KBs	2004-09-27 08:19:59	2004-09-27 08:20:33	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	2.38 KBs	google
0 seconds	2.45 KBs	2004-09-27 08:21:07	2004-09-27 08:21:13	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	1.58 KBs	google
0 seconds	2.40 KBs	2004-09-27 12:36:11	2004-09-27 12:38:58	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	22.18 KBs	google
0 seconds	2.45 KBs	2004-09-27 15:08:31	2004-09-27 15:10:25	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	12.92 KBs	google
0 seconds	2.45 KBs	2004-09-27 15:08:31	2004-09-27 15:10:25	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	12.92 KBs	google
0 seconds	2.45 KBs	2004-09-27 22:19:31	2004-09-27 22:21:16	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	11.28 KBs	google
0 seconds	7.42 KBs	2004-09-27 22:22:42	2004-09-27 22:24:46	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	7.24 KBs	google
0 seconds	2.45 KBs	2004-09-27 22:24:49	2004-09-27 22:25:08	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	7.41 KBs	google
0 seconds	2.45 KBs	2004-09-27 22:25:38	2004-09-27 22:26:20	192.168.168.10	CONNECT 11Mbps 802.11b	CONNECT 11Mbps 802.11b	Admin-Reboot	4.40 KBs	google

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Location: http://127.0.0.1/dialadmin/



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from date to date user on server

2004-09-30 2004-10-08 DelIC400 Go

Thursday, 7 October 2004, 12:17:49 WIT

statistics period:
2004-09-30 up to 2004-10-08

access statistics

statistics for **all** users

sessions total usage time downloads

Refresh

Daily Analysis

date	sessions			total usage time			downloads		
	count	avg	bar	time	avg	bar	size	avg	bar
2004-09-30	7	53%	<div style="width: 53%;"></div>	22:14:06	100%	<div style="width: 100%;"></div>	29.08 KBs	0%	
2004-10-01	13	100%	<div style="width: 100%;"></div>	04:02:06	18%	<div style="width: 18%;"></div>	37.48 MBs	100%	<div style="width: 100%;"></div>
2004-10-02	2	15%	<div style="width: 15%;"></div>	00:05:17	0%		10.51 KBs	0%	
2004-10-03	7	53%	<div style="width: 53%;"></div>	00:37:08	2%		14.20 MBs	37%	<div style="width: 37%;"></div>
2004-10-04	0	0%		00:00:00	0%		0.00 KBs	0%	
2004-10-05	0	0%		00:00:00	0%		0.00 KBs	0%	
2004-10-06	5	38%	<div style="width: 38%;"></div>	00:30:21	2%		34.26 KBs	0%	
2004-10-07	0	0%		00:00:00	0%		0.00 KBs	0%	
2004-10-08	0	0%		00:00:00	0%		0.00 KBs	0%	



DIALUP ADMIN

SHOW	EDIT	USER INFO	
ACCOUNTING	BADUSERS	DELETE	TEST
OPEN SESSIONS			

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Connection Status for nightlogin (NightLogin)

User is online since	2004-10-07 12:19:49
Connection Duration	<input type="text" value="00:01:09"/>
Server	172.16.1.1 (172.16.1.1)
Server Port	1
Workstation	00-02-6F-30-DC-2D
Upload	not available
Download	not available
Allowed Session	user can login for 3 hours, 59 minutes, 6 seconds
Usefull User Description	-

Check Password

Password

check

Subscription Analysis



Location: http://127.0.0.1/dialadmin/



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Account Status For The Last 7 Days

Connections	8
Online time	43 minutes, 22 seconds
Failed Logins	0
Upload	0.52 MBs
Download	5.00 MBs
Average Time	5 minutes, 25 seconds
Average Upload	66.79 KBs
Average Download	0.62 MBs

Personal Information

name	NightLogin
department	Electrical Engineering UGM
title	-
address	-
home address	-
phone	(0274) 909012
home phone	(0274) 899879
mobile	+6281328137737
fax	-
home page	-
e-mail	nightlogin@gmail.com
e-mail alias	-



DIALUP ADMIN

SHOW	EDIT	USER INFO	
ACCOUNTING	BADUSERS	DELETE	TEST
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Subscription Analysis for wayan

2004-09-30 up to 2004-10-08

#	type	logged in	session time	ip address	upload	download	server	terminate cause	callerid
1	/Wireless-802.11	2004-10-06 21:07:30	2 minutes	-	10.18 KBs	3.61 KBs	172.16.1.1:1	-	00-02-6F-30-DC-2D
2	/Wireless-802.11	2004-10-06 20:43:28	20 minutes	-	12.45 KBs	7.07 KBs	172.16.1.1:1	-	00-02-6F-30-DC-2D
3	/Wireless-802.11	2004-10-01 15:16:26	54 minutes, 17 seconds	-	259.68 KBs	78.68 KBs	172.16.1.1:1	Admin-Reboot	00-02-6F-33-7C-07
4	/Wireless-802.11	2004-10-01 14:44:44	8 minutes, 41 seconds	-	3.02 KBs	5.61 KBs	172.16.1.1:1	Idle-Timeout	00-02-6F-30-DC-2D
5	/Wireless-802.11	2004-10-01 14:34:23	9 minutes, 4 seconds	-	19.41 KBs	18.81 KBs	172.16.1.1:2	Admin-Reboot	00-02-6F-30-DC-2D
6	/Wireless-802.11	2004-10-01 09:56:19	58 minutes, 35 seconds	-	43.80 MBs	28.58 MBs	172.20.2.50:1	Admin-Reboot	00-02-6F-33-7C-07
7	/Wireless-802.11	2004-10-01 09:38:43	13 minutes, 29 seconds	-	43.14 MBs	8.60 MBs	172.20.2.50:1	Admin-Reboot	00-02-6F-33-7C-07
8	/Wireless-802.11	2004-10-01 09:13:35	24 minutes, 58 seconds	-	34.30 KBs	103.79 KBs	172.20.2.50:1	Admin-Reboot	00-02-6F-33-7C-07
Page Total			3 hours, 11 minutes, 4 seconds		87.27 MBs	37.40 MBs			



Implementasi 802.1x EAP-TLS dan PEAP MSCHAPv2

by

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Okt 2004

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