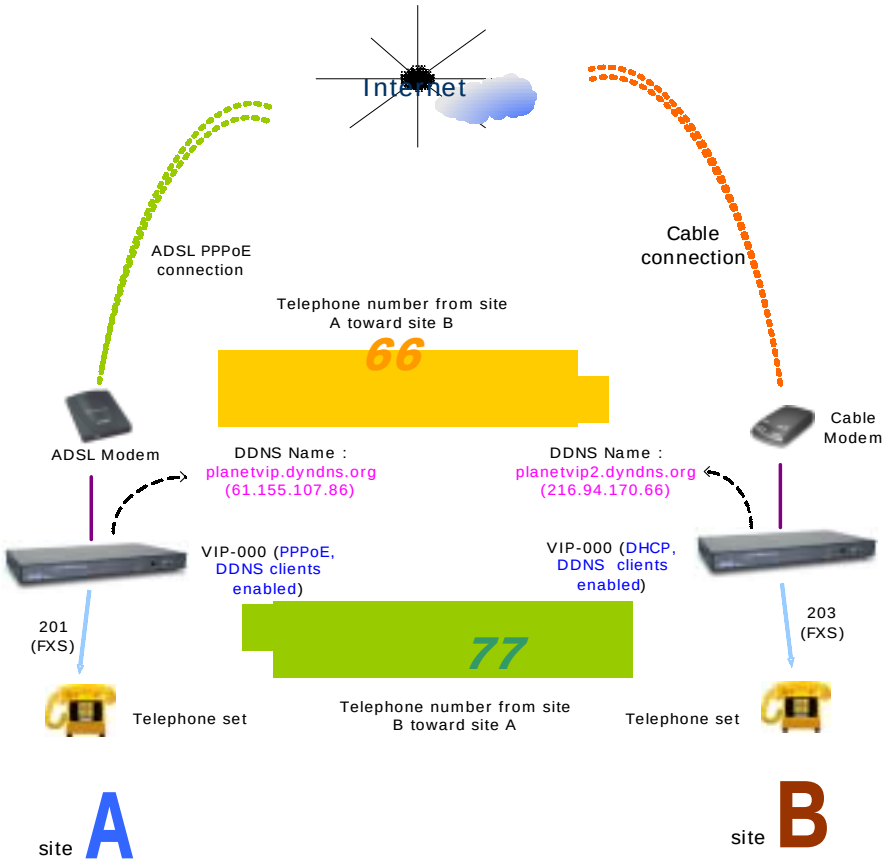
Document #:	TB-VIP-020805	Date:	05 August 2002
Publisher	Jimmy Lin / ENM Dept.		
Subject:	*Interworking DDNS service with PLANET VIP series*		
Product:	*VIP-000 / 200 / 400*		
Requirement	1. VIP-000 / 200 / 400 (firmware version must be 3.15 or above) 2. VIP-200/400 **MUST** be version 2 in order to have PPPoE/DHCP/DDNS client function normally. 3. A PC with terminal software (e.g. MS HyperTerminal) installed for command line interface operation 4. An effective DDNS name has to be applied from related DDNS service provider. (Currently, DDNS service support in VIP series are www.dyndns.org and www.dtdns.com)		
Interpretation	1. DNS: DNS is short for Domain Name System (or Service), an Internet service that translates domain names into IP addresses. Because domain names are alphabetic, it will be easier for people to remember names than IP addresses. The Internet however, is really based on IP address. Every time users type a domain name while surfing on the net, therefore, a DNS service is required to translate the name into corresponding IP address. For example, the domain name www.planet.com.tw may be translated to 203.70.249.1. 2. DDNS (Dynamic DNS) : The Dynamic DNS service allows you to associate a dynamic IP address to a static hostname i.e. allowing your computer to be more easily accessed from various locations on the Internet. There are many dynamic DNS service providers offering this service for free to the Internet community.		
Description	Scenarios on this subject: 1) VIP with built-in DDNS client 2) VIP co-working with router built-in DDNS client		
How To	**Attention!** **a) VIP-200/400 users: Before proceeding, please check the unit at hand is a version 2 machine. (This can be verified via checking "V.2" text on FCC label at the bottom of machine.)** **b) Before proceeding any further, an effective DDNS name has to be applied from related DDNS service provider.** **Scenario I - VIP with built-in DDNS client:** **Please note that DDNS client in VIP series is not suggested working in NAT environment.** **Network topology can be shown below:**		



Commands used on this topology:

PPPoE Configuration on VIP-000/200/400

1) **net set pppoe on**: turn on PPPoE service.
2) **net set pppoe off**: turn off PPPoE service.
3) **net set pppoe user_name** *<my_name>* insert username provided by ISP
4) **net set pppoe pw** *<my_password>*
   insert password provided by ISP
5) **net set pppoe fix_ip xxx.xxx.xxx.xxx**
   insert the static IP address provided by ISP
6) **net show pppoe**: display PPPoE status

DHCP Configuration on VIP-000/200/400

1) **net set dhcp on**: turn on DHCP service
2) **net set dhcp off**: turn off DHCP service

DDNS Configuration on VIP-000/200/400

1) **net set dyndns on**: turn on the DDNS client
2) **net set dyndns off**: turn off the DDNS client
3) **set dyndns add** *[serv_name] [host_name] [user_name] [password]*
   add the DDNS name applied from DynDNS.org
4) **set dyndns delete** *[host_name]|all*
   delete (all) DDNS name applied from www.DynDNS.org
5) **net show dyndns**: display status of DDNS service

Domain name server configuration

set h323 dns_ip [XXX.XXX.XXX.XXX] [DNS server name] --- setup DNS server in VIP. (DNS IP is a **MUST-HAVE** configuration.)
Note:
please obtain DNS server from local ISP in order to have best efficiency for name resolution while making domain name calls.
After adding the DNS server, please use "config store " to save settings, then reboot machine to make the settings effective.

Network Deployment

DDNS service
planetvip.dyndns.org (61.155.107.86) is applied by VIP-000 on site A,
planetvip2.dyndns.org (216.94.170.66) is applied by VIP-000 on site B.

Other parameters on this connection :
VIP-000 on site A has **PPPoE**, and **DDNS** clients enabled
VIP-000 on site B has **DHCP**, and **DDNS** clients enabled.

VIP-000 configuration on site A :

PPPoE section :

net set pppoe on
net set pppoe user_name *[my_name]*
net set pppoe pw *[my_password]*
net reset

Please fill in the username/password obtained from ISP.

DNS server section

set h323 dns_ip *[dns_ip]*
config activate
config store

DNS server settings will not take effect till system reboot.

DDNS client section

set dyndns add dyndns planetvip planetvip planetvip 123
config activate
config store

Dialplan settings

atpm req
atpm aadd 66 2 8 66 2
atpm hadd 66 2 66
atpm dadd 66 dns planetvip2.dyndns.org
atpm done
atpm store

Create an address entry for VIP-000 on site B

VIP configuration on site B:
DHCP section:

net set dhcp on ,
then press ”y” or use command ***net reset*** to rebooting machine and activate this setting..

DNS server section:

set h323 dns_ip *[dns_ip]*
config activate
config store

DNS server settings will not take effect till system reboot.

DDNS client section:

set dyndns add dyndns planetvip2 planetvip2 planetvip 456
config activate
config store

Dialplan section:

Create an address entry for VIP on site A

atpm req
atpm aadd 77 2 8 77 2
atpm hadd 77 2 77
atpm dadd 77 dns planetvip.dyndns.org
atpm done
atpm store

After these modifications, users on site A are able to dial “66 + telephone number” to connect users on site B to have voice conversation. Users on site B are able to have voice communication via dialing number “77 + telephone number” toward users on site A. (please note that there is a Max digits (8) limitation of dialstring in this case, users may modify this parameter to meet different needs.)

Scenario II - VIP co works with (NAT) router which has built-in DDNS client:

In this scenario, PLANET XRT 401B is used for DDNS and DMZ features illustration

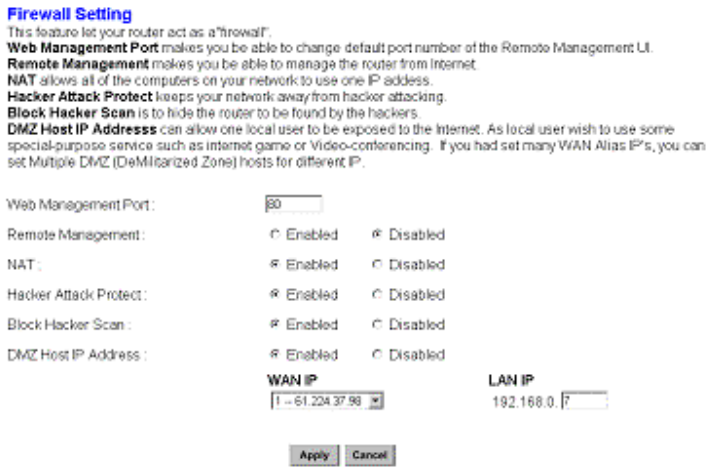
<DDNS setting screen of XRT-401B>

a) Enable DDNS feature in XRT-401B.
b) Insert the registered DDNS name, and username/password applied from www.dyndns.org or www.dtdns.com
c) Click "Apply", and check if DDNS service is effective in machine status log.

Note:
DDNS feature might be different in various router vendors. Please refer to respective user's manual for DDNS feature configuration

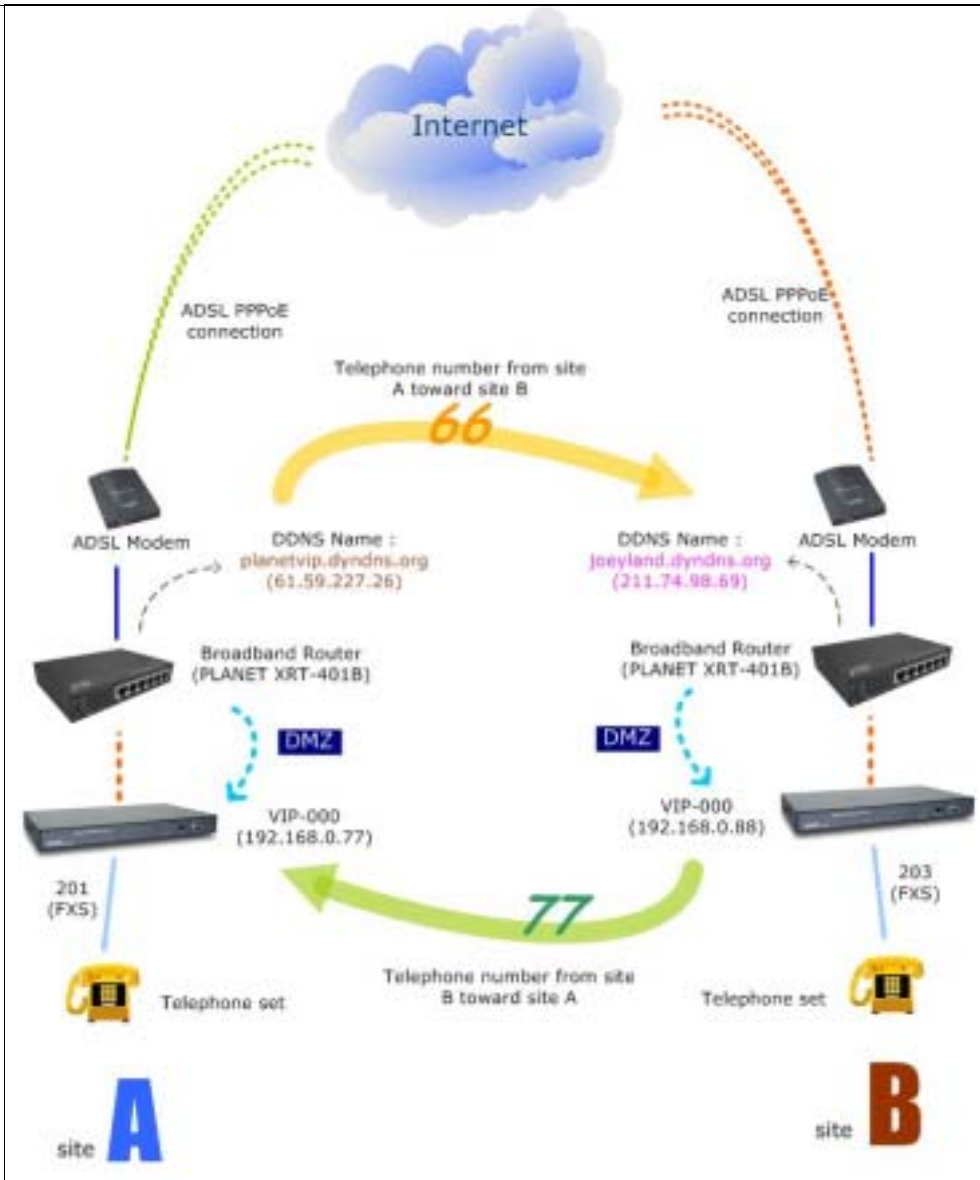
Please note that DDNS client in VIP series is not suggested working in NAT environment.

<DMZ setting screen of XRT-401B>



a) Enable DMZ feature in XRT-401B.
b) Go to "Advanced" – "Firewall" Option menu, and find the "DMZ" function.
c) Click on the "WAN IP" tab to enable the desired IP address to destination VIP.
d) Click "Apply" to make DMZ feature effective on VIP.

Network topology can be shown below:



Commands used on this topology:

IP Configuration on VIP-000/200/400

1) **net set ip**: setup IP address on VIP
2) **net set mask**: setup IP mask in VIP
3) **net set gateway** : assign gateway IP address in VIP
4) **net show**: display VIP network related parameters.

H323 Configuration on VIP-000/200/400

1) **set h323 dns_ip <*dns_server_ip*>**:
   Assign an effective DNS server IP for domain name resolution.
   In this topology, DNS server is a **MUST-HAVE** parameter.

Note:

Please obtain DNS server from local ISP in order to have best efficiency for name resolution while making domain name calls.
After adding the DNS server, please use "config store " to save settings, then reboot machine to make the settings effective.

2) **set h323 nat_call on**: to have packet correctly resolved in NAT environment, this option **MUST** be enabled.

Network Deployment

DDNS service
planetvip.dyndns.org (61.155.107.86) is applied by **XRT-401B** on site A,
planetvip2.dyndns.org (216.94.170.66) is applied by **XRT-401B** on site B.

Other parameters on this connection :
VIP-000 on site A has **DMZ**, and **nat_call** enabled
VIP-000 on site B has **DMZ**, and **nat_call** enabled.

VIP-000 configuration on site A :

IP configuration :

net set ip 192.168.0.77
net set mask 255.255.255.0
net set gateway 192.168.0.254
net reset

Please refer to your application environment to fill these parameters.

DNS server section

set h323 dns_ip *[dns_ip]*
config activate
config store

DNS server settings will not take effect till system reboot.

Dialplan settings

atpm req
atpm aadd 66 2 8 66 2
atpm hadd 66 2 66
atpm dadd 66 dns planetvip2.dyndns.org
atpm done
atpm store

Create an address entry for VIP-000 on site B

VIP configuration on site B:
DHCP section:

IP configuration :

net set ip 192.168.0.88
net set mask 255.255.255.0
net set gateway 192.168.0.254
net reset

Please refer to your application environment to fill these parameters.

DNS server section

set h323 dns_ip *[dns_ip]*
config activate
config store

DNS server settings will not take effect till system reboot.

Dialplan section:

Create an address entry for VIP on site A

atpm req
atpm aadd 77 2 8 77 2
atpm hadd 77 2 77
atpm dadd 77 dns planetvip.dyndns.org
atpm done
atpm store

After these modifications, users on site A are able to dial “66 + telephone number” to connect users on site B to have voice conversation. Users on site B are able to have voice communication via dialing number “77 + telephone number” toward users on site A. (please note that there is a Max digits (8) limitation of dialstring in this case, users may modify this parameter to meet different needs.)

A key point in this NAT-to-NAT VoIP communication topology, **DMZ and DDNS functionality of the NAT routers have to function smoothly**, or the voice communication might have one-way communication, i.e. only WAN side voice can hear the voice from LAN side, but LAN side users cannot hear the voice from WAN side.

More Information

1. The latest User’s Guide and release information: **ftp://ftp.planet.com.tw/VoIP/**
2. The latest firmware release: **ftp://ftp.planet.com.tw/VoIP/Firmware**

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