

# **VigorAccess IP DSLAM**

## **Demostration for IGMP Snooping**

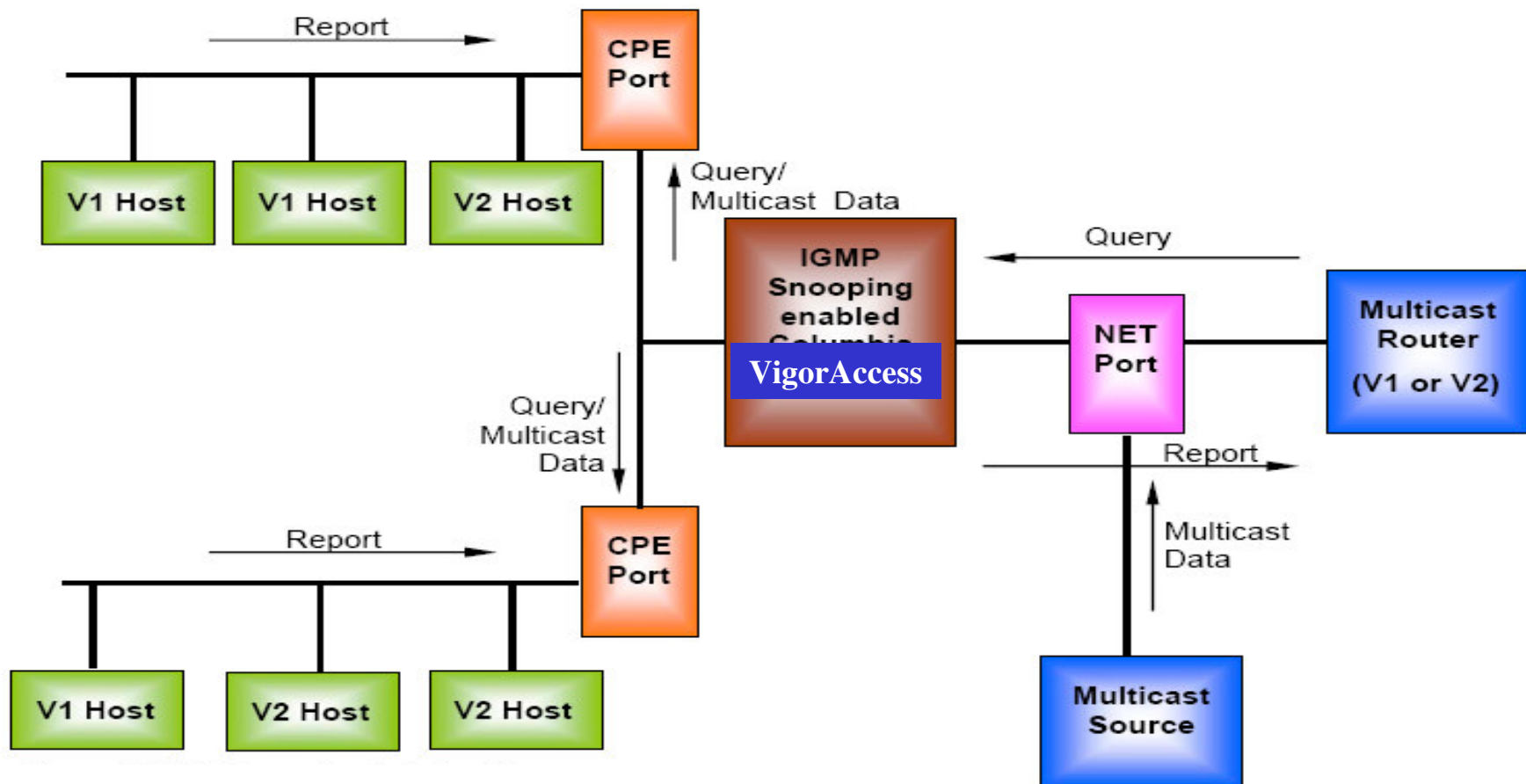
# Introduction

- VigorAccess IP DSLAM supports **IGMPSnooping** functionality
- A demonstration environment will be presented

# IGMP Snooping

- IP hosts use the **Internet Group Management Protocol (IGMP)** to report their multicast group memberships to any immediate neighboring multicast routers.
- IGMP Snooping is the process of listening to IGMP conversations between hosts and routers.

# Multicasting Architecture



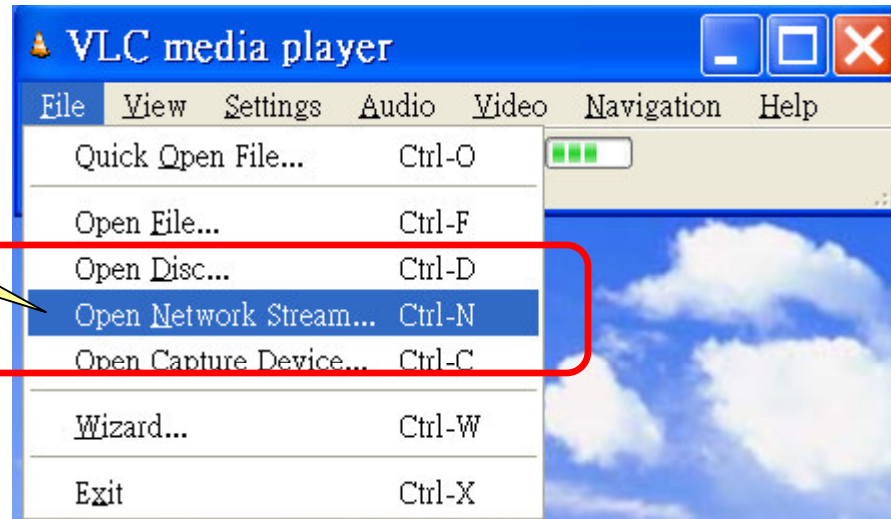
# Components

- **IGMP Snooping Enabled DUT:** VigorAccess
- **CPE:** Transparent Bridge Mode
- **Multicast Source:** VideoLAN VLC Video Media Player
- **V2 Host :** VideoLAN VLC
- **Multicast Router:** or packet generator (such as SmartBit)
- **Video Source:** MPEG, VCD, DVD, ...

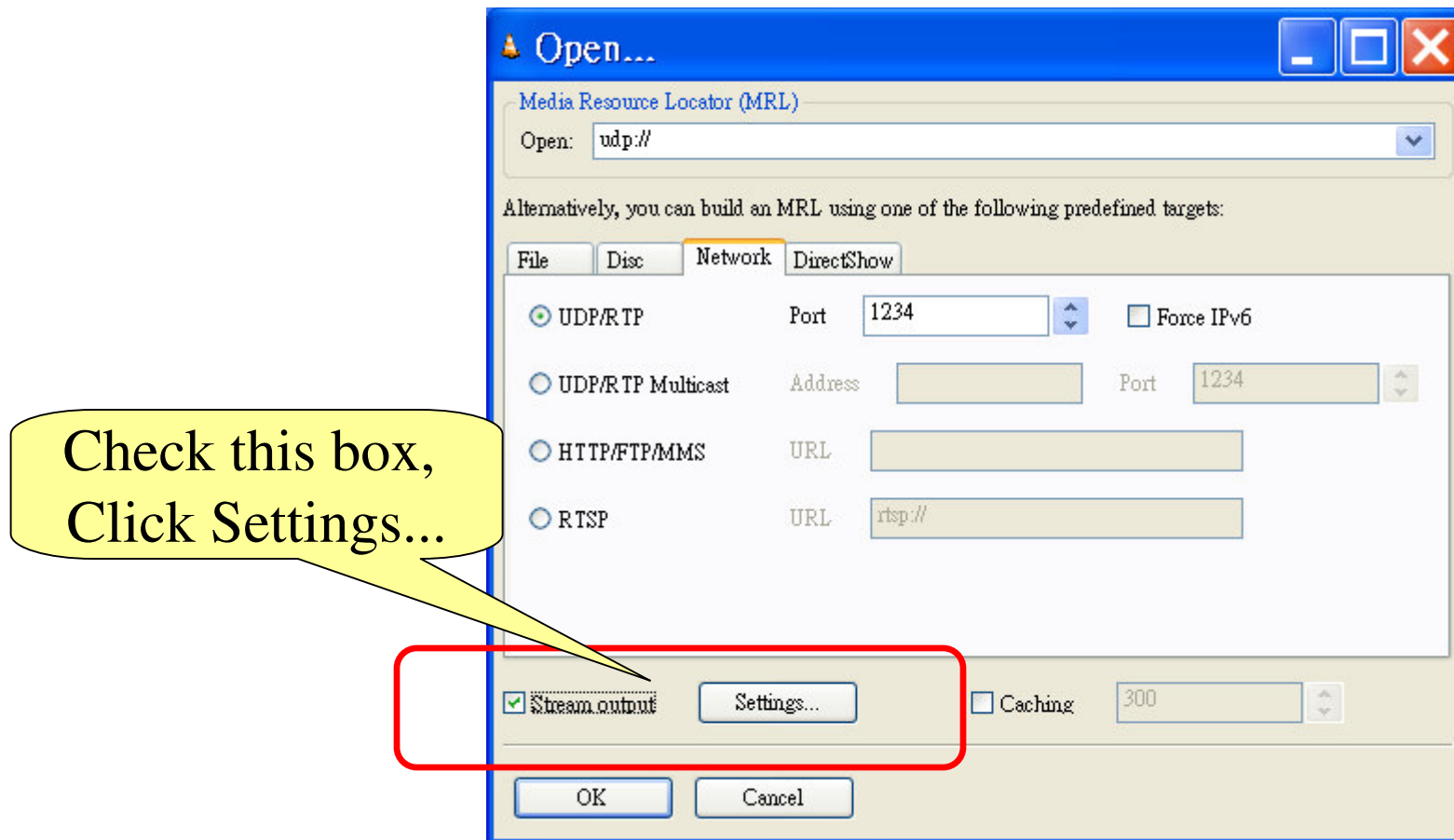
# VLC Source Configuration



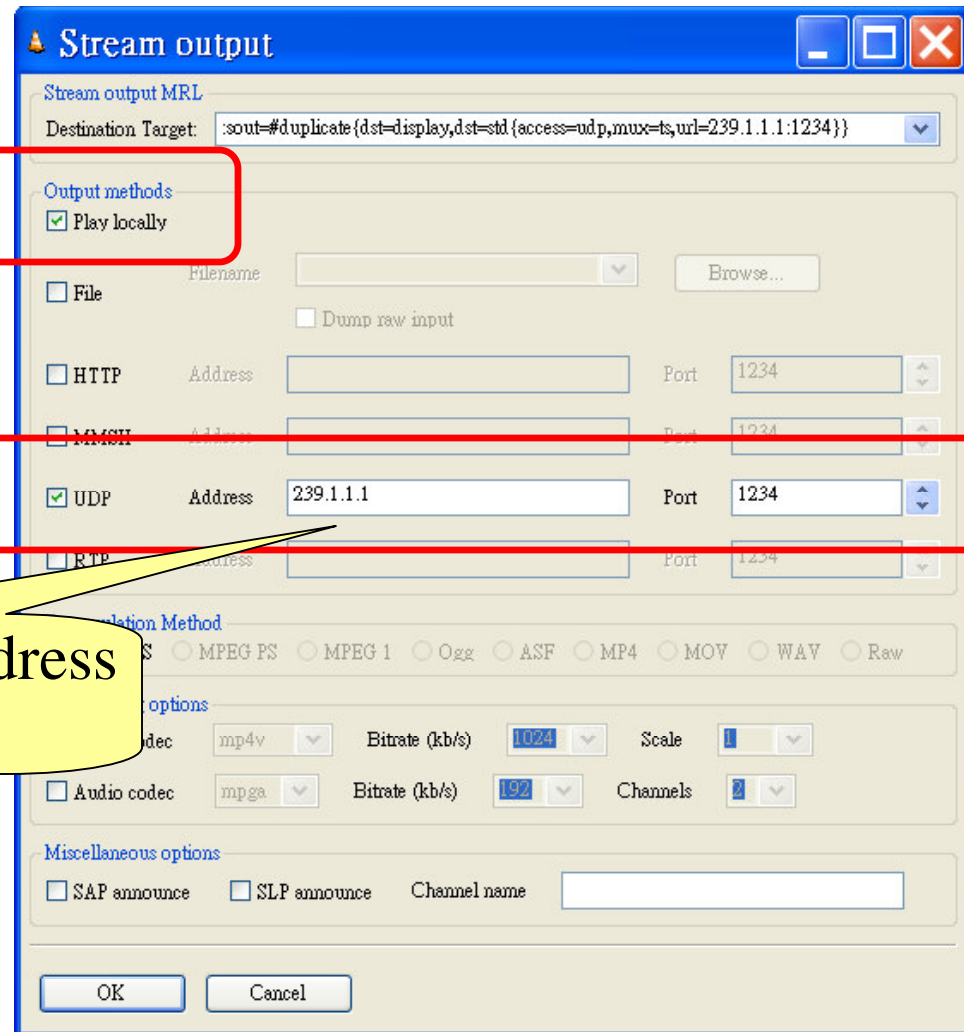
Open Network Stream...



# VLC Source Config. (cont.1)

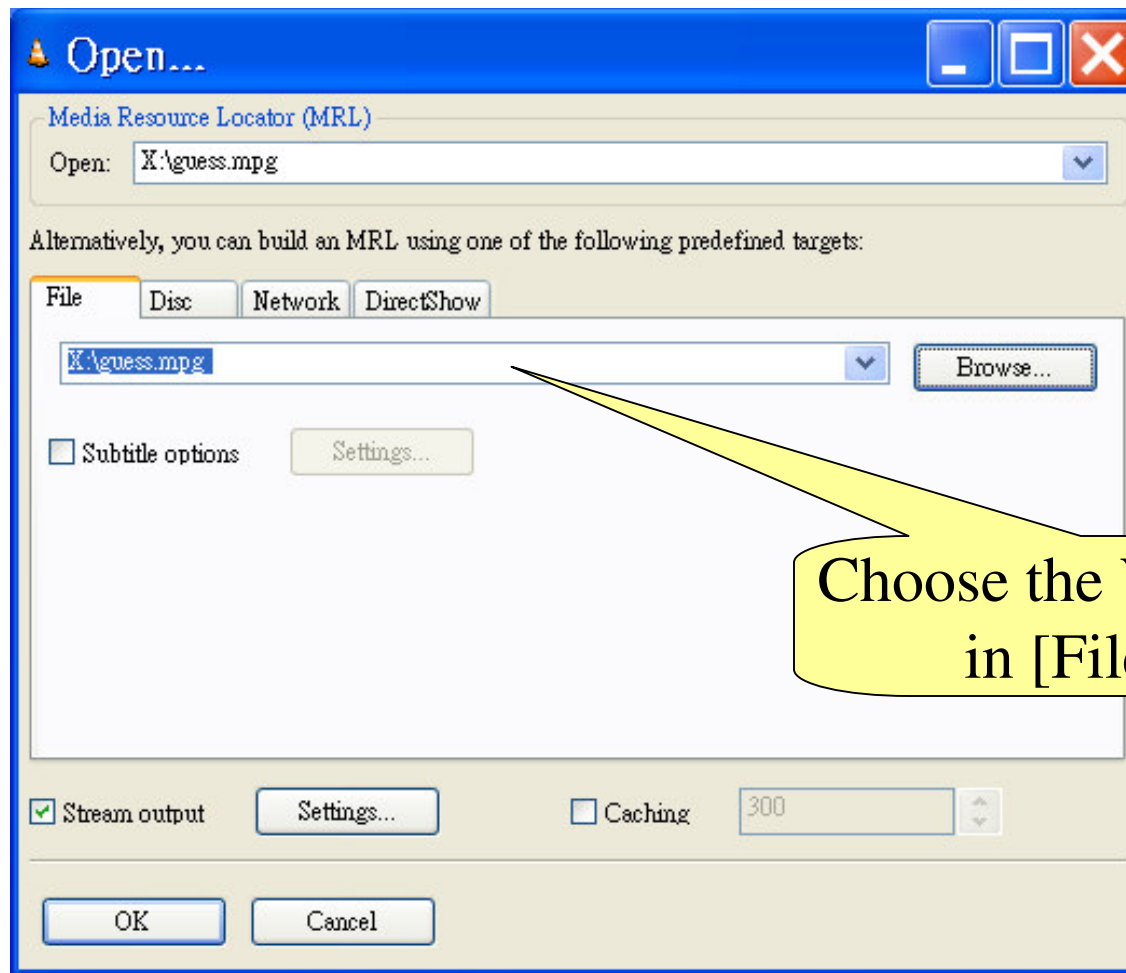


# VLC Source Config. (cont.2)

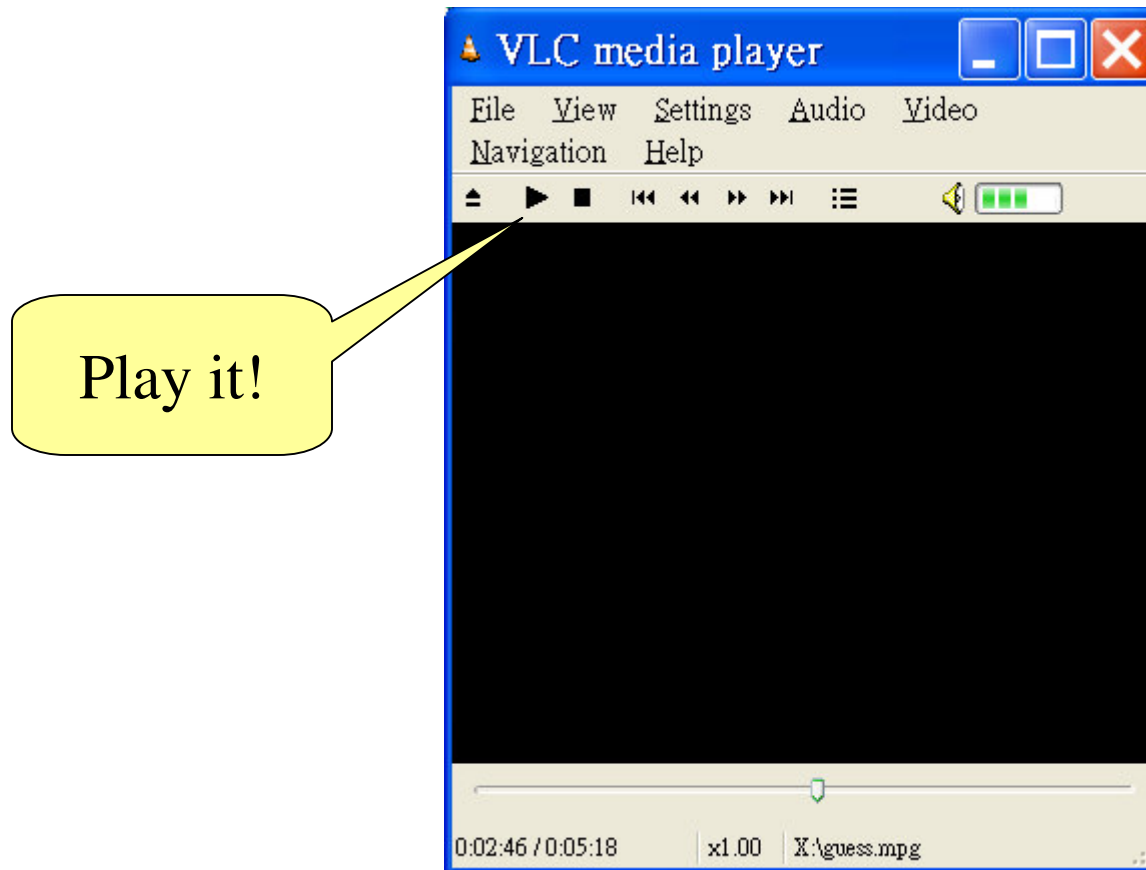




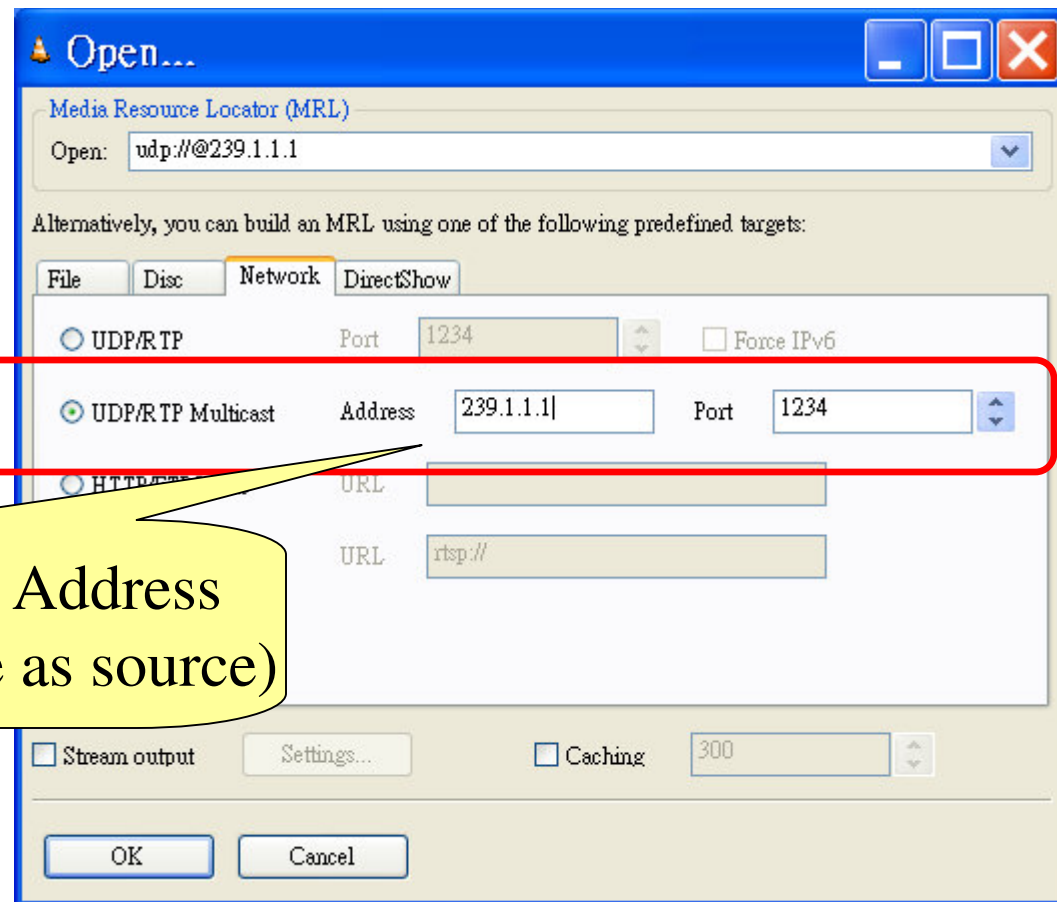
# VLC Source Config. (cont.3)



# VLC Source Config. (cont.4)



# VLC Client Configuration



Give the multicast IP Address  
and port number (same as source)

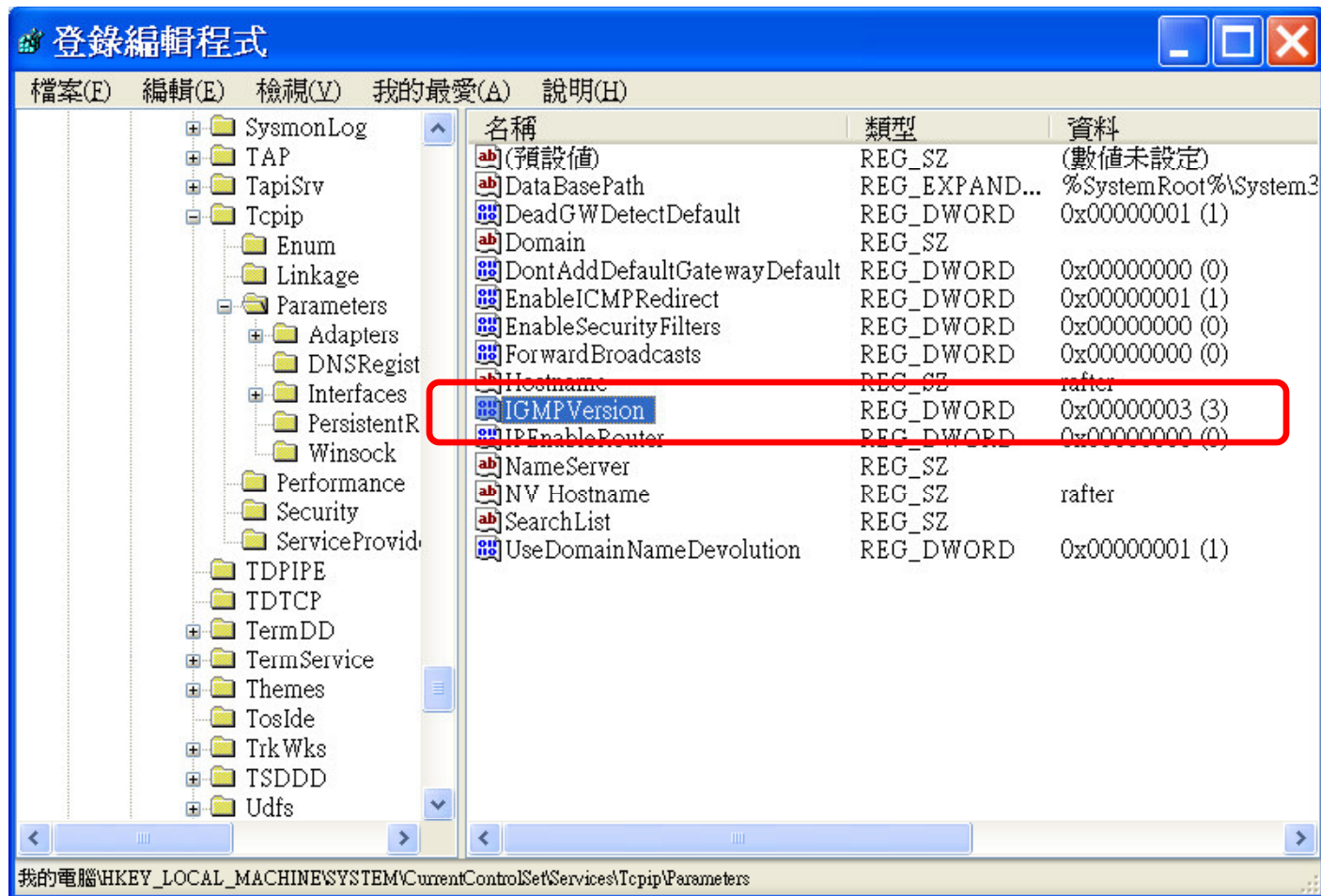
# VLC Client Config. for XP

- VigorAccess supports only **IGMPv1/v2**
- Windows XP supports IGMPv3 by default
- How to make XP utilize IGMPv2 message
  - change to Windows registry

# How to Make XP IGMPv2

- **REGEDIT** utility
- Add/Edit the following “REG\_DWORD” key
  - HKEY\_LOCAL\_MACHINE/SYSTEM/CurrentControlSet/Services/Tcpip/parameters/**IGMPVersion = 3**
  - where value 3 means IGMP version 2
- **Restart** the Windows

# How to Make XP IGMPv2 (cont.)



# It's Time to Play!

- Press the Play button on VLC client
- Multicast streams will be shown
- In VigorAccess
  - **\$get bridge mcast forwarding**
    - Vlan Index : 1      Mac Address : 01:00:5E:01:01:01
    - Egress ports : 5
    - Group Learnt : 5
  - means a IGMP report with address  
01:00:5E:01:01:01 is snooped on bridge port 5

# Limitation

- The video stream will drop due to **TimeOut** if **NO** IGMP Query sent periodically from multicast router
- Use any packet generator (such as SmartBit) to simulate IGMP **Query** (224.0.0.1, all group query) every 2 minutes can complete the work



# Diagnostics

- Make sure the DSL line is in **ShowTime**
- Make sure the **VPCI** and **encap** mode are well-configured (ATM layer connectivity)
- Make sure the video client sends **IGMPv2** report message
- Reference CLI commands
  - `$get igmpsnoop ?` (for more information)
  - `$get bridge mcast forwarding`

**End of Document**