IPNext2000™
NGN IP-PBX System
High Performance Fault Tolerant IP-PBX Solution

NAT Traversal Service for SIP Port Blocking Issue Solving

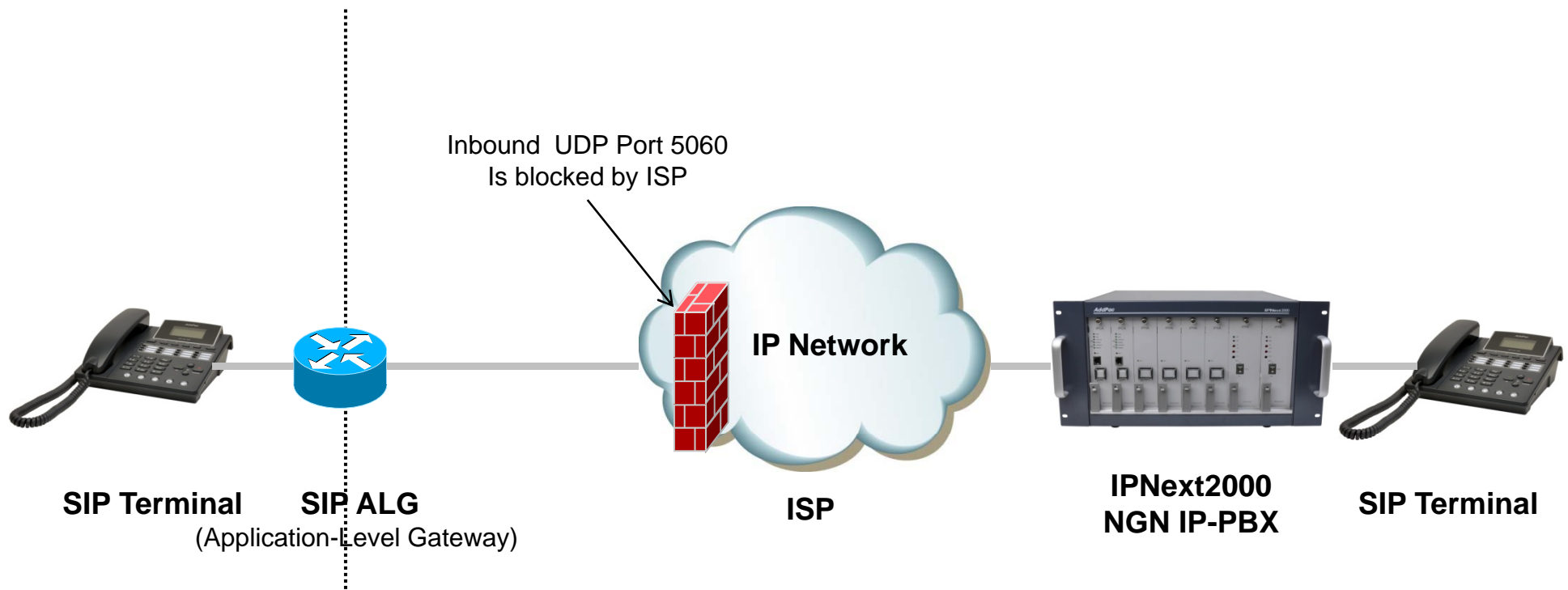**AddPac Technology**

2012, Sales and Marketing

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- IP Telephony Service Environment

- NAT Traversal Service

  - Call Established Mode

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- Smart Multimedia Manager Configuration

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Network Environment

Inbound UDP Port 5060
Is blocked by ISP

IP Network

SIP Terminal

SIP ALG
(Application-Level Gateway)

ISP

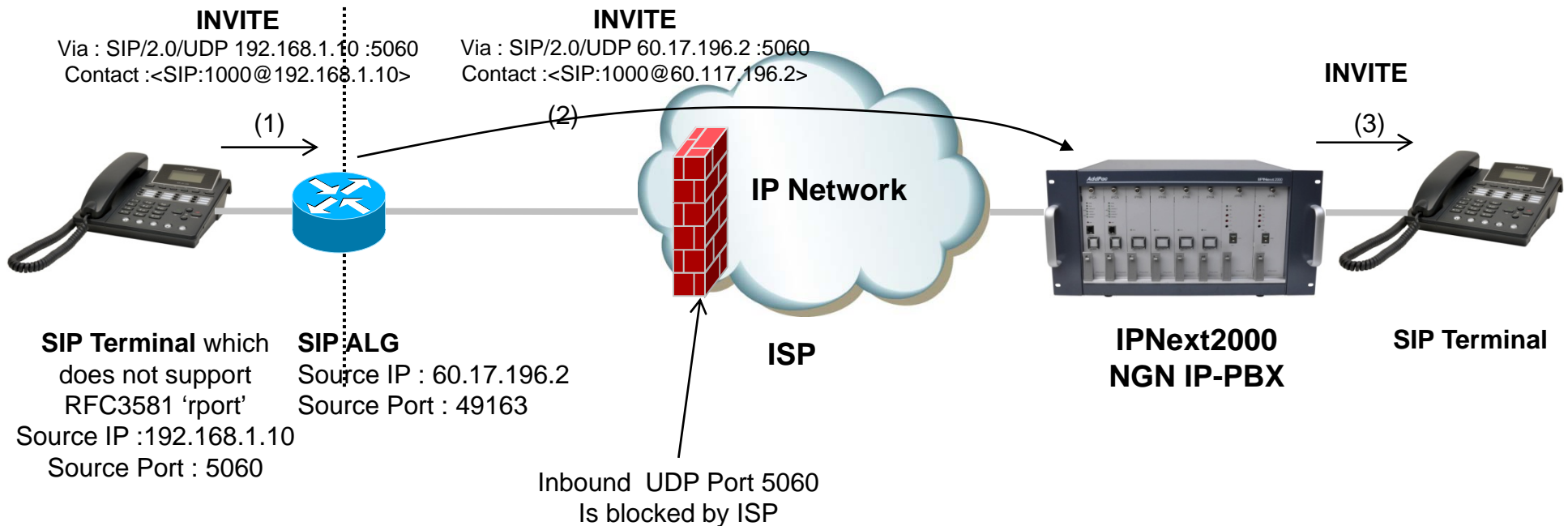**IPNext2000
NGN IP-PBX**

SIP Terminal

IP Telephony Service Network Environment

- Terminal : IP Phone, VoIP Gateway, etc
  - Located below the NAT
  - Do not support RFC3581 (An Extension to the SIP for Symmetric Response Routing)

- NAT : SOHO Router
  - SIP ALG(Application-level gateway)
    - Replace IP in "Via" header with the public IP and port
    - Replace "Contact" with mapped public IP and port
    - Replace SDP media address with public IP and port
  - In some network environments, the SIP ALG replace "Contact" port in REGISTER message only. It's caused by wrong configuration or abnormal operation.

- Network : ISP Network
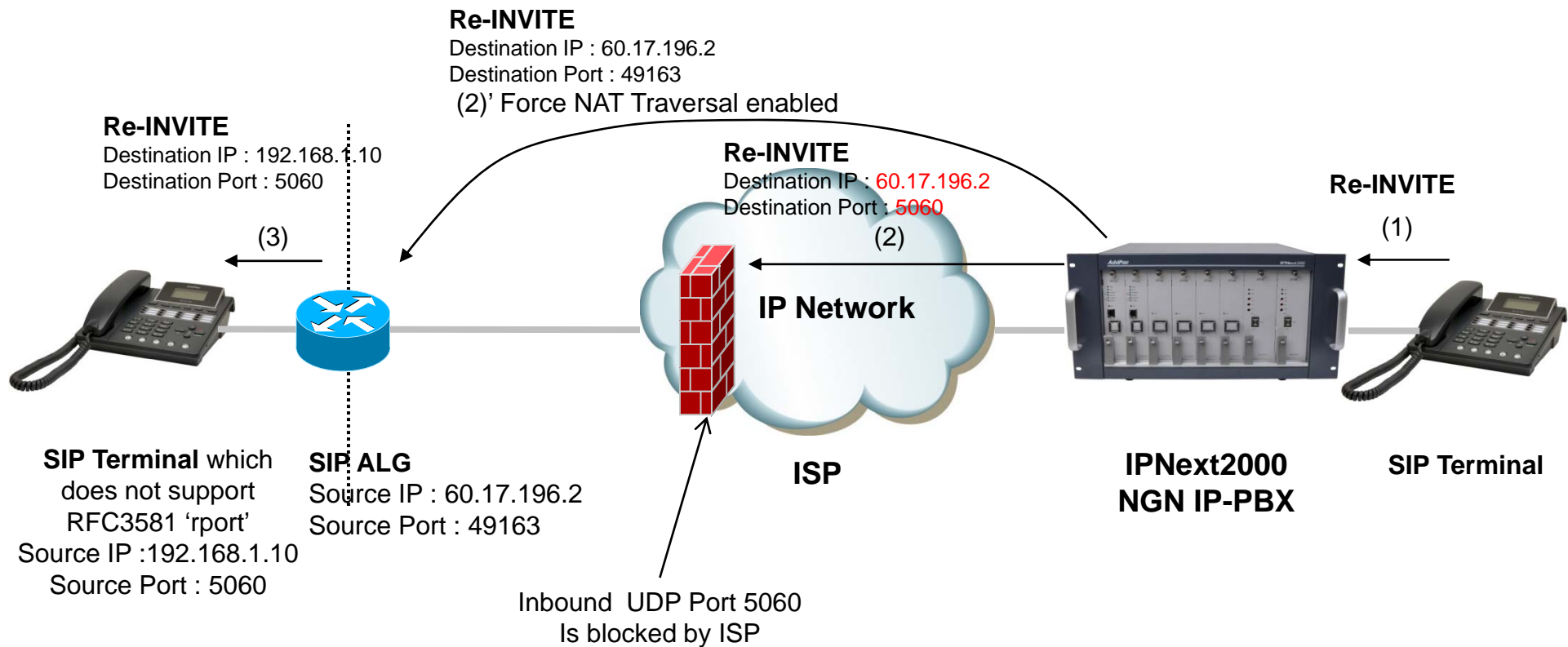 - Inbound UDP port 5060 is blocked by local ISP

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NAT Traversal Service

[Call Established]

INVITE
Via : SIP/2.0/UDP 192.168.1.10 :5060
Contact :<SIP:1000@192.168.1.10>

INVITE
Via : SIP/2.0/UDP 60.17.196.2 :5060
Contact :<SIP:1000@60.117.196.2>

INVITE

(1)

(2)

(3)

IP Network

SIP Terminal which
does not support
RFC3581 'rport'
Source IP :192.168.1.10
Source Port : 5060

SIP ALG
Source IP : 60.17.196.2
Source Port : 49163

ISP

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SIP Terminal

Inbound UDP Port 5060
Is blocked by ISP

NAT Traversal Service

[Change Session]

Re-INVITE
Destination IP : 60.17.196.2
Destination Port : 49163
(2)' Force NAT Traversal enabled

Re-INVITE
Destination IP : 192.168.1.10
Destination Port : 5060

Re-INVITE
Destination IP : 60.17.196.2
Destination Port : 5060

Re-INVITE

(3)

(2)

(1)

IP Network

SIP Terminal which
does not support
RFC3581 'rport'
Source IP :192.168.1.10
Source Port : 5060

SIP ALG
Source IP : 60.17.196.2
Source Port : 49163

ISP

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SIP Terminal

Inbound UDP Port 5060
Is blocked by ISP

Smart Multimedia Manager Configuration

- Smart Multimedia Manager
  - Device Management
    - Devices
      - Server
        » (IPNext) Properties

- Check 'Force NAT Traversal' option

Thank you!

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