

Internet Telephony PBX System

IPX-2000v2 Series



This installation guide introduces several practical configuration examples of IP PBX deployment.

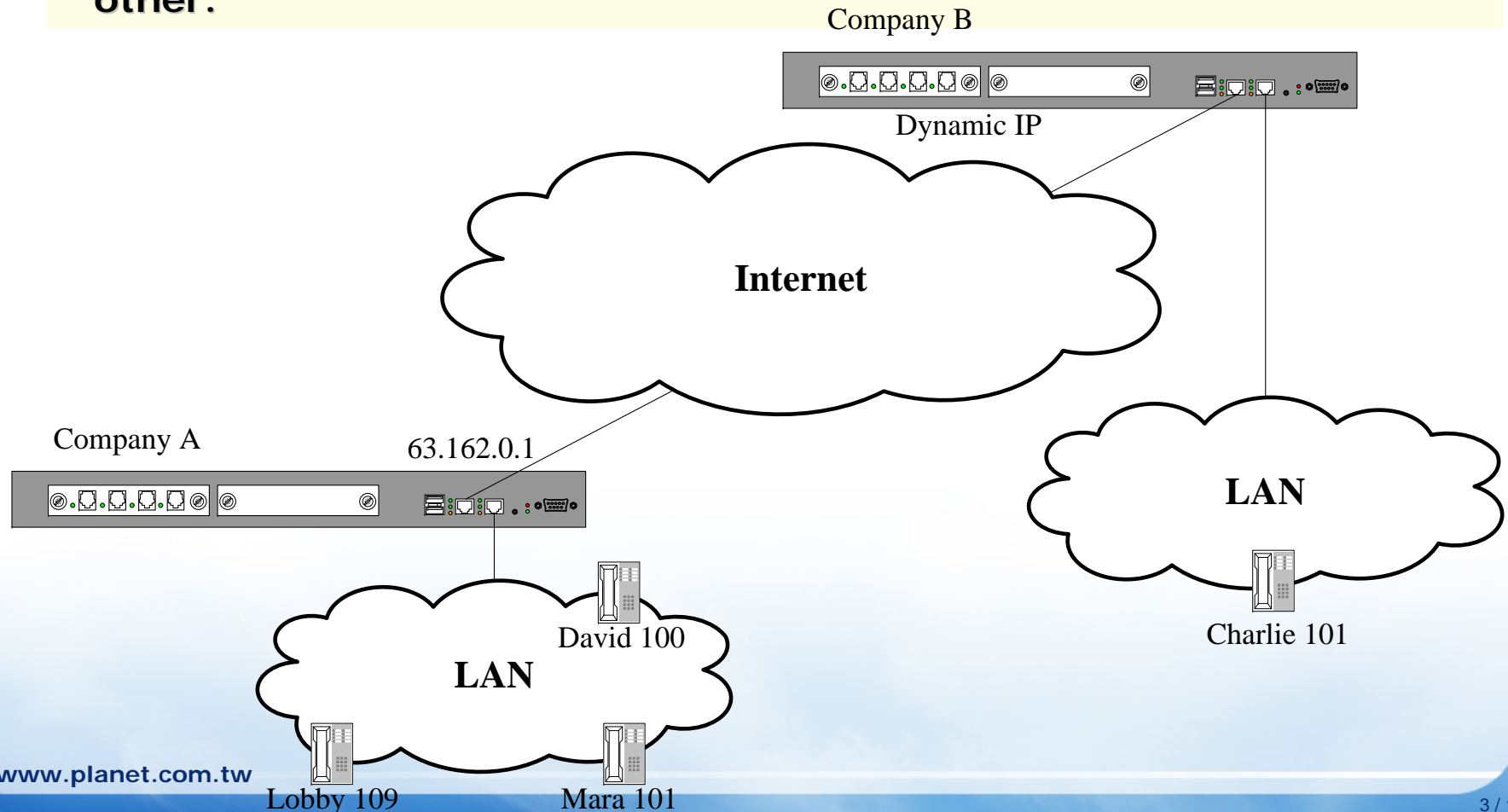
The configuration of IP PBX is very flexible and the expressiveness of usergroups, routegroups, and trunks are scalable enough to support various network architectures.

Users could refer to these examples and build a larger network involving multiple sites and advanced services.



Two-Site Configuration

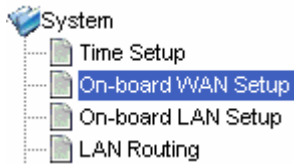
Company B is the business partner of company A, These two companies decided to create a private SIP trunk to connect to each other.



Two-Site Configuration

- They decided the ID of the SIP trunk is 888 and the trunk password is "123456789". Accordingly, Mara dials 888*101 to reach Charlie in company B and Charlie dials 888*100 to reach David.
- In both of the companies, all extensions except the extension in lobby can dial 888 to enter the auto attendant of the other IP PBX.
- Company A has a static IP 63.162.0.1 as the WAN IP of the IP PBX, however company B doesn't have the static IP, it use ADSL modem to gain a dynamic IP from ISP to access the internet.

- 1 Keep the setting of case 1 for company A, and follow the steps of case 1 to create a user **Charlie**, usergroup **staff**, device **Charlie_101**, and extension **101** for Company B.



2 Click the [**System->On-board WAN setup**] to set up the WAN interface for the IP PBX of company A, said IP PBX A and the IP PBX of company B, said IP PBX B. If the IP PBXs not under the NAT, disable the STUN server.

Type: **Static IP** **IPPBX A**

LAN Only

Interface MAC: 00:18:BF:00:0D:D0

MAC Clone

IP Address: 210.66.155.90

Netmask: 255.255.255.224

Gateway: 210.66.155.94

DNS 1: 168.95.192.1

DNS 2: 168.95.1.1

DNS 3:

3 Setup the WAN interface of **IP PBX A** follow the information of IP that provides by ISP

4 Setup the WAN interface of **IP PBX B** follow the information of IP that provides by ISP

Type: **PPPoE** **IPPBX B**

LAN Only

Interface MAC

MAC Clone

IP Address

Netmask

Gateway

DNS 1

DNS 2

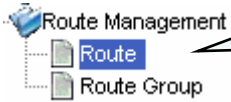
DNS 3

User Name: qugia

Password: ●●●●●●

Status:

IPPBX A



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Select the [Route->Route] of IP PBX A to create the Routes for the IP PBX A.

Route Management			
Route ID	SIP_A_TO_B	Description	SIP_A_TO_B
Destination Number Pattern	888*	Number of Stripped Digits	4
		Prefix	
Add			

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Create a Route ID : **SIP_A_TO_B_AA**
 Destination number pattern : **888**
 Number of stripped digits: **0**
 This Route is for user under IP PBX A to dial 888 then enter the AA of the IP PBX B.

Create a Route ID : **SIP_A_TO_B**
 Destination number pattern : **888***
 Number of stripped digits: **4**
 This Route is for user to dial 888*[ext. in IP PBX B] then the call be transferred to the ext no. that user dialed.

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Route Management			
Route ID	SIP_A_TO_B_AA	Description	SIP_A_TO_B_AA
Destination Number Pattern	888	Number of Stripped Digits	0
		Prefix	
Add			

IPPBX A

IPPBX A



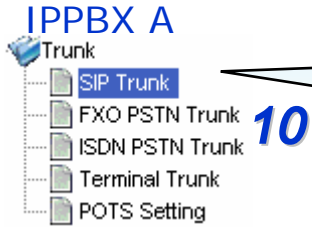
8

Select the [Route->Routegroup] of IP PBX A to add the previous Routes to a Routegroup

Route Group																	
Group ID	RG_A_TO_B																
Description	<input type="text"/> <input type="button" value="Set"/>																
Associated Routes	<table border="0"><tr><td>FXO 2</td><td></td><td>SIP_A_TO_B</td><td></td></tr><tr><td>SIP_A_TO_B_AA</td><td><input type="button" value="+"/></td><td>SIP_A_TO_B_AA</td><td></td></tr><tr><td>SIP_A_TO_B</td><td><input type="button" value="-"/></td><td></td><td><input type="button" value="Set"/></td></tr><tr><td>FXO</td><td></td><td></td><td></td></tr></table>	FXO 2		SIP_A_TO_B		SIP_A_TO_B_AA	<input type="button" value="+"/>	SIP_A_TO_B_AA		SIP_A_TO_B	<input type="button" value="-"/>		<input type="button" value="Set"/>	FXO			
FXO 2		SIP_A_TO_B															
SIP_A_TO_B_AA	<input type="button" value="+"/>	SIP_A_TO_B_AA															
SIP_A_TO_B	<input type="button" value="-"/>		<input type="button" value="Set"/>														
FXO																	
<input type="button" value="Back"/>																	

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Create a Routegroup **RG_A_TO_B**, then add the Route **SIP_A_TO_B** and Route **SIP_A_TO_B_AA** to the Routegroup.



Select the [Trunk->SIP trunk] of IP PBX A to create a SIP trunk which connect with IP PBX B

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Trunks Add New

Trunk Identifier	888
Description	SIP Trunk A_B
Auth. Name	888
Auth. Password
<input checked="" type="checkbox"/> Dynamic Peer	
Language	English
DID Type	None DID
IVR List	
Usergroup of Privilege	UG_DEF
<input type="checkbox"/> Disable Fast Bridging	
<input type="checkbox"/> Advanced Settings	

IPPBX A

Back Add

Since IP PBX A has a static IP, we set IP PBX A as the **dynamic peer** for IP PBX B to register IP PBX A.
Trunk identifier: **888** (this number is for IP PBX B to dial to auto attendant)
Check Dynamic peer
Auth. Name: **888**
Auth. password: **123456789**

IPPBX A

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Select the [User->Usergroup] of IP PBX A to associate the SIP trunk 888 to corresponding usergroup

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IPPBX A

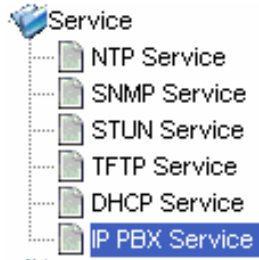
Associate the SIP trunk 888 to the usergroup **CEO**

Associate the SIP trunk 888 to the usergroup **Staff**, and we don't want the phone in lobby can access this SIP trunk, so don't add this SIP trunk to Usergroup utility.

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IPPBX A

IPPBX A



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Select the [**Service->IP PBX service**] of IP PBX A to reload the IP PBX configuration.

Click the [**Reload**] button to reload the IP PBX configuration. After completed the setting of IP PBX A then connect to IP PBX B to finish rest procedures.

The screenshot shows a web interface with two tabs: 'Operations' and 'Settings'. The 'Settings' tab is active. Below the tabs is a table of configuration options:

IP PBX Configuration Reload	Reload
IP PBX Configuration Backup	Backup <input type="checkbox"/> PBX Settings Only
IP PBX Configuration Restore	Restore <input type="text" value="pbxconfT_1825-20080704140945.cfg"/>
IP PBX Service Restart	Restart
IP PBX Configuration Revert to Factory Default	Revert

The 'Reload' button is highlighted with a blue callout box labeled '16'. The text 'IPPBX A' is written in blue below the table.

IPPBX B



Select the [Route->Route] of IP PBX B to create routes of the IP PBX B

Route Management				
Route ID	SIP_B_TO_A	Description	SIP_B_TO_A	18
Destination Number Pattern	888*	Number of Stripped Digits	4	Prefix
IPPBX B				Add

Create a Route ID : **SIP_B_TO_A_AA**
 Destination number pattern : **888**
 Number of stripped digits: **0**
 This Route is for user under IP PBX B to dial 888 then enter the AA of the IP PBX A.

Create a Route ID : **SIP_B_TO_A**
 Destination number pattern : **888***
 Number of stripped digits: **4**
 This Route is for user to dial 888*[ext. in IP PBX A] then the call will be transferred to the ext no. that user dialed.

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Route Management				
Route ID	SIP_B_TO_A_AA	Description	SIP_B_TO_A_AA	IPPBX B
Destination Number Pattern	888	Number of Stripped Digits	0	Prefix
Add				Add



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Select the [Route->RouteGroup] of IP PBX B to add the previous Routes to a RouteGroup

Create a RouteGroup **RG_B_TO_A**, then add the Route **SIP_B_TO_A** and Route **SIP_B_TO_A_AA** to the RouteGroup.

Route Group											
Group ID	RG_B_TO_A										
Description	<input type="text"/> <input type="button" value="Set"/>										
Associated Routes	<table border="1"> <tr> <td>FXO 2</td> <td rowspan="4"> <input type="button" value="+"/> <input type="button" value="-"/> </td> <td>SIP_B_TO_A</td> <td rowspan="4"> <input type="button" value="Set"/> </td> </tr> <tr> <td>SIP_B_TO_A_AA</td> <td>SIP_B_TO_A_AA</td> </tr> <tr> <td>SIP_B_TO_A</td> <td></td> </tr> <tr> <td>FXO</td> <td></td> </tr> </table>	FXO 2	<input type="button" value="+"/> <input type="button" value="-"/>	SIP_B_TO_A	<input type="button" value="Set"/>	SIP_B_TO_A_AA	SIP_B_TO_A_AA	SIP_B_TO_A		FXO	
FXO 2	<input type="button" value="+"/> <input type="button" value="-"/>	SIP_B_TO_A		<input type="button" value="Set"/>							
SIP_B_TO_A_AA		SIP_B_TO_A_AA									
SIP_B_TO_A											
FXO											
<input type="button" value="Back"/>											

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IPPBX B

- Trunk
 - SIP Trunk**
 - FXO PSTN Trunk
 - ISDN PSTN Trunk
 - Terminal Trunk
 - POTS Setting

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Select the [Trunk->SIP trunk] of IP PBX B to create a SIP trunk which connect with IP PBX A

Trunks Add New

Trunk Identifier	888
Description	SIP Trunk A_B
Auth. Name	888
Auth. Password	••••••••
<input type="checkbox"/> Dynamic Peer	
SIP Proxy IP	63.162.0.1
SIP Proxy Port	5060
SIP Domain	63.162.0.1
<input checked="" type="checkbox"/> Registration Required	
SIP Registrar IP	63.162.0.1
SIP Registrar Port	5060
Language	English
DID Type	None DID

Status :Please reload PBX configuration.

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IPPBX B

Because IP PBX B doesn't have a static IP; it uses a dynamic IP to access the internet, we set SIP proxy/registrar IP/port of IP PBX A for IP PBX B to register to.

Trunk identifier: **888** (this number is for IP PBX B to dial to auto attendant)

Trunk Identifier : **888**

Auth. Name: **888**

Auth. password: **123456789**

Description : **SIP Trunk A_B**

Don't check Dynamic peer

SIP proxy IP: **63.162.0.1**

SIP proxy Port: **5060**

SIP Domain: **63.162.0.1**

Check Registration Required

SIP Registrar IP : **63.162.0.1**

SIP registrar port: **5060**

IPPBX B



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Select the [User->Usergroup] of IP PBX B to associate the SIP trunk 888 to corresponding usergroup

User Group Management

Group ID	Staff										
Description	<input type="text"/> Set 25										
Associated Trunks	<table border="0"> <tr> <td>RG B TO A RG_DEF</td> <td>888 pots1 blocking loopback</td> <td>Group ID: 0</td> <td>+</td> <td>RG B TO A 8</td> </tr> <tr> <td></td> <td></td> <td>Weight: <input type="text"/></td> <td>-</td> <td></td> </tr> </table>	RG B TO A RG_DEF	888 pots1 blocking loopback	Group ID: 0	+	RG B TO A 8			Weight: <input type="text"/>	-	
RG B TO A RG_DEF	888 pots1 blocking loopback	Group ID: 0	+	RG B TO A 8							
		Weight: <input type="text"/>	-								
Reachable User Groups	<table border="0"> <tr> <td>CEO Staff UG_DEF Utility</td> <td>+</td> <td>Staff</td> <td>IPPBX B</td> </tr> <tr> <td></td> <td>-</td> <td></td> <td>Apply</td> </tr> </table>	CEO Staff UG_DEF Utility	+	Staff	IPPBX B		-		Apply		
CEO Staff UG_DEF Utility	+	Staff	IPPBX B								
	-		Apply								
Associated PBX Features	<table border="0"> <tr> <td>Meet-me Conference Call Parking Voice Mail</td> <td>+</td> <td><input type="text"/></td> </tr> <tr> <td></td> <td>-</td> <td></td> </tr> </table>	Meet-me Conference Call Parking Voice Mail	+	<input type="text"/>		-					
Meet-me Conference Call Parking Voice Mail	+	<input type="text"/>									
	-										

Associate the SIP trunk 888 to the usergroup **Staff**

IPPBX B



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Select the [Service->IP PBX service] of IP PBX B to reload the IP PBX configuration.

Click the [Reload] button to reload the IP PBX configuration.

Operations Settings

IP PBX Configuration Reload	<input type="button" value="Reload"/>
IP PBX Configuration Backup	<input type="button" value="Backup"/> <input type="checkbox"/> PBX Settings Only
IP PBX Configuration Restore	<input type="button" value="Restore"/> <input type="text" value="pbxconft_1825-20080704140945.cfg"/>
IP PBX Service Restart	<input type="button" value="Restart"/>
IP PBX Configuration Revert to Factory Default	<input type="button" value="Revert"/>

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ACTIVATING IP POWER

