晶捷數位股份有限公司
Jing Jie System Integration Co.,Ltd.

UniIVR-7000 SIP IVR Application Server Administrative Guide

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About Jing Jie

Jing Jie Co., Ltd. concentrates to provide the IPV6+IPV4 SIP server farm solution including SIP proxy server, IP-PBX, SIP surveillance server and QoS Monitor to our partner, system integrator and value added reseller. All Jing Jie solutions are provided to support both IPV4 and IPV6 dual stack simultaneously. We provides a painless migration path from IPV4 to IPV6 network.

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1 Getting Start

After successfully installed the system , first of all is to login to the web management interface. You can either using IPv4 or IPv6 address to access GUI management interface by using popular browser such as Firefox or Internet Explorer. The following is the step by step to tell how to create your unique IVR service.

1.1 Logon the system

After connect the Ethernet cable into the server machine, administrator need to use a computer which had Firefox or IE installed and network connected in order to connect to system GUI. For convenience, configuration computer is recommended to have same subnet as the server.

Start the browse, and type http://xxx.xxx.xxx.xxx:7000 or https://xxx.xxx.xxx.xxx:7001 to login the web manage where xxx.xxx.xxx.xxx is the IP address.

After connected, you should able to see the following login page. Input the default user ID "admin" and password "admin" and the validation code (CAPTCHA) to logon the system.

1.2 Change Default Password

The default password of "admin" is madden for easy to remember. To secure the system access, it is recommended to change the default password as the follows.

Click ***ADMINISTRATION -> Account -> admin*** and the following screen will appear. Input the new password at the Password and Confirm Password fields and click the ***Apply*** button to take effective. Click logout to quit the system UI and relogin by new password for confirmation.

1.3 Setup IVR Server ID

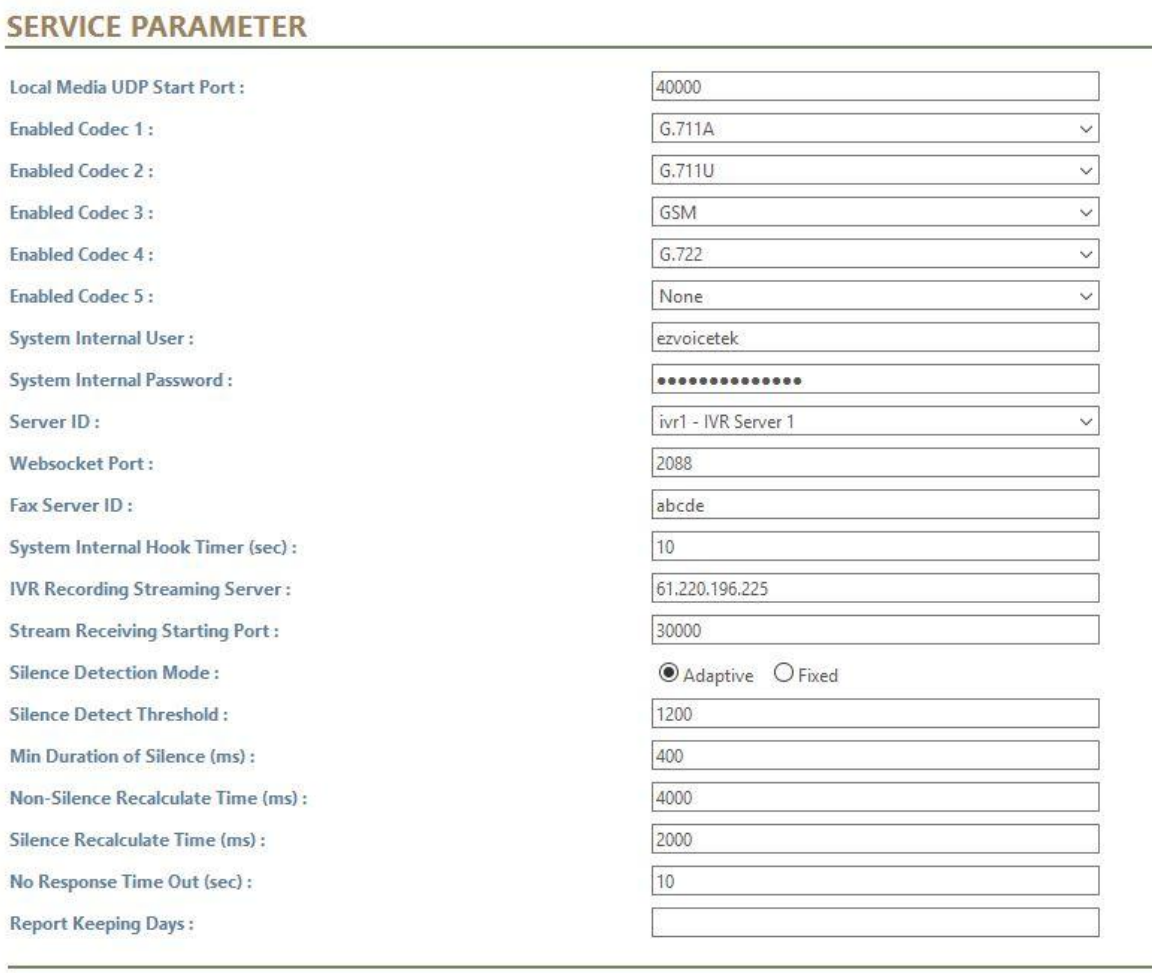
The first step is to setup an unique IVR server ID. If each IVR server are independent and not sharing same database or call flow,you can always set the Server ID to ivr1 as default. Otherwise, each server need have different server ID to identify each server. First to add an IVR server by clicking SYSTEM -> IVR Server List and following will appear:

Click New and add the following information:

Parameter Name	Value
Server ID	ivr1
Server Name	IVR Server1

Click Apply and you should see this Server ID was inserted.

Click SYSTEM -> Service Parameter and the following will appear:

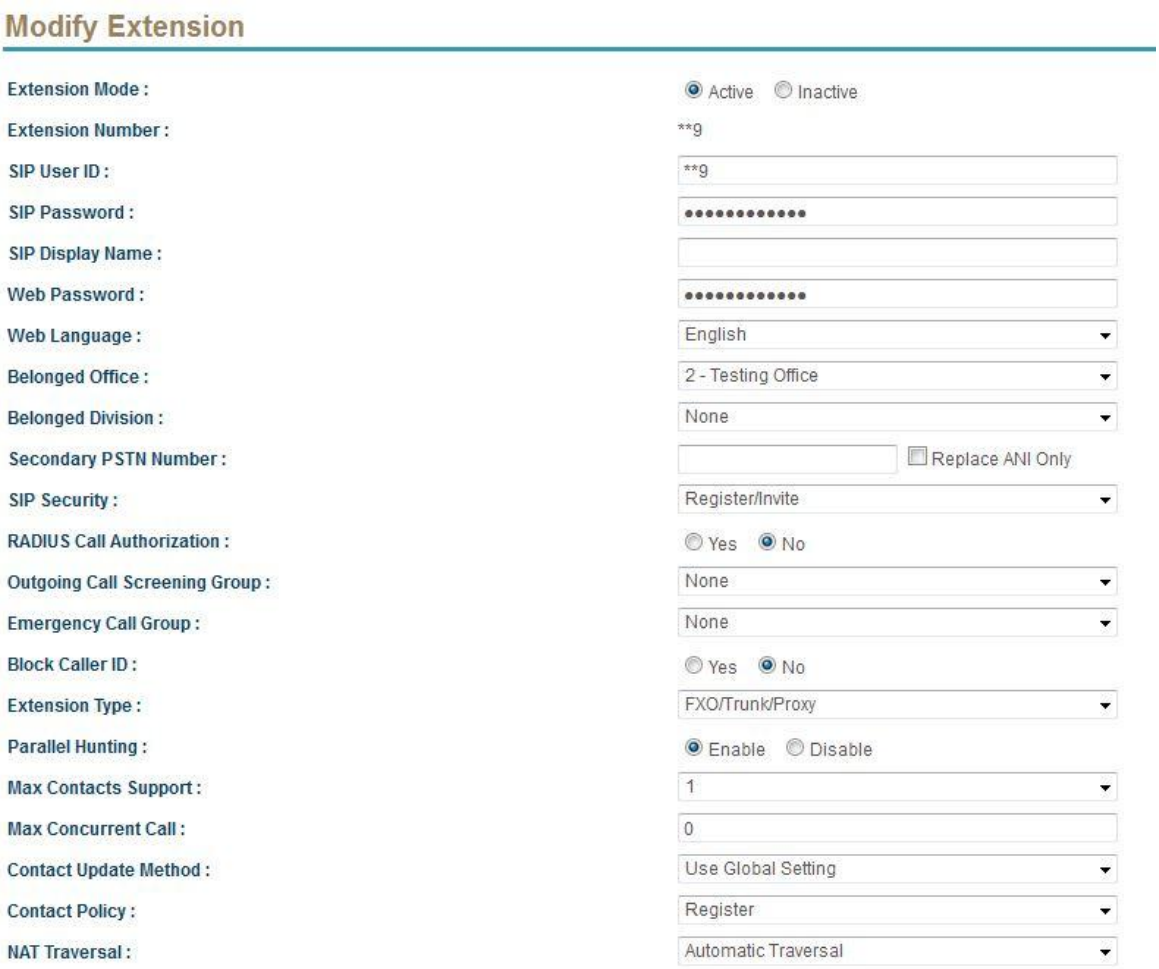


Select ivr1 in the Server ID field and click apply.

1.4 Create IVR Account in Proxy/IPPBX

Before you can connect SIP IVR into your SIP Proxy or IPPBX, you need create a SIP account to register or a predefine account.

For UniSIP-6000 or UniPBX-2000 user, click Extension -> Extension -> New to create an account for IVR. The following screen will appear:



The following parameters are recommended:

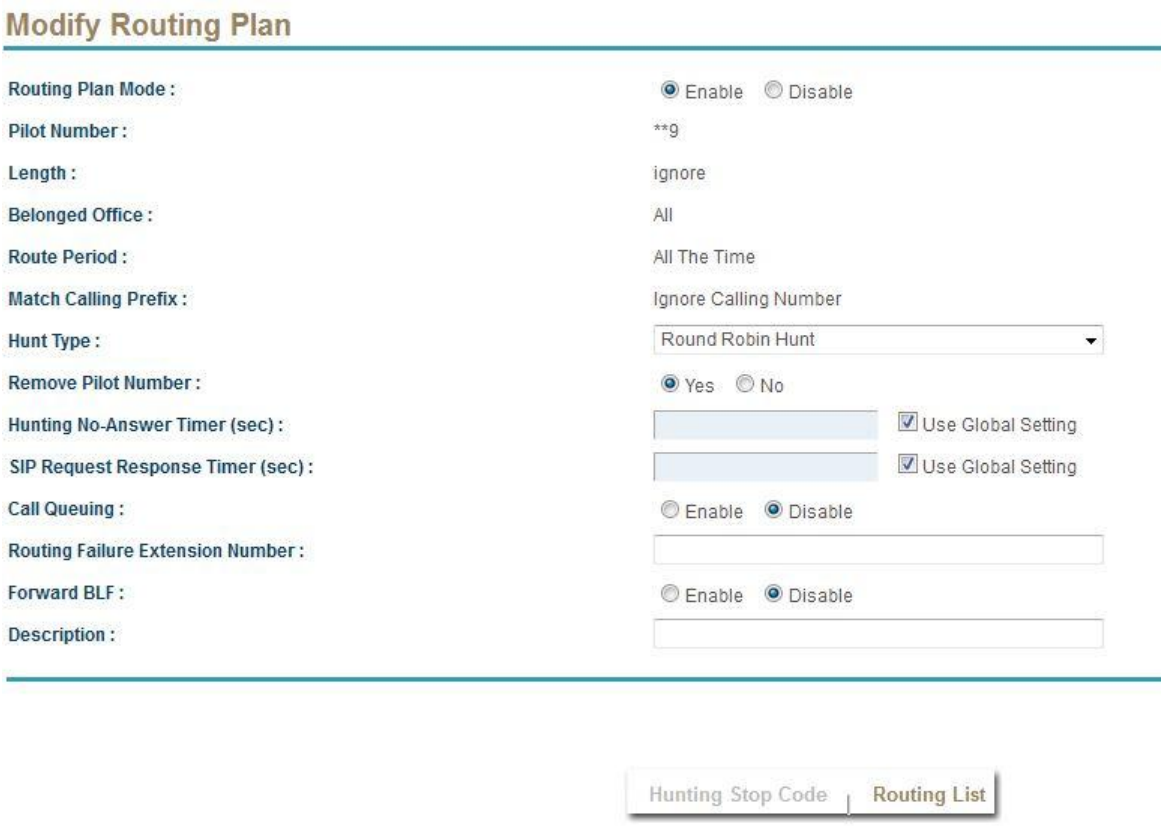
Parameter Name	Value
Extension Number	**9 (you might change as your numbering plan)
SIP User ID	**9 (you might change as your numbering plan)
SIP Password	a secure password was required
Extension Type	FXO/Trunk/Proxy
Contact Policy	Register (You can choose to use Permanent contact as well)
Default Register TTL	60 seconds

Parameter Name	Value
Max Contact Supprot	1
Max Concurrent Call	0 (it means no limitation)
Permanent Contact 1	If you are using Permanent contact, the following is the example to be set. sip:**9@xxx.xxx.xxx.xxx:5063 where xxx.xxx.xxx.xxx is the IP address of UniIVR

Click Apply to save it.

The next is to create a routing plan in order to route the call to UniIVR-7000 as follows:

Click Feature -> Routing Plan -> New to create routing plan for IVR as follows (You can create many routing plan based on your numbering plan to UniIVR).



Please input the following parameters:

Parameter Name	Value
Pilot Number	**9
Length	ignore
Extension Group	All
Route Period	All the Time
Match Calling Prefix	Ignore calling number
Hunt Type	Round Robin
Remote Pilot Number	Yes

Click Apply to save it.

Click Route List to add your UniIVR server as follows:

Parameter Name	Value
Extension Number	**09
Perference	0

Apply the above settings to system by click COMMIT.

1.5 Connect to SIP Proxy

After create an IVR account in your SIP proxy or IP-PBX, the next is to setup the IVR to connect to it. Click SYSTEM -> SIP Service as follows:

Parameter Name	Value
Proxy Server IPV4	The SIP proxy IP address
Proxy Server IPV4 UDP Port	The UDP service port of SIP proxy
SIP TEL	**9 (or the number you created in SIP proxy)
SIP User Name	**9 (or the number you created in SIP proxy)
SIP User Password	a secure password was required
Register Type	Register
Register Expires Time	60 seconds

Click Apply to save the settings.

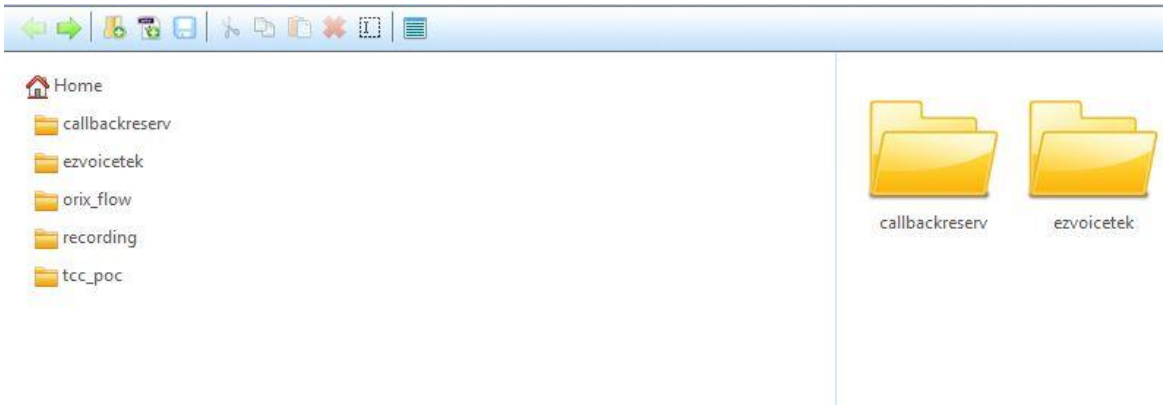
1.6 Commit the Changes

Because of the SIP Proxy server setting in IVR need restart to take effective, click Administration -> Restart and the following will appear:

Click Restart to restart the service and take the setting effective.

1.7 Upload Required Prompts

Before you start to deploy your own call flow, you need prepare the required prompt files. Click CALL FLOW -> Prompt Manager and the following will appear:



Click the  to create a directory and the following will appear:

Input your folder name (e.g. prompt) and click Apply. You should see the directory was created.

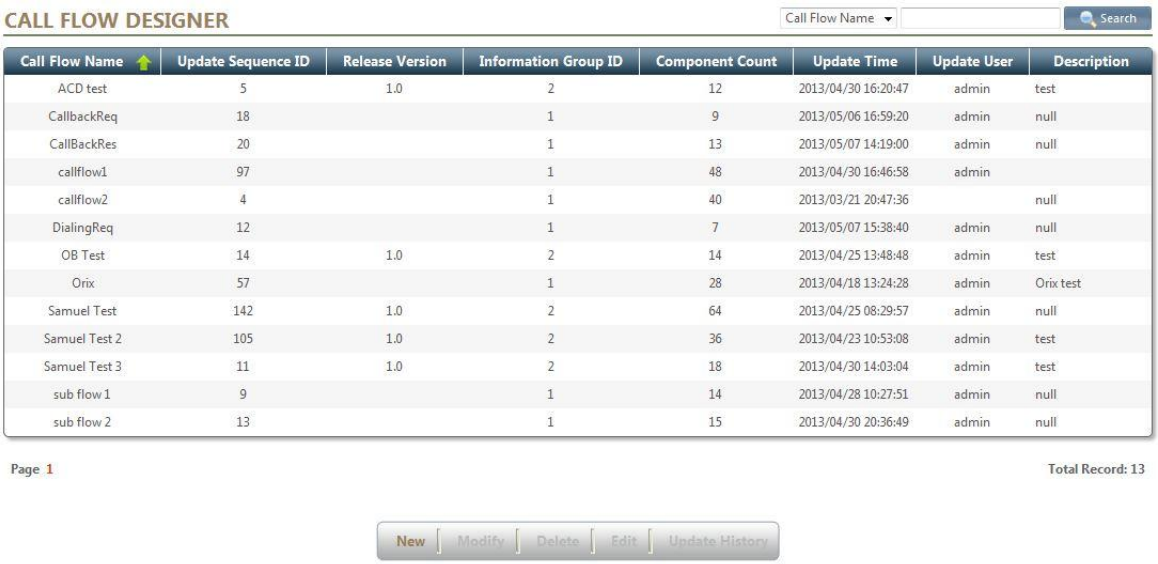
Click the  to upload your prompt file. Please note that your prompt file must comply the following rule in order to make it work.

File Extension: wav
Encode : Linear PCM 16 bits, Mono
Sample Rate : 8000

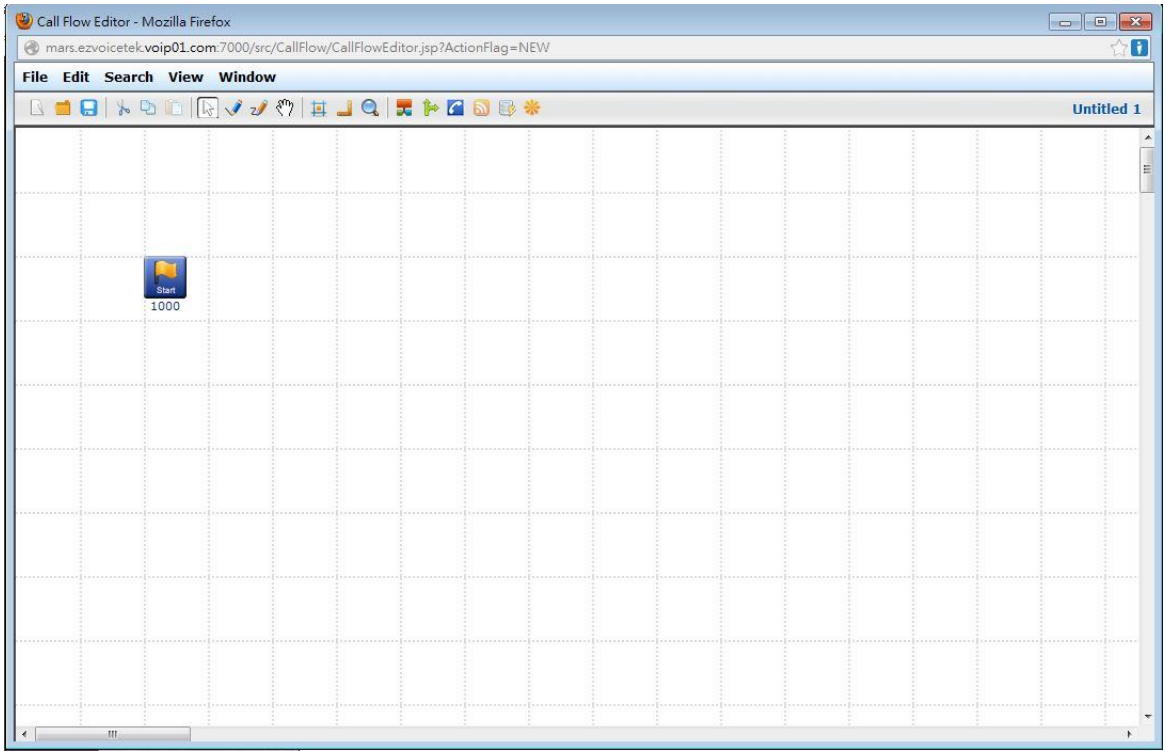
Please upload all of your required prompt into the system under the created directory.

1.8 Design Call Flow

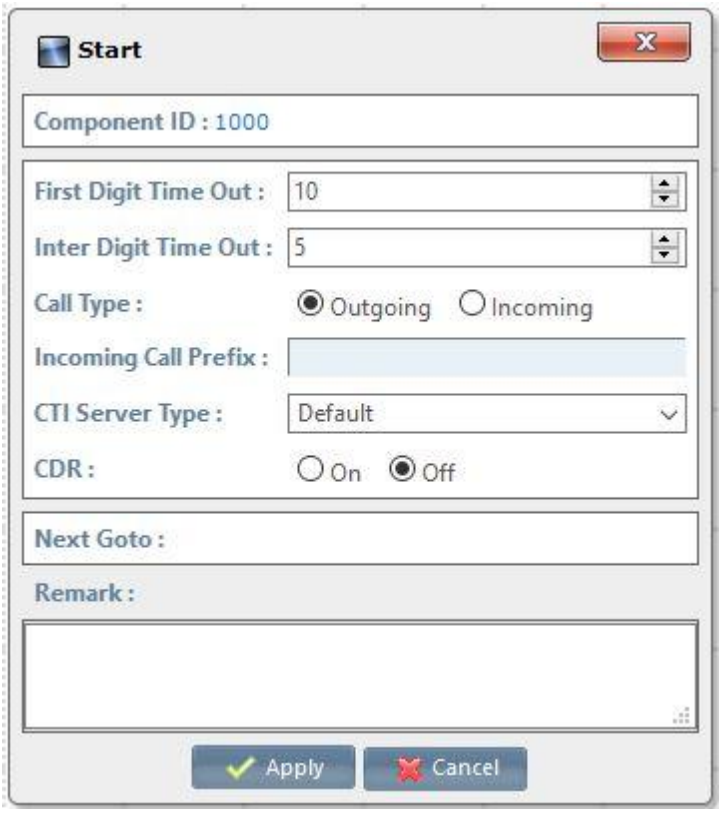
Now you can start to design your first call flow. Click CALL FLOW -> Call Flow Designer and the following will appear:



Click New and the following will appear:

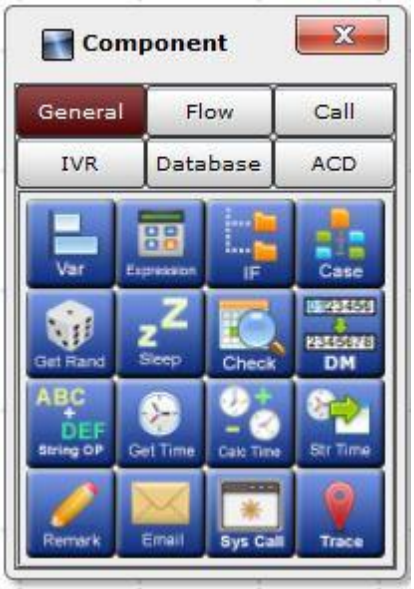


The first is to decide this call flow is for incoming call or outgoing call. Right click the Start component  and you will see the following:



For incoming call, set the call type to Incoming. For outgoing call, set the call type to Outgoing. Click Apply to save it.

And now you can start to add component into your call flow. Click  and following will appear:



You can select different category of component and click the one you need and drop it into your call flow. And use line  or  to connect 2 component together.

For an incoming call flow, you must have at least the following:

- Start: Call Type must set to Incoming
- Wait Call
- Answer Call

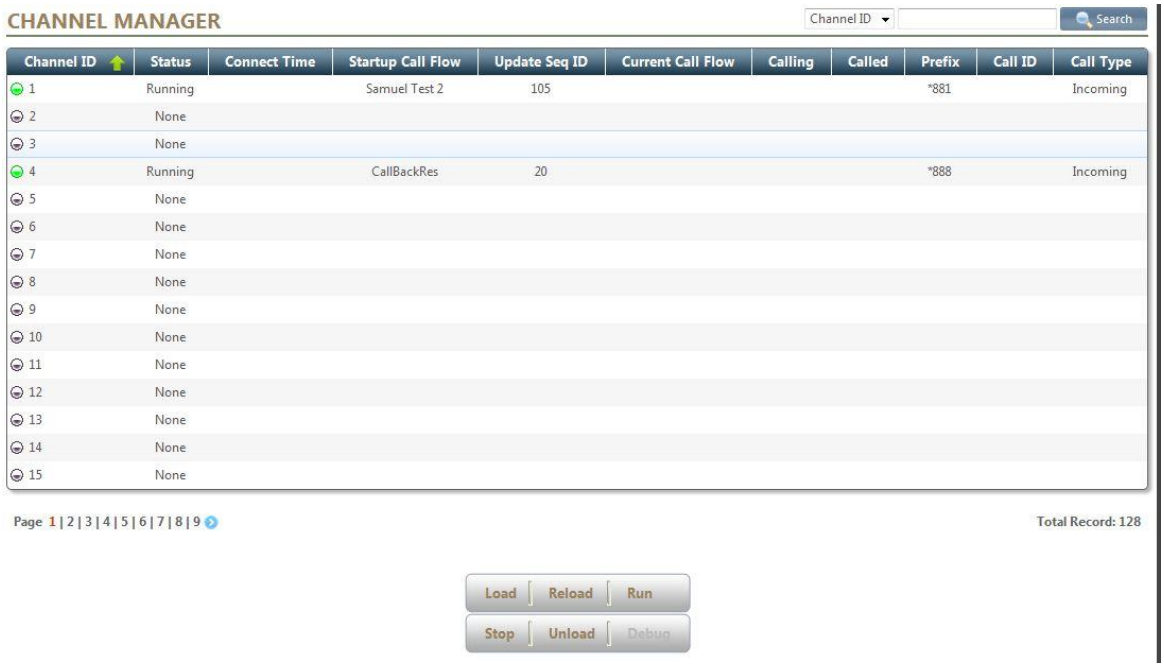
For an outgoing call flow, you must have at least the following:

- Start: Call Type must set to Outgoing
- Call Make

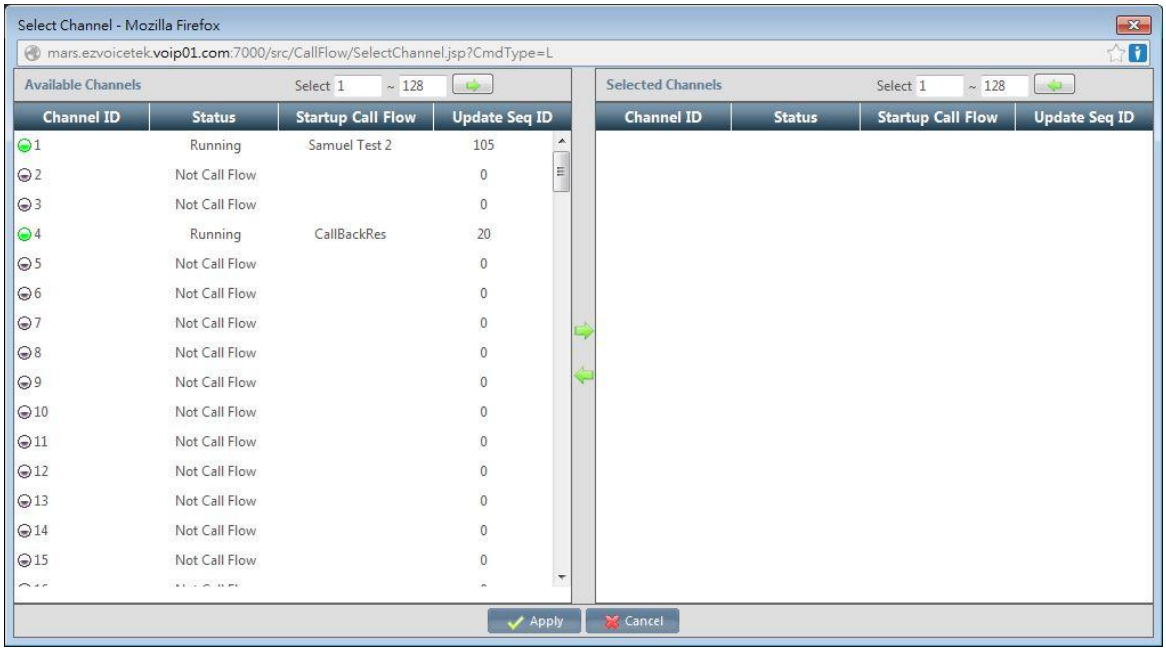
After you did the modification of call flow. click File -> Save to save it.

1.9 Load and Run the Call Flow

After you complete the call flow design, you can run it on the selected channels by clicking CALL FLOW -> Channel Manager and the following will appear:



Select the channels you would like to run by using SHIFT + Channels for a range of channels or Control + Channels to select the specified channels, and click Load button. The following will appear:



Click the call flow you would like to run and Apply it.

Then you can select these channels again and click Run button to start run the call low.

1.10 Make Testing Call

Using an IP phone or softphone, registered in your SIP Proxy or IPPBX, dials to routing prefix **9 (or your defined number) to test your call flow for incoming call. You should hear your call flow prompt.

2 Using the System

The administrator can logon the web GUI interface to manage the system service. It provides the system setting, call flow editor, real time system status monitor etc. The default login URL for administrator login is http://xxx.xxx.xxx.xxx:7000 or https://xxx.xxx.xxx.xxx:7001 and default login id is "admin" and password is "admin".

2.1 Home

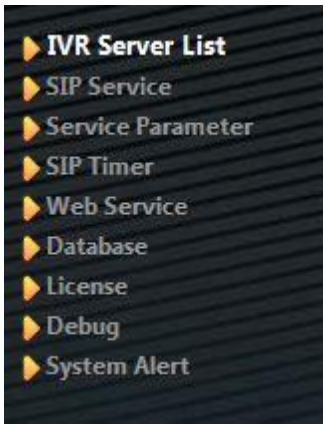
The home page of the system, provides the system summary information. The administrator can have a quick way to view the major system settings.

The detail of each parameter are described as below:

Parameter Name	Description
Product Name	The product name
System Version	The current running system release
Web Release	The current running web release

2.2 System

The system parameters including the SIP, service, IVR and license settings. Click the SYSTEM and will see the setting in the left panel as follows.



2.2.1 IVR Server List

IVR Server List is useful when you have more than 1 IVR server and would like to have central management. In this case, each IVR server must have an unique IVR Server ID in order to identify it. For most of application, each IVR server have their own call flow and management, therefore there is not matter which ID is used. To add an IVR server into the server list, click SYSTEM -> IVR Server List and the following will appear:

Click New to add a new IVR server into the list as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Server ID	The unique server ID for each IVR server
Server Name	The name of IVR server

After you create the IVR server list, you must assign it in the SYSTEM -> Service Parameter for each IVR server.

2.2.2 SIP Service

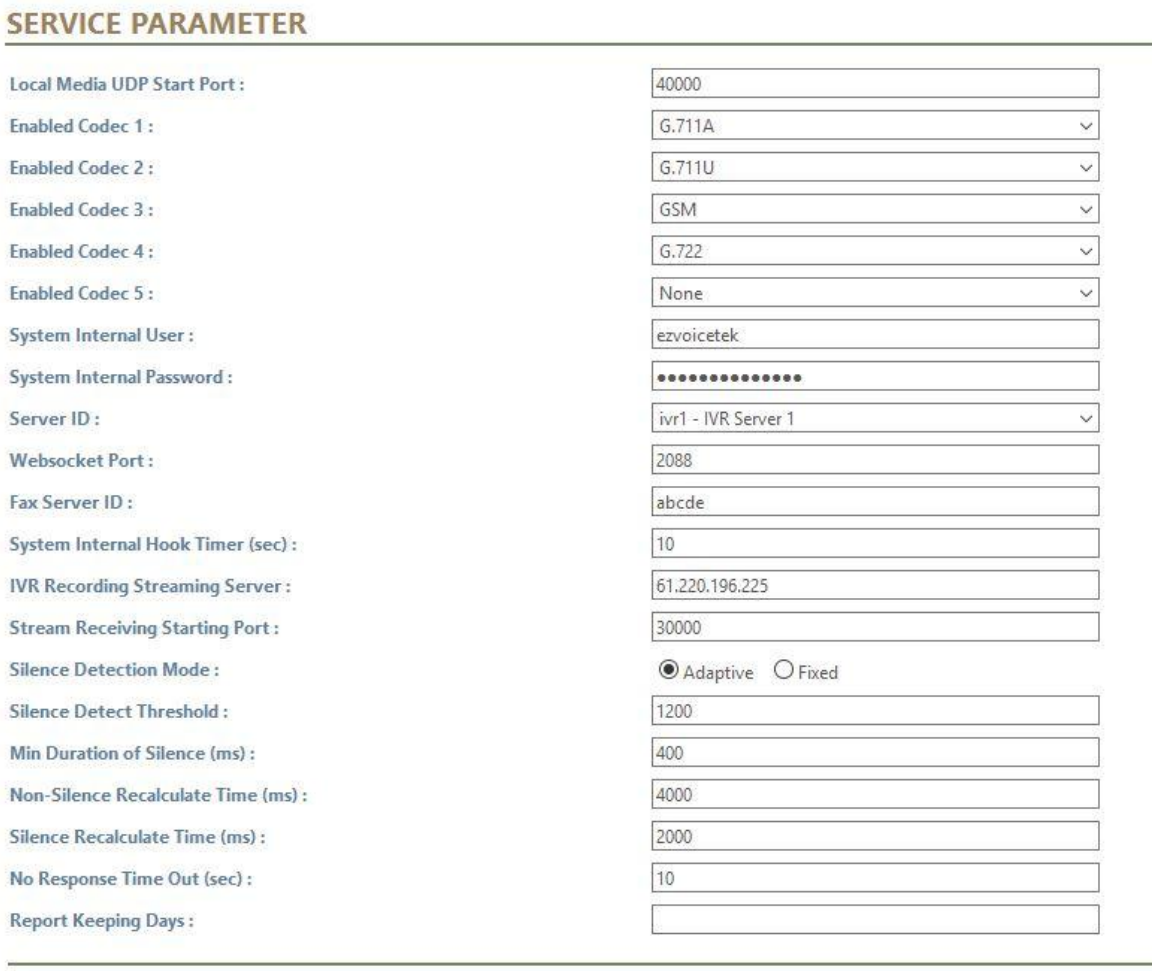
This is the setting for connected SIP proxy. Click SYSTEM -> Proxy Setting and following will appear.

The detail of each parameter is described as below:

Parameter Name	Description
Attached IPV4 Interface	The network interface to be attached for SIP IVR service.
Proxy Server IPV4	The IPV4 address of SIP proxy server
Proxy Server IPV4 UDP Port	The UDP port used to connected to IPV4 SIP Proxy Server
Local SIP IPV4 UDP Port	This is local IPV4 SIP UDP port will be used for SIP IVR service.
Attached IPV6 Interface Name	The network interface will be used or IPV6 service
Proxy Server IPV6	The IPV6 address of SIP proxy server
Proxy Server IPV6 UDP port	The UDP port used to connected to IPV6 SIP Proxy Server
Local SIP V6 UDP Port	This is local IPV6 SIP UDP port will be used for SIP IVR service.
SIP Domain	The SIP domain will be used for calling to SIP proxy server.
SIP TEL	The SIP account on the SIP proxy server to be used for this IVR server. Administrator need create an SIP account in for this IVR server order to connect together.
SIP User Name	SIP user name for authentication
SIP User Password	SIP user password is used when calling to SIP proxy server.
Register Type	The connection type to SIP proxy server. It could be dynamic register or predefine. Normally, it could be predefine.
Register Expires Time (sec)	The register TTL if SIP proxy server requires to register.

2.2.3 Service Parameter

This is the setting related to SIP IVR service. Click SYSTEM -> Service Parameter to view the settings as below.



The detail of each parameter is described as below:

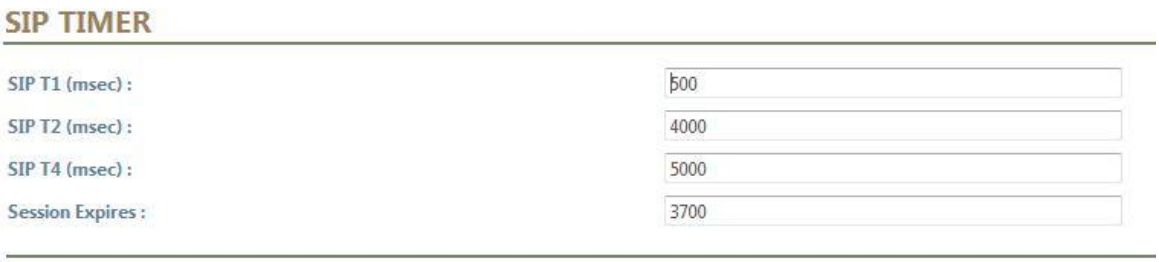
Parameter Name	Description
Local Media UDP Start Port	The is the media UDP starting port will be used for IVR server service. The default is 40000. It means the UDP ports will be used will be 40000 to 40000+ (Max service

Parameter Name	Description
	channel * 10).
Enabled Codec 1-5	The codec will be used for IVR service.
System Internal User	The system GUI used internal users for system control and management.
System Internal Password	The system GUI used internal users for system control and management.
Server ID	Unique IVR server ID to identify this server within a central management architecture.
Websocket port	The websocket port used for channel debug
Fax Server ID	Fax Server station ID (only available when you have fax license)
System Internal Hook Timer(sec)	System internal http hook time out for those ACD integration. The default is 10 seconds.
IVR Recording Streaming Server	This could be the ASR server which receive the real time Linear PCM voice data and initiate the ASR for voice recognition.
Stream Receiving Starting Port	The ASR server receiving port. Each channel use 1 UDP port. For example, you have 10 channels ASR service and starting port is 30000. Thus server need listen on 30000 to 30009, in total 10 ports.
Silence Detection Mode	For voice recording, this is the silence detection method could be used. It is recommend to use adaptive silence detection.
Silence Detect Threshold	The signal level to be detected as a silence. Below this value, SDT will think it is a silence. The default is 1200. Higher threshold indicates more sensitive on silence and lower threshold indicates less sensitive to detect the silence.
Min Duration of Silence (ms)	Minimum duration of silence (in msec) before silence is reported. The default is 400 ms.

Parameter Name	Description
Non-Silence Recalculate Time (ms)	The interval (in msec) to recalculate threshold in non-silence condition when adaptive silence detection is set. The default is 400 ms.
Silence Recalculate Time (ms)	The interval (in msec) to recalculate threshold in silence condition when adaptive silence detection is set. The default is 2000 ms.
No Response Time Out (sec)	The SIP sending no response timeout.
Report Keeping Days	The max days to keep reporting data.

2.2.4 SIP Timer

There are some SIP related timer in this page for system tuning purpose. Click ***SYSTEM->SIP Timer*** to view and modify the settings.



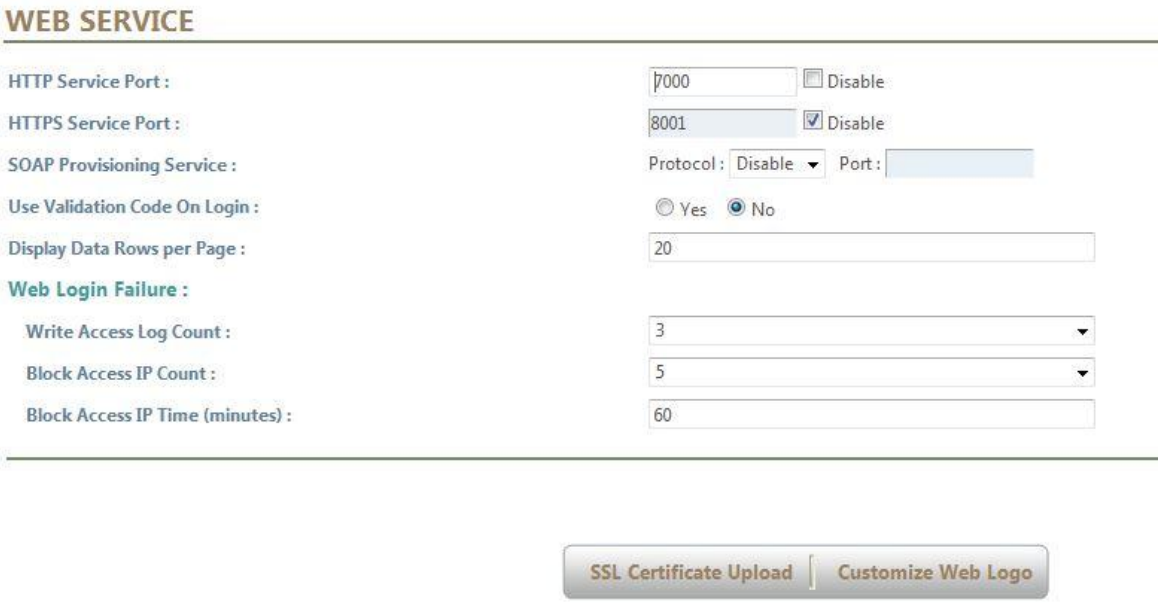
The detail of each parameter is described as below:

Parameter Name	Description
SIP T1	The T1 timer, which is defined in milliseconds, specifies the amount of round trip time (RTT), that the client will attempt to send a SIP Request and expect a response. By default, the T1 timer is set to 500ms.
SIP T2	Maximum retransmission interval for non-INVITE requests and INVITE responses. The default value is 4000 ms.

Parameter Name	Description
SIP T4	Maximum duration that a message can remain in the network. The default value is 5000 ms.
Session Expires	Session expires timer for calling checking (session timer RFC 4028)

2.2.5 Web Service

This page come with web GUI service settings. Click ***SYSTEM -> WEB Service*** to view and change the settings.



The detail of each parameter is described as below:

Parameter Name	Description
HTTP Service Port	The TCP service port for web GUI management. The default value for administrator and supervisor login is 7000. The default value for extension login is 81.
HTTPS Service Port	The TCP service port for HTTPS (SSL) web GUI management. The default value for administrator and supervisor login is 7001. The default value for extension SSL login is 82.

Parameter Name	Description
Display Data Rows per Page	Number of data rows will be displayed per page. The default is 15.
SOAP Provisioning Service	The HTTP or HTTPS interface for SOAP provisioning for extension and call features. It is recommended to use HTTPS for security reason. The default service port is TCP 7080.
Use Validation Code on Login	Use CAPTCHA to against the response is not generated by a computer or not for logon. It is recommended to enable it for security reason.
Write Access Log Count	Number of authenticate failure access will write a log into Web provisioning report.
Block Access IP Count	Number of authenticate failure access will block this IP address.
Block Access IP Time (minutes)	How long the IP will be blocked

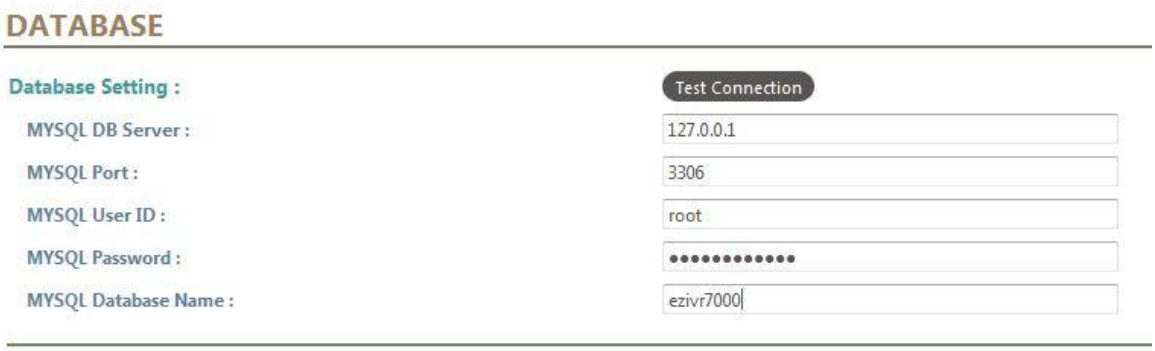
Click SSL Certificate Upload to upload you own certificate.

Click Customize Web Logo to upload you own logo for web management interface.

Click Web login Blocked IP to check whether an IP is blocked or not and unblock it when necessary.

2.2.6 Database

This is for system database settings. Click ***SYSTEM -> Database*** to view and change the settings.



The detail of each parameter is described as below:

Parameter Name	Description
MYSQL DB Server	MYSQL database server IP address. The default value is 127.0.0.1
MYSQL Port	MYSQL database connection port. The default port is 3306.
MYSQL User ID	MYSQL access user ID
MYSQL Password	MYSQL access password
MYSQL Database Name	MYSQL Database Name

2.2.7 License

This the license granted for the system. It can only be used on this dedicate machine. There is no any responsibilities for error, omissions or any damages resulting from the wrong use of the license. Click ***SYSTEM -> License*** to view or import/export the license.

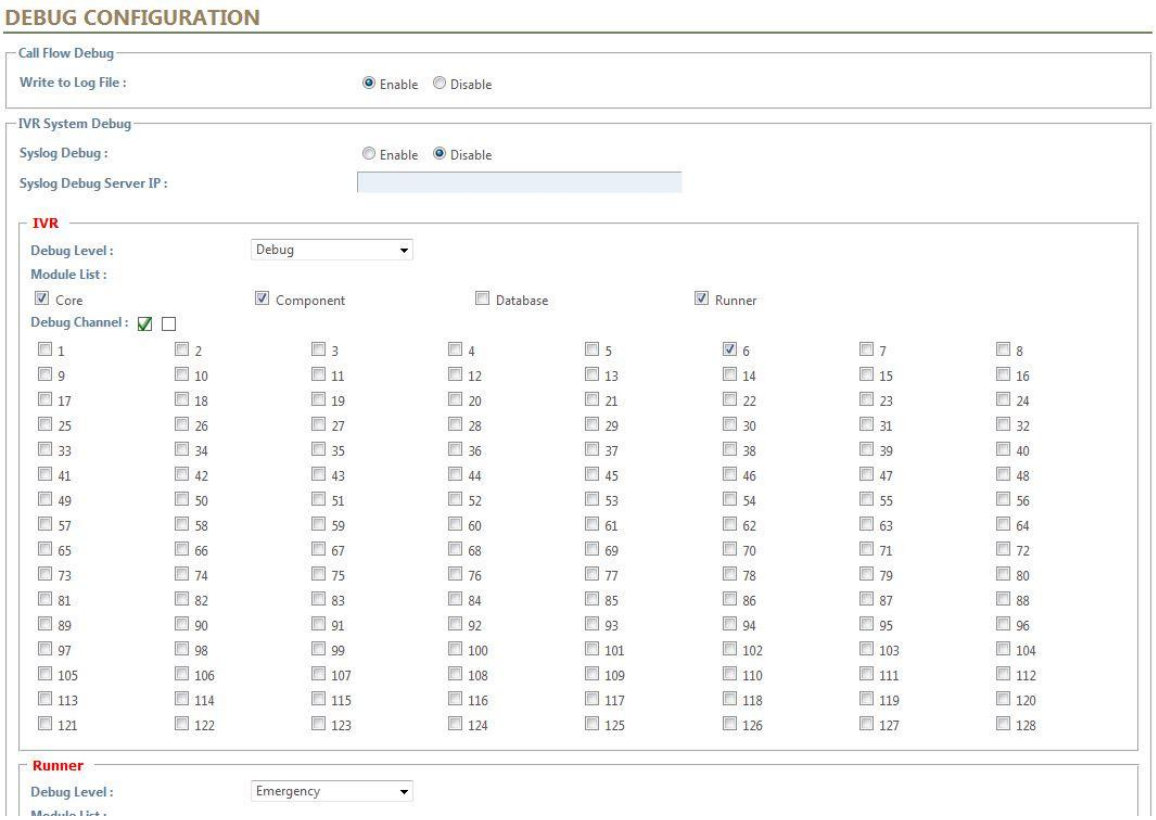
The detail of each parameter is described as below:

Parameter Name	Description
Product Name	The licensed product name
Serial ID	The serial ID generated for each license
Machine ID	The machine ID used for the license

Parameter Name	Description
Feature	The feature list of this license
License Key	The license key generated
Expired Date	The expired date for the license

2.2.8 Debug

The Debug Configuration page is used to manage the debug level and modules. Please only turn on the debug level under the recommendation from supporting FAE. Or the system performance might be greatly affected. In order to receive the system debug log, the administrator need prepare a PC which installed a SYSLOGD server. It is recommended that both server and syslogd PC stay at same network because of the large packet might be send over the network. Click ***SYSTEM -> Debug*** to view and change the debug settings.



The detail of each parameter is described as below:

Parameter Name	Description
Write to Log File	Whether to write the call flow debug log to file for tracing?
Syslog Debug	Enable syslog debug or not
Syslog Debug Server IP	The syslogd server to receive the debug information. The port to receive the syslog is 514.
Debug Channel	The channels to be debug
Debug Level	This parameter is the detail level of generating debug information. The default level is "Warning". When you change it to debug, the system will generate hug log and might greatly affect the system performance. Please only change it under the supervision of FAE.
Module List	The target module to be debug. Please only change it under the supervision of FAE.

2.2.9 System Alert

The system can be set to automatically send the system event notice to administrator through syslog or email. Click ***SYSTEM -> System Alert*** to view and change the settings.

The detail of each parameter is described as below:

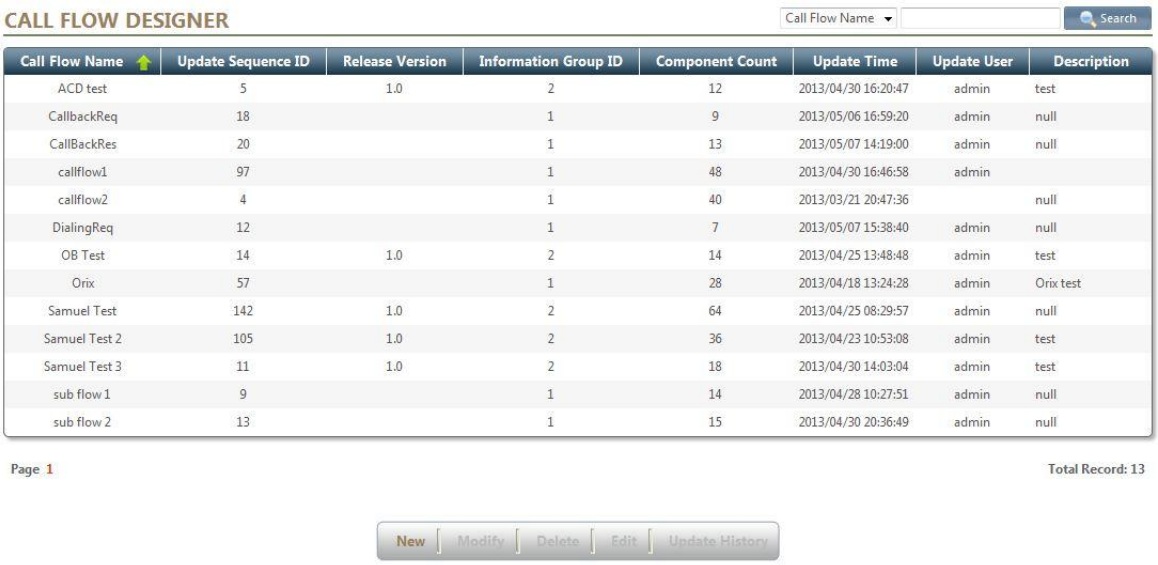
Parameter Name	Description
System Alert Threshold	The filter level to send the alert out. The default is level of "Notice".
Alert to Syslog	Whether to send the system alert to syslogd server or not.
Syslog Receiver IP	The syslogd server to receive the system alert.
Alert to Email	Whether to send the system alert to the listed email account or not.
SMTP Server	The SMTP server for sending the system alert mail notice.
SMTP Port	The SMTP server port. For SSL the default is 465 and for StartSSL or none, the default is 25.
SSL Type	The SMTP server supported SSL Type, it can be none, STARTTLS or SSL.
Email From	The email sending account (FROM)
Email To List	The email addresses to receive the system alert email.
Email Subject	The email subject for the system alert notice. The variable "$HOSTIP$", Host IP address, could be used in the subject to make the subject easy to be read (e.g. System Alert Notice from $HOSTIP$).
Email User ID	The email sending account ID
Email User Password	The email sending account password

2.3 Call Flow

Call Flow contains the call flow designer, channel, information and prompt management.

2.3.1 Call Flow Designer

Call Flow Designer is use to create your unique IVR flow. It provides easy designing interface and flexible logic flow design to build a customized flow based on your requirement. System will keep up-to 10 saving historical call flow for safety purpose. Click CALL FLOW-> Call Flow Designer to manage your call flow and the following will appear:



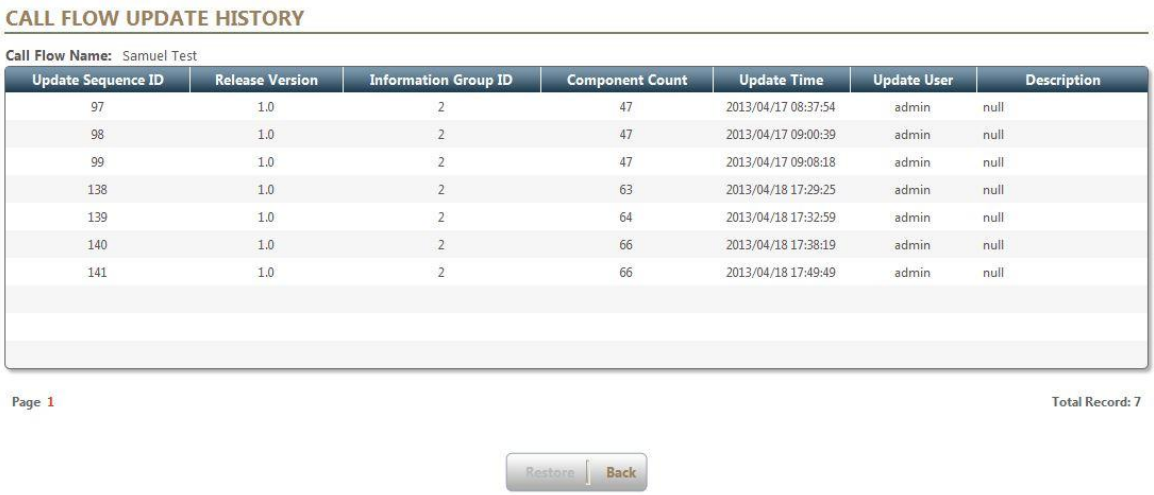
Click Modify the call flow and the following will appear:

The detail of each parameter is described as below:

Parameter Name	Description
Call Flow Name	The name of call flow

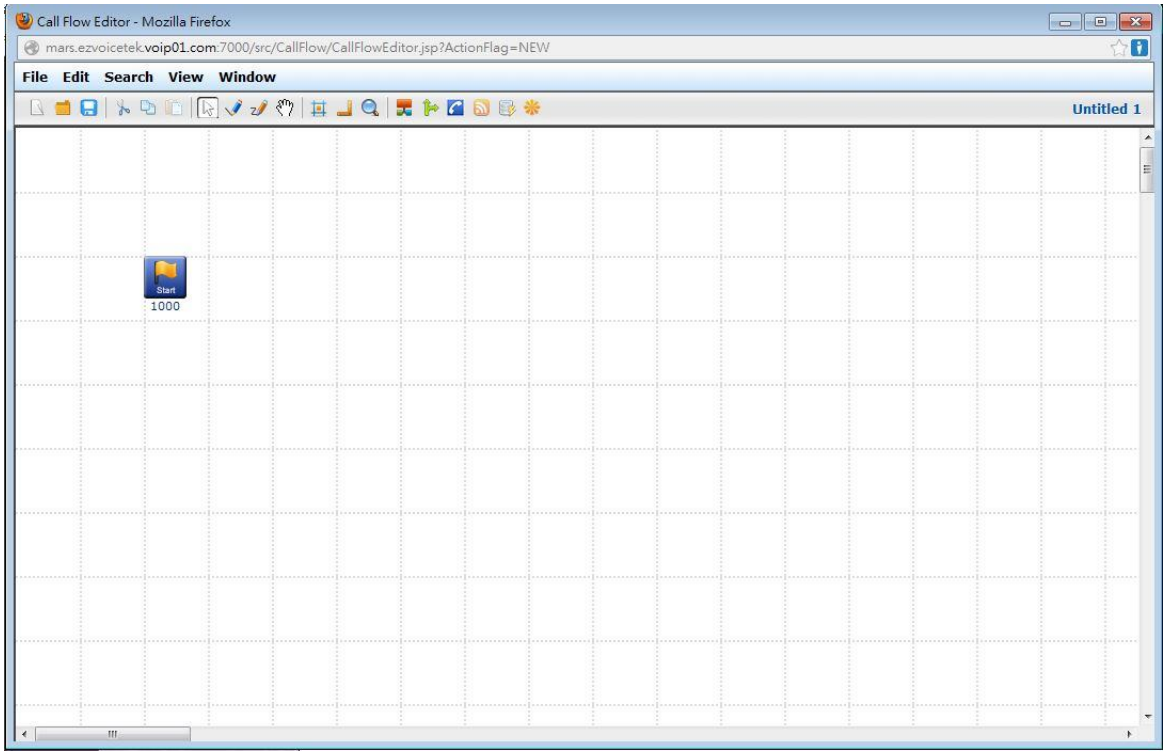
Parameter Name	Description
Update Sequence ID	The automatically sequence update for each saving
Release Version	The call flow version/release for reference
Information Group ID	The call flow used Information group which contains working hour, holiday and digit manipulation.
Component Count	Current component count
Update Time	Last update time
Update User	Last update user
Description	The description of this call flow

Click Update History and the history will be showed as follows:

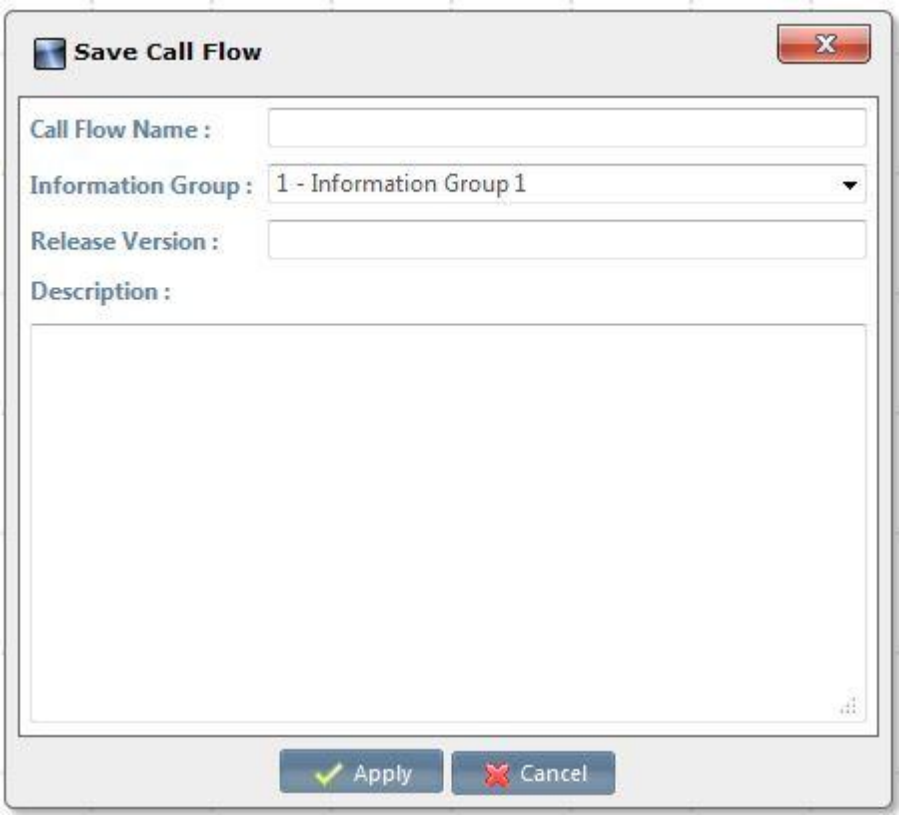


You can select an historical call flow and click restore to make it become newest.

Click New to add a new call flow as follows:



After you finish the editing, click  save and the following will appear:



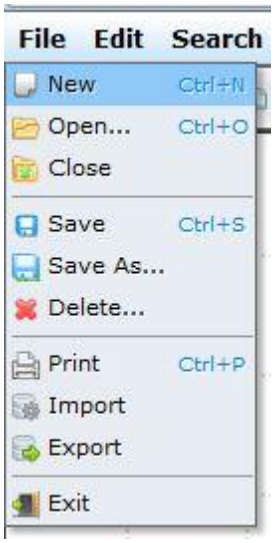
The detail of each parameter is described as below:

Parameter Name	Description
Call Flow Name	The name of call flow
Release Version	The call flow version/release for reference
Information Group ID	The call flow used Information group which contains working hour, holiday and digit manipulation.
Description	The description of this call flow

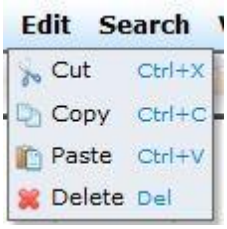
2.3.1.1 Menu

The top of call flow designer contains a mean and operation bar as follows:

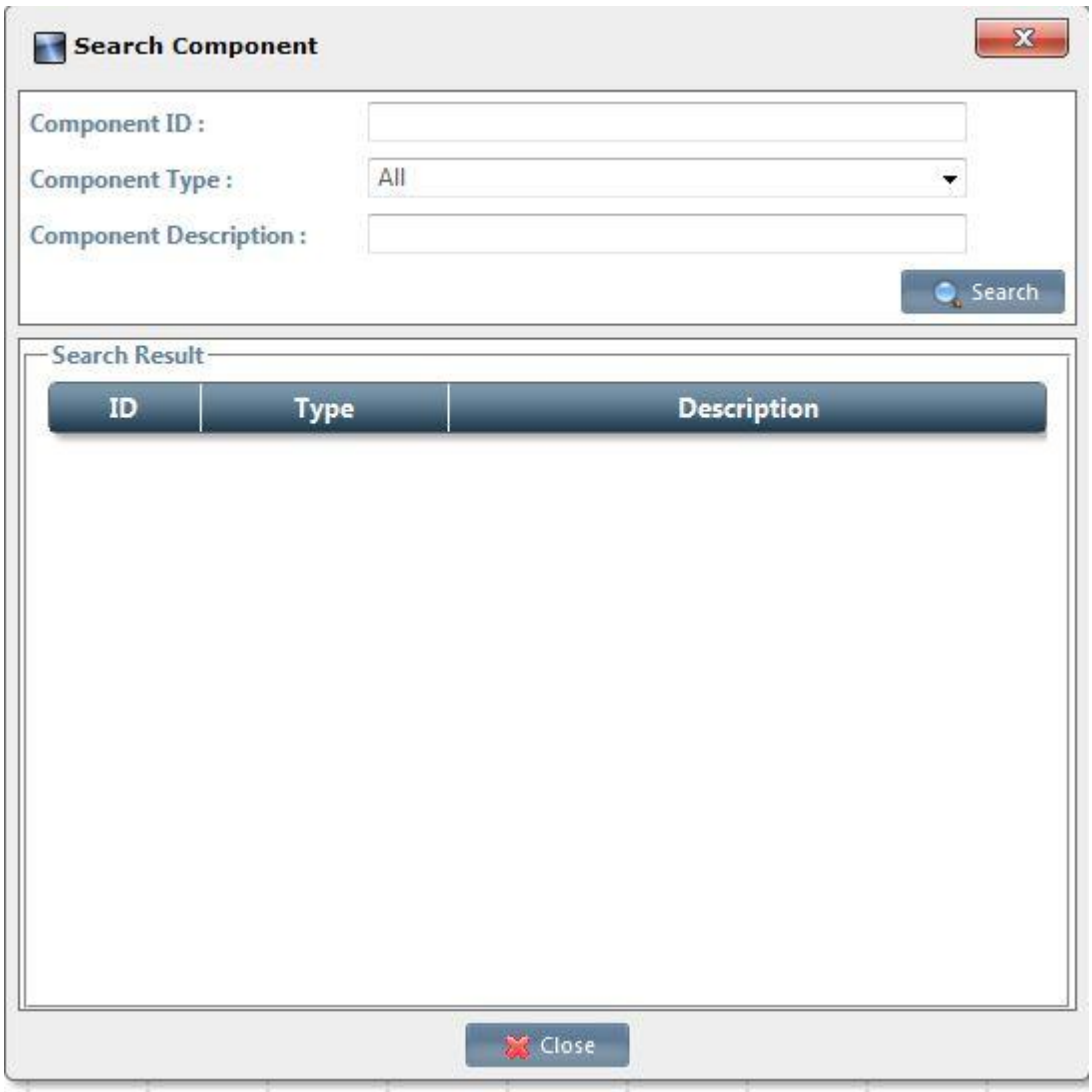
The File menu can be use to create, open, close, save or import/export call flows as follows:



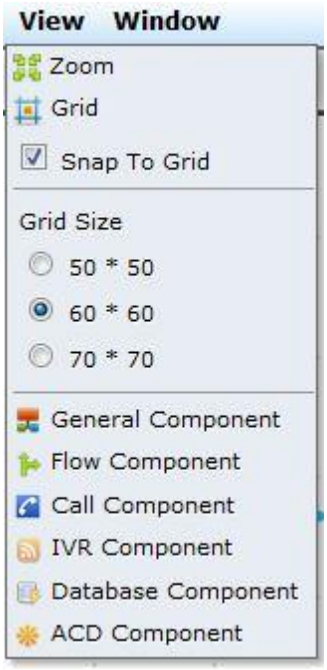
The Edit menu can be use to copy, paste, cut or delete components as follows:



The Search menu can be used to search a specified component based on different criteria as follows:



The View menu can be used to change the grid size or related settings as follows:



The Windows menu can be used to select different call flow when you have multiple call flow opened at same time as follows:

2.3.1.2 Operation Bar

The operation bar contains the following:

 : New a call flow

 : Open a call flow

 : Save the current call flow

 : Cut the selected components

 : Copy the selected components

 : Paste the selected components to call flow

 : Selecting components

 : Connect 2 components using a direct line

 : Connect 2 components using a curve line

 : Moving components

 : Show or hide grid

 : Fit into grid line or not

 : Search a components

 : General component

 : Call flow related components

 : Call related components

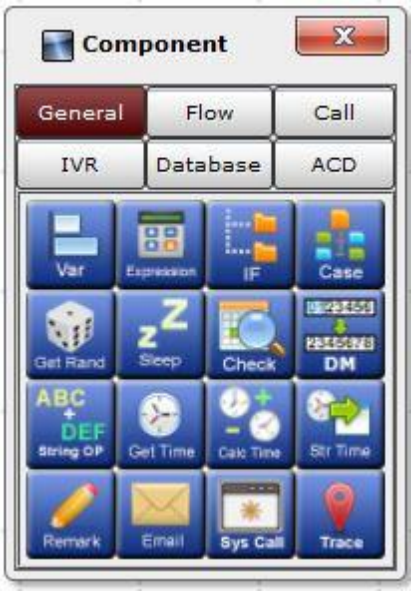
 : IVR related components

 : Database related components

 : ACD related components

2.3.1.3 General Component

The General component contains the general purpose components. Click  as the following components will be display for your selection:



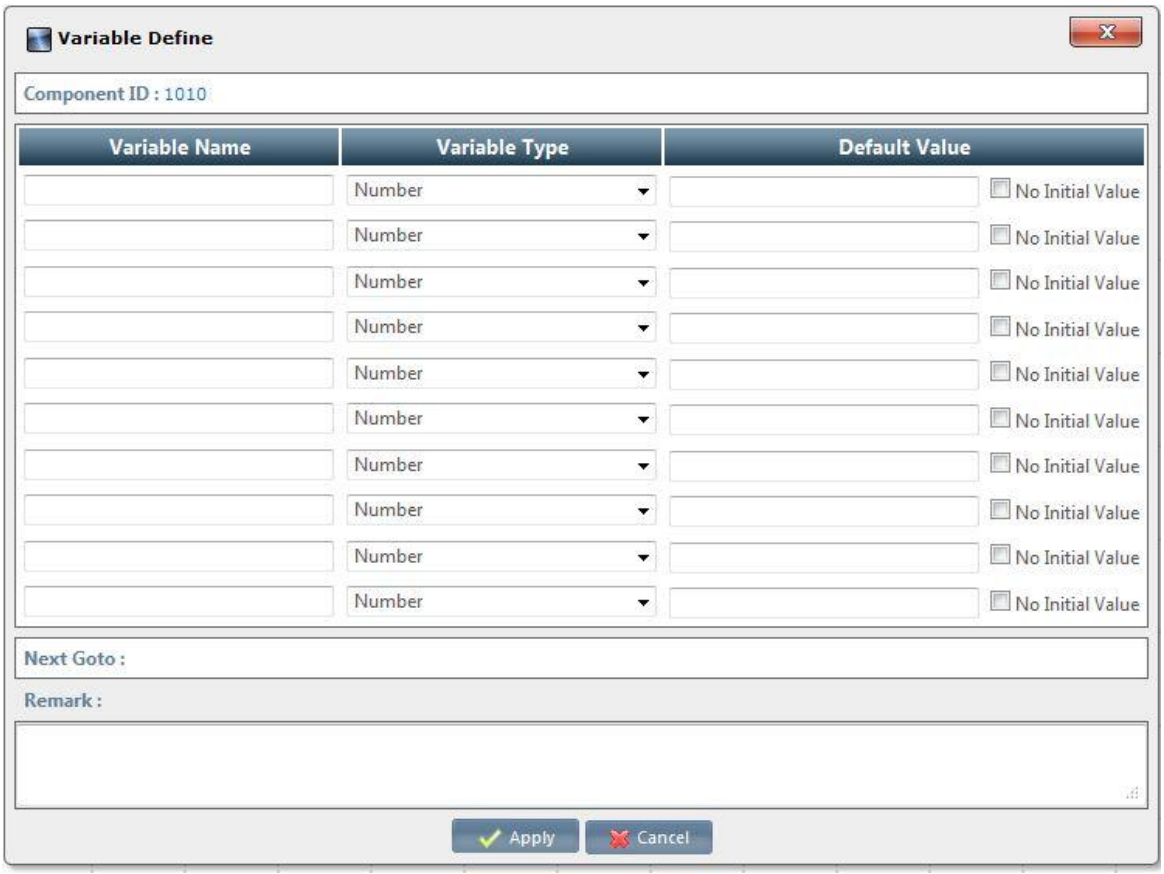
2.3.1.3.1 Variable Define

This component is used to define used variable. The system provides 3 types of variable: Number, String and Time variable.

The following is the rule for using a variable:
1. Each variable must define it in "Variable Define" component before it can be used.
2. Each variable is channel and call flow wide visible. Each channel's variable cannot be shared.
3. If a sub flow need refer to a variable in the main flow, you must define it and check "No Initial Value" in order to keep the original value from main flow.
4. If a variable is defined more than once, new define will overwrite the existed one.
5. Each variable will be cleaned once the call is completed.

Click 

and drop it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Variable Name	The variable name will be used. Each variable need to be unique. And it is recommended to use v or _v as a prefix to make it easy to identity.
Variable Type	The system support 3 types of variable: String variable, Number variable and Time variable. Only Number variable can be used in the math expression and time variable should be used for time operations.
Default Value	The default value will be assigned to this variable. If keep it blank, the system will set 0 for number variable, empty for string variable, 0 for time variable.
No Initial Value	This is used when a sub flow is using a variable from main flow. Check it when the sub flow need able to use the value from main flow.
Next Goto	Next component to be followed

2.3.1.3.2 Math Expression

The Math Expression component is used do the math calculation. The variable can be used only is number variable in this match expression.

Click  and drop it into your call flow. Right click the component and the properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Expression	The match expression will be execute. It can contain variables in the expression. And it must contains a assignment operator in order to return the result into call flow.
Error Goto	In case there is an error occurred, this component will be followed
Next Goto	Next component to be followed

For math expression, the following is the built-in functions supported:

Function Name	Argument Count	Explanation	Example
sin	1	sine function	y=sin(x)
cos	1	cosine function	y=cos(x)
tan	1	tangens function	y=tan(x)
asin	1	arcus sine function	y=asin(x)
acos	1	arcus cosine function	y=acos(x)
atan	1	arcus tangens function	y=atan(x)
sinh	1	hyperbolic sine function	y=sinh(x)
cosh	1	hyperbolic cosine	y=cosh(x)
tanh	1	hyperbolic tangens function	y=tanh(x)
asinh	1	hyperbolic arcus sine function	y=asinh(x)
acosh	1	hyperbolic arcus tangens function	y=acosh(x)
atanh	1	hyperbolic arcur tangens function	y=atanh(x)
log2	1	logarithm to the base 2	y=log2(x)
log10	1	logarithm to the base 10	y=log10(x)
log	1	logarithm to the base 10	y=log(x)
ln	1	logarithm to base e (2.71828...)	y=ln(x)
exp	1	e raised to the power of x	y=exp(x)
sqrt	1	square root of a value	y=sqrt(x)
sign	1	sign function -1 if x<0; 1 if x>0	y=sign(x)

Function Name	Argument Count	Explanation	Example
rint	1	round to nearest integer	y=rint(x)
abs	1	absolute value	y=abs(x)
min	var.	min of all arguments	y=min(x,2,5)
max	var.	max of all arguments	y=max(x,z)
sum	var.	sum of all arguments	y=sum(x,5,z)
avg	var.	mean value of all arguments	y=avg(x,z)

The following is the built-in binary operator:

Operator	Meaning
=	assignment
&&	logical and
||	logical or
<=	less or equal
>=	greater or equal
!=	not equal
==	equal
>	greater than
<	less than
+	addition
-	subtraction
*	multiplication
/	division
^	raise x to the power of y

*The assignment operator is special since it changes one of its arguments and can only by applied to variables.

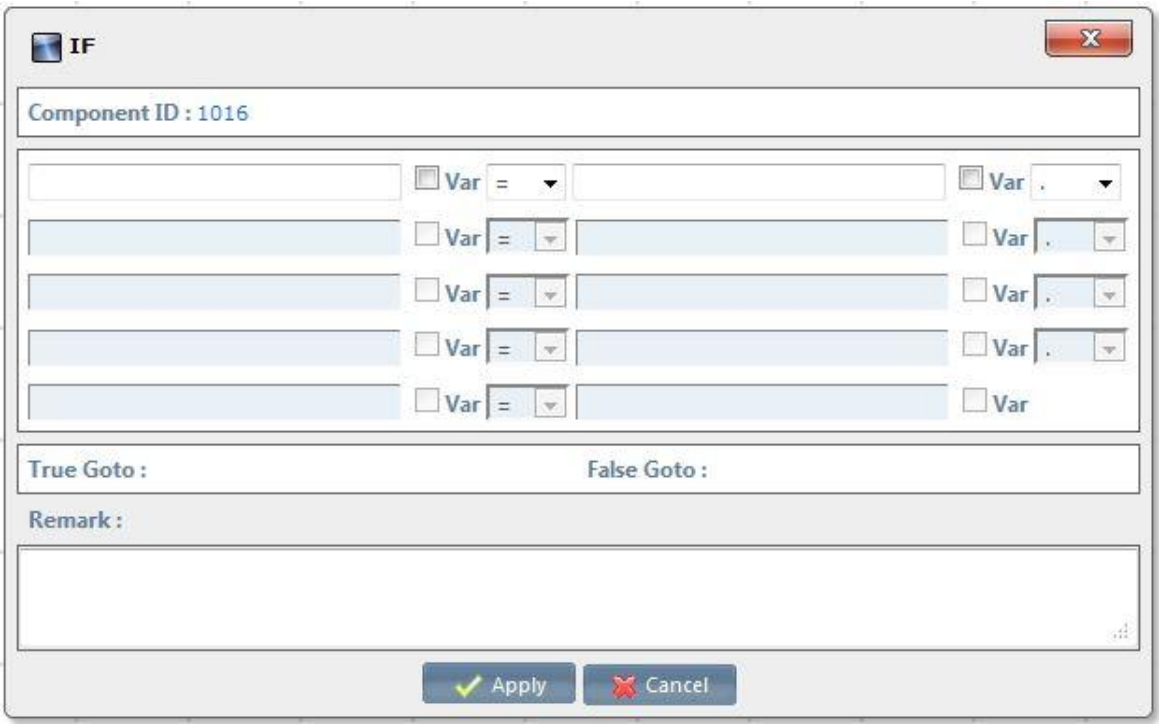
The following is the example for the math expression:

vCnt=vCnt+1

vTotal=vCntA+vCntB+2000

2.3.1.3.3 IF

If component is used to do the logical operation. Click  and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Operand 1	The operand which can be value or a variable. For variable, check the Var tag and select the variable you would like to use.
Operator	The logical operation which can be >, <, = etc.
Operand 2	The operand which can be value or a variable. For variable, check the Var tag and select the variable you would like to use.
Logical Operator	and or or operator
True Goto	Next component to be followed if the result is true.
False Goto	Next component to be followed if the result is false.

2.3.1.3.4 Case

The Case component is used to switch based on different value. It is useful especially when you receive DTMF digits from caller and would like to switch to different announcement.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Matched Variable	variable to be used for matching the following case value
Index	Up-to 10 value can be matched. If you need more than 10 value for matching, default goto can be used to cascade together.
Case Value	The value to be matched.
Goto	If the variable's value matched the Case Value, this is the component will be followed.
Default Goto	If not mach any above value, this is the component will be followed.

2.3.1.3.5 Generate Random Number

This component is used to generate a random number. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

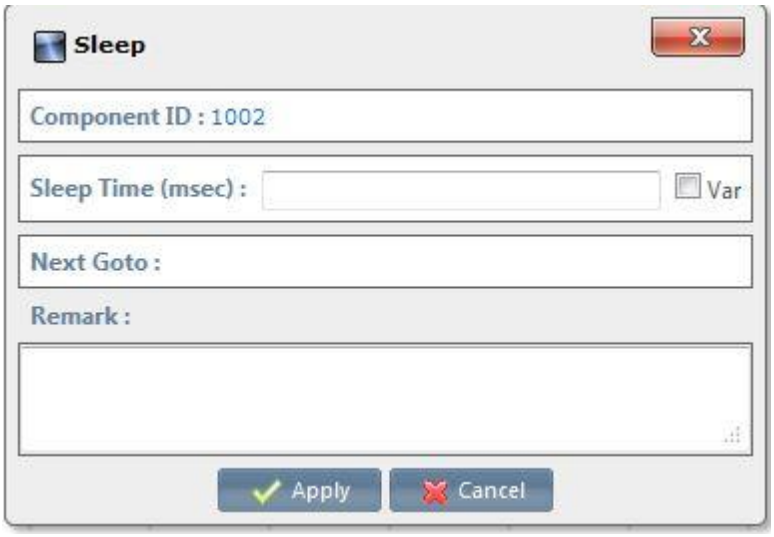
The detail of each parameter is described as below:

Parameter Name	Description
Range	The generated number should be within this range (maximum and maximum)
Stored Variable	The variable to be used for storing the generated random number.
Success Goto	Next component to be followed

2.3.1.3.6 Sleep

This component is used to sleep for a certain period. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

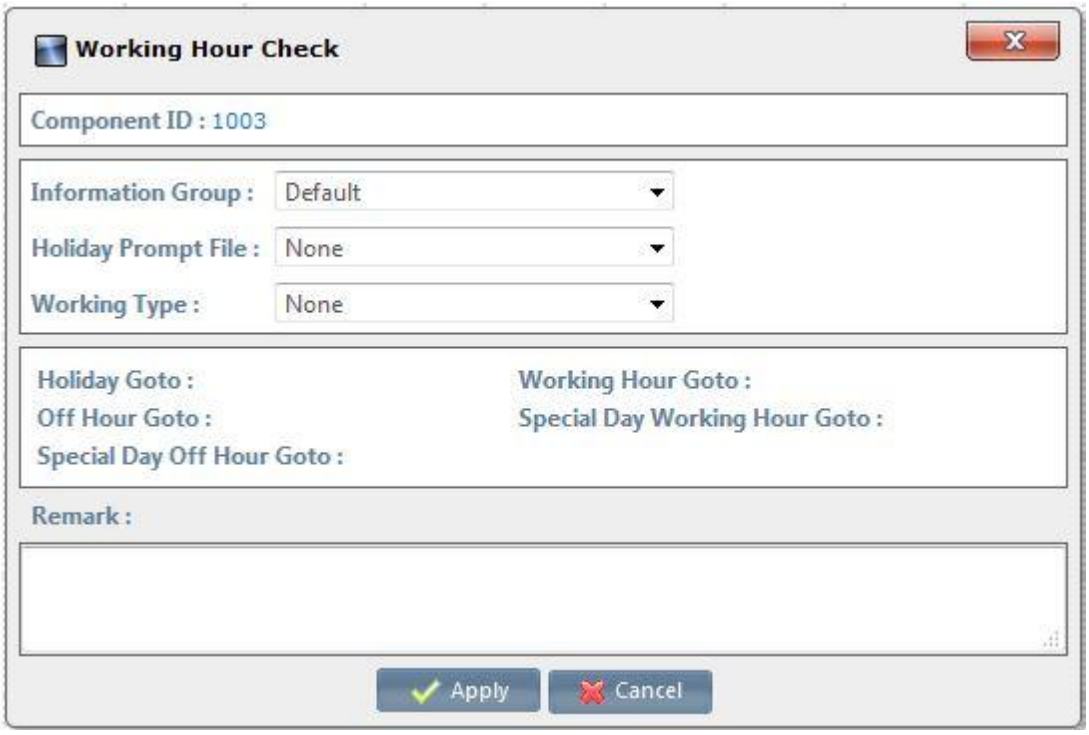
Parameter Name	Description
Sleep Time (msec)	The time to be sleep (wait) in mini second
Next Goto	Next component to be followed

2.3.1.3.7 Working Hour/Holiday Checking

This component is used to check whether now is working hour, off hour or holiday. Those definition was on Information Group. To associate an information group into a call flow, you can modify the call flow or select the information group when you save it.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Information Group	If it is set to Default, the system will use the call flow based Information group. Other, select the used information group here.
Holiday Prompt File	If you have setup a holiday prompt, this is the variable that you can used for store the holiday prompt in order to play back.
Working Type	The variable to be used for storing the working hour type in order to have different call flow.

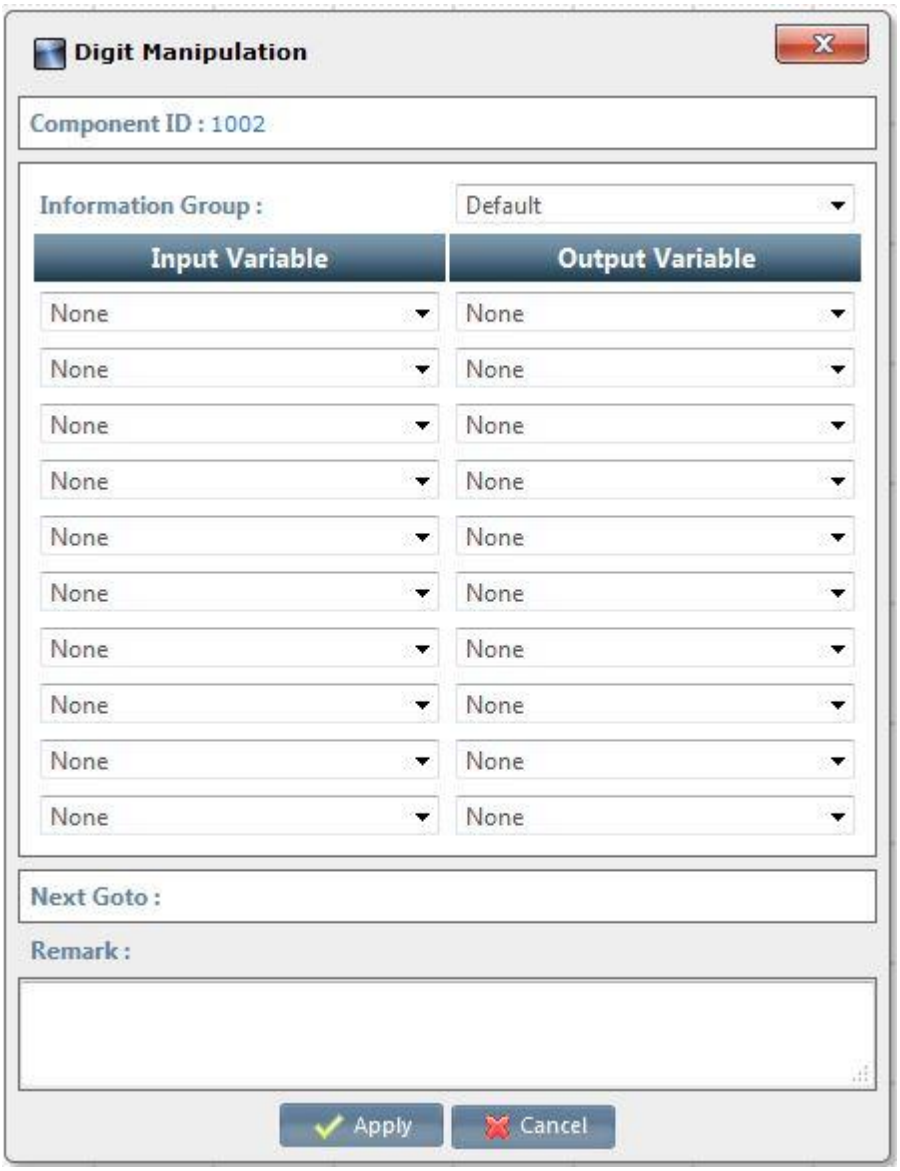
Parameter Name	Description
Holiday Goto	Next component to be followed when the checking result is holiday
Working Hour Goto	Next component to be followed when the checking result is working hour. The next component can check working hour type in order to have different call flow.
Off Hour goto	Next component to be followed when the checking result is off hour. If there is not any matched time segment, holiday or special day. This off hour will be handled as default.
Special Day Working Hour Goto	Next component to be followed when the checking result is a special working day and now is working hour.
Special Day Off Hour Goto	Next component to be followed when the checking result is a special working day and now is off hour.

2.3.1.3.8 Digit Manipulation

This component is used to do the digit manipulation based on Information Group. To associate an information group into a call flow, you can modify the call flow or select the information group when you save it.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



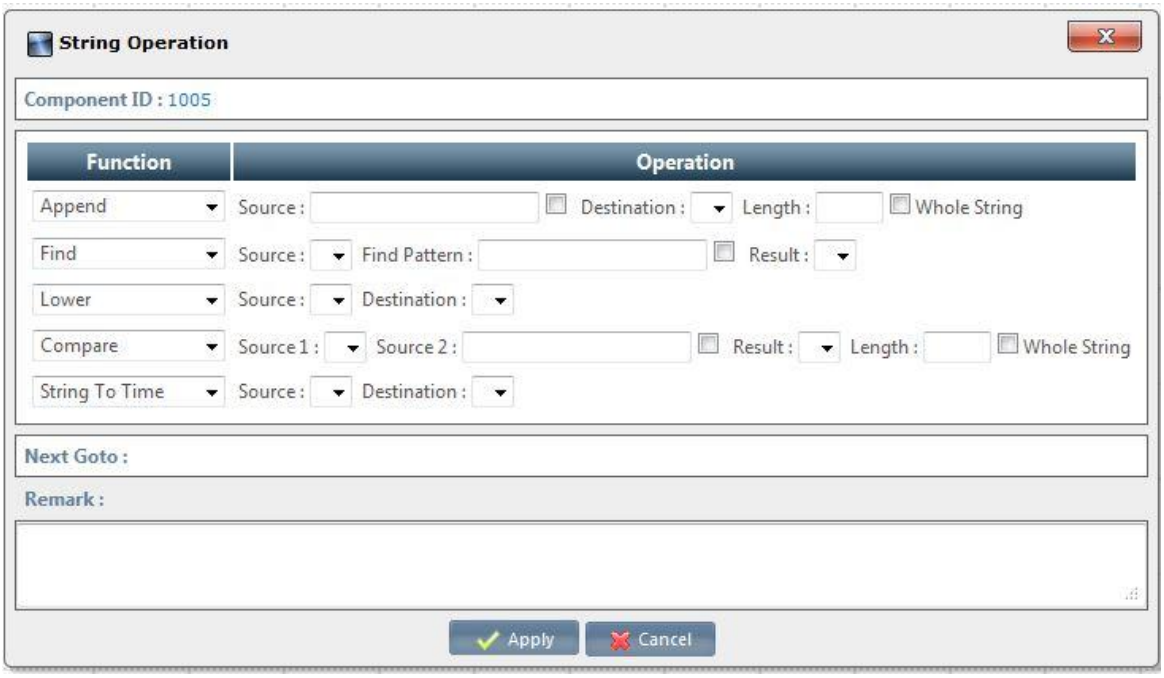
The detail of each parameter is described as below:

Parameter Name	Description
Information Group	If it is set to Default, the system will use the call flow based Information group. Other, select the used information group here.
Input Variable	The variable to be used as an input for the DM rule
Output Variable	The variable to be used for storing the DM result
Next Goto	Next component to be followed

2.3.1.3.9 String Operation

This component is used to do the manipulation of string variable. It can be used to do the copy, get string length, compare etc. operations.

Click  and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Function	The applied string function
Operation	The detail parameter for each functions
Next Goto	Next component to be followed

The detail of each function is described as below:

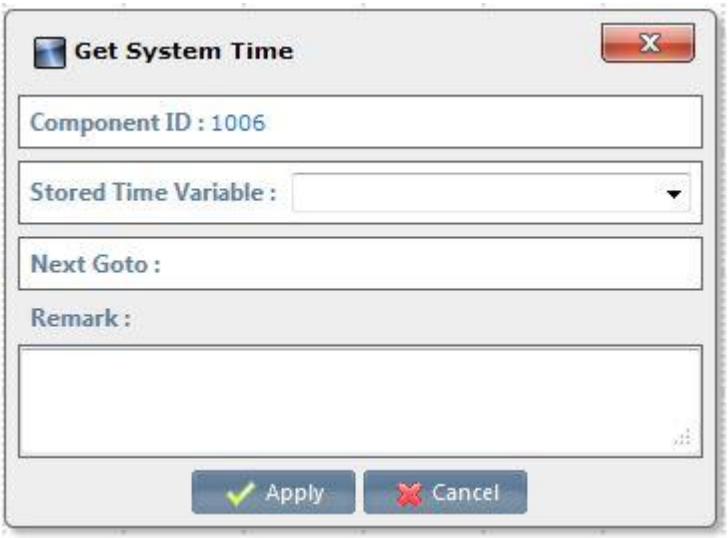
Function Name	Description
Append	Append source variable or value into destination variable. You can only append first x characters into destination variable by input the length.
Copy	Copy source variable or value into destination variable. You can select copy only first x characters or whole string into destination variable.
Find	Find specified variable or pattern from the source and put the found position into result variable. If it is not found, the result will be -1. Greater than -1 indicates the pattern was found and the position will be reported.
Compare	Compare source 1 and source 2's string value and put the result into result variable. You can optional to only compare first x character by assign a length. If result > 0 means source 1 is greater than source 2. If result < 0 means source 1 is less than source 2. If result is equal to 0, it mean source 1 is equal to source 2.
Length	Calculate source's string length and put the string length into the result variable.
Left String	Get first (left) x (by assigned length) characters from the source variable and assigned to destination variable.
Right String	Get last (left) x (by assigned length) characters from the source variable and assigned to destination variable.
Sub String	Retrieve sub-string from the source by assigning starting position and the retrieve length and assign to the destination variable. The position started from 0 to indicate first character.
Delete	Delete sub-string from the source by assigning starting position and the retrieve length and assign to the destination variable. The position started from 0 to indicate first character.
Upper	Upper all characters in source and assign to destination variable.
Lower	Lower all characters in source and assign to destination variable.

Function Name	Description
Insert	Insert source into destination by assigning start position (starting from 0)
Trim to Digit	Trim the source variable to only have telephone digits (0-9, *, #) and stored the result into destination variable.
String to Number	Convert a String variable into a Number variable
Number to String	Convert a Time variable into a String variable
String to Time	Convert a String Variable into a Time variable. The input string format has to be" yyyy/mm/dd hh:nn:ss" or "yyy-mm-dd hh:nn:ss".

2.3.1.3.10 Get System Time

This component is used to get local system time. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



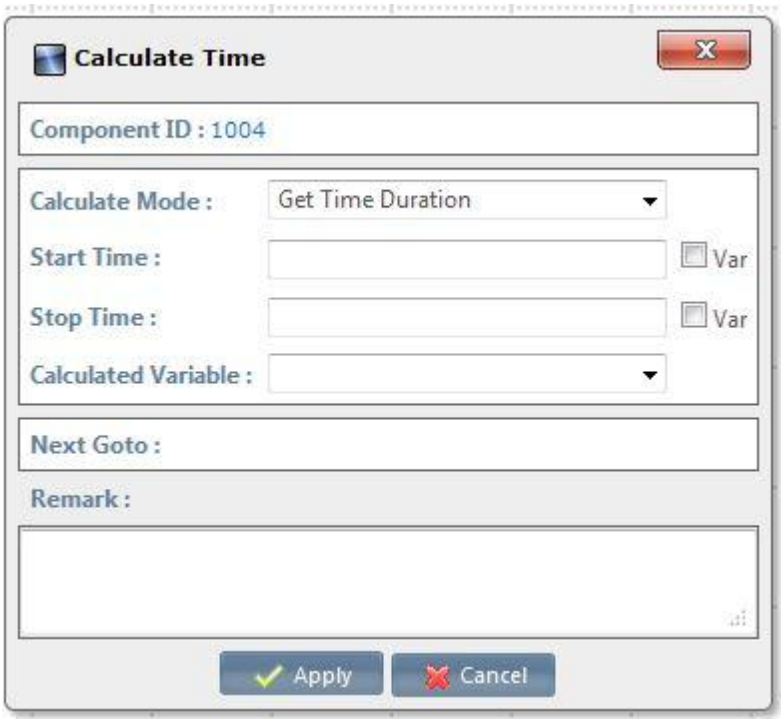
The detail of each parameter is described as below:

Parameter Name	Description
Stored Time Variable	The time variable to store the current local system time.
Next Goto	Next component to be followed

2.3.1.3.11 Calculate Time

This component is used to do the calculate of time duration or get new time. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

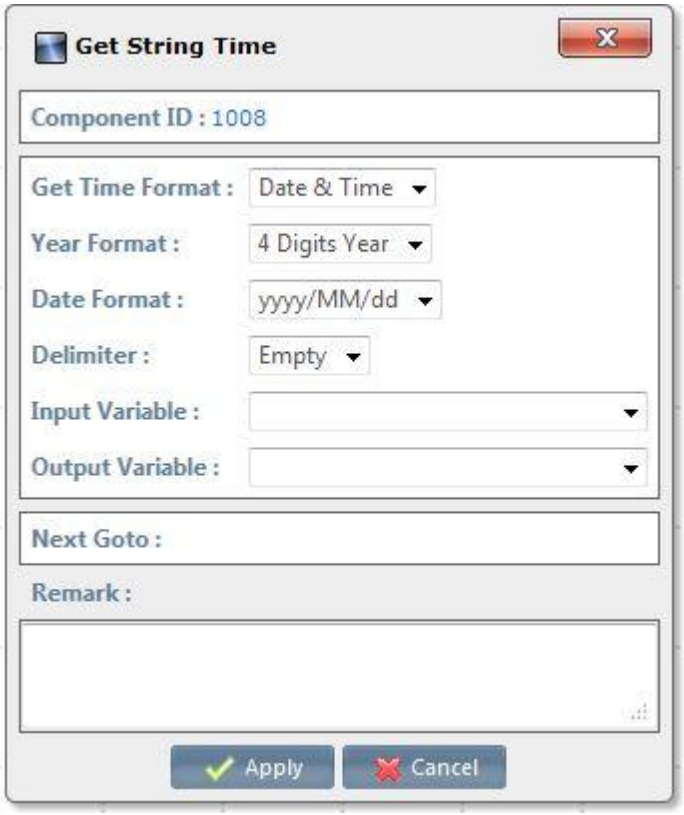
Parameter Name	Description
Calculate Mode	How to calculate the time. Get Time Duration: Stop Time - Start Time. If stop time is less then start time, the result will be 0. The result is a number variable. Get Past Time: Stop Time - Start Time. The result is

Parameter Name	Description
	a time variable. Get Future Time: Stop Time + Start Time. The result is a time variable.
Start Time	The Starting Time
Stop Time	The Stop Time
Calculate Variable	The variable to store the calculated result.
Next Goto	Next component to be followed

2.3.1.3.12 Get String Time

This component is used to convert a time variable into a string variable based on selected format. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



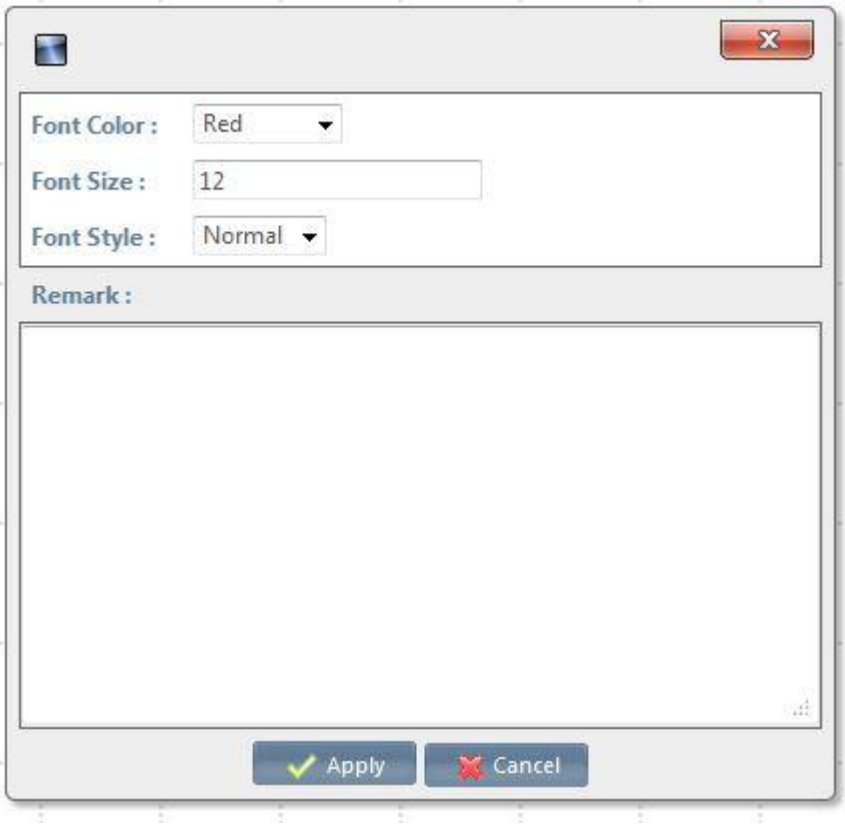
The detail of each parameter is described as below:

Parameter Name	Description
Get Time Format	The converted time format: Date & Time: The output string will have date and time Date Only: The output string will have date only Time Only: The output string will have time only Weekday: The output string is 1: Monday, 2: Tuesday... 7:Sunday
Year Format	The system support 4 digits year (YYYY), 2 digits year (YY) or Taiwan Year (YYY)
Date Format	The date format supported
Delimiter	The date or time delimiter
Input Variable	The time variable to be converted
Output Variable	The variable to store the output string
Next Goto	Next component to be followed

2.3.1.3.13 Remark

This component is used to put a remark on your call flow. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



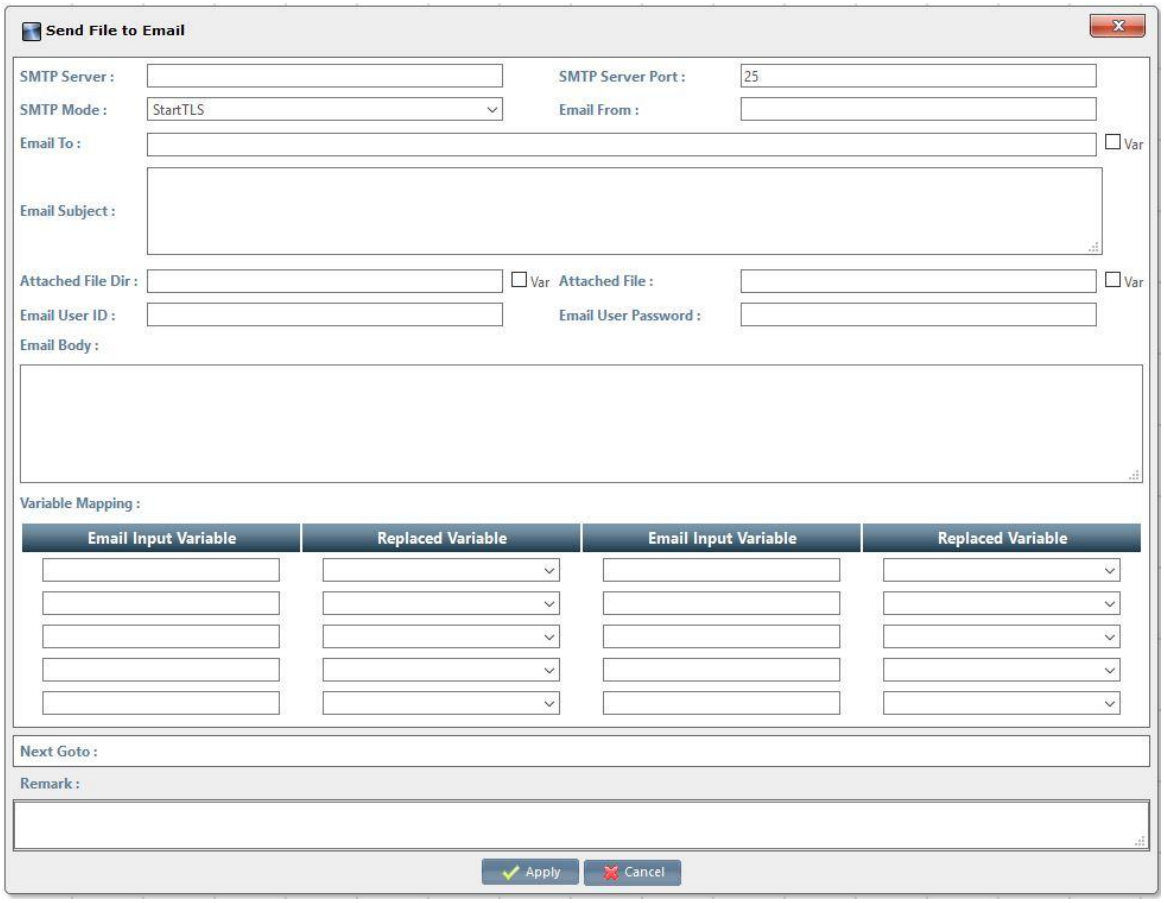
The detail of each parameter is described as below:

Parameter Name	Description
Font Color	The color to display the remark text
Font Size	The display text size
Font Style	The display text style
Remark	The contents of this remark which will be display in call flow

2.3.1.3.14 Send Email

This component is used to send a email out with an attachment. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

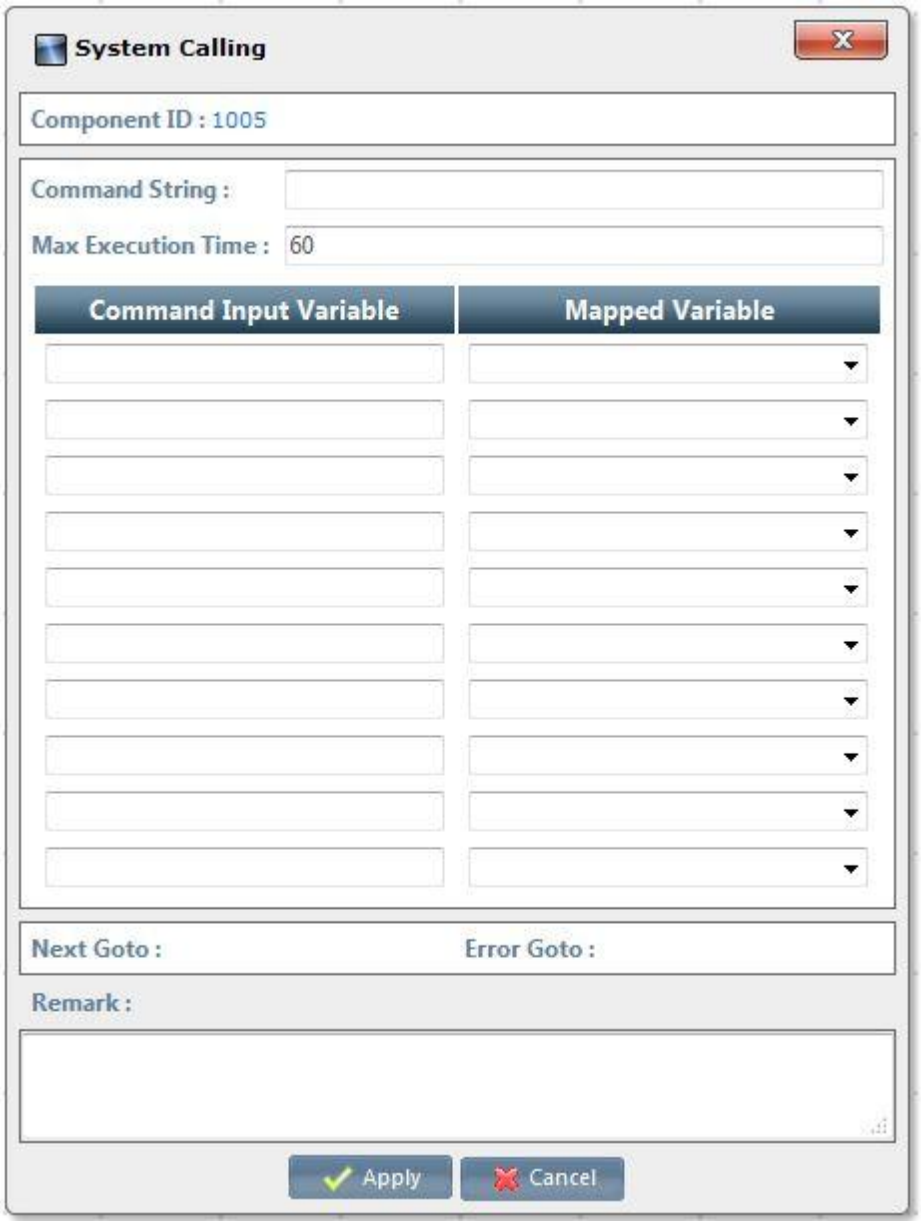
Parameter Name	Description
SMTP Server	The SMTP server which can be an domain name or IP address
SMTP Server Port	The STMP Server port. Normally, this port is set to 25 but for SSL it could be others such as 465.
SMTP Mode	The SMTP server supported security options which could be non-SSL, STARTTLS or SSL.
Email From	The email sending email address for SMTP server.
Email To	The email receiver email address
Email Subject	The subject of this mail
Attached File Dir	If you have attached file, this is the directory contains the attached file.

Parameter Name	Description
Attached File	The file to be attached
Email User ID	The email sending account ID
Email User Password	The email sending account password
Email Body	The body of this mail
Email Input Variable	This is the keyword to be replaced in the subject and body. The system will look at the email subject and body and find those keywords (Email Input Variable) and replace it by using the value of "Replaced Variable". This is useful to make the subject or body more readable and dynamic.
Replaced Variable	This is the mapped variable which value will replace the corresponding keyword in Email Input Variable.
Next Goto	Next component to be followed

2.3.1.3.15 System Calling

This component is used to calling a system script to run a specified task such as move a recorded file, delete a file etc. Those script file need to be installed on the system running patch such as /usr/local/sbin. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Command String	The shell script or command line to be executed. The system will call system to run this script or command. The command is able to carry the system variable by using the Command Input Variable and Mapped Variable. In order to make the command to be ran successfully, the script need to be located in system running patch such as /usr/local/sbin, /usr/local/bin.

Parameter Name	Description
Max Execution Time	Max running time to execute this system script.
Command Input Variable	This is the keyword to be replaced in the Command String. The system will look at the Command String and find those keywords (Command Input Variable) and replace it by using the value of "Mapped Variable". This is useful to make the Command String parameters based on your collected data.
Mapped Variable	This is the mapped variable which value will replace the corresponding keyword in Command Input Variable.
Next Goto	Next component to be followed if the script returning a success code (exit 0)
Error Goto	Next component to be followed if the script returning a failed code.

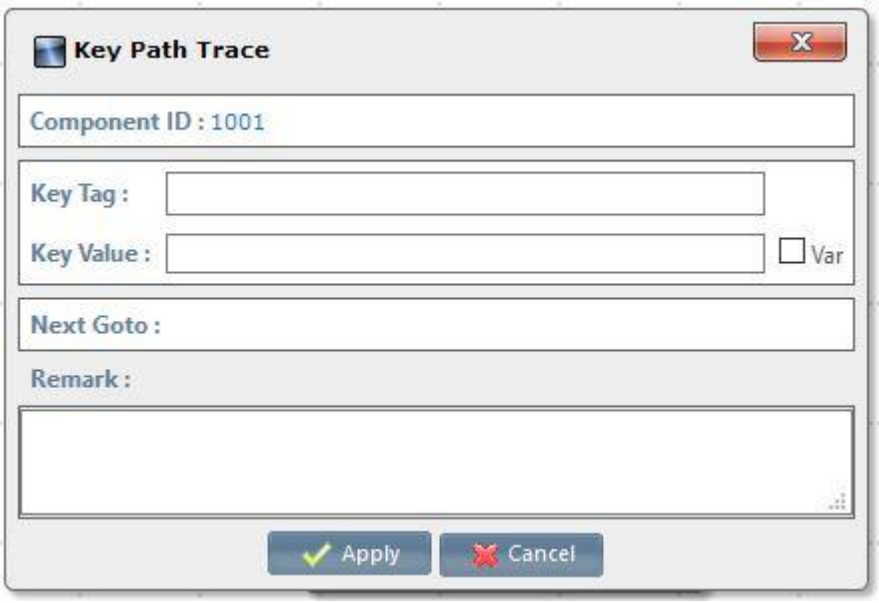
Examples of local rename script contents:

```
#!/bin/bash
#
cd /opt/ezvoicetek/ezivr7000/userdata/
mv -f $1 $2 > /dev/null 2>&1
exit $?
```

2.3.1.3.16 Key Path Trace

This component is used to insert a key path trace report into report database. It will only be started when CDR is turned ON on Start component, otherwise, this component will be ignored. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Key Tag	The Tag will be recorded for reporting. This tag will be the target for reporting.
Key Value	The value will be displayed on Call History Report Detail for tracking purpose.
Next Goto	Next component to be followed.
Remark	The contents of this remark which will be display in call flow

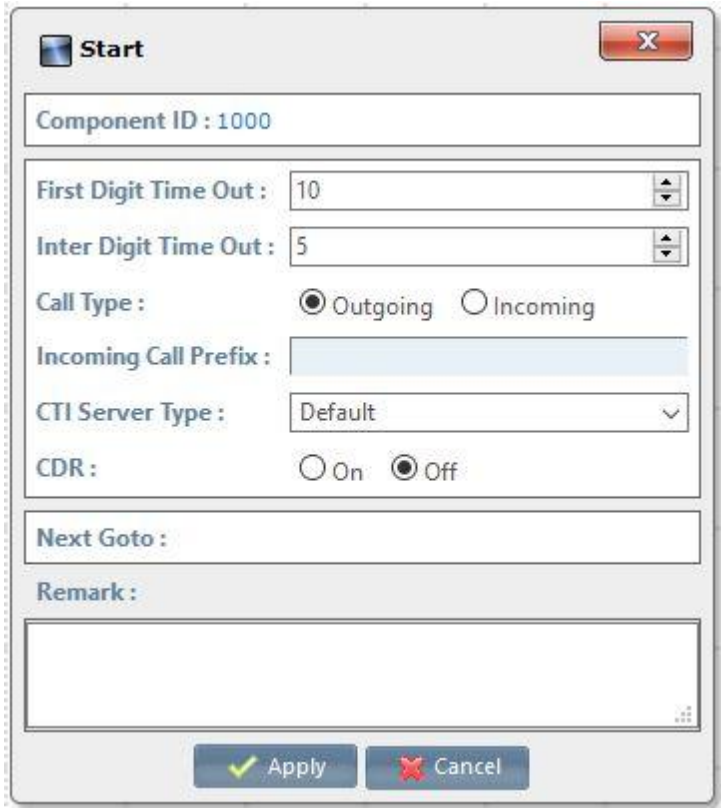
2.3.1.4 Flow Component

The General component contains the call flow related components. Click  as the following components will be display for your selection:

2.3.1.4.1 Start

Start component is the beginning of call flow. The call flow will run from here for each call. After you create a call flow, the Start component 

is created automatically for you.
Right click the component and the properties will be display as follows:



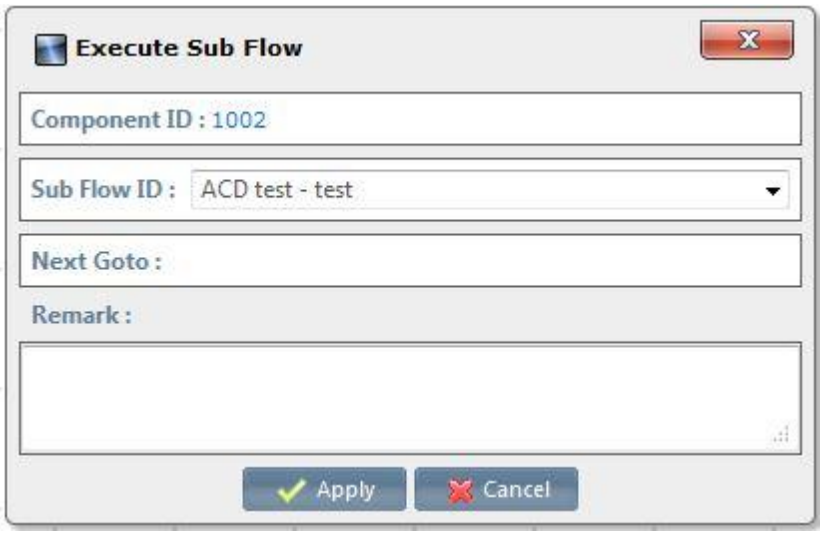
The detail of each parameter is described as below:

Parameter Name	Description
First Digit Time Out	After complete the playing of announcement, this is the time to wait the first digit. The recommended value is 6-10 seconds.
Inter Digit Time Out	After first digit was received, this the time to wait the incoming digit. The default is 3 seconds.
Call Type	The call type of this call flow. If this call flow is used to dial out, set it to Outgoing. Otherwise, make it to Incoming.
Incoming Call Prefix	For incoming call, you can optionally specify call flow to only accept those calls' called number is matching the Incoming Call Prefix. This is useful to define which channels to If it is empty, the call flow will accept any calls.
CTI Server Type	What kind of CTI server will be supported: Default: Using default CTI server type which is fully integrated with ACD. UUI (hex), using UUI hex mode to carry CTI data. UUI (string), using UUI string to carry CTI data.
CDR	Turned on CDR for this call flow or not. Please turned on CDR if you would like to use Key Path Trace feature.
Next Goto	Next component to be followed

2.3.1.4.2 Execute Sub Flow

This component is used to execute a sub call flow. Once the sub call flow is finished, it will return to it and execute the next goto component. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

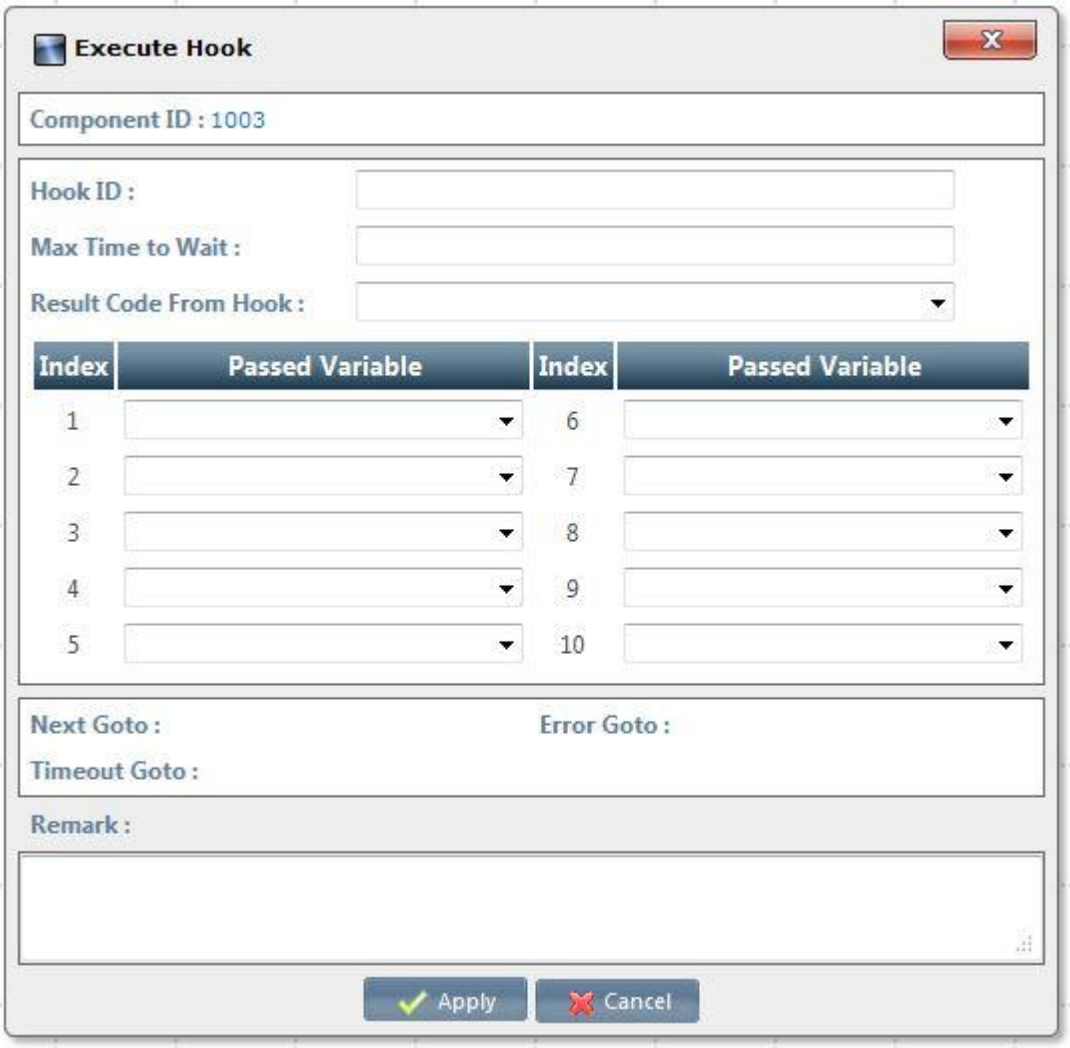


The detail of each parameter is described as below:

Parameter Name	Description
Sub Flow ID	The call flow will be executed as a sub flow
Next Goto	Next component to be followed after retuning form the sub call flow.

2.3.1.4.3 Legacy Hook

This component is used to execute a custom legacy hook. This hook has to be running on the same Linux server. Please contact technical support for detail. Click  and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Hook ID	The ID is used to identify the hook request. Thus the custom hook AP will know which request is processed.
Max Time to Wait	The max time to wait the hook to return. If over this timeout, it will go to Timeout Goto component.
Result Code from Hook	The variable to store the returning code from hook
Passed Variable	The variable will be passed to hook AP
Error Goto	If the hook is returning error (not success), this component will be followed.

Parameter Name	Description
Timeout Goto	If the hook doesn't return within max time to wait, this component will be followed.
Next Goto	If the hook is returning success (OK), this component will be followed.

2.3.1.4.4 Http Hook

This component is used to execute a custom http or https hook. This hook is calling a http URL and carry the parameter into the URL by using GET or POST method. Thus the hook can be written on any web technologies and remotely.

For GET method, the http URL can be http://192.168.0.1/hook ? var1=sys_var (sys_var is the internal string variable and its value will be replaced to it)
For POST method, the http URL can be https://192.168.0.1/hook and post field will be var1=sys_var

The http hook has to return the following format:
ret=x (0: success, <0: failure or error)
var=variable_name,value (optional, variable_name has to be a string variable and defined in the calling call flow. You can have multiple var= to returning multiple variable)

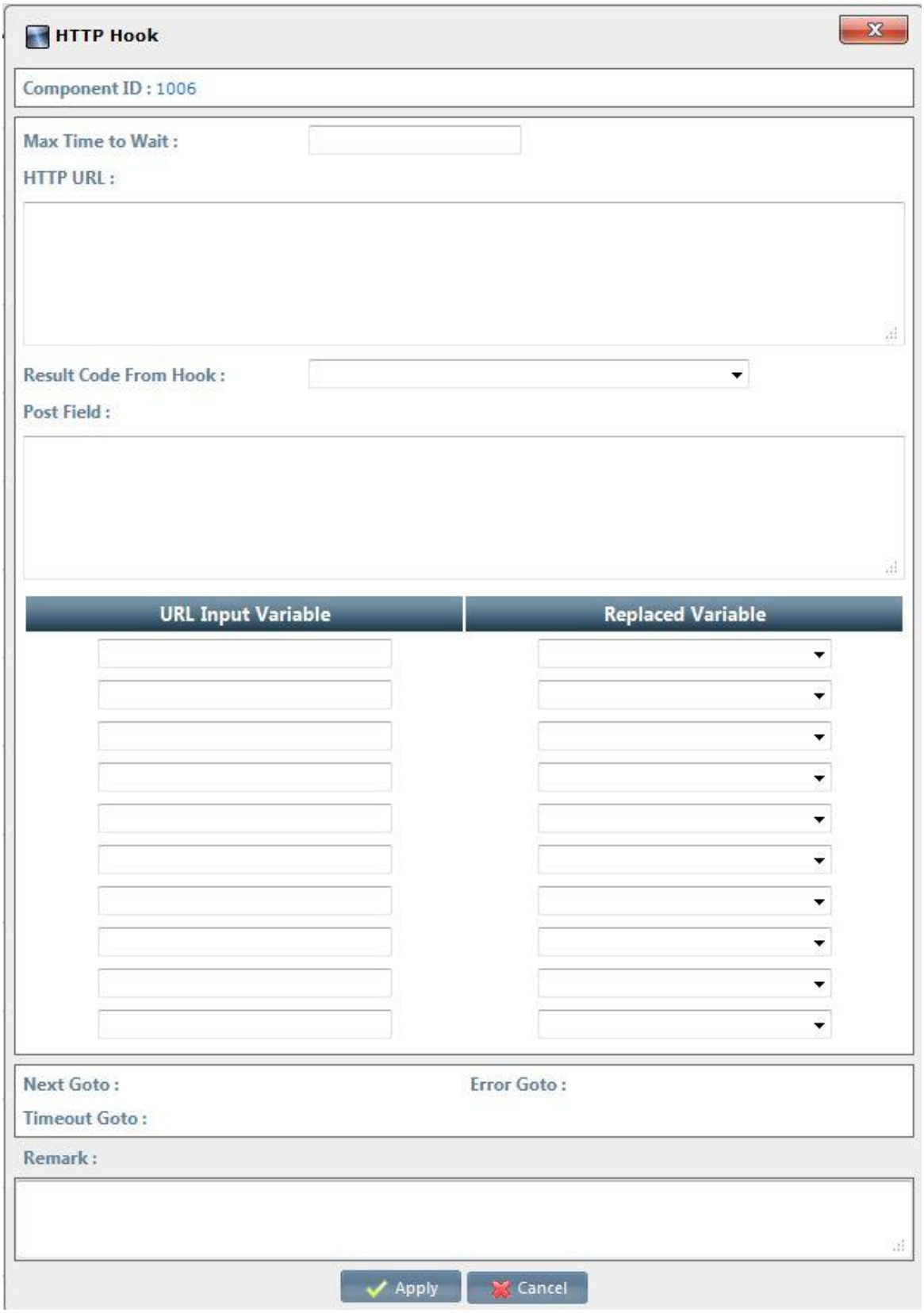
An example of http output is:
ret=0
var=ret_var1,123
var=ret_var2,abc

In this case, the system will update ret_var1 to "123" and ret_var2 to "abc" in the call flow. Thus you can process these 2 return value to meet your requirements.

This is the recommended method to link to your legacy system or external database connection.

Please contact technical support for detail. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



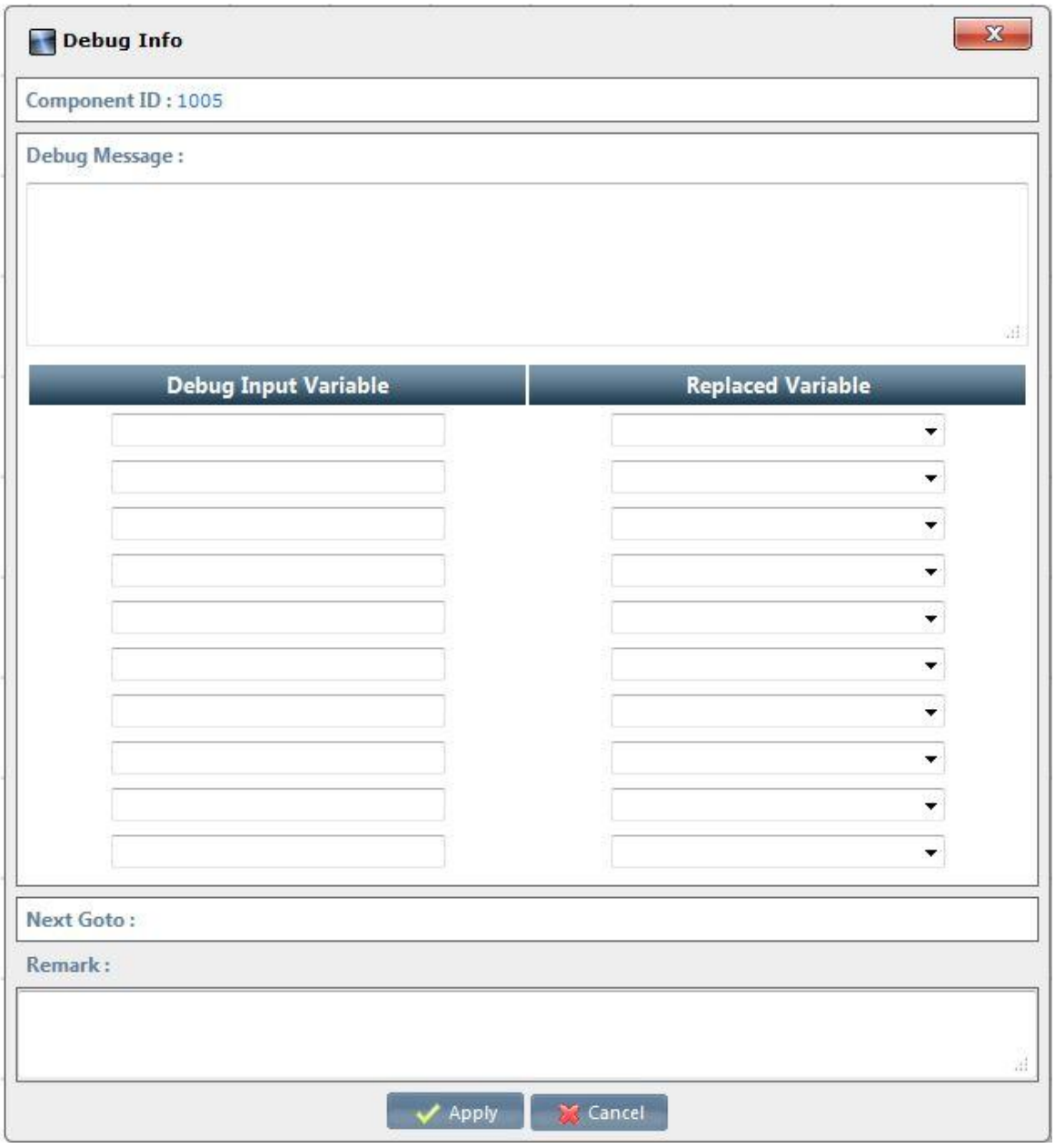
The detail of each parameter is described as below:

Parameter Name	Description
HTTP URL	The http or https URL will be called. It can support get and post for the parameters. For GET method, the http URL can be http://192.168.0.1/hook ?var1=sys_var. For POST method, the http URL can be https://192.168.0.1/hook and post field will be var1=sys_var.
Post Field	The POST parameter will be send to web server.
Max Time to Wait	The max time in seconds to wait the hook to return. If over this timeout, it will go to Timeout Goto component.
Result Code from Hook	The variable to store the returning code from hook
URL Input Variable	This is the keyword to be replaced in the HTTP URL. The system will look at the HTTP URL and find those keywords (URL Input Variable) and replace it by using the value of "Replaced Variable". This is useful to make the HTTP URL based on your collected data.
Replaced Variable	This is the mapped variable which value will replace the corresponding keyword in URL Input Variable.
Error Goto	If the hook is returning error (ret<0), this component will be followed.
Timeout Goto	If the hook doesn't return within max time to wait, this component will be followed.
Next Goto	If the hook is returning success (ret=0), this component will be followed.

2.3.1.4.5 Debug Message

This component is used to send a call flow debug message into debug log or debugger. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

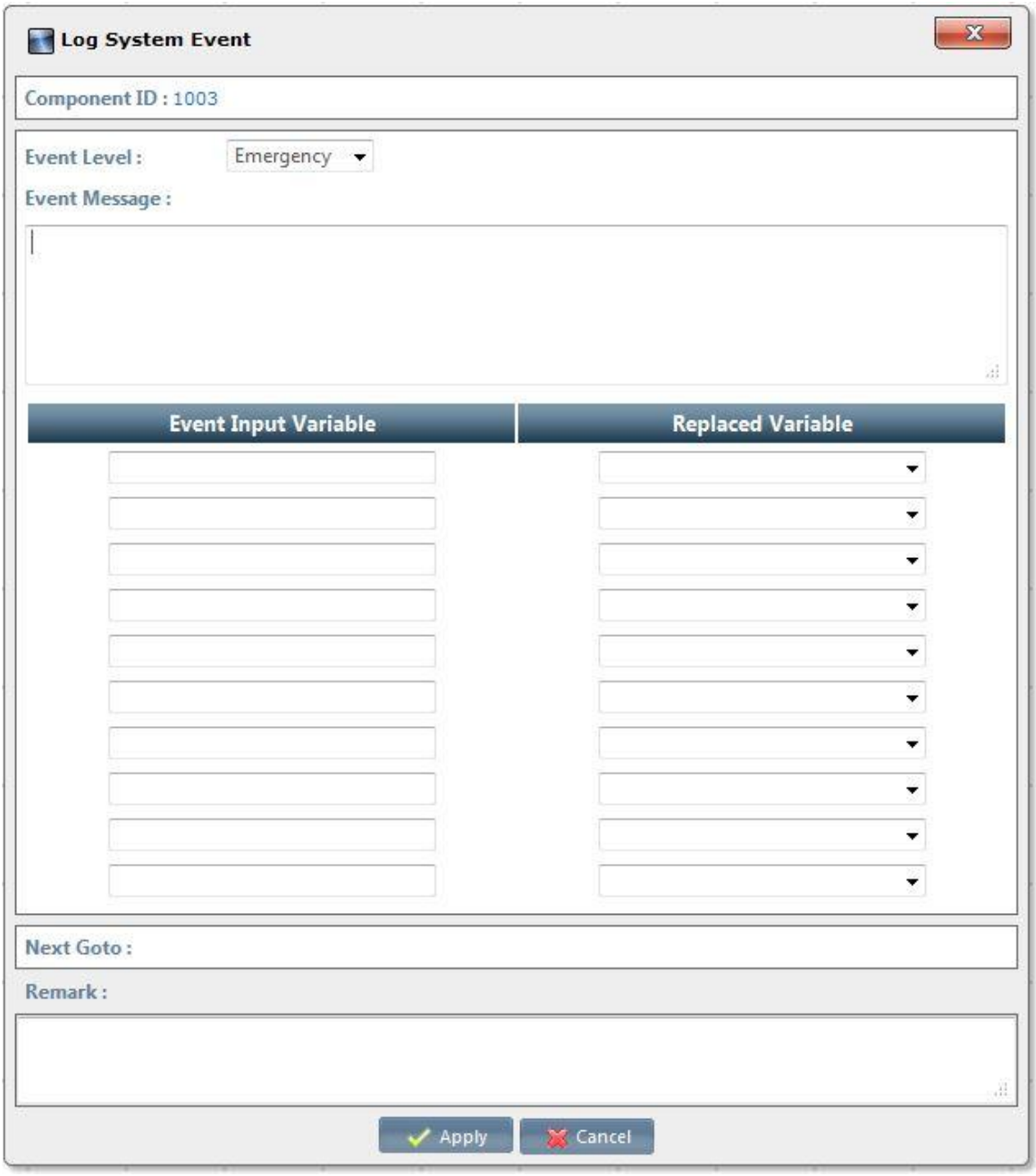
Parameter Name	Description
Debug Message	The debug message will be recorded or send to debugger.
Debug Input Variable	This is the keyword to be replaced in the debug message. The system will look at the debug message and find those keywords (Debug Input Variable) and replace it by using the value of

Parameter Name	Description
	"Replaced Variable". This is useful to make the Debug Message together with your collected information.
Replaced Variable	This is the mapped variable which value will replace the corresponding keyword in Debug Input Variable.
Next Goto	If the hook is returning success (ret=0), this component will be followed.

2.3.1.4.6 System Event Message

This component is used to send a call flow system alerting message into call flow alert or debugger. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Event Level	The event message severity level.
Event Message	The event message will be recorded or send to debugger.

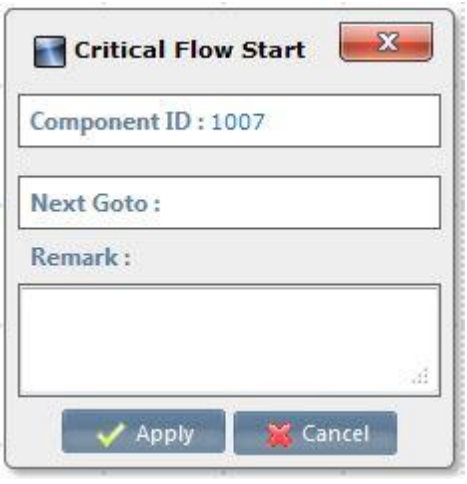
Parameter Name	Description
Event Input Variable	This is the keyword to be replaced in the debug message. The system will look at the event message and find those keywords (Event Input Variable) and replace it by using the value of "Replaced Variable". This is useful to make the Event Message together with your collected information.
Replaced Variable	This is the mapped variable which value will replace the corresponding keyword in Event Input Variable.
Next Goto	If the hook is returning success (ret=0), this component will be followed.

2.3.1.4.7 Critical Section Start

This component is used to ensure that all followed components within critical section start and critical section stop will be executed event when call is disconnected. Please make sure you don't have IVR related components or blocked components within critical start and stop. And start/stop must be a pair.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

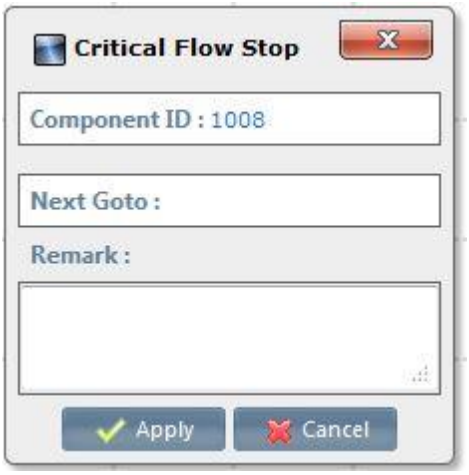
Parameter Name	Description
Next Goto	Next component to be followed

2.3.1.4.8 Critical Section Stop

This component is used to ensure that all followed components within critical section start and critical section stop will be executed event when call is disconnected. Please make sure you don't have IVR related components or blocked components within critical start and stop. And start/stop must be a pair.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Next Goto	Next component to be followed

2.3.1.4.9 Goto

This component is used to jump to another component directly.

Click 

and drag it into your call flow. Right click the component and the

properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Goto Component ID	The component ID will be jumped to.

2.3.1.4.10 Quit

This component is used to quit this call flow. The existing call will be disconnected.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

There is no parameter is required except remark.

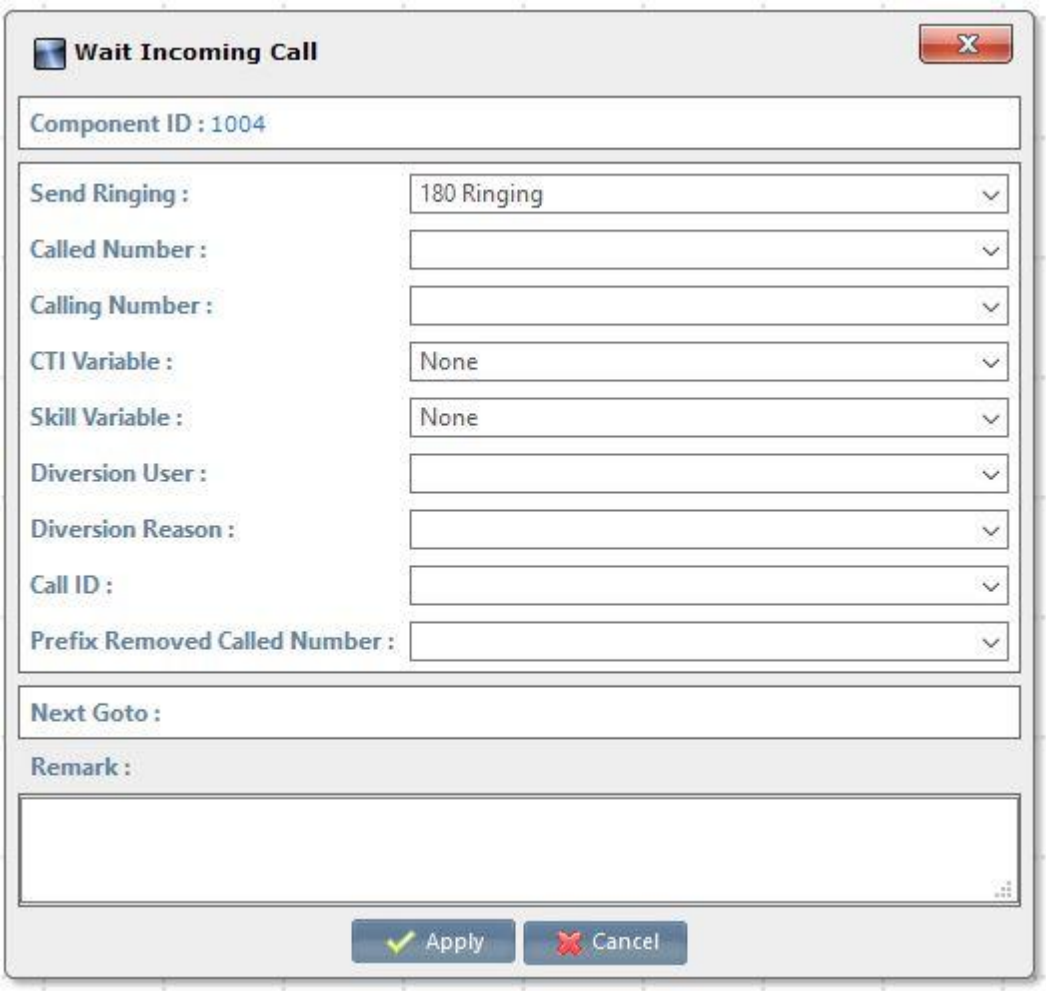
2.3.1.5 Call Component

The General component contains the call related components. Click  as the following components will be display for your selection:

2.3.1.5.1 Wait Incoming Call

This component is used to waiting for a incoming call. This component is necessary for an incoming call flow. IVR will stop on this component until there is a incoming call arrived. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

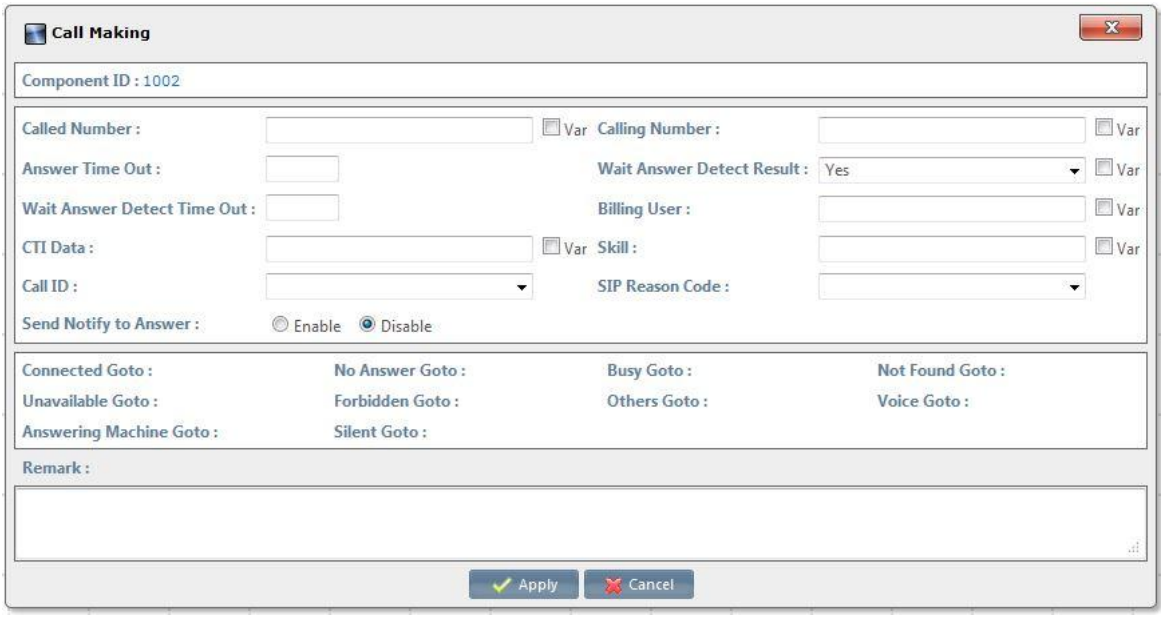
Parameter Name	Description
Send Ringing	Whether to send 180 (ringing) or 183 (early media)? After 183 was sent, early media will be started and can start the play prompt without answer.
Called Number	The called number for this call
Calling Number	The calling number for this call
CTI Variable	The incoming call carried CTI data
Skill Variable	The incoming call carried Skill Information
Diversion User	The Diversion User part for this call

Parameter Name	Description
Diversion Reason	The Diversion Reason for this call
Call ID	SIP Call ID for this call
Prefix Removed Called Number	The called number after remove the IVR incoming prefix
Next Goto	Next component to be followed after retuning form the sub call flow.

2.3.1.5.2 Make Outgoing Call

This component is used to make a call out. This component is necessary for an outgoing call flow. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Called Number	The called number for this call

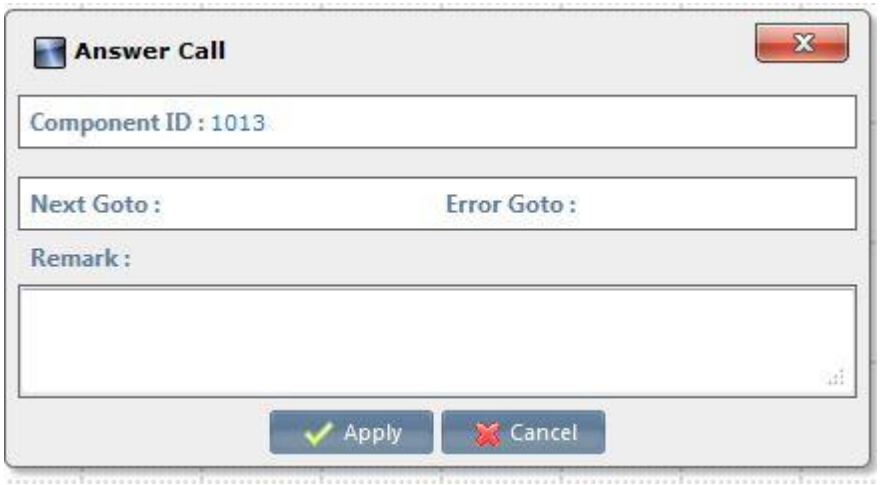
Parameter Name	Description
Calling Number	The calling number for this call
Answer Time Out	How long in second to wait the called party answer?
Send Notify to Answer	Whether IVR will send NOTIFY to tell the called party answer or not? It is useful when you need called party answer automatically. However, please make sure the called party can support this feature. Please contact FAE for detail.
Wait Answer Detect Result	Whether to wait the answering detection result or not? It only support those gateway who can send SIP message to tell the answering result. Please don't enable it unless you have confirmed your SIP gateway can support this feature.
Wait Answer Detect Time Out	How long to wait the answering result event from SIP gateway.
Billing User	The Billing user carried for this call. It is only supported when you are using UniSIP-6000 or UniPBX-2000.
CTI Variable	The carried CTI data for this call. The format is ctidata1,ctidata2
Skill Variable	The carried Skill Information for this call. The format is skillid1,skillid2
Call ID	SIP Call ID for this call
SIP Reason Code	The SIP reason code for this call out result
Connected Goto	The component will be followed if call is connected (200 OK)
No Answer Goto	The component will be followed if call is not answered by called (487)
Busy Goto	The component will be followed if called party is busy (486)
Not Found Goto	The component will be followed if called party is not found (404)

Parameter Name	Description
Unavailable Goto	The component will be followed if called party is not able to take this call (480)
Forbidden Goto	The component will be followed if called party is forbidden this call (403)
Others Goto	The component will be followed if called party reject this call.
Voice Goto	This only valid when answering detection was turned one and the SIP gateway can support the answering detection. When called party is a human answer, this component will be followed.
Answering Machine Goto	This only valid when answering detection was turned one and the SIP gateway can support the answering detection. When called party is a answering machine, this component will be followed.
Silence Goto	This only valid when answering detection was turned one and the SIP gateway can support the answering detection. When called party is silence, this component will be followed.

2.3.1.5.3 Answer Incoming Call

This component is used to answer an incoming call . Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



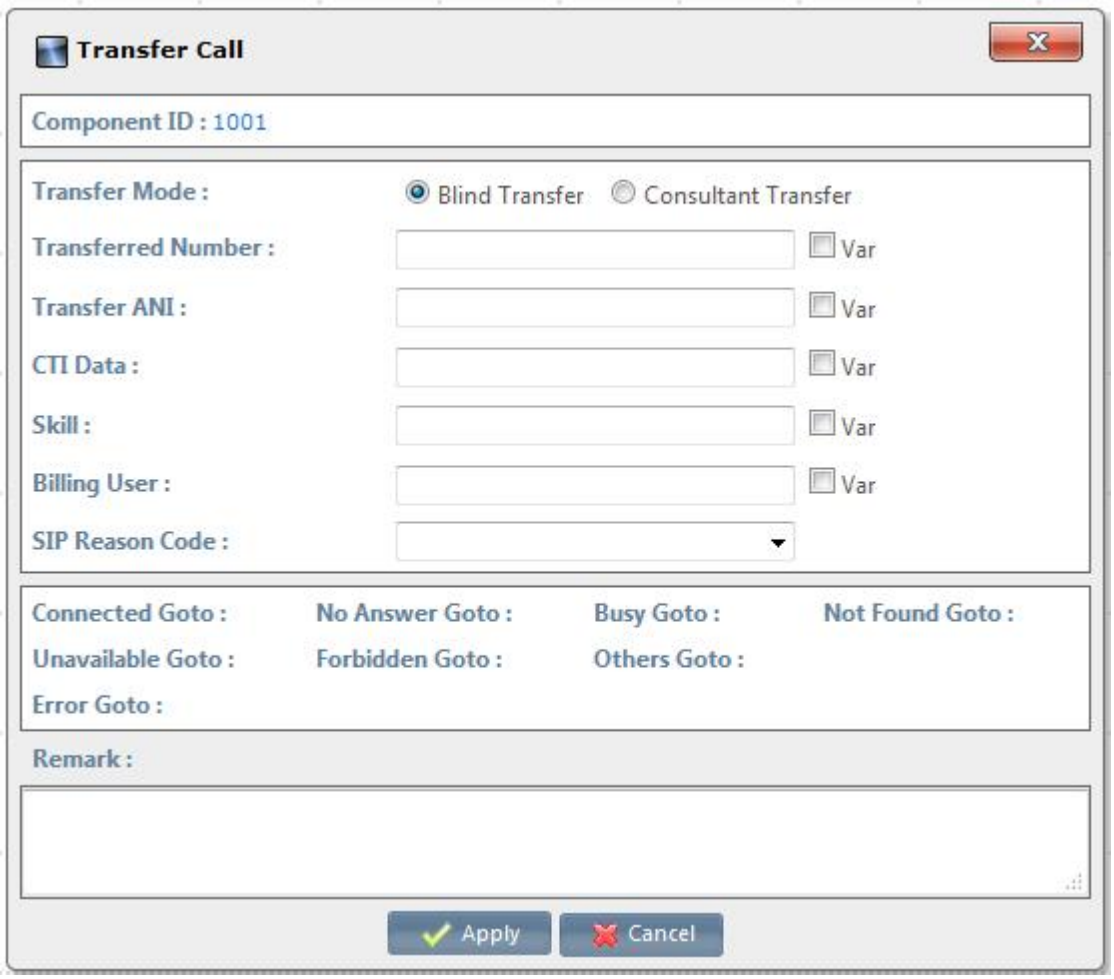
The detail of each parameter is described as below:

Parameter Name	Description
Next Goto	The component will be followed if call is answered successfully.
Error Goto	The component will be followed if call is not able to answer it.

2.3.1.5.4 Transfer Call

This component is used to transfer an existing call. This call could an incoming call, outgoing call or second call. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

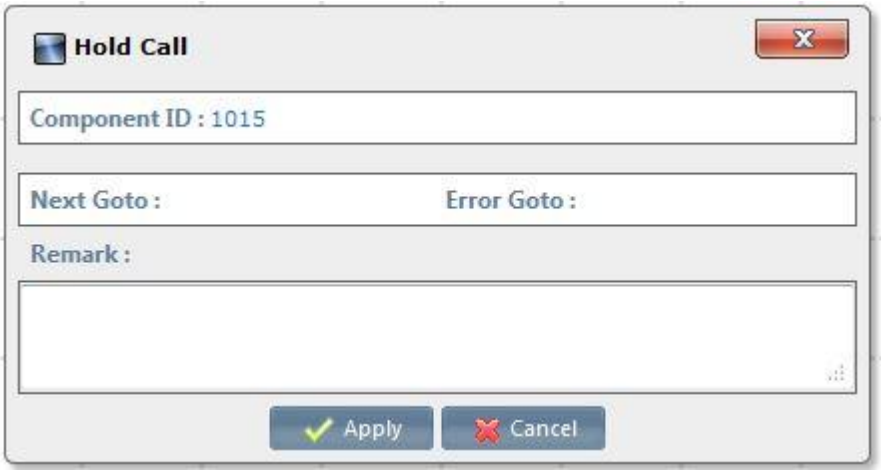
Parameter Name	Description
Transfer Mode	The system support 2 types of transfer: 1. Blind Transfer: This mode will transfer the existing call to transferred number without second call. 2. Consultant Transfer: This mode need IVR make 2nd call and transfer to it.
Transferred Number	It is only valid for blind transfer mode. This is the number to be transferred.
Transfer ANI	It is only valid for blind transfer mode. This is the calling number (ANI) to be used (carried in Refer-By header). In SIP proxy server or transferred party need enabled the feature to "use Refer-By as ANI" to make it working.
Billing User	The Billing user carried for this transferred call. It is only supported when you are using UniSIP-6000 or UniPBX-2000.
CTI Data	The carried CTI data for this transferred call. The format is ctidata1,ctidata2
Skill	The carried Skill Information for this transferred call. The format is skillid1,skillid2
SIP Reason Code	The SIP reason code for this transferred call result
Connected Goto	The component will be followed if transferred call is connected (200 OK)
No Answer Goto	The component will be followed if transferred call is not answered by called (487)
Busy Goto	The component will be followed if transferred called party is busy (486)
Not Found Goto	The component will be followed if transferred called party is not found (404)
Unavailable Goto	The component will be followed if transferred called party is not able to take this call (480)

Parameter Name	Description
Forbidden Goto	The component will be followed if transferred called party is forbidden this call (403)
Others Goto	The component will be followed if transferred called party reject this call.

2.3.1.5.5 Hold Call

This component is used to hold an existing call . Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



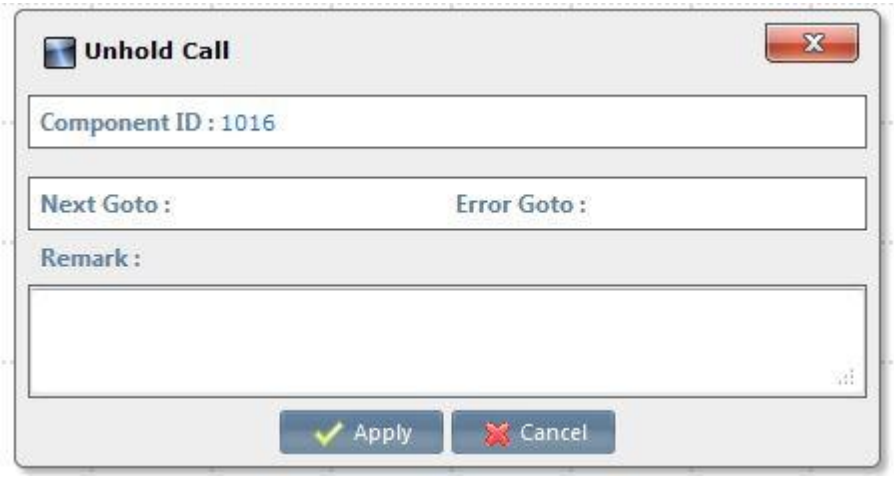
The detail of each parameter is described as below:

Parameter Name	Description
Next Goto	The component will be followed if call is hold successfully.
Error Goto	The component will be followed if call is not able to hold it.

2.3.1.5.6 Unhold Call

This component is used to hold an existing call . Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Next Goto	The component will be followed if call is unhold successfully.
Error Goto	The component will be followed if call is not able to unhold it.

2.3.1.5.7 Redirect Call

This component is used to redirect a incoming call before you answer it. This component can be used only before answer the incoming call. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

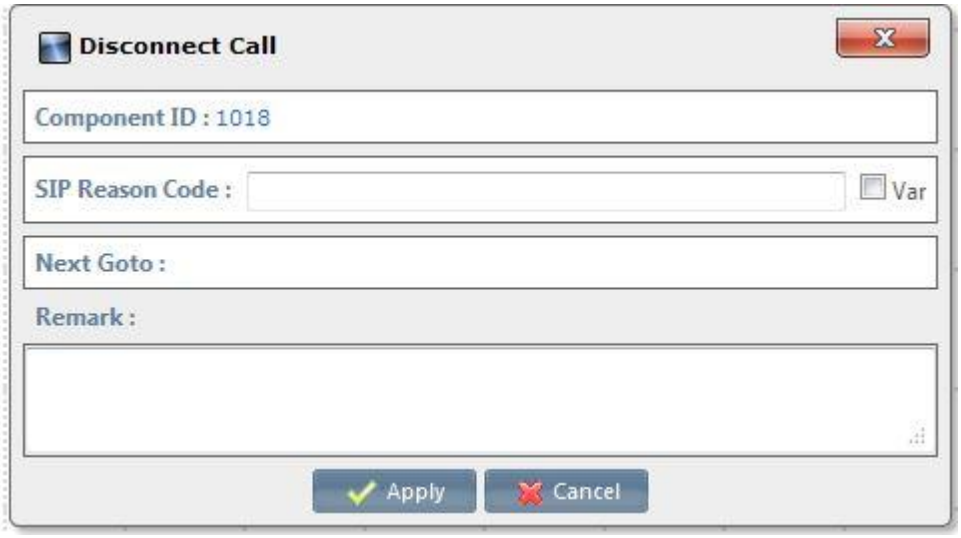
The detail of each parameter is described as below:

Parameter Name	Description
Redirect Number	The number will be redirected (302 moved)
CTI Data	The carried CTI data for this redirected call. The format is ctidata1,ctidata2
Skill	The carried Skill Information for this redirected call. The format is skillid1,skillid2
Billing User	The Billing user carried for this redirected call. It is only supported when you are using UniSIP-6000 or UniPBX-2000.
Next Goto	The component will be followed if call is hold successfully.
Error Goto	The component will be followed if call is not able to hold it.

2.3.1.5.8 Disconnect Call

This component is used to disconnect a connected call. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
SIP Reason Code	The SIP reason code will be used to reject if call is not connected yet.
Error Goto	The component will be followed if call is not able to hold it.

2.3.1.5.9 Disconnecting Start Event

This component will be executed when call is disconnected. This component will be triggered to run when a connected call was disconnected no matter whether it is disconnected by remote or local. If call flow is running into Critical Start/Stop pair, this will wait Critical Stop executed and start this Disconnect Start Event. You can do some processing such as DB access, execute a HTTP Hook etc by using this components/ Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

The detail of each parameter is described as below:

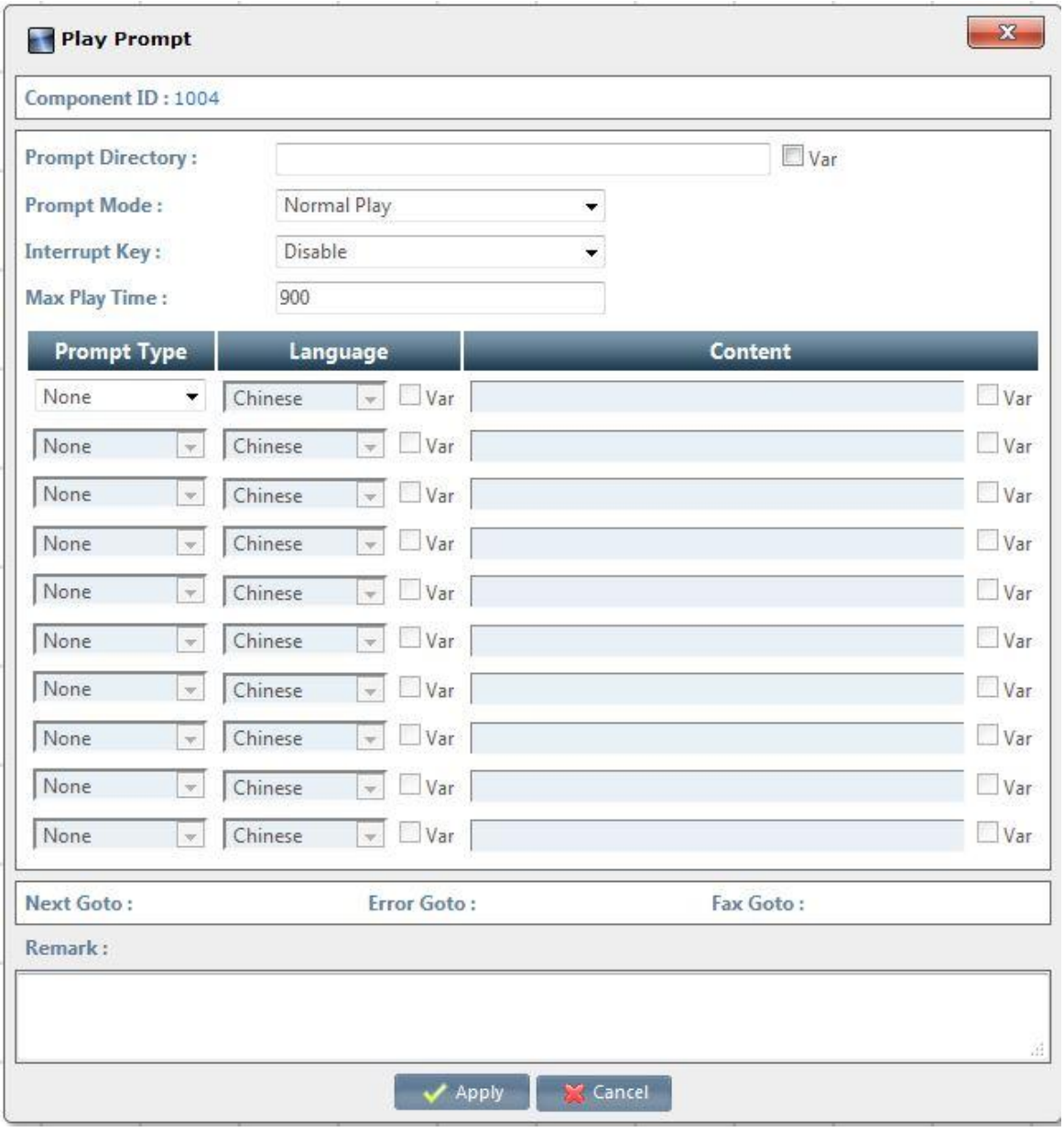
Parameter Name	Description
Next Goto	The following component will be followed when a connected call is disconnected.

2.3.1.6 IVR Component

The General component contains the IVR related components. Click  as the following components will be display for your selection:

2.3.1.6.1 Play Prompt

This component is used to play announcement file to remote party. Click  and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Prompt Directory	The sub-directory for the prompt based on the system

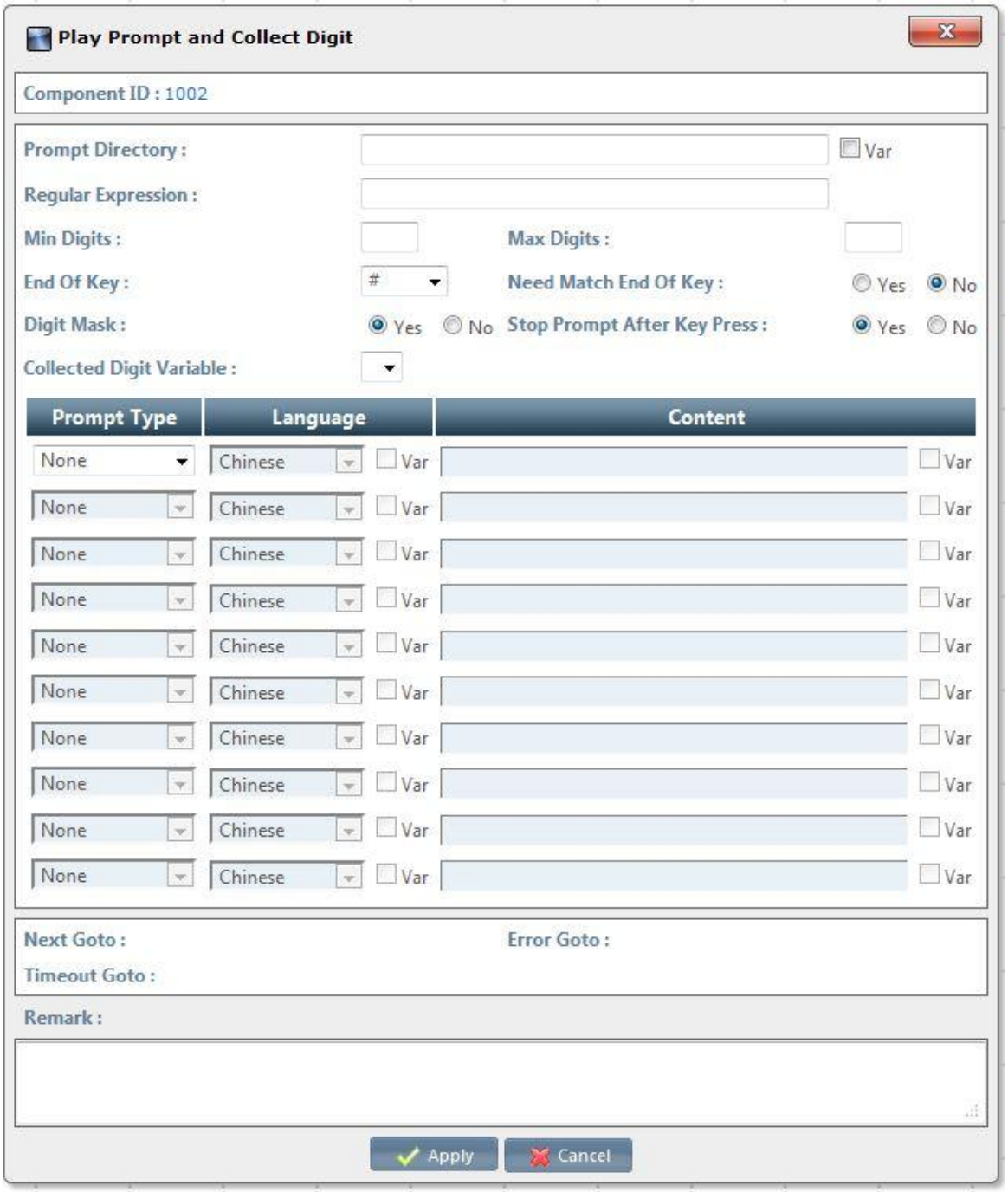
Parameter Name	Description
	prompt directory
Prompt Mode	The system support the following types of prompt play back mode: 1. Normal Play: In this mode, the system will play all prompts once 2. Repeat Play: In this mode, the system will play all prompts one by one and repeat it. 3. Repeat Background Play: In this mode, the system will play all prompts one by one and repeat it until a stop play or another play prompt related components. The system will play it background and move to next component (Next Goto). Thus IVR can do other process such as execute a HOOK or DB query.
Interrupt Key	Whether DTMF will stop the play or not? It is only valid when prompt mode is Normal Play or Repeat Play: Disable: DTMF digit will be ignored. Any Key: Any DTMF digit will stop the play. Specified: Only specified DTMF digit will stop the play. Others will be ignored.
Max Play Time	Max time to run this component. It is useful when you are play a prompt repeatedly.
Prompt Type	The Prompt Type contains the different source to be played as follows: 1. Prompt File: Play a wav format file which is Linear PCM 16 bits, Mono, 8K sample rate. 2. TTS Date: Play date based on the selected language. The input format is yyyy/mm/dd or mm/dd. 3. Time 24 hours: Play time in 24 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 4. Time 12 hours: Play time in 12 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 5. Currency: Play currency amount based on the selected language 6. Numeric: Play numeric amount based on the selected language 7. Digit: Play digit such as telephone number based on the selected language.

Parameter Name	Description
Language	The Text to Speech Language. It will be ignored for prompt file.
Content	The contents to be played. It could be a variable or value.
Next Goto	The component will be followed if play announcement is success.
Error Goto	The component will be followed if play prompt is failed.

2.3.1.6.2 Play Prompt and Collect Digit

This component is used to play announcement file to remote party and collect user DTMF digits based on the rule. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

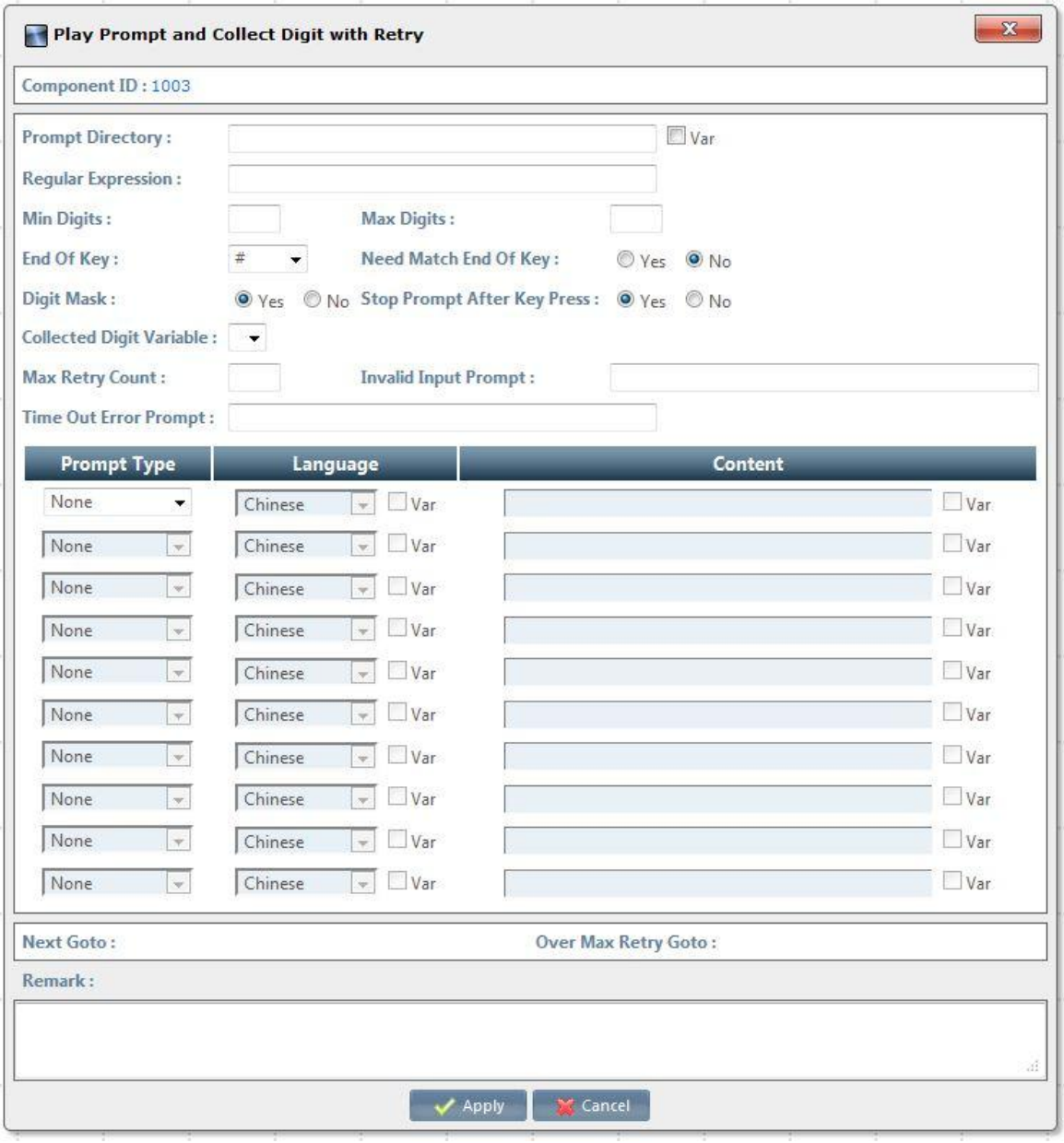
Parameter Name	Description
Prompt Directory	The sub-directory for the prompt based on the system prompt directory

Parameter Name	Description
Regular Expression	Whether to match additional to regular expression or not? Please refer to Appendix for the example of regular expression. And you can test your regular expression by using http://regexpal.com/ before you use it. The system system will start the regular expression evaluation after min digits was receive and stop if max digits is reached.
Min Digits	The minimum digits to be received.
Max Digits	The maximum digits to be received
End of Key	If specified, the system will think end of input if this key was received. Normally, this key is #. And this end of key will not be a part of result.
Need Match End of Key	If it is enabled, the caller need input end of key. Otherwise, the system will think the input is not comply the requirements.
Digit Mask	Whether to send DTMF when caller input DTMF digits or not. Please contact FAE for detail.
Stop Prompt After Key Press	Whether DTMF will stop the play or not? If it is not, the play prompt will be continued until end of prompt or matching the digit collecting requirement.
Collect Digit Variable	The variable to store the collected digits (not include the end of key)
Prompt Type	The Prompt Type contains the different source to be played as follows: 1. Prompt File: Play a wav fromat file which is Linear PCM 16 bits, Mono, 8K sample rate. 2. TTS Date: Play date based on the selected language. The input format is yyyy/mm/dd or mm/dd. 3. Time 24 hours: Play time in 24 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 4. Time 12 hours: Play time in 12 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 5. Currency: Play currency amount based on the selected language 6. Numeric: Play numeric amount based on the

Parameter Name	Description
	selected language 7. Digit: Play digit such as telephone number based on the selected language.
Language	The Text to Speech Language. It will be ignored for prompt file.
Content	The contents to be played. It could be a variable or value.
Next Goto	The component will be followed if collected digits is comply to the settings.
Error Goto	The component will be followed if collected digits is not comply to the settings.
Timeout Goto	The component will be followed if no any digits was received.

2.3.1.6.3 Play Prompt and Collect Digit with Retry

This component is used to play announcement file to remote party and collect user DTMF digits based on the rule. Click  and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Prompt Directory	The sub-directory for the prompt based on the system prompt directory
Regular Expression	Whether to match additional to regular expression or not? Please refer to Appendix for the example of regular expression. And you can test your regular expression by using http://regexpal.com/ before you

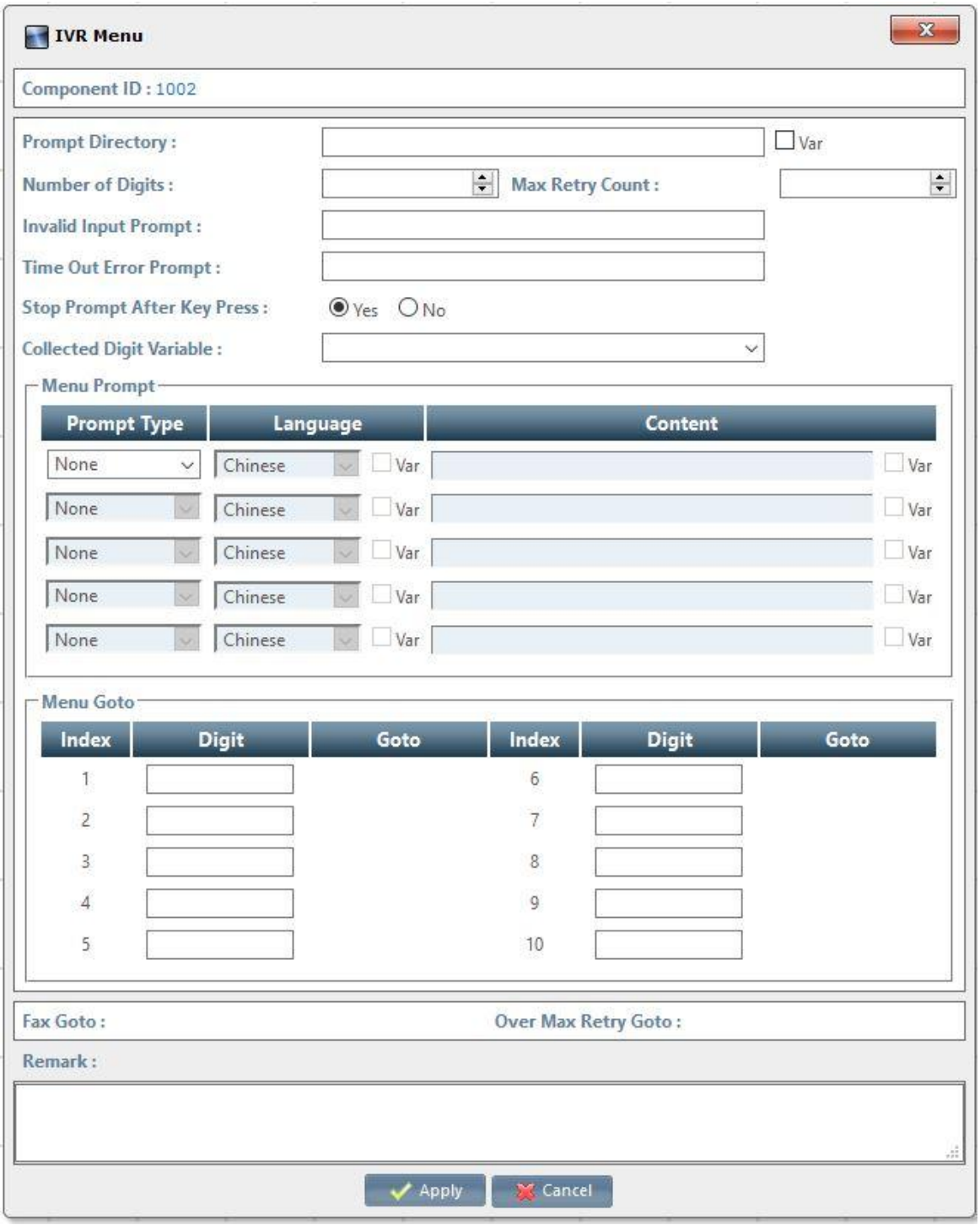
Parameter Name	Description
	use it. The system will start the regular expression evaluation after min digits was receive and stop if max digits is reached.
Min Digits	The minimum digits to be received.
Max Digits	The maximum digits to be received
End of Key	If specified, the system will think end of input if this key was received. Normally, this key is #. And this end of key will not be a part of result.
Need Match End of Key	If it is enabled, the caller need input end of key. Otherwise, the system will think the input is not comply the requirements. When enable this feature, the min and max digits need to be add 1 more for the end of key.
Digit Mask	Whether to send DTMF when caller input DTMF digits or not. Please contact FAE for detail.
Stop Prompt After Key Press	Whether DTMF will stop the play or not? If it is not, the play prompt will be continued until end of prompt or matching the digit collecting requirement.
Collect Digit Variable	The variable to store the collected digits (not include the end of key)
Max Retry Count	The max retry count if the input cannot match the component requirements.
Invalid Input Prompt	The system will play this prompt if the input is not match the component requirements such as min/max digits, regular expression, end of key etc.
Time Out Error Prompt	The system will play this prompt if remote party doesn't input any digits.
Prompt Type	The Prompt Type contains the different source to be played as follows: 1. Prompt File: Play a wav format file which is Linear PCM 16 bits, Mono, 8K sample rate. 2. TTS Date: Play date based on the selected language. The input format is yyyy/mm/dd or mm/dd. 3. Time 24 hours: Play time in 24 hours format based on the selected language. The input format is

Parameter Name	Description
	hh:mm:ss or hh:mm. 4. Time 12 hours: Play time in 12 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 5. Currency: Play currency amount based on the selected language 6. Numeric: Play numeric amount based on the selected language 7. Digit: Play digit such as telephone number based on the selected language.
Language	The Text to Speech Language. It will be ignored for prompt file.
Content	The contents to be played. It could be a variable or value.
Next Goto	The component will be followed if collected digits is comply to the settings.
Over Max Retry Goto	The component will be followed if over max retry count

2.3.1.6.4 IVR Menu

This component is used to play announcement, ask input and switch to different component based on the user input. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Prompt Directory	The sub-directory for the prompt based on the system

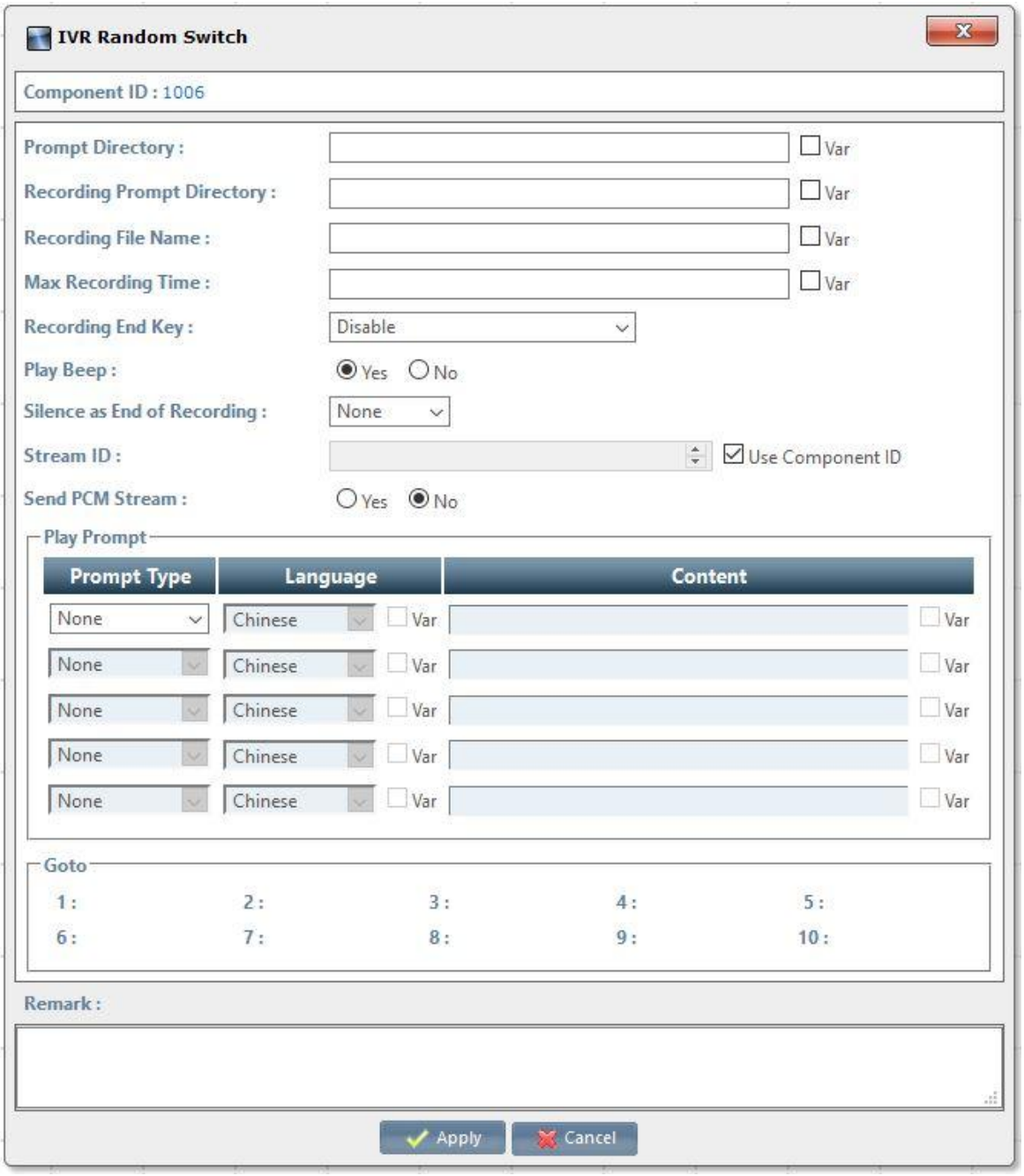
Parameter Name	Description
	prompt directory
Number of Digits	Number of digits to be received.
Stop Prompt After Key Press	Whether DTMF will stop the play or not? If it is not, the play prompt will be continued until end of prompt or matching the digit collecting requirement.
Collected Digit Variable	The variable to store the inputted digits.
Max Retry Count	The max retry count if the input cannot match the component requirements.
Invalid Input Prompt	The system will play this prompt if the input is not match the component requirements such as min/max digits, regular expression, end of key etc.
Time Out Error Prompt	The system will play this prompt if remote party doesn't input any digits.
Prompt Type	The Prompt Type contains the different source to be played as follows: 1. Prompt File: Play a wav format file which is Linear PCM 16 bits, Mono, 8K sample rate. 2. TTS Date: Play date based on the selected language. The input format is yyyy/mm/dd or mm/dd. 3. Time 24 hours: Play time in 24 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 4. Time 12 hours: Play time in 12 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 5. Currency: Play currency amount based on the selected language 6. Numeric: Play numeric amount based on the selected language 7. Digit: Play digit such as telephone number based on the selected language.
Language	The Text to Speech Language. It will be ignored for prompt file.
Content	The contents to be played. It could be a variable or value.

Parameter Name	Description
Digit/Goto	If the receive digits matched this digits settings, the goto will be the component to be run.
Over Max Retry Goto	The component will be followed if over max retry count

2.3.1.6.5 IVR Random Menu Switch

This component is used to play announcements, record a file and switch to different component by random select one switch. I t could be useful for a IVR training. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



Play

The detail of each parameter is described as below:

Parameter Name	Description
Prompt Directory	The sub-directory for the prompt based on the system prompt directory

Parameter Name	Description
Recording Prompt Directory	The sub-directory for the recorded file based on the system prompt directory
Recording File Name	The file name for the recorded voice
Max Recording Time	The max time to record
Recording End Key	The key to indicate end of the recording. It is normally a # key.
Play Beep	Whether to play beep to tell remote party the starting of recording.
Silence as End of Recording	Whether detect silence to see whether the voice recording was completed or not?
Stream ID	What is the stream ID will be send to remote server such as ASR or other server. It can also use component ID as a reference ID. This stream ID will be use to know what kind of ASR service will be used or other purpose.
Send PCM Stream	Whether start the PCM stream sending or not? Please only start it when you have a server to receive the real time stream. It will sending the real time stream by UDP as the following: channel ID: short Steam ID: int Sequence ID: unsigned short Payload Length: short Payload Data: 8K, 16 bits, Liner PCM data will be sent to peer server. 100 ms (1600 bytes) is the max payload size.
Prompt Type	The Prompt Type contains the different source to be played as follows: 1. Prompt File: Play a wav format file which is Linear PCM 16 bits, Mono, 8K sample rate. 2. TTS Date: Play date based on the selected language. The input format is yyyy/mm/dd or mm/dd. 3. Time 24 hours: Play time in 24 hours format based on the selected language. The input format is hh:mm:ss or hh:mm. 4. Time 12 hours: Play time in 12 hours format based on the selected language. The input format is

Parameter Name	Description
	hh:mm:ss or hh:mm. 5. Currency: Play currency amount based on the selected language 6. Numeric: Play numeric amount based on the selected language 7. Digit: Play digit such as telephone number based on the selected language.
Language	The Text to Speech Language. It will be ignored for prompt file.
Content	The contents to be played. It could be a variable or value.
Goto	The system will random choice next component when this goto had next component.

2.3.1.6.6 Stop Play

This component is used to stop a background playing. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

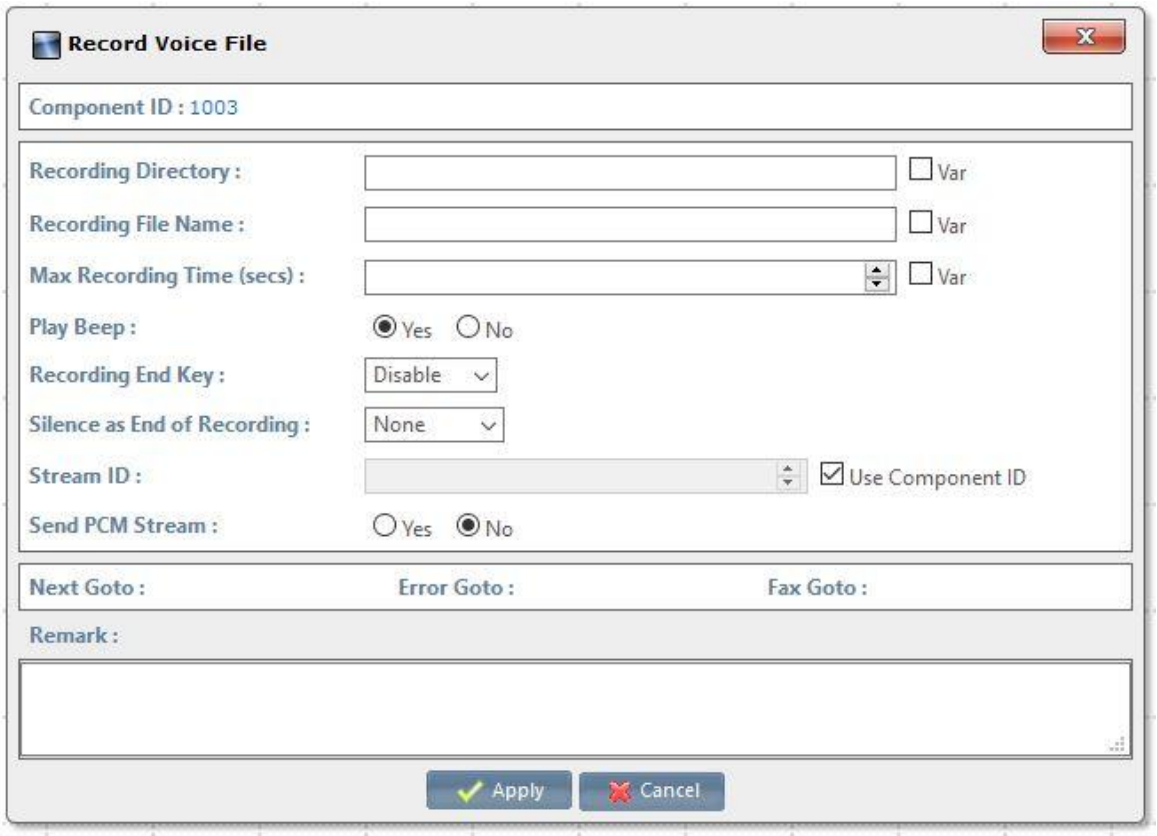
The detail of each parameter is described as below:

Parameter Name	Description
Next Goto	The component will be followed after stopped the

Parameter Name	Description
	playing.

2.3.1.6.7 Record Voice File

This component is used to record a file. Click  and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

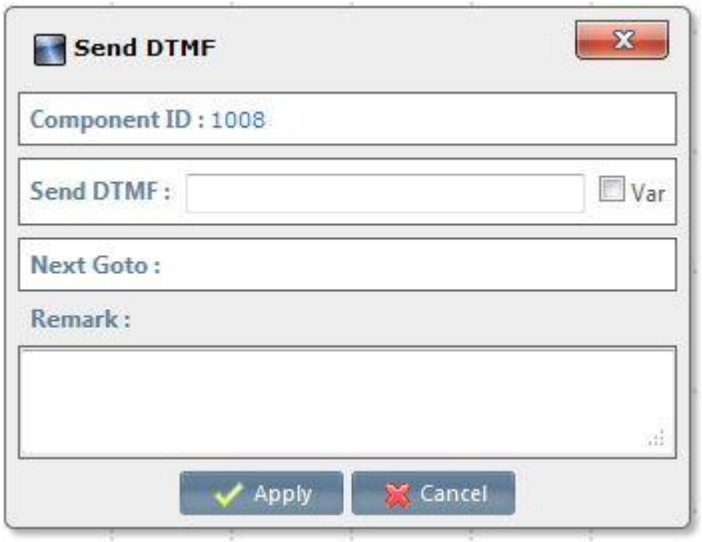
Parameter Name	Description
Recording Prompt Directory	The sub-directory for the recorded file based on the system prompt directory
Recording File Name	The file name for the recorded voice
Max Recording Time	The max time to record

Parameter Name	Description
Recording End Key	The key to indicate end of the recording. It is normally a # key.
Play Beep	Whether to play beep to tell remote party the starting of recording.
Silence as End of Recording	Whether detect silence to see whether the voice recording was completed or not?
Stream ID	What is the stream ID will be send to remote server such as ASR or other server. It can also use component ID as a reference ID. This stream ID will be use to know what kind of ASR service will be used or other purpose.
Send PCM Stream	Whether start the PCM stream sending or not? Please only start it when you have a server to receive the real time stream. It will sending the real time stream by UDP as the following: channel ID: short Steam ID: int Sequence ID: unsigned short Payload Length: short Payload Data: 8K, 16 bits, Liner PCM data will be sent to peer server. 100 ms (1600 bytes) is the max payload size.
Next Goto	The next component when complete the recording
Error Goto	The next component when there is a error found

2.3.1.6.8 Dial DTMF Digits

This component is used to send DTMF to the remote party. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



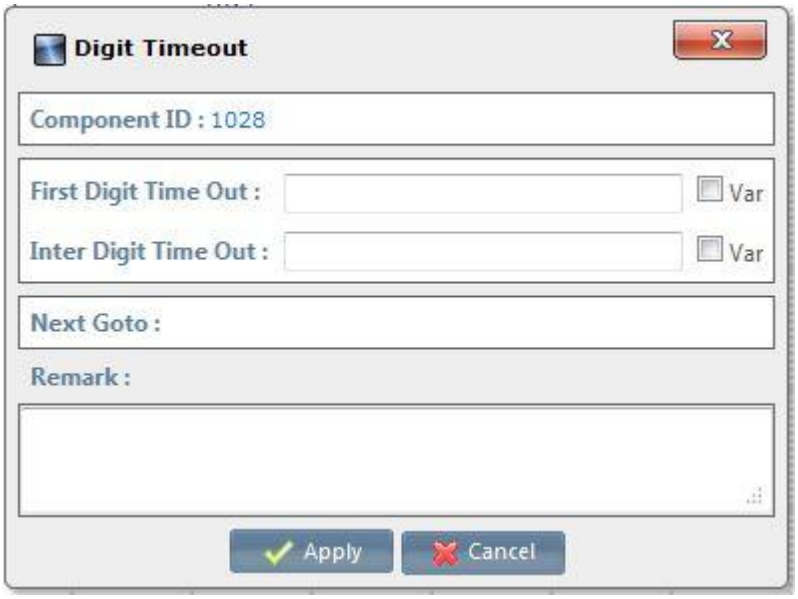
The detail of each parameter is described as below:

Parameter Name	Description
Send DTMF	The DTMF string to be send. It could be 1 or multiple digits
Next Goto	The component will be followed after send the DTMF out

2.3.1.6.9 Digit Timeout

This component is used to change the first digit and inter digit time out. It will overwrite the existing settings. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



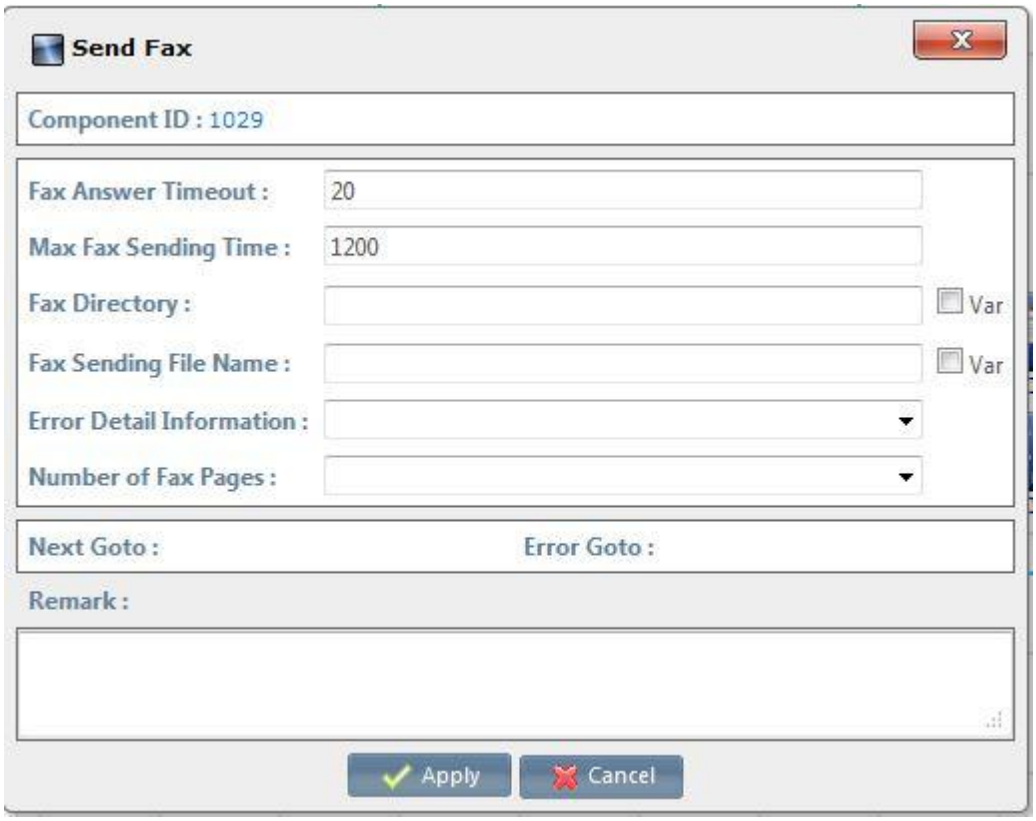
The detail of each parameter is described as below:

Parameter Name	Description
First Digit Time Out	The max waiting time for first digit
Inter Digit Time Out	The max waiting time between digits after received first digit
Next Goto	The component will be followed after send the fax out

2.3.1.6.10 Send Fax

This component is used to send a fax file to the remote party (fax resource license required). The file name must have extension of .tff and its format is G4 compression and 1728 width. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Fax Answer Timeout	The max time to wait remote party fax to answer the fax
Max Fax Sending Time	The max time to send a fax
Fax Directory	The directory which contains the sending fax file
Fax Sending File Name	The fax sending file name (need end with .tiff). The tiff format is: Width: 1728 Compression: G4 It will be easier to use Call Flow- -> Prompt/Fax Manger to upload a tiff or pdf from it. The upload will do the conversion automatically.
Error Detail Information	In case the fax had error, this is the variable to store the detail error information.
Number of Fax Pages	This is the variable to store the pages transmitted.

Parameter Name	Description
Next Goto	The component will be followed after send the fax out
Error Goto	If the fax encountered an error, this is the next cid will go.

2.3.1.6.11 Receive Fax

This component is used to receive fax from the remote party (fax resource license required). Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

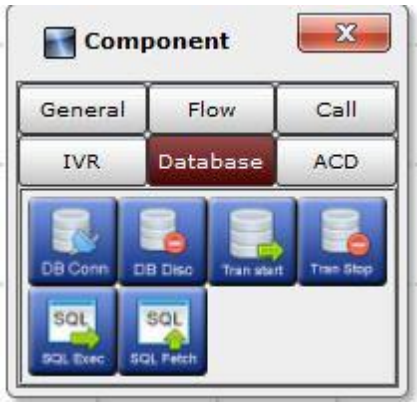
The detail of each parameter is described as below:

Parameter Name	Description
Max Fax Receiving Time	The max time to receive a fax
Fax Directory	The directory which contains the sending fax file

Parameter Name	Description
Fax Remote ID	Fax remote party ID
Fax Receiving File Name	The received fax file name in tiff extension. The received tiff format is: Width: 1728 Compression: G4
Error Detail Information	In case the fax had error, this is the variable to store the detail error information.
Number of Fax Pages	This is the variable to store the pages received.
Next Goto	The component will be followed after send the fax out
Error Goto	If the fax encountered an error, this is the next cid will go.

2.3.1.7 Database Component

The General components contains the database related components. Click  as the following components will be display for your selection. To use database component, UnixODBC need to be installed and an odbc setting need to be done as a source name.



2.3.1.7.1 DB Connect

This component is used to request a DB connection to a data source. You need setup UNIX ODBC data source setting out of IVR in order to use the DB components. Click 

and drag it into your call flow. Right click the component

and the properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Data Source Name	The data source name in UNIX ODBC
DB User ID	The Database User
DB User Password	The Database Password
Connect Time Out	The max connecting time to the DB server in seconds
Next Goto	The next component if DB connection is created
Error Goto	The next component if failed to create the required DB connection

2.3.1.7.2 DB Disconnect

This component is used to disconnect a DB source when it is not used. Click 

and drag it into your call flow. Right click the component and the properties will be

display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Data Source Name	The data source name in UNIX ODBC
Next Goto	The next component after disconnect the DB source

2.3.1.7.3 Transaction Start

This component is used to start a DB transaction. Click  and drag it into your call flow. Right click the component and the properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Data Source Name	The data source name in UNIX ODBC
Next Goto	The next component if DB transaction was started successfully
Error Goto	The next component if DB transaction was failed to start

2.3.1.7.4 Transaction Stop

This component is used to stop a DB transaction. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

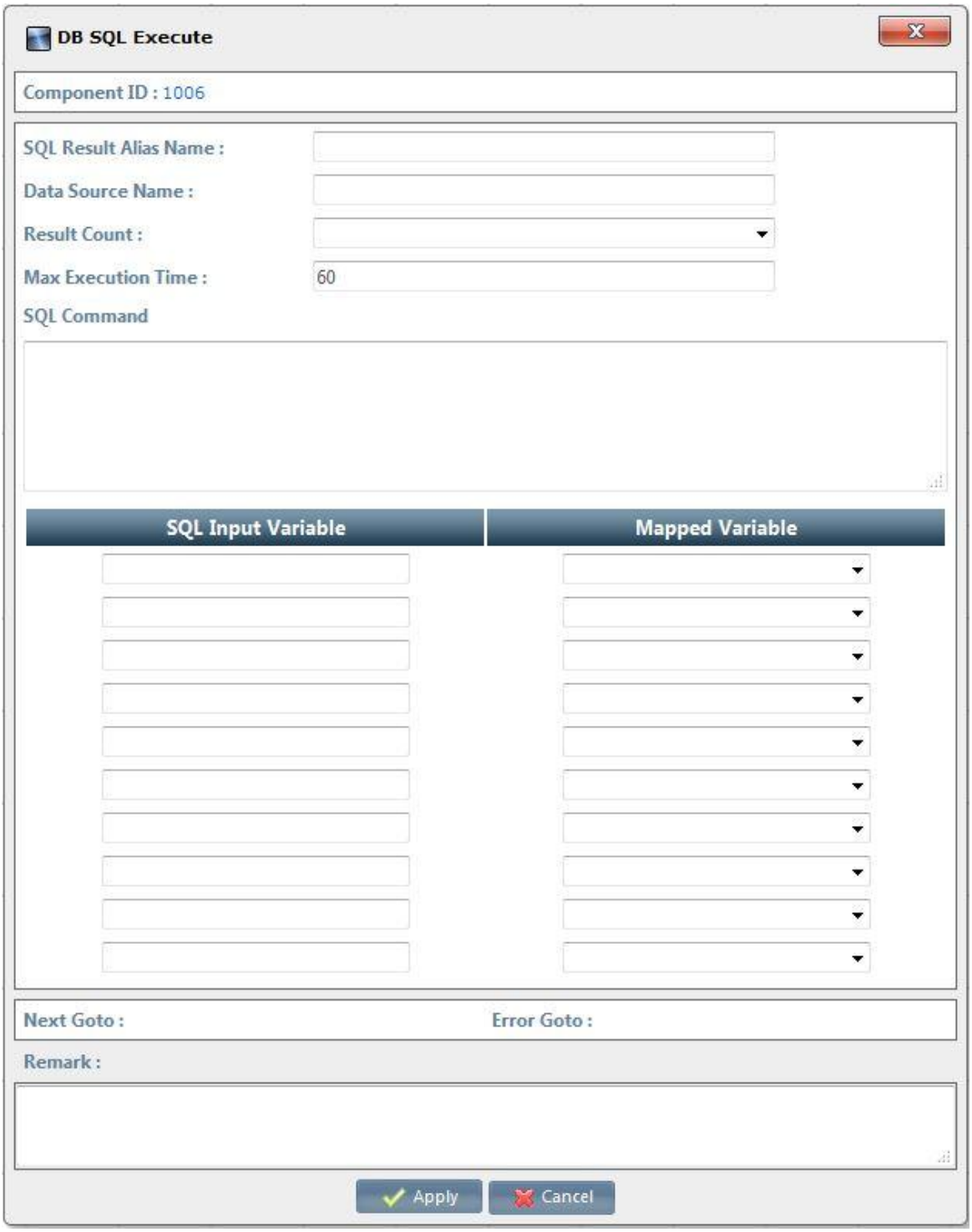
The detail of each parameter is described as below:

Parameter Name	Description
Data Source Name	The data source name in UNIX ODBC
Commit or Rollback	Whether this transaction is going to be committed or rolled back? Yes: Commit No: Rollback
Next Goto	The next component if DB transaction was started successfully
Error Goto	The next component if DB transaction was failed to start

2.3.1.7.5 SQL Exectute

This component is used to execute a SQL command. To bind your variable into SQL, you can use SQL input variable and mapped variable. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

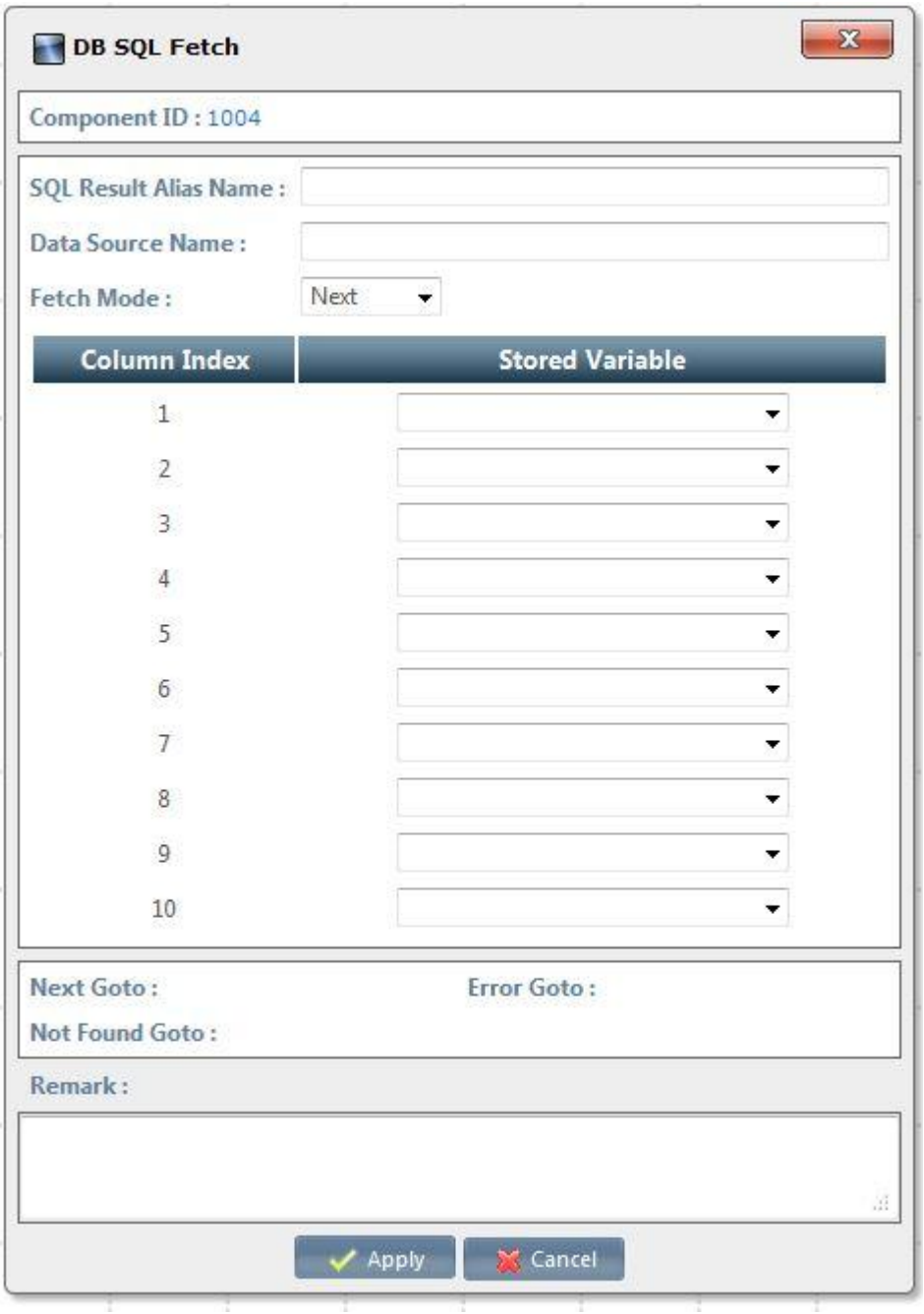
Parameter Name	Description

SQL Result Alias Name	If the SQL is a query SQL, this is the alias name to be used to store the SQL result. You can use SQL fetch to get the result by using this alias name.
Data Source Name	The data source name in UNIX ODBC
Result Count	The variable to store the result counter. If it is a query SQL, this is the number of records found. If it is a update or delete SQL, this is the number of records deleted or updated.
Max Execution Time	Max time to execute this SQL command
SQL Command	The SQL command to be executed
SQL Input Variable	This is the keyword to be replaced in the SQL URL. The system will look at the SQL URL and find those keywords (SQL Input Variable) and replace it by using the value of "Replaced Variable". This is useful to make the SQL URL based on your collected data.
Mapped Variable	This is the mapped variable which value will replace the corresponding keyword in SQL Input Variable.
Next Goto	If SQL command is executed successfully, this component will be followed.
Error Goto	If SQL command is failed to execute, this component will be followed.

2.3.1.7.6 SQL Fetch

This component is used to get a record from the result set of SQL. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
SQL Result Alias Name	This is the alias name from SQL execute.
Data Source Name	The data source name in UNIX ODBC

Fetch Mode	The retrieve mode to get the record from the result set
Column Index/Stored Variable	The variable to store the result for each column index
Next Goto	If result is fetched successfully, this component will be followed.
Error Goto	If result is failed to be fetched, this component will be followed.
Not Found Goto	If there is no data in this result set, this component will be followed

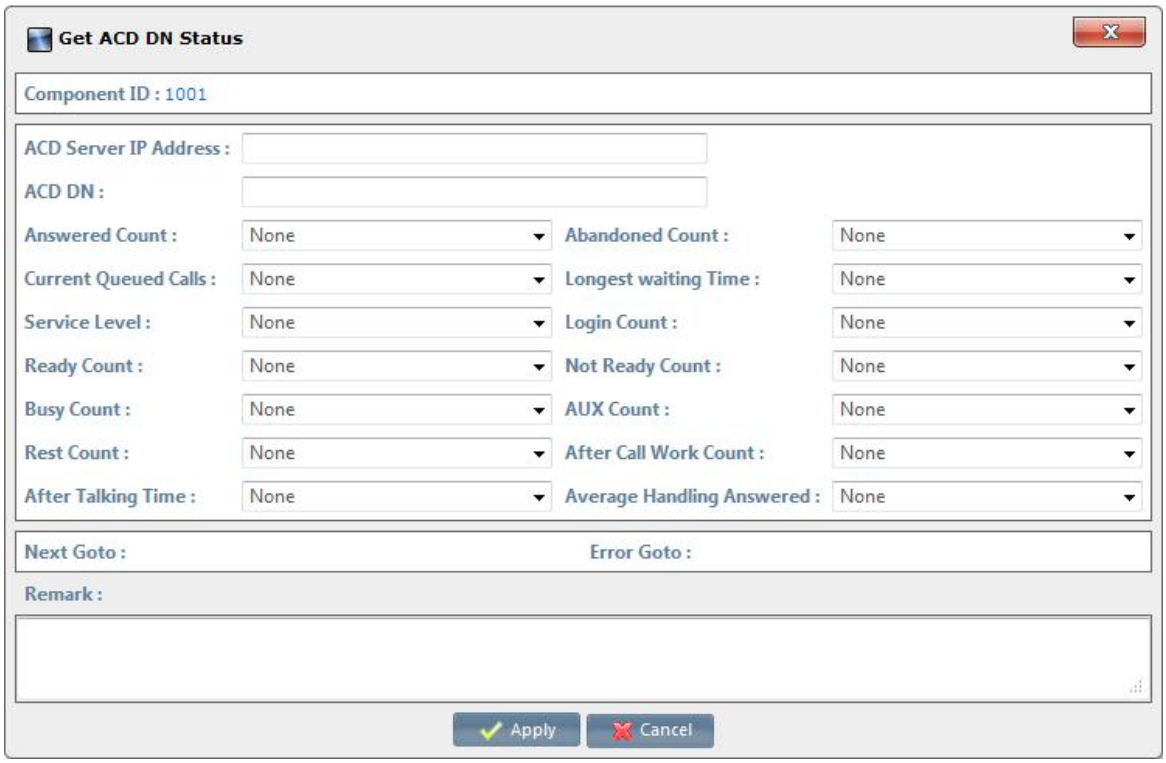
2.3.1.8 ACD Component

The General component contains the ACD related components. Click  as the following components will be display for your selection:

2.3.1.8.1 ACD-DN Status

This component is used to get the current ACD-DN status. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

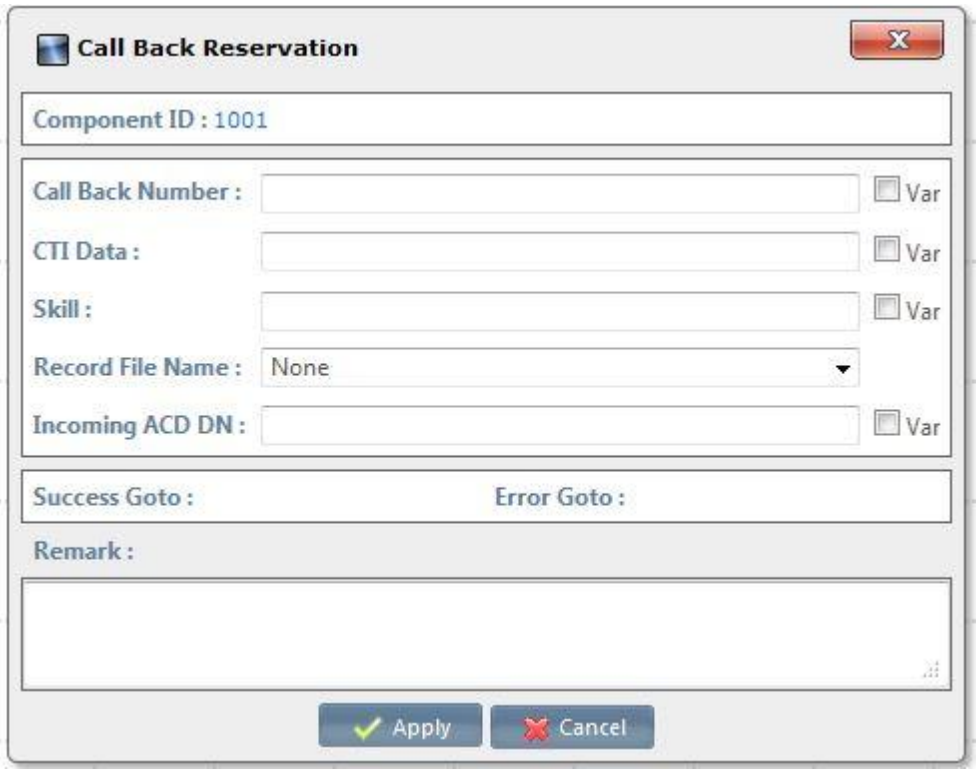
Parameter Name	Description
ACD Server IP Address	The ACD server IP address.
ACD DN	The ACD DN to be queried
Answered Count	The counter of answered calls
Abandoned Count	The counter of abandoned calls
Current Queued Calls	Number of calls currently in the queue
Longest Waiting Time	Longest waiting time of this ACD-DN
Service Level	The service level of this ACD-DN
Login Count	Number of agents login to the system
Ready Count	Number of agents in Ready state
Not Ready Count	Number of agents in Not Ready state

Busy Count	Number of agents in Busy state
AUX Count	Number of agents in AUX state
Rest Count	Number of agents in Rest state
After Call Work Count	Number of agents in After Call Work state
Average Talking Time	Average Agent Talking Time
Average Handling Time	Average Handling Time which include ACW and Talking Time.
Next Goto	The next component if ACD-DN Status was retrieved successfully.
Error Goto	The next component if failed to retrieve ACD-DN status from server

2.3.1.8.2 Call Back Reservation

This component is used to make a reservation of call back to ACD server. If IVR server is not running in the same server of ACD, you need have an ODBC connection setting in UNIX ODBC in order to access ACD database. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



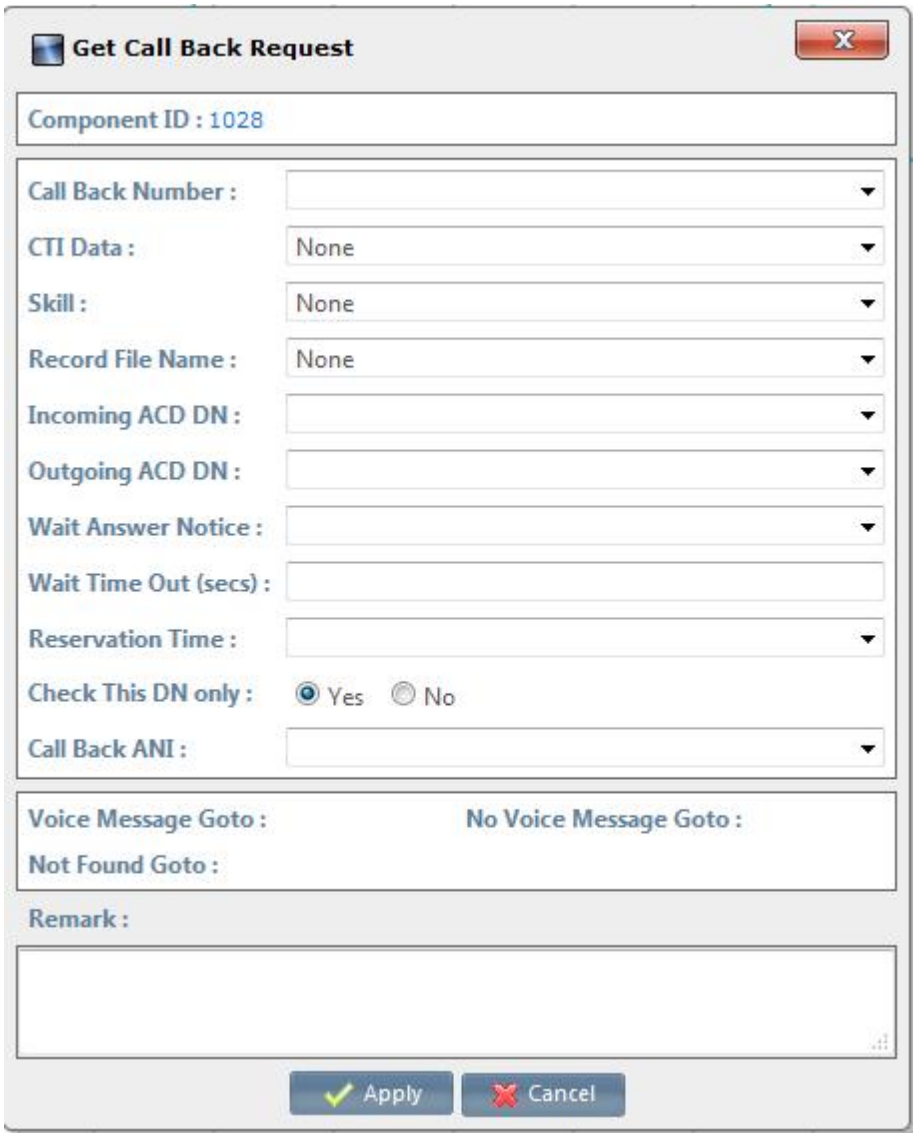
The detail of each parameter is described as below:

Parameter Name	Description
Call Back Number	The number to be called back
CTI Data	The CTI data will be used when call back (from Wait Incoming Call Skill Variable)
Skill	The Skill will be used when call back (from Wait Incoming Call Skill Variable)
Record File Name	The file name to record customer message which will be play back to agent if there is one.
Incoming ACD DN	The incoming ACD-DN (normally, it is coming from Wait Incoming Call Diversion Variable)
Success Goto	The next component if call back reservation was registered successfully.
Error Goto	The next component if failed to register this call back request to server

2.3.1.8.3 Get Call Back Request

This component is used to get a call back request from ACD server. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
Call Back Number	The variable to store the number to be called back

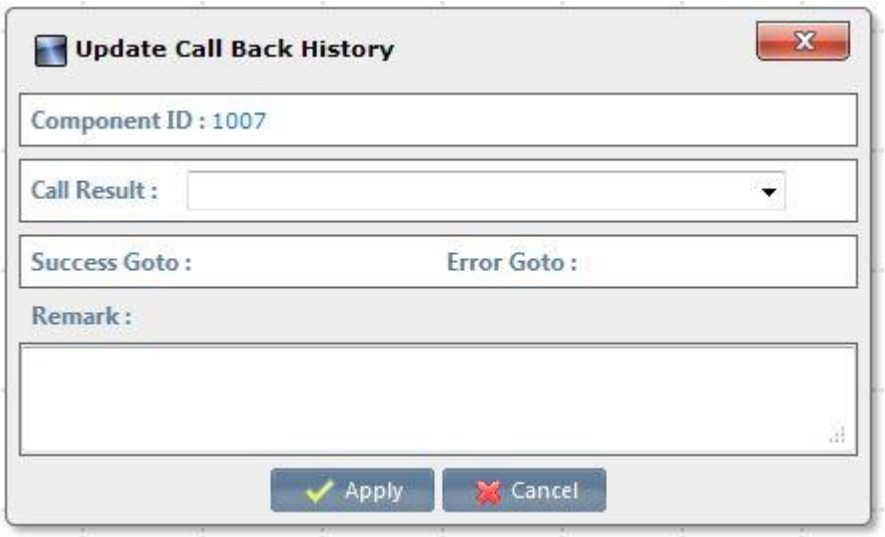
Parameter Name	Description
CTI Data	The variable to store the CTI data will be used when call back
Skill	The variable to store the Skill will be used when call back
Record File Name	The variable to store the file name of recorded customer message which will be play back to agent.
Incoming ACD DN	The variable to store the incoming ACD-DN
Outgoing ACD DN	The variable to store the outgoing ACD-DN to agents which handle the call back request
Wait Answer Notice	The variable to store that whether to wait answer notice when dialing out to customer or not? It need VOIP gateway to support this feature. Please contact FAE for detail.
Wait Time Out (secs)	The variable to store the waiting time for VOIP gateway to report the result of answering detect.
Reservation Time	The variable to store the time of reservation.
Check this DN only	When check this DN only is checked, the IVR will get this DN's call back request only. If it is not checked, all DN's call back request will.
Voice Message Goto	The next component if a call back request was found and it need leave customer voice message.
No Voice Message Goto	The next component if a call back request was found and it doesn't need leave customer voice message.
Not Found Goto	The next component if failed to get a call back request from server
Call Back ANI	The calling number (ANI) will be used for this call back service.

2.3.1.8.4 Update Call Back History

This component is used to update the current call back request to ACD server.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



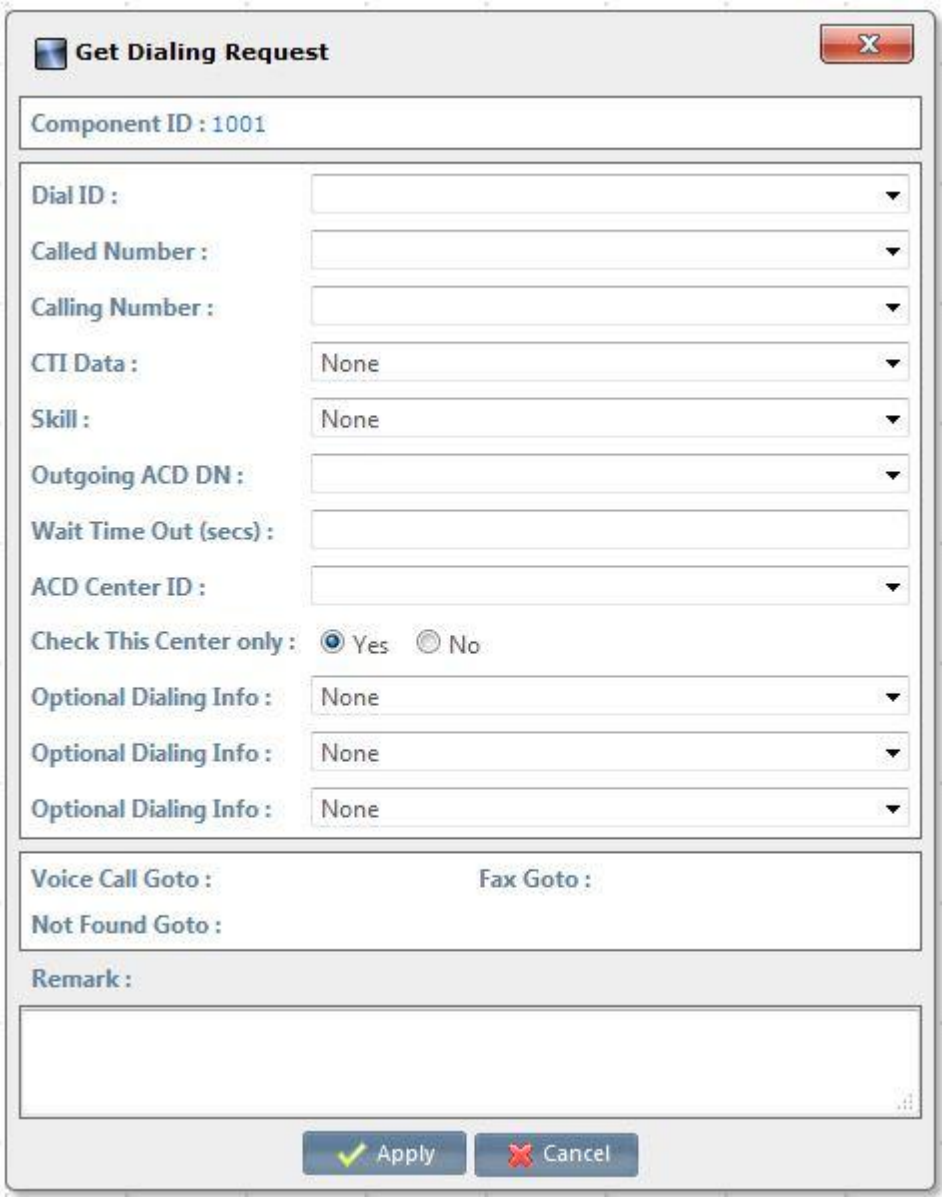
The detail of each parameter is described as below:

Parameter Name	Description
Call Result	The variable for the call result from Call Making component
Success Goto	The next component if update is success
Not Found Goto	The next component if failed to update

2.3.1.8.5 Get Dialing List

This component is used to get a call back request from IVR DB. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

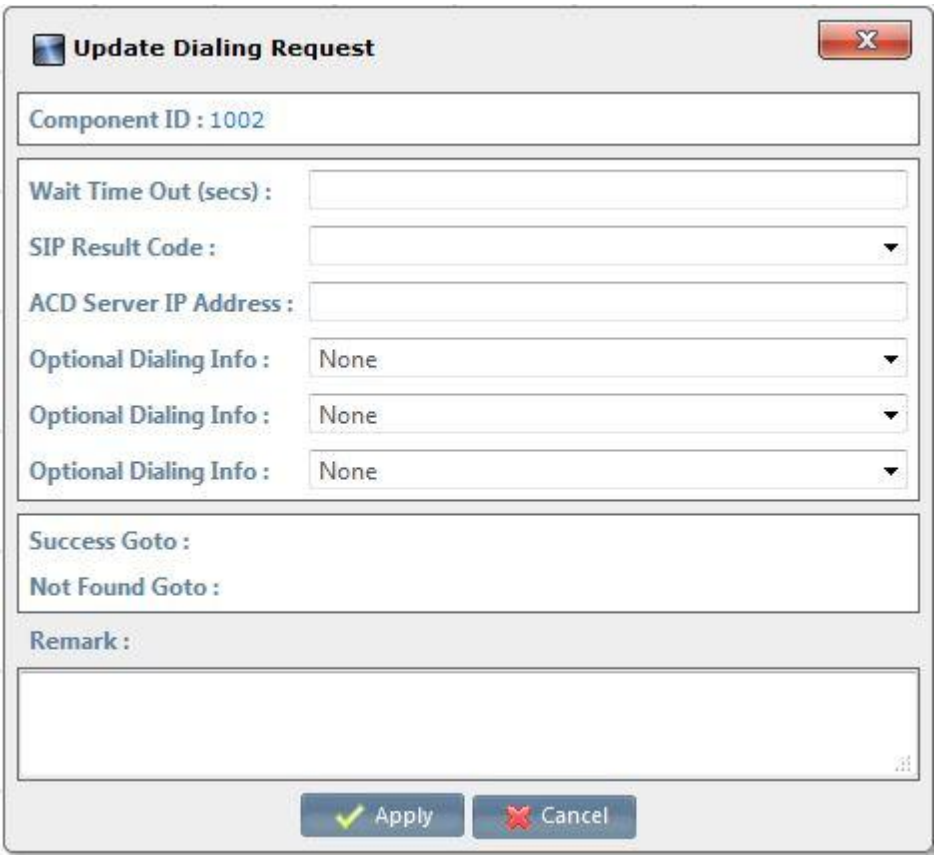
Parameter Name	Description
Dial ID	An unique ID for this dialing
Called Number	The number to be dialed
Calling Number	The calling number to be used
CTI Data	The variable to store the CTI data will be used when call back

Parameter Name	Description
Skill	The variable to store the Skill will be used when call back
Outgoing ACD DN	The variable to store the outgoing ACD-DN to agents which handle the dialing our request if this call required to transfer to agent.
Wait Answer Notice	The variable to store that whether to wait answer notice when dialing out to customer or not? It need VOIP gateway to support this feature. Please contact FAE for detail.
Wait Time Out (secs)	The variable to store the waiting time for VOIP gateway to report the result of answering detect.
ACD Center ID	This variable is for input (when Check this center only is checked) and output (when Check this center only is not checked).
Check this Center only	When check this center only is checked, the IVR will get this center's dialing list only. If it is not checked, Center ID filed will be ignored.
Optional Dialing Info	The variable to store the additional dialing information
Voice Call Goto	The next component if a dialing list was found and it is a voice call request
Fax Call Goto	The next component if a dialing list was found and it is a fax call request
Not Found Goto	The next component if failed to get a dialing list from server

2.3.1.8.6 Update Dialing List

This component is used to update the current dialing list result to IVR server. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



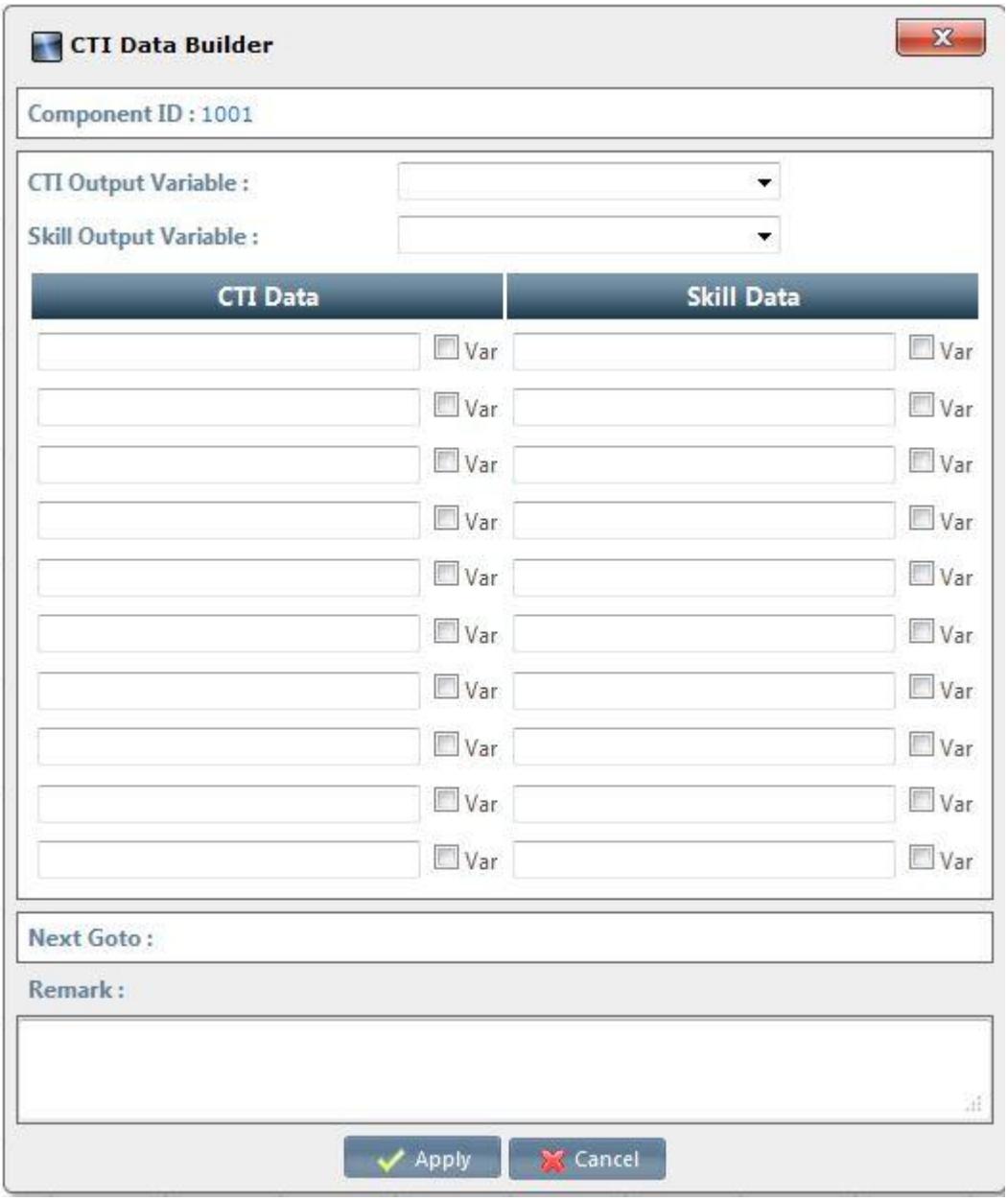
The detail of each parameter is described as below:

Parameter Name	Description
Wait Time Out (secs)	The time to wait the update result
SIP Result Code	The variable for the call result from Call Making component
ACD Server IP Address	The ACD Server IP address which is used to update ACD related call service information. It could be empty to ignore the updating if the customer is not using FAX calling out feature from ACD.
Optional Dialing Info	The variable to update the additional dialing information
Success Goto	The next component if update is success
Not Found Goto	The next component if failed to update

2.3.1.8.7 CTI Data Build

This component is used to build ACD required CTI or Skill data variable from input value or variable. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



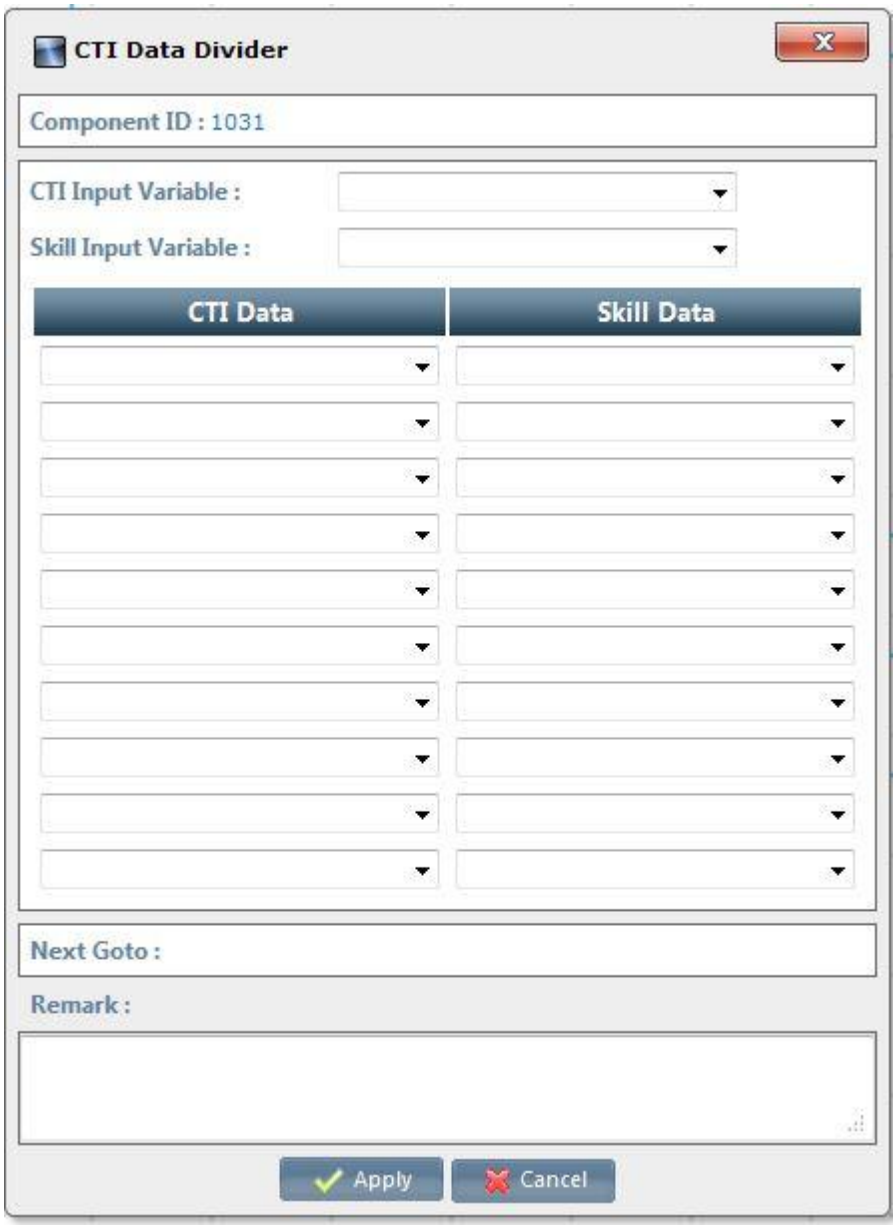
The detail of each parameter is described as below:

Parameter Name	Description
CTI Output Variable	Combined result of CTI data
Skill Output Variable	Combined result of Skill data
CTI Data	Up-to 10 variable or constant value can be added to CTI Output Variable.
Skill Data	Up-to 10 variable or constant value can be added to Skill Output Variable
Next Goto	The next component to be executed

2.3.1.8.8 CTI Data Divider

This component is used to divide received CTI data into individual CTI or Skill data variable. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



The detail of each parameter is described as below:

Parameter Name	Description
CTI Input Variable	Received CTI Data
Skill Input Variable	Received Skill data
CTI Data	Up-to 10 variable can be used to store individual data from received CTI data

Parameter Name	Description
Skill Data	Up-to 10 variable can be used to store individual data from received Skill data
Next Goto	The next component to be executed

2.3.1.8.9 CTI Agent Listen Control

This component is used to control the CTI agent can hear the voice played by IVR or not. It can be only working with our own ACD server and only when agent use ACD command to transfer to IVR for some automatic service.. It is useful when IVR is playing the ID or password and would like to make the Agent to hear it. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
Mute IVR	Yes: Agent will not able to hear the voice played by IVR (mute) No: Agent will able to hear the voice played by IVR (unmute)
Next Goto	The next component to be executed if succeed

Parameter Name	Description
Error Goto	The next component to be executed if an error is occurred.

2.3.1.8.10 CTI Data Update

This component is used to update ACD CTI attached data for future usage. It can be only working with our own ACD server and only when agent use ACD command to transfer to IVR for some automatic service. It is useful when IVR need update CTI data to agent when it collected some new information. After this component, Agent Desktop will receive "CTI Data Changed Event (9005)" event to tell new CTI data.

Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
CTI Attached Data	The new CTI attached data will be replaced.
Next Goto	The next component to be executed if succeed
Error Goto	The next component to be executed if an error is occurred.

2.3.1.8.11 ACD File Generator

This component is used generate a file name which comply with ACD multi-media request for such as FAX or voice message service. The generated file name could be used to be the file name of receiving fax or voice recording name. After the fax file or voice file was received, the call flow should use ACD multimedia request component to put this file into ACD server and dispatch to agent to service. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:

The detail of each parameter is described as below:

Parameter Name	Description
File Name Type	The file type for generated file name. FAX Message: xxxxxx.tiff will be generated Voice Message: xxxx.wav will be generated The generated file name will be like yyyymmddhhmmss-xxxxxxxx.tiff (for fax message), yyyymmddhhmmss-xxxxxxxx.wav (for wav). xxxxxxx is an random number for make it unique.

Parameter Name	Description
Directory Prefix:	The stored file directory value or variable under system user data ($IVR/userdata). To make it work, the directory need able to be accessed by both IVR and ACD server. It is recommended to use an link (if it is in the same machine) or NFS when both server are not in the same server.
ACD Center ID	The ACD Center ID for this file.
Directory Stored Variable	The output variable to be used as a directory variable in recording or fax receiving components.
File Name Stored Variable	The output variable to be used as a file name variable in recording or fax receiving components.
Next Goto	The next component to be executed if succeed

Example:
Input Information:
File Name Type: Fax Message
Directory Prefix: faxdata
ACD Center ID: center99
Current Date Time: 2014/06/27 10:20:30

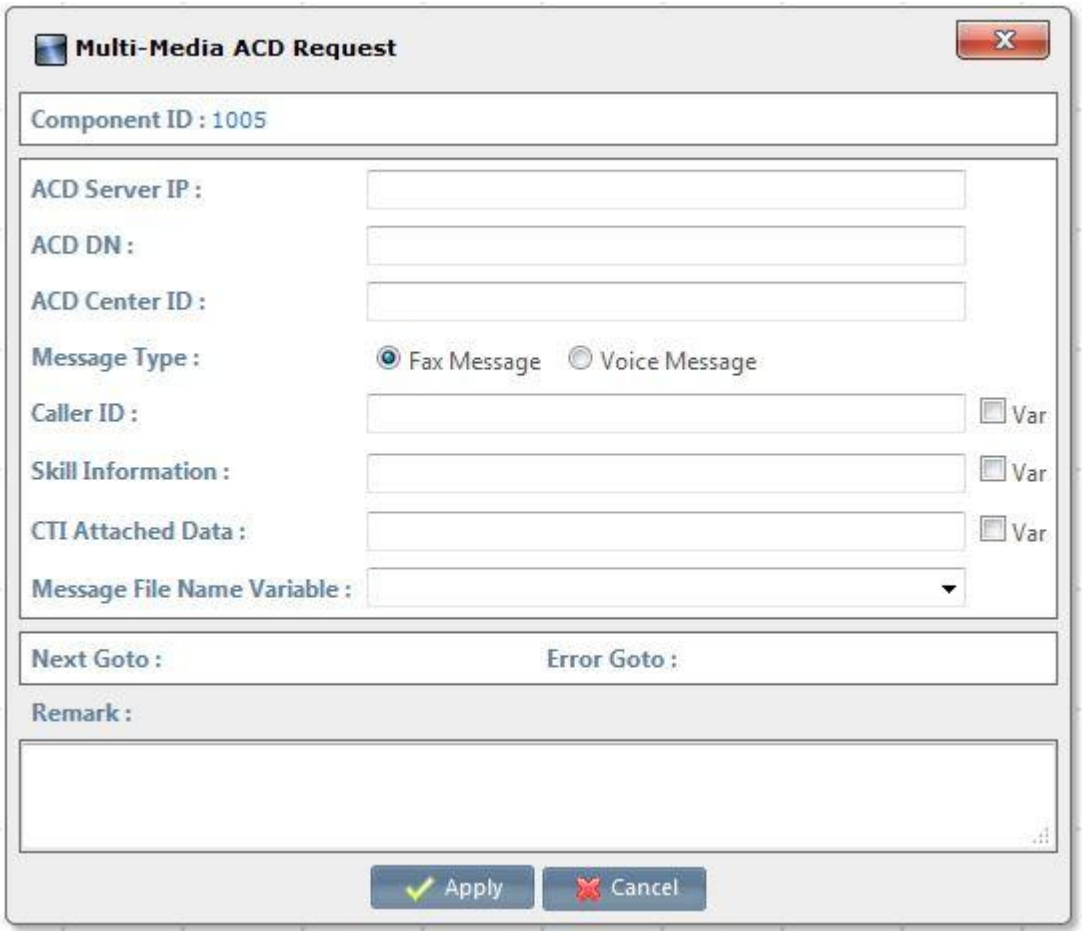
Output variable:
Directory Stored Variable: faxdata/center99/201406/27
File Name Stored Variable: 20140627102030-7F2A33.tiff

When this is used by the recording or fax receiving, the system will create the corresponding directory automatically.

2.3.1.8.12 ACD Multimedia Request

This component is to be used for making the recorded voice message or fax message become a ACD service request. It can only be working with our own ACD server. There are some integration requirements to make both IVR and ACD sharing the same directory. Please contact technical support. Click 

and drag it into your call flow. Right click the component and the properties will be display as follows:



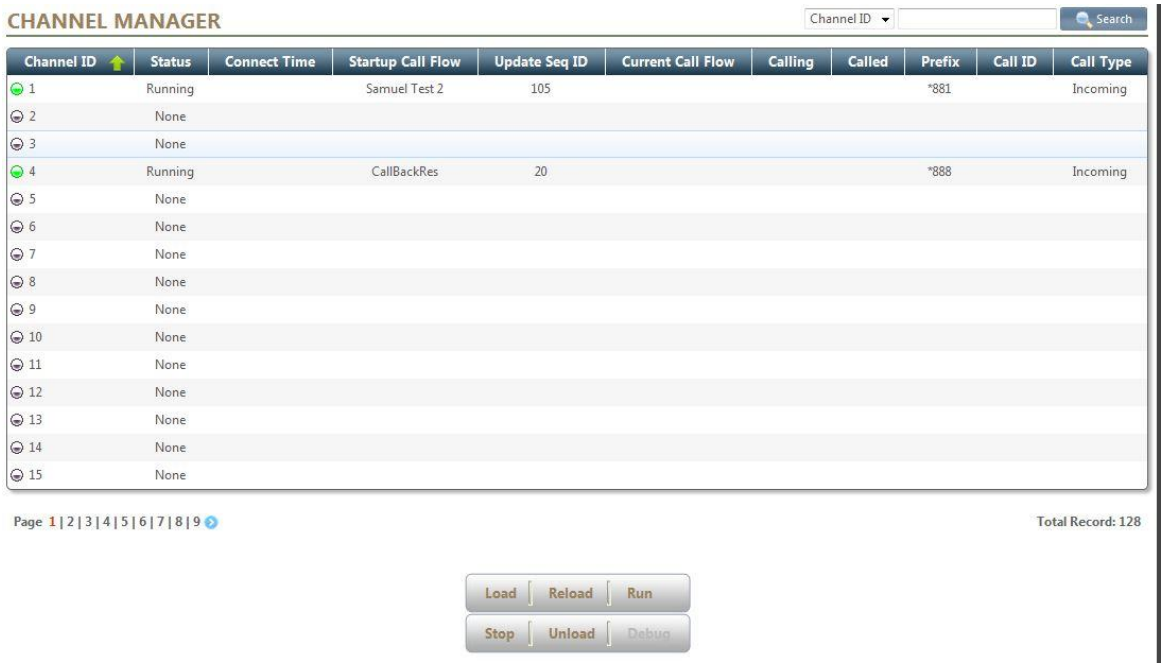
The detail of each parameter is described as below:

Parameter Name	Description
ACD Server IP	The ACD server IP address
ACD DN	The ACD DN will be dispatched to for this voice/fax message.
ACD Center ID	Center ID from ACD server
Message Type	Fax message: By using fax receive Voice message: By using voice message
Caller ID	Calling party number for identifying the caller.
Skill Information	Skill ID list separated by a comma (if multiple skill is required)

Parameter Name	Description
CTI Attached Data	CTI attached data separated by a comma (if multiple CTI data is required)
Message File Name Variable	The message file name variable getting from ACD Multimedia Request.
Next Goto	The next component to be executed if succeed
Error Goto	The next component to be executed if an error is occurred.

2.3.2 Channel Manager

Channel Manager is to be used manager each IVR channels. you can load, unload, run, stop or debug 1 or more channels by selecting them. Click CALL FLOW -> Channel Manager and the following will appear:

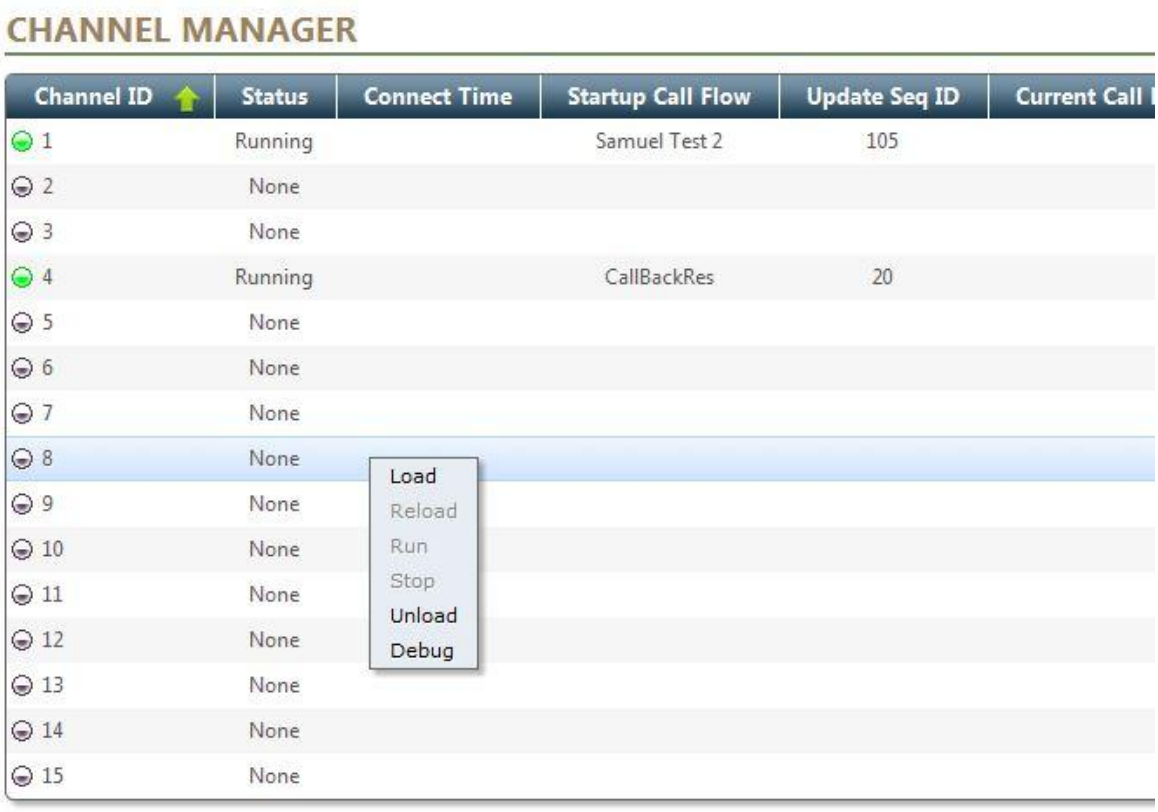


The detail of each column is described as below:

Parameter Name	Description
Channel ID	The IVR channel ID

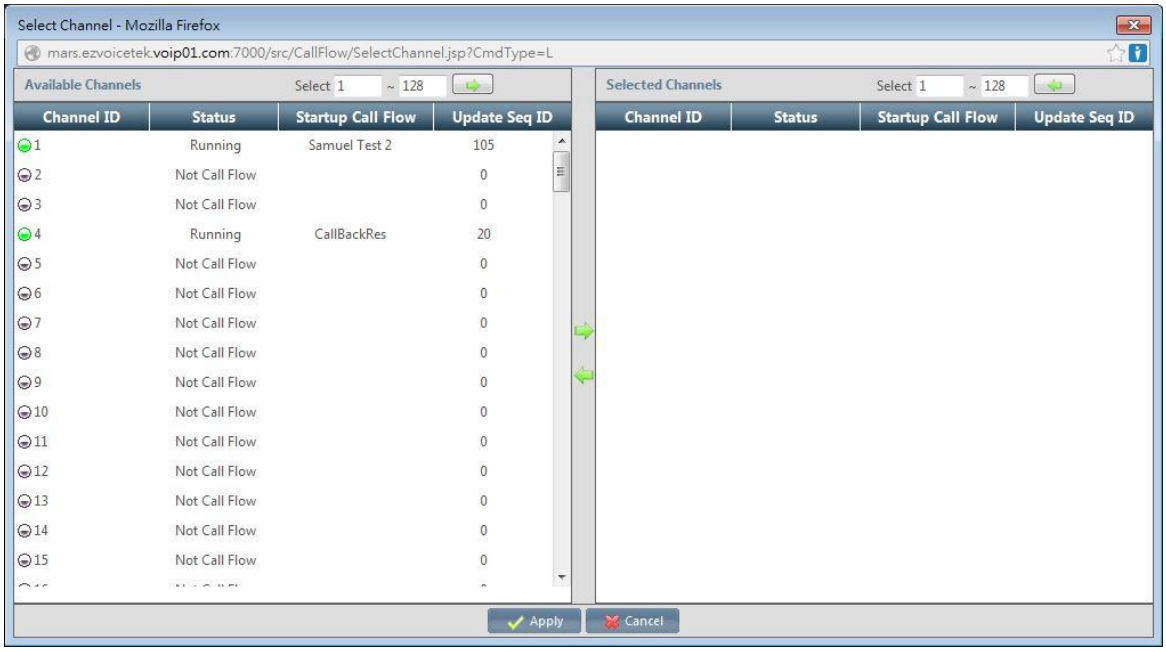
Parameter Name	Description
Status	The current status of this channel
Connect Time	The call connected time
Startup Call Flow	The start-up call flow name
Update Seq ID	The Start Call Flow's update seq ID
Current Call Flow	The current call flow which could be start-up call flow or sub flow.
Calling	The calling party number
Called	The called party number
Prefix	This is the incoming call prefix need to be matched. Only available when Call Type is incoming call.
Call ID	SIP Call ID
Call Type	This field indicate the call flow type is incoming call or outgoing call.

Select one or more channel ID and right click, the following will appear:

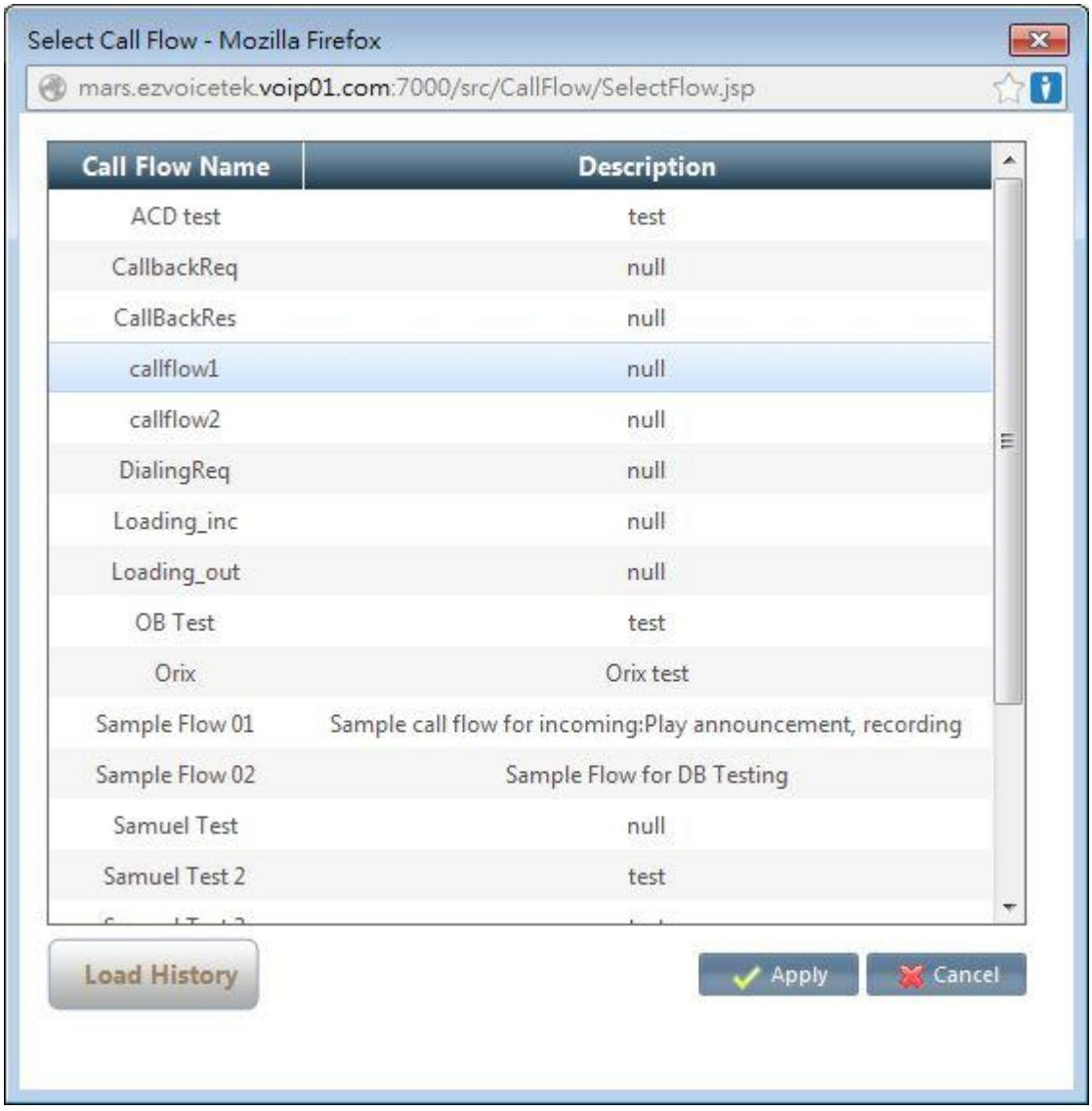


You can do the load, reload, run, stop, unload or debug for this channel.

The following button is used to handle multiple channels as follows. Click load, unload or run button and the following will appear:



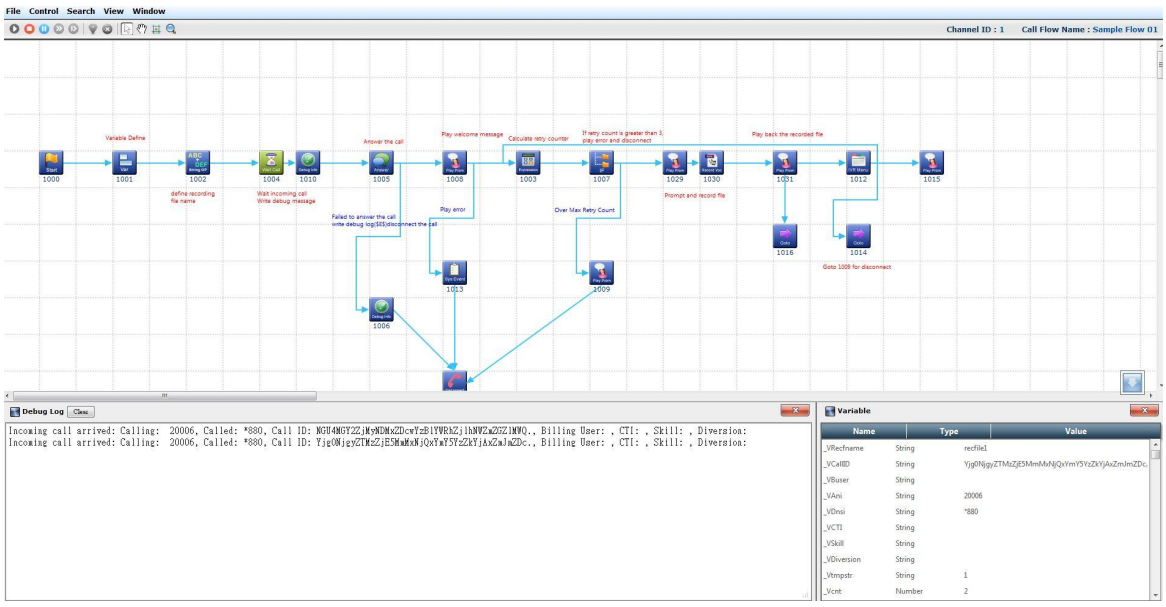
Select those channels to right windows and click Apply. The following will appear:



Select the call flow to apply to those channels and click Apply.

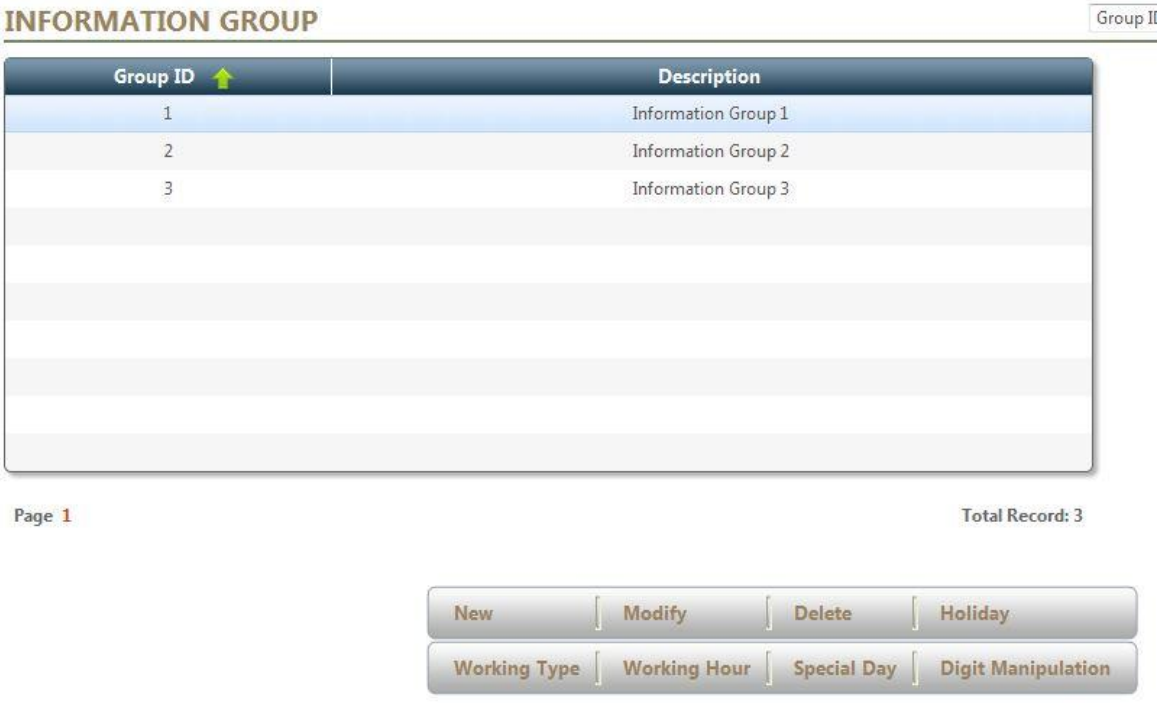
2.3.2.1 Debug a Channel

To debug a channel, right click and select debug in the channel manager and the following will appear. You can see the current component running, variable value and debug message as follows:

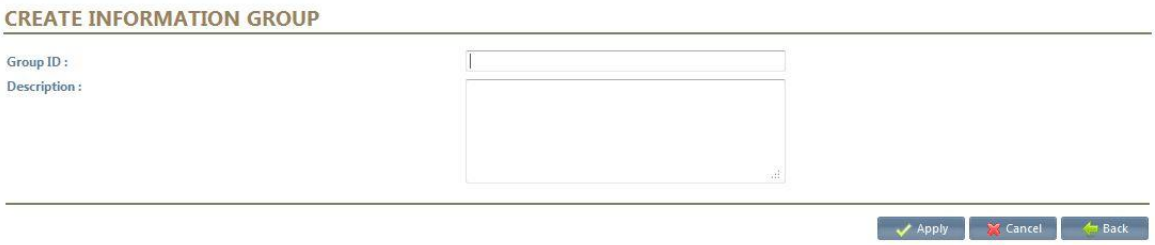


2.3.3 Information Group

Information Group is used to associated into a call flow. Multiple call flow can use same information group if need. Each information group contains holiday, working hour and digit manipulation information. Click CALL FLOW -> Information Group and the following will appear:



Click New to create an information group as follows:

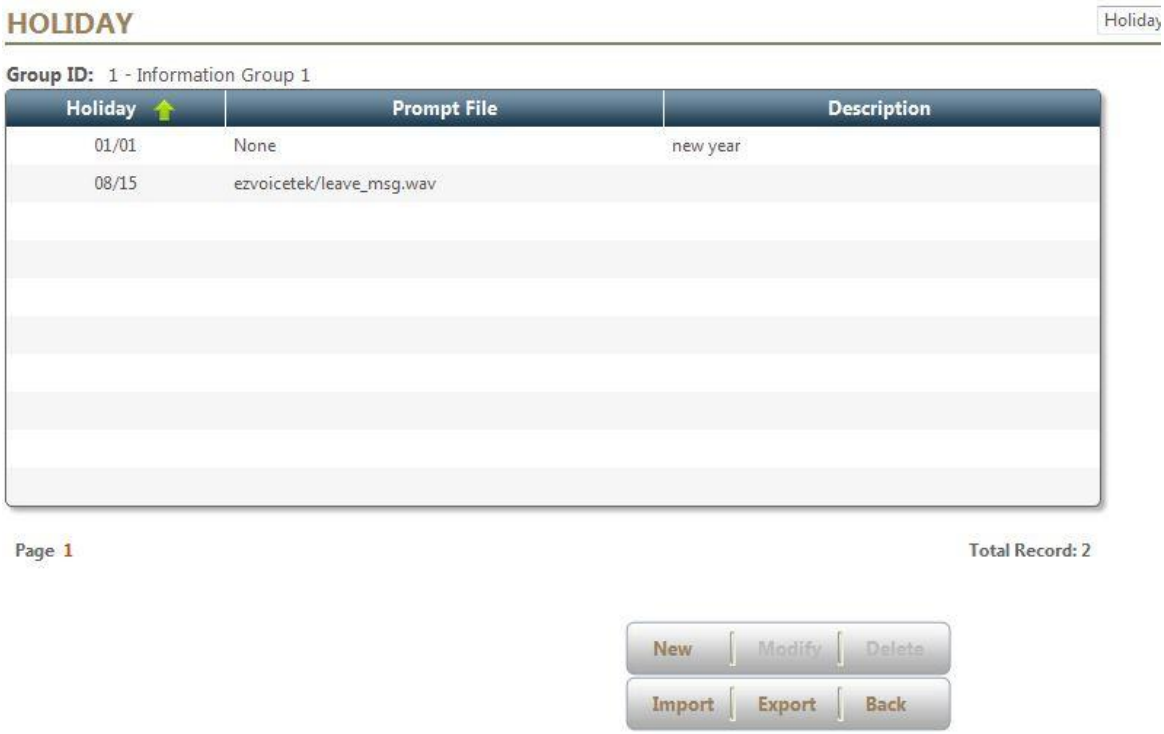


The detail of each parameter is described as below:

Parameter Name	Description
Group ID	The ID of information group
Description	The description of this information group

2.3.3.1 Holiday

Click Holiday for an information group, the following will appear:



Click New to add a new holiday into this information group and the following will

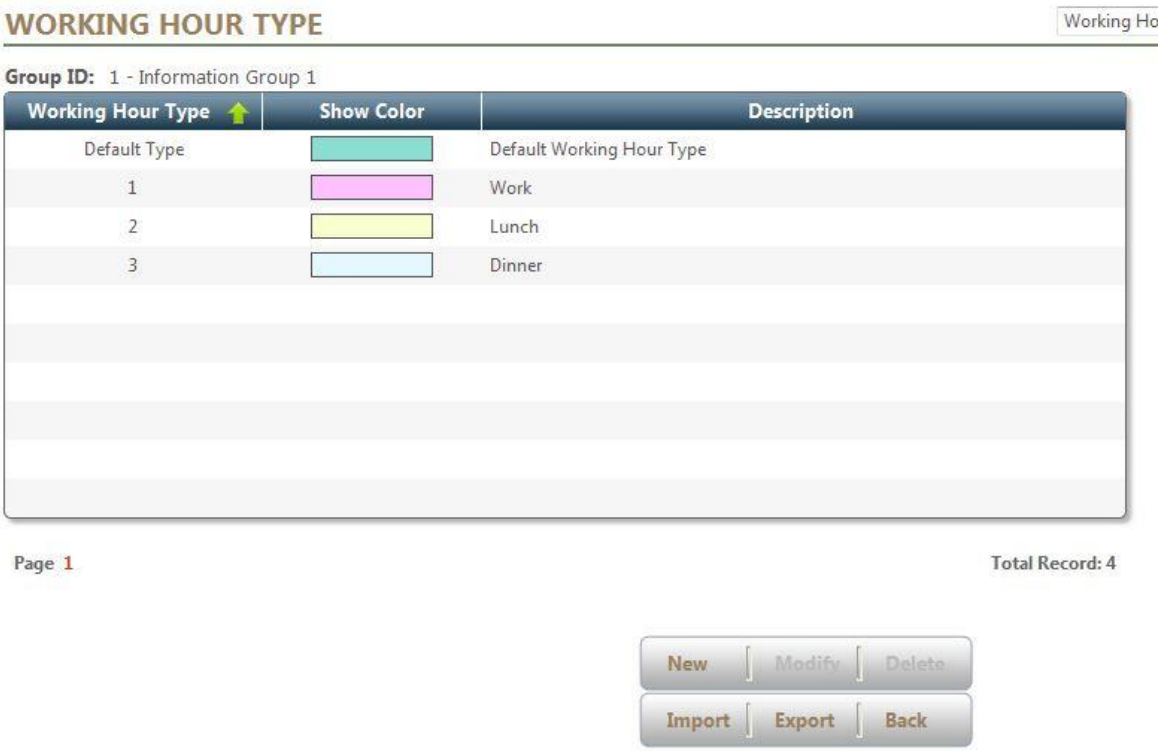
appear:

The detail of each parameter is described as below:

Parameter Name	Description
Group ID	The ID of information group
Holiday	The holiday will be inserted
Prompt File	This is the prompt for this holiday and it can be retrieved by IVR for playing back in call flow.
Description	The description of this holiday

2.3.3.2 Working Hour Type

You can define working type for this information group which will be used for working hour settings. In you call flow, you can retrieve this working type to have different call scenario.



Click New to add a new working hour type into this information group and the following will appear:

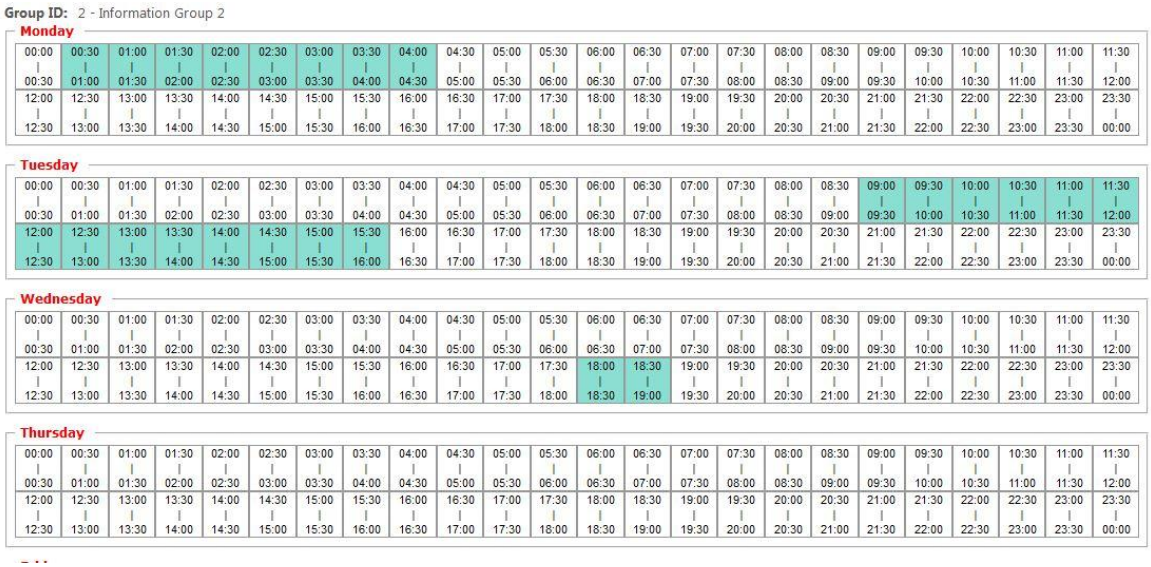
The detail of each parameter is described as below:

Parameter Name	Description
Group ID	The ID of information group
Working Hour Type	The working hour type definition which can be retrieved by IVR for play different voice prompt. It

Parameter Name	Description
	could be lunch, tea, breakfast etc.
Display Color	The color will be display for this working hour type
Description	The description of this working hour type

2.3.3.3 Working Hour

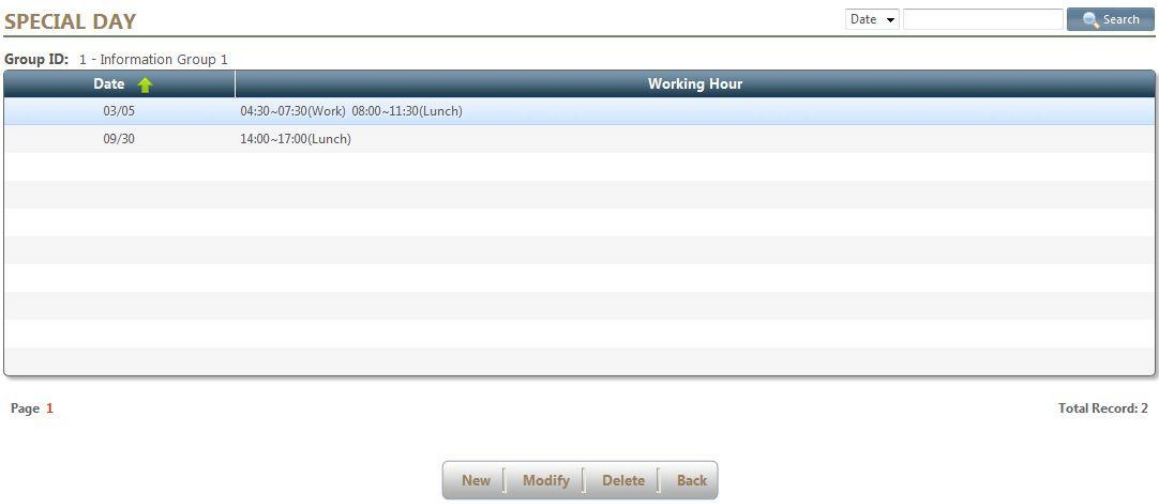
Click Working Hour for an information group, the following will appear:



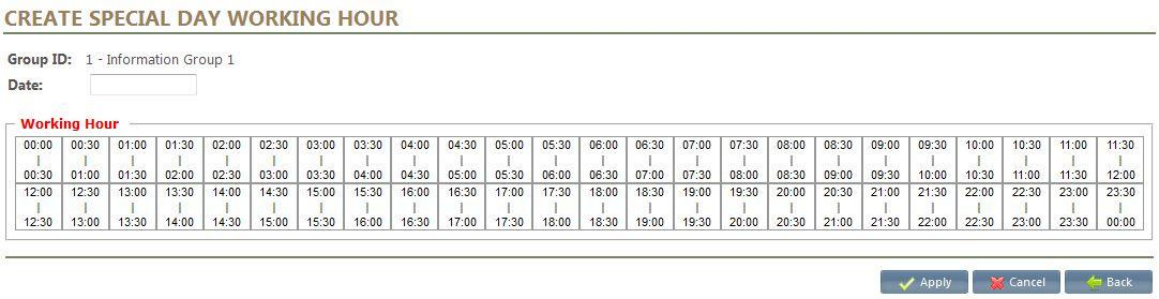
Click the period you would like to make it as a working hour by selecting different working hour type. The different color indicate different working hour type based on you settings.

2.3.3.4 Special Day

The special day is a day which had a special working settings. Click Special Day for an information group, the following will appear:



Click New to add a new special day into this information group and the following will appear:

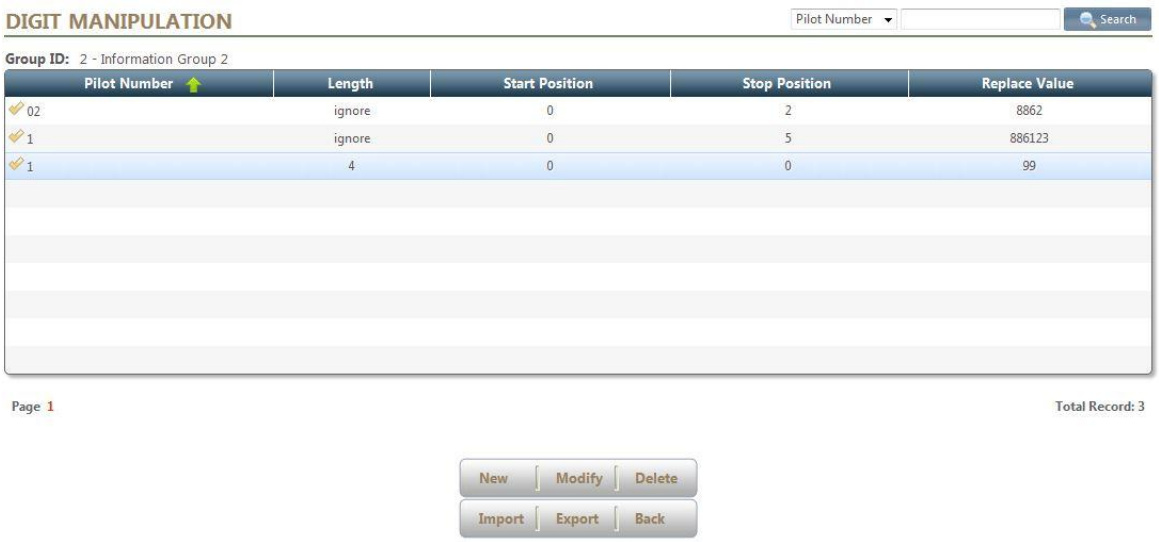


The detail of each parameter is described as below:

Parameter Name	Description
Group ID	The ID of information group
Date	The special date
Working Hour	Click the period you would like to make it as a working hour by selecting different working hour type. The different color indicate different working hour type based on you settings.

2.3.3.5 Digit Manipulation

Click Digit Manipulation for an information group, the following will appear:



Click New to add a new Digit Manipulation rule into this information group and the following will appear:

The detail of each parameter is described as below:

Parameter Name	Description
Group ID	The ID of information group
Mode	Whether enable or disable this rule?
Pilot Number	The leading number (prefix) to be matched
Length	The incoming number requires to have the same length in order to enable this digit manipulation rule.

Parameter Name	Description
	Click "ignore" to ignore the length matching.
Start Position	The start position to be replaced. Before the first digit, the position is 0. Between digit 1 and digit 2, the position is 1 and so on. If the position is greater than the digit length, it indicates after last digit.
Stop Position	The stop position to be replaced. Before the first digit, the position is 0. Between digit 1 and digit 2, the position is 1 and so on. If the position is greater than the digit length, it indicates after last digit.
Replace Value	The value to be placed after remove the digit in between start and stop position. You can keep it empty if only required to delete those digits in between start and stop. The following are the examples of the DM rule: Number to be DM: 1234567, Start position: 0, stop position: 0, Replaced value: "002", DM result: 0021234567. Number to be DM: 1234567, start position: 2, stop position: 6, replaced value: "002", DM result:120027 Number to be DM: 1234567, start position: 24, stop position: 24, replace value: "002", DM result: 1234567002. Number to be DM: 1234567, start position: 1, stop position: 2, replaced value: "", DM result:134567.

2.3.4 Prompt/Fax Manager

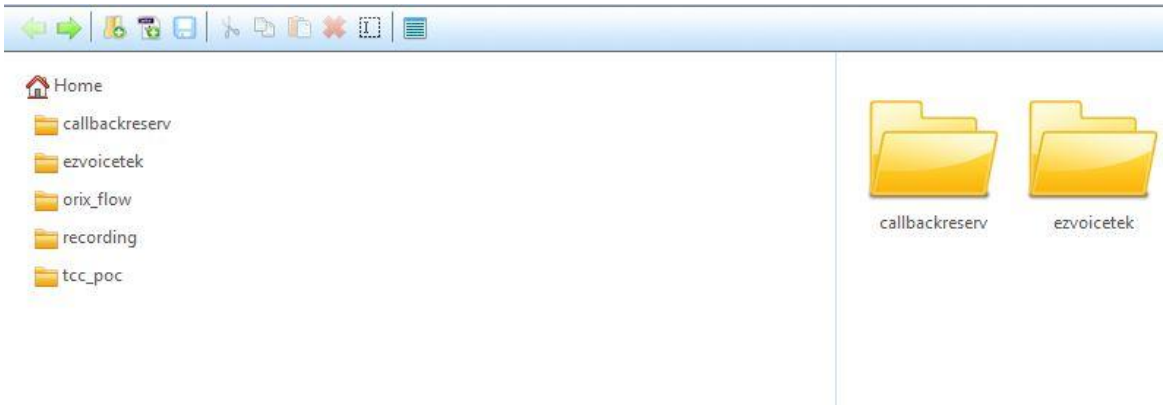
Click CALL FLOW -> Prompt/Fax Manager (if fax license is grated) or CALL FLOW -> Prompt Manager (without fax license) and you will able to manage your prompt or fax file by using web GUI.

The supported voice prompt file format is:
- 8K Sample Rate
- 16 bits
- Linear PCM (signed)
- Mono
- Wav format

The supported fax file format are pdf and tiff. The system will automatically convert

the received pdf or tiff into standard format for fax system. It might take longer time if the input file has multiple pages.

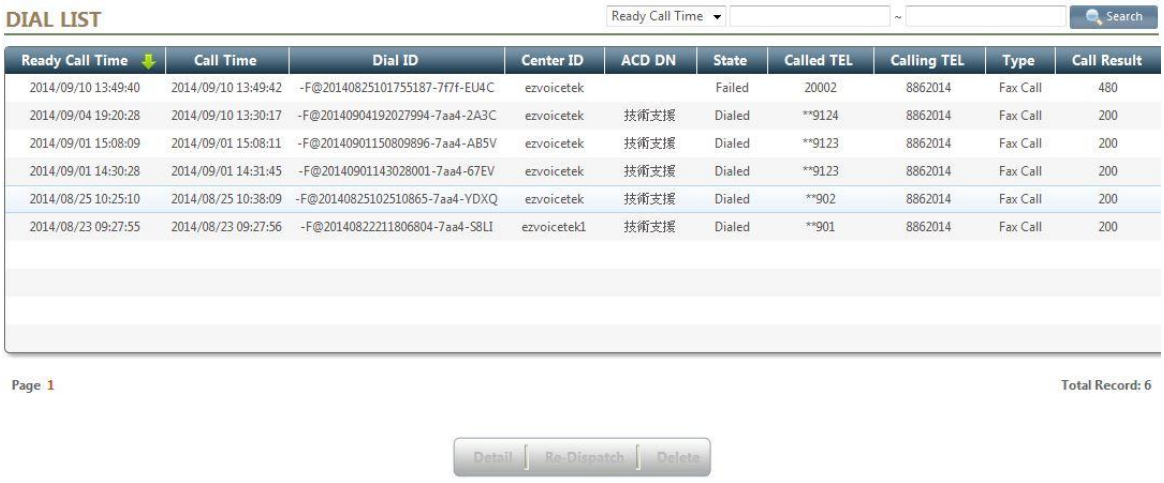
The manager is an explore like manager as follows:



You can create directory, upload, download, delete or rename the file etc. by using the prompt manager icon.

2.3.5 Dial List

Dialing List is used to check and verify the dialing request from web, ACD or external system. For example, a FAX request could be issued from ACD and the administrator can check the integration from Dial List. Click Call Flow -> Dial List and the following will appear:



Ready Call Time	Call Time	Dial ID	Center ID	ACD DN	State	Called TEL	Calling TEL	Type	Call Result
2014/09/10 13:49:40	2014/09/10 13:49:42	-F@20140825101755187-7f7f-EU4C	ezvoicetek		Failed	20002	8862014	Fax Call	480
2014/09/04 19:20:28	2014/09/10 13:30:17	-F@20140904192027994-7aa4-2A3C	ezvoicetek	技術支援	Dialed	**9124	8862014	Fax Call	200
2014/09/01 15:08:09	2014/09/01 15:08:11	-F@20140901150809896-7aa4-AB5V	ezvoicetek	技術支援	Dialed	**9123	8862014	Fax Call	200
2014/09/01 14:30:28	2014/09/01 14:31:45	-F@20140901143028001-7aa4-67EV	ezvoicetek	技術支援	Dialed	**9123	8862014	Fax Call	200
2014/08/25 10:25:10	2014/08/25 10:38:09	-F@20140825102510865-7aa4-YDXQ	ezvoicetek	技術支援	Dialed	**902	8862014	Fax Call	200
2014/08/23 09:27:55	2014/08/23 09:27:56	-F@20140822211806804-7aa4-S8LI	ezvoicetek1	技術支援	Dialed	**901	8862014	Fax Call	200

The detail of each parameter is described as below:

Parameter Name	Description
Ready Call Time	Targeted time to be used for dialing
Call Time	Last Calling Time
Dial ID	Unique dialing reference ID
Center ID	If it is coming from ACD, this is requested Center ID
ACD DN	If it is coming from ACD, this is requested ACD DN
State	Current dialing state which includes: 0: Wait To Dial 1: Dispatched 2: Dialed 3: Failed
Called TEL	Called Number
Calling TEL	Calling Number (ANI)
Type	Call type: FAX: It is a fax call Voice: It is a voice call
Call Result	Latest SIP Call Result
Reference ID	Reference ID which can be used to be referred to ACD or external system
Last Retry Count	Last Retry Counter
Max Retry Count	Max Retry for this dialing request
Retry Interval (Seconds)	Retry Interval in Seconds
CTI Data	CTI Data for this call
Skill Info	Skill Information for this dialing
Dial Info 1-3	Private Dialing Information for this dialing which could be used for dialing parameters

Click Detail and the following will appear:

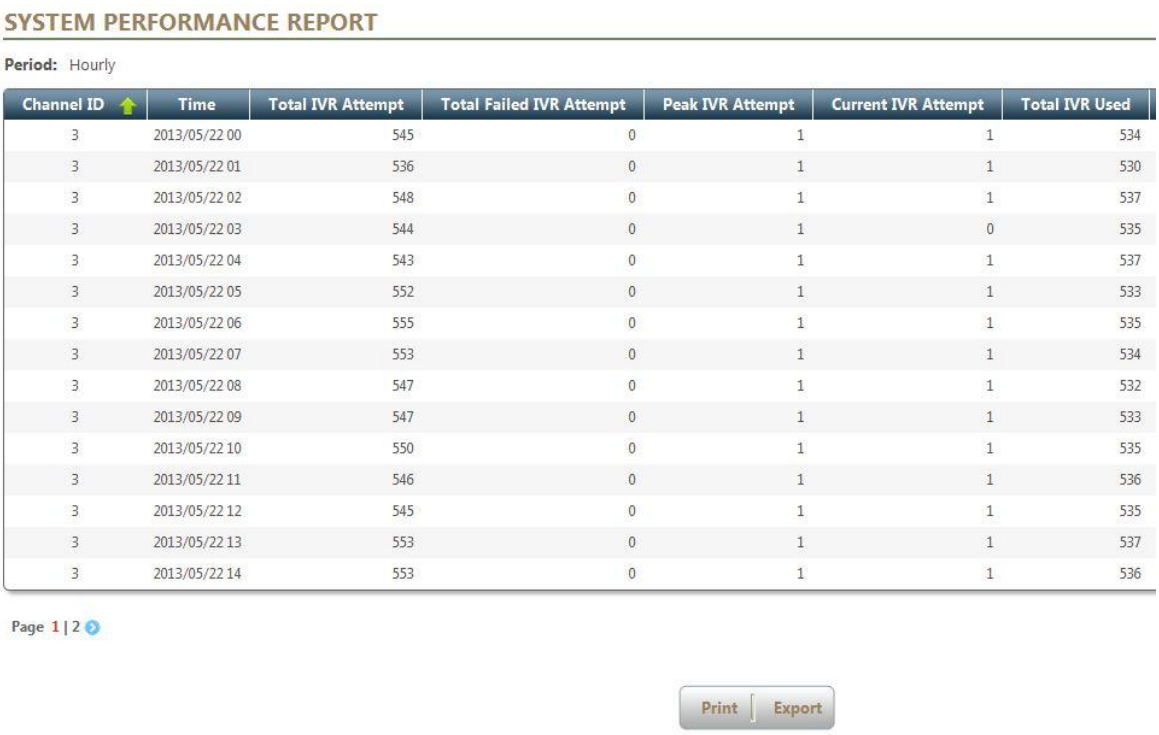
Click Re-Dispatch to request IVR to dial again.
Click Delete to remove this dialing request.

2.4 Report

The system provides system statistic, system alerting, call flow wide alert and debug reports for management purpose.

2.4.1 System Performance Report

The system provides hourly or daily performance report for each IVR channels. Click REPORT -> System Performance Report and the following will appear:



SYSTEM PERFORMANCE REPORT

Period: Hourly

Channel ID	Time	Total IVR Attempt	Total Failed IVR Attempt	Peak IVR Attempt	Current IVR Attempt	Total IVR Used
3	2013/05/22 00	545	0	1	1	534
3	2013/05/22 01	536	0	1	1	530
3	2013/05/22 02	548	0	1	1	537
3	2013/05/22 03	544	0	1	0	535
3	2013/05/22 04	543	0	1	1	537
3	2013/05/22 05	552	0	1	1	533
3	2013/05/22 06	555	0	1	1	535
3	2013/05/22 07	553	0	1	1	534
3	2013/05/22 08	547	0	1	1	532
3	2013/05/22 09	547	0	1	1	533
3	2013/05/22 10	550	0	1	1	535
3	2013/05/22 11	546	0	1	1	536
3	2013/05/22 12	545	0	1	1	535
3	2013/05/22 13	553	0	1	1	537
3	2013/05/22 14	553	0	1	1	536

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Print | Export

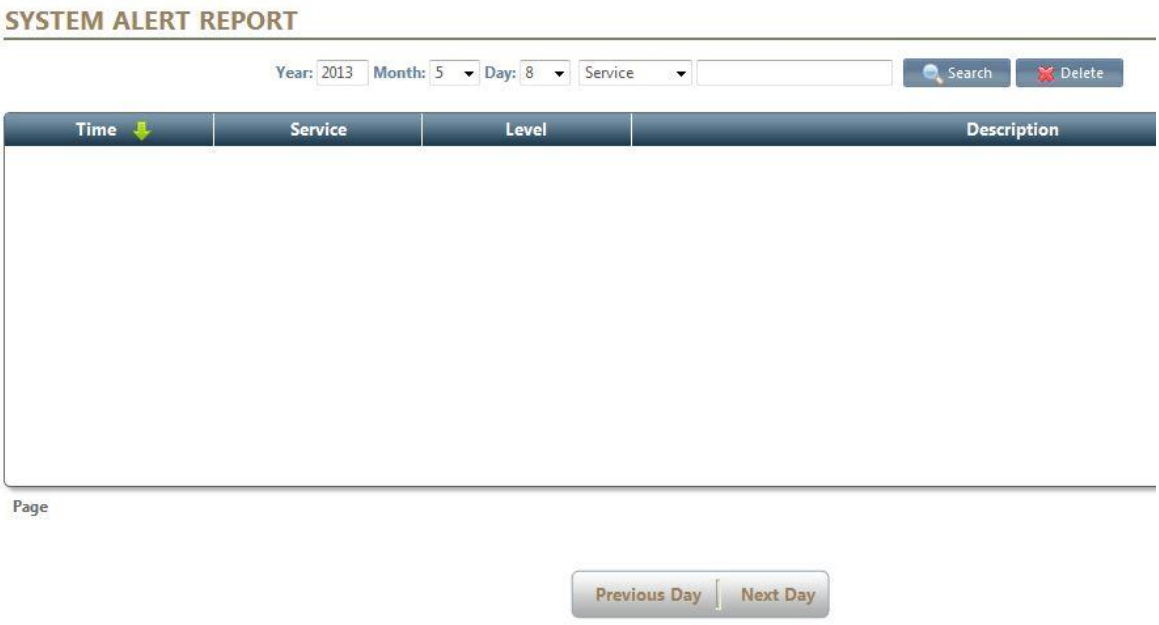
The detail of each report field is described as follows:

Field Name	Description
Channel ID	IVR channel ID. Channel 0 indicate whole system wide statistic. And call flow based Peak Failure IVR attempt can be found on Call Flow's lowest running channel for diagnostic purpose. For example, call flow A is running on the channels 7,8,9,10. The call flow A's statistic will be summarized at channel 7.
Time	The statistic time
Total IVR Attempt	Total IVR call attempts during this period
Total Failed IVR Attempt	Total IVR call attempts which is not answered or failure during this period. The lowest running channel for the same call flow will summaries the total failed IVR attempt for administrator to see if the call flow's running channel need increase or not.
Peak IVR Attempt	Peak IVR call attempts
Current IVR Attempt	Current IVR call attempts
Total IVR Used	Total IVR serviced during this period

Field Name	Description
Peak IVR Used	Peak IVR used
Current IVR Used	Current IVR used
Total IVR Service Time	Total IVR service time during this period
Longest IVR Service Time	Longest IVR service time during this period
Average Service Time	Average IVR service time during this period

2.4.2 System Alert Report

This report provides system alert notice report. The administrator can use it to understand when and which service had problem. Click ***REPORT -> System Alert*** to view the report.



The detail of each report field is described as follows:

Field Name	Description
Time	The system alert notice event time
Service	The service which generated the event

Field Name	Description
Level	The level of this event
Description	The system alert notice content

2.4.3 Call Flow Alert Report

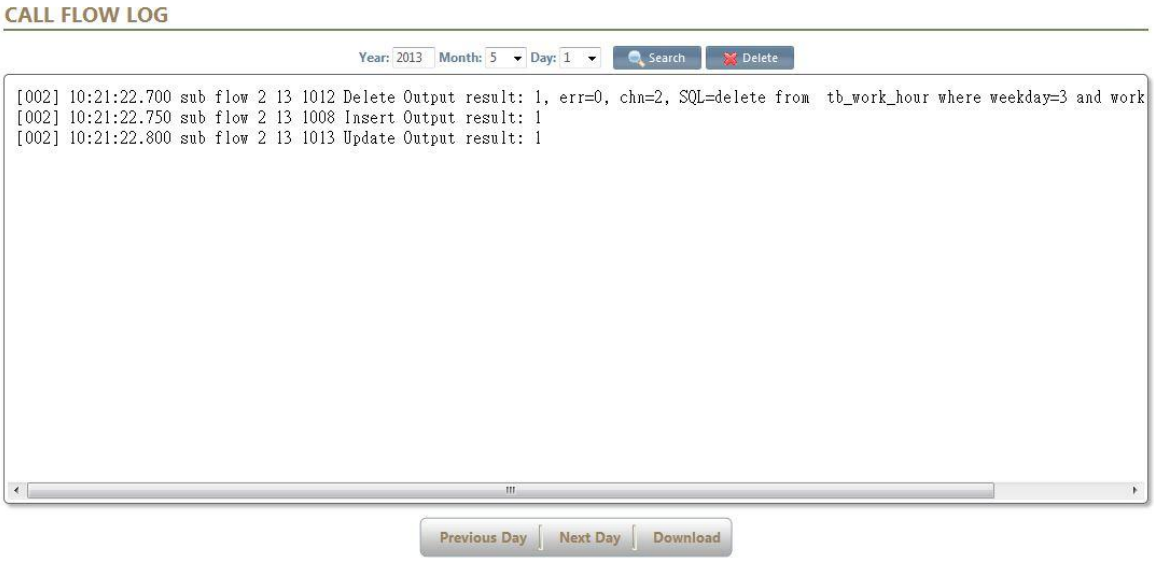
This report provides call flow alert report which is generated by System Event Message component. Click REPORT -> Call Flow Alert Report to view the report.

The detail of each report field is described as follows:

Field Name	Description
Alert Time	The call flow alert notice event time
Channel ID	The channel ID for generating this event
Level	The level of this event
Message	The call flow alert notice content

2.4.4 Call Flow Log

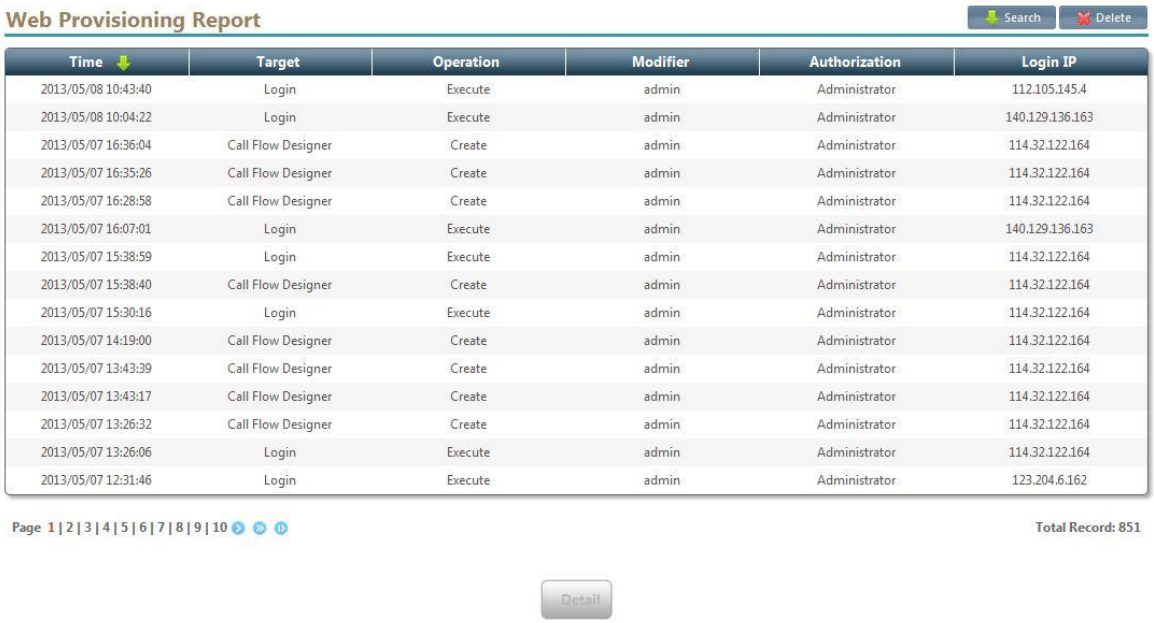
This report provides call flow debug message report which is generated by Debug Message component. Click REPORT -> Call Flow Log to view the report.



You can download to check it if it is big.

2.4.5 Web Provisioning

The system will record down all the access to the system from web. The administrator can use it to audit the system and tracking the changes. Click ***REPORT -> Web Provisioning*** to view the report as follows:



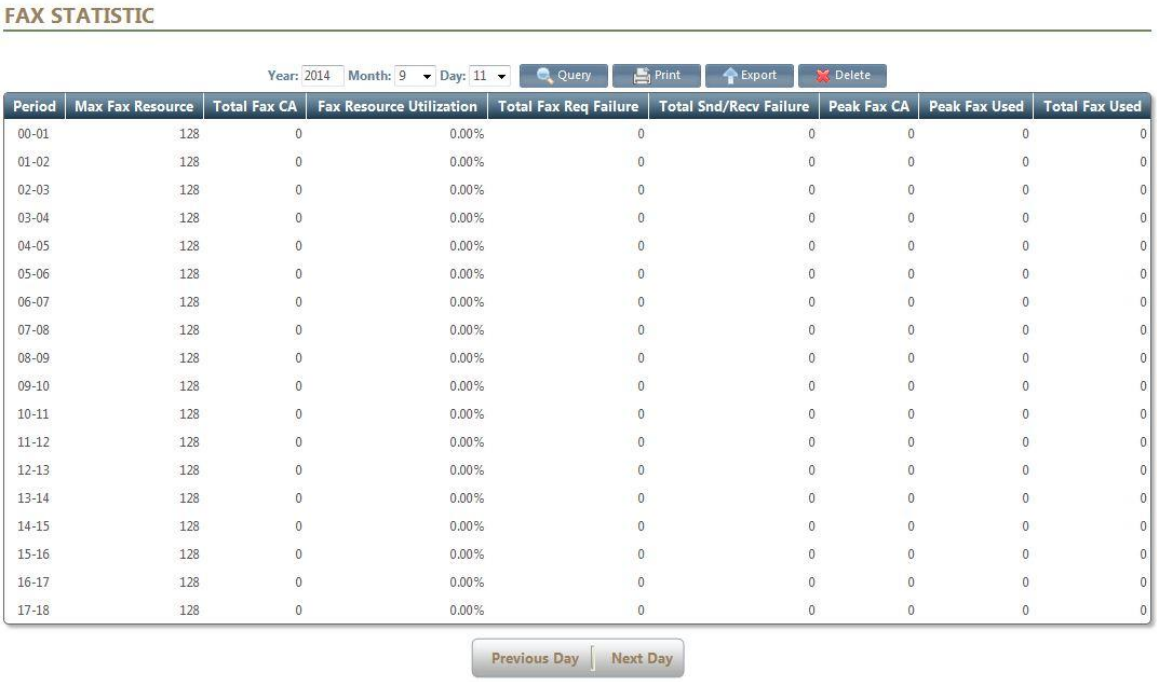
The detail of each report field is described as follows:

Field Name	Description
Time	The time to access web
Target	The web target to be accessed
Operation	The operation madden by user
Modifier	The user who made the change
Authorization	The login user's authorization
Login IP	The IP address of user
Update Value	The value changed detail

Select one of record and click the Detail button. The following detail for such record will appear.

2.4.6 Fax Statistic

Fax statistic report contains the fax resource utilization and peak resource usage for administrator to check whether need increase license or not. Also it includes the fax sending/receiving failure which could lead the administrator to check whether the fax compatible or line issues. Click Report -> Fax Statistic and the following will appear:



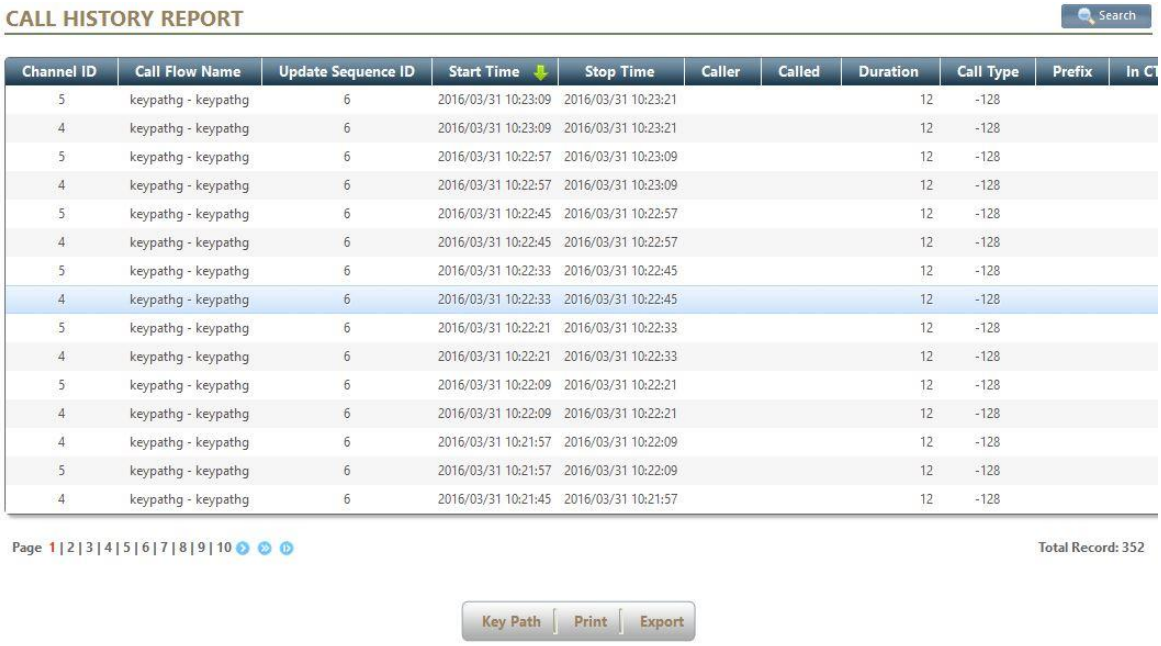
Period	Max Fax Resource	Total Fax CA	Fax Resource Utilization	Total Fax Req Failure	Total Snd/Recv Failure	Peak Fax CA	Peak Fax Used	Total Fax Used
00-01	128	0	0.00%	0	0	0	0	0
01-02	128	0	0.00%	0	0	0	0	0
02-03	128	0	0.00%	0	0	0	0	0
03-04	128	0	0.00%	0	0	0	0	0
04-05	128	0	0.00%	0	0	0	0	0
05-06	128	0	0.00%	0	0	0	0	0
06-07	128	0	0.00%	0	0	0	0	0
07-08	128	0	0.00%	0	0	0	0	0
08-09	128	0	0.00%	0	0	0	0	0
09-10	128	0	0.00%	0	0	0	0	0
10-11	128	0	0.00%	0	0	0	0	0
11-12	128	0	0.00%	0	0	0	0	0
12-13	128	0	0.00%	0	0	0	0	0
13-14	128	0	0.00%	0	0	0	0	0
14-15	128	0	0.00%	0	0	0	0	0
15-16	128	0	0.00%	0	0	0	0	0
16-17	128	0	0.00%	0	0	0	0	0
17-18	128	0	0.00%	0	0	0	0	0

The detail of each report field is described as follows:

Field Name	Description
Period	The statistic period
Max Fax Resource	Granted fax resource license
Total Fax CA	The fax call attempt during this period
Fax Resource Utilization	The utilization of licensed fax resource
Total Fax Req Failure	Number of failures to get fax T.38 resource when a FAX resource is requested
Total Snd/Recv Failure	Number of failures that the sending fax or receiving fax cannot be completed which might be caused by transport quality or fax compatible issues etc.
Peak Fax CA	Peak fax resource request received during this period
Peak Fax Used	Peak fax resource were used during this period
Total Fax used	Total fax resource were used during this period

2.4.7 Call History Report

This report provides call detail record report. Click REPORT -> Call History Report and the following will appear:



The detail of each report field is described as follows:

Field Name	Description
Channel ID	IVR Channel ID
Call Flow Name	Call flow is used for this channel ID
Update Sequence ID	Call flow sequence is used for this channel ID
Start Time	Channel starting service time
Stop Time	Channel stop service time
Caller	Calling party number
Called	Called party number
Duration	Service time in seconds
Call Type	Incoming call or outgoing call type
In CTI Data	Incoming CTI data if existed
Out CTI Data	outgoing CTI data if existed
Out Skill Data	outgoing Skill data if existed

Field Name	Description
Universal Call ID	Global unique call ID can be traced in between systems.

2.4.7.1 Key Path

Key path provides a way to analyze customer behavior. For each call history record, you can click Key Path button to see the detail of customer key path in flow or list as follows:

The flow started by service start time and end with service stop time. For each customer traced key path it includes:

Key Time (Escape time in seconds since start)
Key Tag: Recorded key tag name
Key Value: Recorded key value on Key Path Trace Component

Click List and you will see the following:

The detail of each report field is described as follows:

Field Name	Description
Key Sequence	Key happened sequence
Key Time	The time to enter this key path trace compoent
Key Tag	The key traced tag name for reporting purpose
Key Value	The key trace tag value

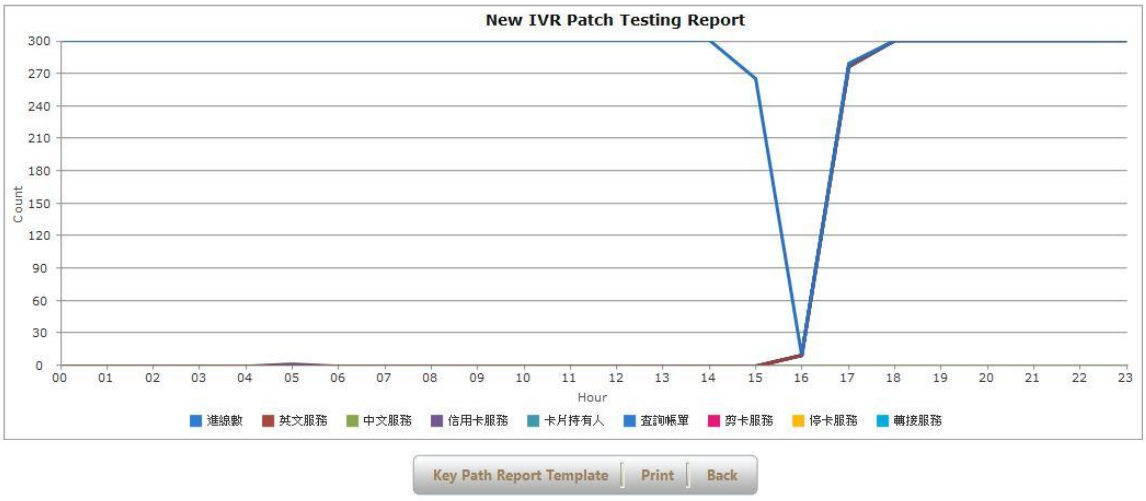
2.4.8 Key Path Report

Key Path Report provides a customized key path statistic report or chart to analyze customer behavior. Click REPORT -> Key Path Report and input the search criteria, defined report template. The selected customized report will be displayed as following example:

The detail of each report field is described as follows:

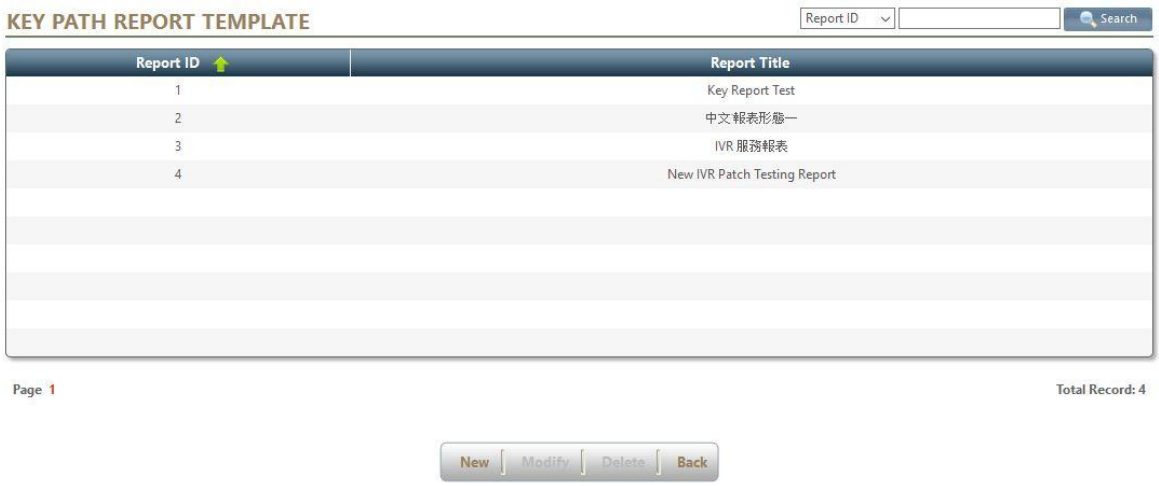
Field Name	Description
Channel ID	IVR Channel ID
Time	Statistic Time period or date
Call Count	Service call count for this channel during the time period
Customized Column...	Others are customizable column defined in key path report template.

Select the Chart report format and the following will appear:

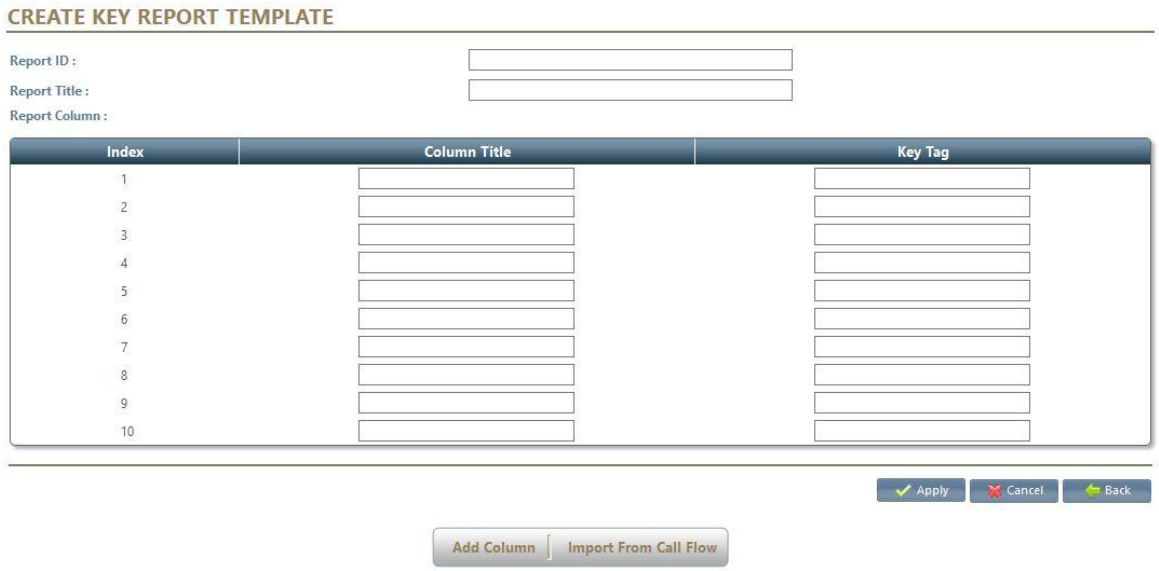


2.4.8.1 Key Path Report Template

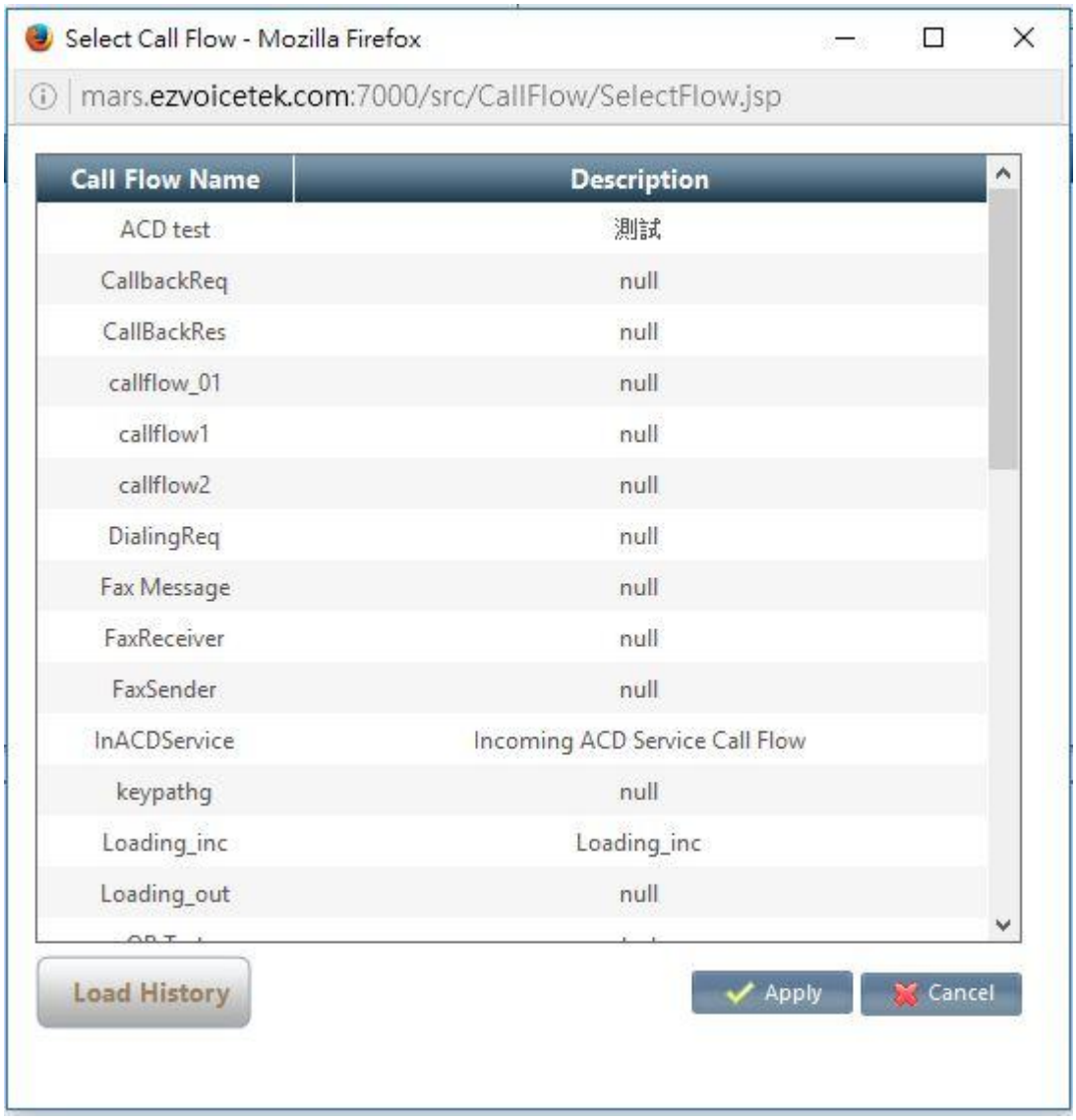
Click Key Path Report Template button to customize your dedicate report as following:



Click New and the following will appear:



The first step is import those defined Key Tag from a existing call flow. Click Import From Call Flow and the following will appear:



Select the required call flow and click apply. You can import multiple call flow's key tag if required. After import, you will see all key tag you defined in call flow as follows:

Modify the column title add the customer your need. In case you need more column, click Add Column to add a new column.

Click Apply and this customized report is ready to be used.

2.5 Diagnostic

The Diagnostic page provides real time monitoring for system, extension, call and system log tracking. It could be very good tools to help administrator to identify the root cause of problems.

2.5.1 System Status

System Status show the current status of service. Click ***DIAGNOSTIC -> System Status*** to check the resource status as follows.

The detail of each filed is described as below:

The detail of each report field is described as follows:

Field Name	Description
System Release	The IVR system release version
Web Release	The IVR web release version
System Startup Time	The system start-up time
Total IVR Attempt	Total IVR call attempts during this period
Total Failed IVR Attempt	Total IVR call attempts which is not answered or failure during this period
Peak IVR Attempt	Peak IVR call attempts
Current IVR Attempt	Current IVR call attempts
Total IVR Used	Total IVR serviced during this period
Peak IVR Used	Peak IVR used
Current IVR Used	Current IVR used
Total IVR Service Time	Total IVR service time during this period
Longest IVR Service Time	Longest IVR service time during this period
Average IVR Service Time	Average IVR service time during this period
Max Fax Resource Count	Max Fax T.38 resource purchased
Total Fax CA	Total Fax call attempt during this period
Total Fax Req Failure	Number of failures to get fax T.38 resource when a FAX resource is requested
Total Fax Snd/Recv Failure	Number of failures that the sending fax or receiving fax cannot be completed which might be caused by transport quality or fax compatible issues etc.
Peak Fax CA	Peak fax resource request received during this period
Current Fax CA	Current fax resource request attempt
Peak Fax Used	Total fax resource were used during this period
Current Fax Used	Current fax resource were used during this period

Field Name	Description
Total Fax Used	Total fax resource were used during this period

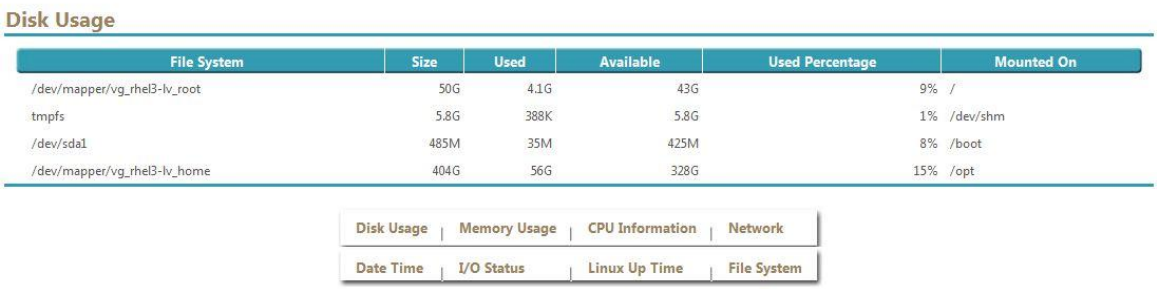
2.5.2 Ping

The administrator can ping a IP address from the host by clicking ***DIAGNOSTIC -> Ping.*** The following screen will appear.

Input the Host IP address and start the ping test.

2.5.3 System Information

Click DIAGNOSTIC -> System Information, you will able to see the current system related setting,s including up time, hard disk, cpu, network information as follows:



Click each button to see the different status. For detail, please refer to Linux administration guide.

2.5.4 Call Capture

Call capture is a debug tool for tracking a call and suitable for low traffic mode. If you need large traffic capture and analyze, you need have a qos monitor product to do it. Click DIAGNOSTIC -> Call Capture and following will appear:

Select an network interface to capture and required packet filter, click Start Capture to start the capture. Please make sure you stop the capture after you get required packets. Otherwise, the capture might create a big file in your system and eat all hard disk space. Click "Get Capture File" to download the captured file to analyze.

2.6 Administration

The ***Administration*** setting includes the user account management, restart or reboot the service.

2.6.1 Restart Service

Click ***ADMINISTRATION -> Restart Service*** and the following pop screen will appear.

Click ***Restart IVR Service*** button to restart the IVR service.
Click ***Restart IVR/Fax Service*** button to restart the IVR and IVR Media Service

service (only available for Fax License).

2.6.2 Reboot System

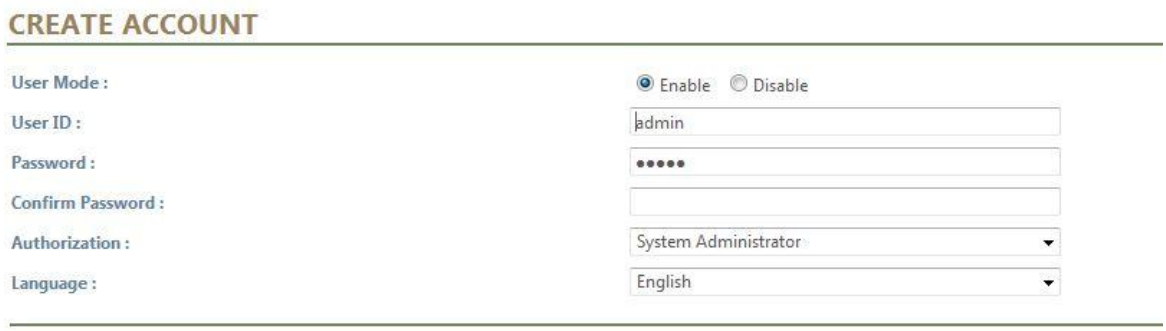
Click ***ADMINISTRATION -> Reboot System*** and the following screen will appear.

Click ***Reboot*** button to reboot the whole machine.

2.6.3 Account

Click ***ADMINISTRATION -> Account*** to view the current settings of user account. The following screen will appear.

Click ***New*** to add a new user and the following screen will appear.

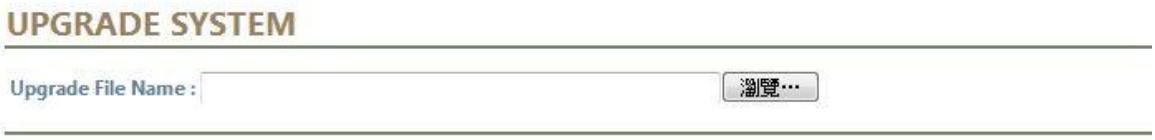


The detail of each parameter is described as below:

Field Name	Description
User Mode	Activate or de-activate the user
User ID	The user ID to login
Password	The user password
Authorization	The authorized role for the user.
Language	The web GUI language when the user login.

2.6.4 Upgrade System

Use ***Upgrade System*** to do the application patch by clicking ***ADMINISTRATION -> Upgrade System***. Please only use the certificated patch file to do the upgrade. Otherwise, it will had problems.



After upgrade, reboot the machine to take effective.

2.6.5 Backup/Restore

Backup/Restore is used to backup the system configuration or restore it back. All the configuration will be saved. Click ***ADMINISTRATION -> Backup/Restore*** to do the backup to restore.

Select Backup System Configuration to backup the system configuration.
Select Restore System Configuration to restore it back.

2.6.6 Clear Hitory Data

It is recommended to clean the unnecessary historical data periodically. Here is the place to clean those historical data. Click ***Administration -> Clear History Data*** to clean those historical data.

Select those data you want to delete, click apply to delete it.

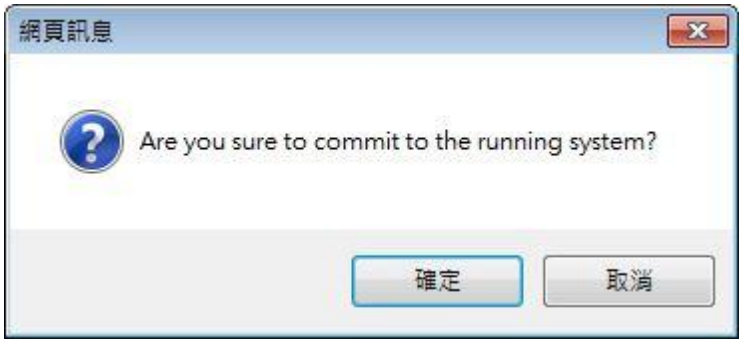
2.6.7 Logout

To quit the management web for the current user, click ***ADMINISTRATION -> Logout*** and the following pop screen will appear.

Click ***OK*** to logout.

2.7 Commit

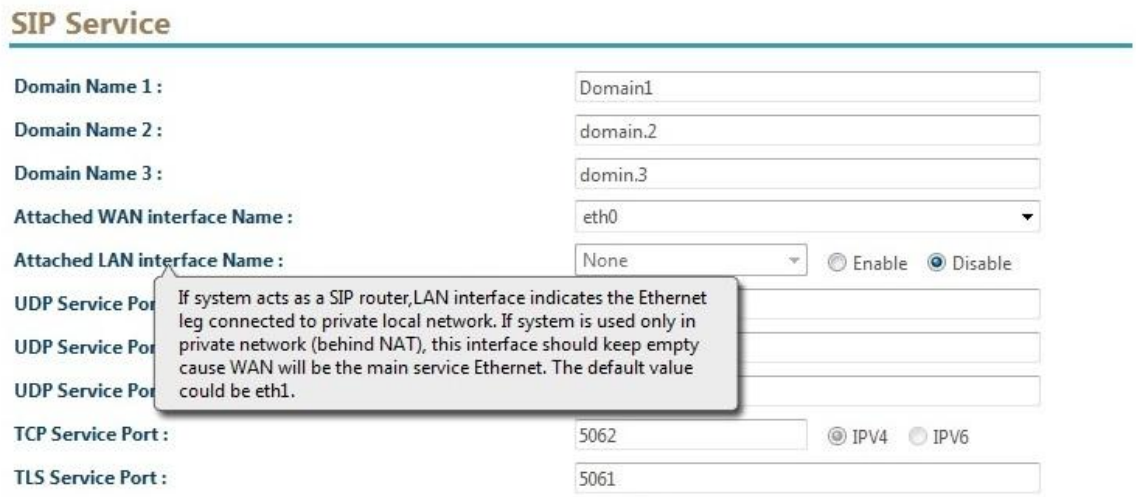
After you change the system settings, you need to apply it by clicking the ***COMMIT*** and the following popup screen will appear:



Select OK to commit the changes.

2.8 Help

The system provides pop up help hint when you move the cursor to the filed as follows.



Also you can click ***HELP*** to see on line help which provides the same information as this guide.

3 Appendix

3.1 List of Used Network Ports

The following is the list of used TCP/IP ports. The network administrator can use it to set the firewall when necessary.

Default Ports	Protocol	Description	Configuration Path
5063	UDP	IVR UDP IPV4 SIP Port	SYSTEM ->SIP Settings -> Local SIP IPV4 UDP Port
5067	UDP	IVR UDP IPV6 SIP Port	SYSTEM -> SIP Settings -> Local IPV4 IPV6 UDP Port
40000-41200	UDP	IVR RTP port	Each IVR channel will use up-to 4 rtp ports which is allocated dynamically. The starting port of the IVR can be changed on SYSTEM -> Service Parameter -> Local Media UDP Start Port
2090	TCP	IVR Control Port	It is the port to control IVR channel manager, status or debug.
7000	TCP	HTTP port for administrator	SYSTEM -> WEB Service -> HTTP Service Port -> Administrator Only be opened in firewall when necessary.
7001	TCP	HTTPS port for administrator	SYSTEM -> WEB Service -> HTTPS Service Port -> Administrator Only be opened in firewall when necessary.
7080	TCP	SOAP Provisioning Port	SYSTEM -> Web Service -> SOAP Service Port Only be opened in firewall when necessary.
3306	TCP	MYSQL Service Port	SYSTEM-> Database -> MYSQL Port

3.2 Regular Expression Example

Here it the regular expression example based on POSIX standard:

Matching Rule	Regular Expression	Matched Input
Match the prefix 886 and followed by 8 digits including * and 0-9	886[\d*]{8}	88612345678 886*1234567
Match digit start with 9,8 or 7 and followed by 4 digits (0-9)	[987]\d{4}	91234 81234
Match one of the following case: Prefix is 123 and followed by 3 digits Prefix is 234 and followed by 2 digits Prefix is 66 and followed by 4 digits	^123\d{3}|^234\d{2}| ^66\d{4}	123123 23422 661234
Not matched any prefix start with 2, 5, 7 or 9 and followed by 3 digits	[^2579]\d{3}	8111 6222
Start with * and followed by 3 digits and #	[*]\d{3}#	*123# *666#
Start with prefix 0932, 0933 or 0918 and followed by 4 digits	(0932|0933|0918)\d{4}	09321234 09182222
1 digit and matched 1, 3, 5, 7	[13579]	3 1

3.3 System Internal Variable

The following is the read only system internal variable which can be used for debug or other purpose.

Variable Name	Description
_ERRNO	Errno Number for debug purpose
_CHANID	The running channel ID

Variable Name	Description
_HTTPOSTR	HTTP request URL to send to http server for HOOK request. It is mainly for debug purpose.
_SQLOSTR	SQL string to send to DB for execution. It is mainly for debug purpose
_HTTPPOSTR	HTTP request URL to send to http server for HOOK
_PREVCID	Previous Component ID for debug tracking