

Administrator Guide

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About This Guide

This iPECS iPCR(Call Recording) Administrator Guide is indented to provide you with the information needed to System Configuration, Installation, Administration and Using iPECS Call Recording Server.

The screen might look a little different depending on which version of the OS (Operating System) and Installation Program you're using, all information in this guide is subject to change without prior notice.

Organization of the Document

This guide consists of seven Chapters, as well as the Before Starting section.

- Before Staring
- Chapter 1: Introduction
- Chapter 2: Installation Overview
- Chapter 3: iPECS System Configuration
- Chapter 4: iPCR Installation
- Chapter 5: iPCR Administration
- Chapter 6: Using iPECS Call Recording Server
- Chapter 7: Useful Information

The following icons and notices are used in this guide to convey important cautions and notes.



CAUTION

A caution statement alerts you to situations that may cause damage to hardware, software, or data.

NOTE

A note provides additional explanations, important information, or a reference to relate information.

1.1 iPECS Call Recording Server

The administrator can configure multiple User admin levels and define the features and functions available to each level. A user may be limited to recording only, search & play, call monitoring and recording, and access to various management and administrative Web pages.

The iPECS Internet Protocol Call Recording (IPCR) server application employs a Linux OS and VoIP technology to deliver advanced Call Recording capabilities to iPECS platforms. The advanced capabilities provide automatic and on-demand call recording for recording Agents linked to objects (stations numbers) registered with the iPECS platform. An IPCR server can be associated with from one (1) to ten (10)-host iPECS systems permitting the application to record calls for a network of systems. Each iPECS host can support one (1) to ten (10) IPCR servers allowing separation of Call Recording based on tenant or other iPECS system groupings.

Employing iPECS and SIP protocols, the IPCR application provides an affordable SMB solution to recording and monitoring calls. iPECS protocols are employed to register and control call recordings. The IPCR application registers with the iPECS host as any other iPECS device. The registration can be automatic "plug-and-play" or by listing the MAC address of the Call Recording server in the iPECS host database for local or remote service. The IPCR application operates as an iPECS SIP Phone to receive RTP (Real-Time Protocol) packets. When a call is received, configured objects invite the call recording Agent to join the call and deliver RTP packets to the IPCR application for storage as part of a conference call. Once the call is terminated, the recording Agent is released and a record of the call and RTP packet media (voice) are stored.

The IPCR application supports both Automatic recording of all calls (ACR) and configured users assigned a Two-way Recording button can request an active call be recorded, ODR (Ondemand recording). In the later case, when the call is connected to an On-demand recording object, the recording Agent is activated and the media is sent to the Call Recording server. If during the call the user requests recording, audio for the entire call is stored from the beginning of the call. If the user does not request recording during the call, when the call is complete, the recording Agent is released and the media is not stored.

1.2 Web Server Module

IPCR includes a Web server module. The Web server module is the user-interface for administrative and user functions and features of the application. In addition to configuring the IPCR for registration with the host iPECS systems, the administrator can configure Automatic Back-up of recordings, type of recording (All calls or On-demand), security for signaling and media packets, and server usage thresholds for e-mail notification. The administrator can view and search the Web module activity and the Call Statistics log.

The administrator can configure multiple User admin levels and define the features and functions available to each level. A user may be limited to recording only, search & play, call monitoring and recording, and access to various management and administrative Web pages.

The iPECS Call Recording application has been optimized to run under the Fedora 16 i386 Linux environment from Red Hat and others. The host iPECS platform should be configured for the Call Recording Server as discussed in Chapter 3. The installation follows the steps below:

- Prepare the iPECS host for registration and login of the IPCR application, see sections 3.1.1 to 3.1.3
- Install the Fedora-19 Linux OS, see section 7.1.
- Install the IPCR application, see Chapter 4.
- Prepare the IPPCR application for registration and login with the iPECS host, see sections 5.2.3 PBX Registration and 5.2.5 IPCR Server Registration.
- Complete configuration of the iPECS host, see sections 3.1.4 to 3.1.7.
- Complete configuration of the IPCR application, see Chapter 5.

Once configured for registration and login, the IPCR server registers with the iPECS host using automatic or MAC address registration. The IPCR application then will login to the system employing the SIP Id and password, which must match the User Id and password assigned, if any, in the Device User Login program (PGM 443) where the desired station number can be defined. Once login is complete, the remaining characteristics of the iPECS host and the IPCR application can be configured and calls recorded.

Chapter 6 provides information on using the IPCR Web application to search, play and copy recordings as well as real-time call monitoring and recording.

2.1 IPCR Server General Requirements

Before installing the IPCR application, several items should be considered.

2.1.1 Network Addressing

The IPCR application is designed for use with Static IP addressing only.

2.1.2 Network

The IPCR application is intended for connection to a wired network and must have sufficient bandwidth to handle the expect call traffic. The iPECS object will send RTP traffic to the IPCR application. Depending on the codec and configuration, each recorded call will send 50 packets/second (20-msec. sampling) at about 125 Kbps (G.711).

2.2 OS & Server Requirements

The server as recommended below is capable of handling a maximum of 250 simultaneous calls (Agents). However, it is recommended that the number of agents not exceed 150. Note even though a user does not activate on-demand call recording, RTP traffic is still sent to the IPCR application should the user determine the need to activate recording during the call.

- Operating System: Fedora 16 i386 version
- Server CPU: Intel Pentium Core 2 Duo 1.8 GHz or higher, AMD Athlon X2-64 2.4 GHz or higher
- Server RAM: Minimum 2 GByte
- Server HDD: 1-TByte
- External HDD: Optional for back up

2.3 Server Environment

During installation, the Fedora OS must be configured to support the IPCR application as discussed in the Appendix A. This includes:

- Create the partition ("/var/REC") for the application and storage of recording "
- Install the "Web Server" task
- Install the "PostgreSQL" database
- Disable the Fedora Firewall
- Configure the IPCR Sever network parameters
- Establish the "ntsysv" for automatic restart of the Web and database processes.
- Create a back-up directory.

2.4 iPECS Host Platform

The IPCR application has been designed to work with the iPECS family of systems. Specifically, the following platforms are compatible:

- iPECS LIK/UCP version 5.5 or higher, one or more MCIMs are required to record conference calls.
- MCIM is related to 3 more conference and SIP phone two way record. And VOIM is related to relay between local and Remote and Codec conversion.

Prior to starting the IPCR server application, it is recommended that the iPECS host platform be configured. This section provides details to configure the iPECS host for operation with IPCR.

3.1 iPECS LIK/UCP/UCP

3.1.1 Unlock up to number of IPCR server and Agent ID

Unlock (license) codes for the iPECS LIK/UCP permit operation with up to ten (10) Call recording servers simultaneously. In addition, the codes define the number of IPCR servers, recording Agents available and SIP Phone. IPCR server needs at least 1 copy. SIP phone unlock key needs only 1 copy for an IPCR.

In the iPECS LIK/UCP Web Admin,

- Select the System Management tab,
- Select Appliance Control,
- Select 'Lock Key Install',
- Enter the Key code provided from your local LG-Ericsson Enterprise representative, and
- · Select 'Save'.

ipecs	Administration	S/W Upgrade	System Managemer			
MFIM/VD95N-F.0Di APR/14	[Lock Key Install]					
Boot Version-2,1Aa NOV/12	Key : 000DF7C60000001					
Kernel Version-6,0Aq	Index	Value	State			
H/W ISSUE-3	Network		Installed			
© Database	EZ ATTD		Installed			
0 SMDR			linotanoa			
© File System	CTI(TAPI)		Installed/Disconnect			
			Soft Phone : 50 Copy			
© Trace	Soft Phone		Video Phone : 50 Copy (2 copies free)			
6 Gain@Cadence Control	LICS Client		DeskTop : 50 Copy			
Ø Appliances Control	OCS Cheffit		Mobile : 100 Copy			
Station Param Set	Web Phone		50 Copy			
LGCM Param Set(P429)	Click To Call		0 Copy			
Lock Key Install	TNET(LOCAL-SURVIVAL)		Installed			
D DECT Statistics Feature	NMS		Installed			
© Device Delete Feature	SIP Phone		50 Copy			
© Voice Mail Delete	FIAS(Fidelio)		Installed			
Voice Mail Backup			(Server Number) : 50 Copy			
c rorot main backap	IPCR		(Agent ID Number) : 50 Copy			
			(Trunk Number) : 0 Copy			
	SIRVM		(Server Number) : 50 Copy			
			(Agent Number) : 50 Copy			
	IP Communicator		100 Copy			
	IR Attendant		Office: 5 Copy			
	ii Attendant		Hotel: 5 Copy			
	Contact Center		Server : Activated (Key: 203B005F8D2E)			
			CCS SIP: 4 free			

3.1.2 IPCR Server MAC Address

The IPCR server can be registered with the iPECS host either employing the automatic registration method (Dipswitch 3 set to 'On') or using the MAC address registration. For MAC address registration, assign the MAC address and number of Agents for the IPCR server in the Registration Table (PGM 235).

In the iPECS LIK/UCP Web Admin,

- Select the Administration tab,
- Select Registration Table, PGM 235,
- Enter the MAC address of the IPCR Server and the number of Agents for the server,
- PECS Administration S/W Upgrade System Management Registration Table] O CO Line Da **O** System Data Index MAC Address Maximum Port Device ID for NIPP G/W 00405a112233 Station Group Data 1 N/A ¥ 2 **O ISDN Line Data** 0000000000000 🕂 0 N/A × 3 0 N/A × ● SIP Data 4 0 N/A ~ **Tables Data** 5 0 N/A ~ LCR Control Attribute(220) [N] Save LCR DMT(222) [N] \square Authorization Code Table(227) CCR Table(228) [N] Executive/Secretary(229) [N] System Speed Zone(232) [N] Auto Ring Mode Table(233) [N] Mobile Extension Table(236)
- Select 'Save'.

3.1.3 Station User Login

After the IPCR server registers with the iPECS host using either the MAC or automatic registration method, the IPCR application will login for service. The IPCR application will send the SIP Id and password to the host system. The host will then populate the Station User Login (PGM 443) with the received credentials and assign the next available station number to the IPCR application. In normal case, the Station User Login (PGM 443) procedure doesn't need. It's automatically assigned by register of IPCR.

3.1.4 IPCR Agent ID Table

Prior to programming the Agent Table, the IPCR server must be registered with the iPECS LIK/UCP and the call recording application must be logged into the iPECS LIK/UCP. In addition, the IPCR Channel registration may be configured to assign agents to channels in the IPCR application. Each Agent is linked to an iPECS LIK/UCP object (a Station) in the IPCR Agent Table (PGM 237). The Agent table indicates the number of agents associated with a specific IPCR server, the Agent Id, and the linked object information.

In the iPECS LIK/UCP Web Admin,

- Select the Administration tab,
- Select IPCR Agent Table, PGM 237,
- Select the IPCR Server number,
- Enter the number of Agents for the sever,
- For each Agent Id select an Object Type and the specific object number (Station number or Co) and
- Select 'Save'.
- Note the IPCR server number, 1 10, is the order of registration of the IPCR server with the iPECS LIK/UCP.

ipecs	Administration	S/W Upgrade	System Management	퀵 Log Out
© Station Group Data	•			
© ISDN Line Data	[IPCR Agent Table]			
© SIP Data	Select the number of IPC	R Server(1 - 10) :	Load	Save
🛛 Tables Data				
LCR Control Attribute(220) [N]	IPCR Number :1			
LCR LDT(221) [N]				
LCR DMT(222) [N]	IPCR Agent Lock Key:	0 / Total(50)		
LCN Table Initialization(223) [N]	10			
Toll Exception Table(224) [N]			Agent Order : [1-50] [51-70]	
Emergency Code Table(226) [N]	Index	Agent ID	Object Type	Linked Object
Authorization Code Table(227) [N]	1	(ACR)	STATION •	1001
CCR Table(228) [N]	2	(//CR)	C0 •	1
Executive/Secretary(229) [N]	· · ·	(and	SIATION	
Flexible DID Conversion(231) [N1	3	(ACR)		
System Speed Zone(232) [N]	4	(ACR)	NIA W	
Auto Ring Mode Table(233) [N]	5	(ACR)	N/A T	
Voice Mail Dialing Table(234) [N]		(107)		
Negistration Table(235) [N]	6	(ACR)	NA •	
Mobile Extension Table(236) [N1	7	(ACR)	N/A 🔻	
IPCR Agent Table(237) [N]	8	(ACR)	N/A T	
© Nctworking Data	9	(ACR)	N/A V	

3.1.5 IPCR SIP Station Registration

The IPCR application interfaces to the iPECS LIK/UCP as a single SIP Phone. Registration between the IPCR server and LIK is automatic once both are configured. Under the SIP Phone Attributes, the Registration Mode must be set to Manual and the SRTP Usage, and 1st and 2nd encryption mode can be configured. The encryption algorithm can be selected as AES or, for Korea, ARIA. The remaining SIP Phone Attributes are not used for the IPCR application.

Prior to programming the Agent Table, the IPCR server must be registered with the iPECS LIK/UCP and the IPCR application must be logged into the iPECS LIK/UCP, see *section 5.2.3*. The station number of the IPCR application can be verified in Station User Login (PGM 443) after registration and login.

In the iPECS LIK/UCP Web Admin,

- Select the Administration tab,
- Select SIP Data menu,
- Select SIP Phone Attributes,
- · Enter the Station number associated with the IPCR server and select Load,
- Select 'Manual' for the Registration Mode,
- Select the desired configuration for SRTP Usage, 1st and 2nd Crypto, and
- Select 'Save'.
- 407 will support after A.0Ak version of IPCR.

ipecs	Administrat	ion S/W Upgrade	System Management	
> System ID & Numbering Plans	Station Range F	rom 7001 to 7001		
System ID(100) [N]	Order Chec	k All Attribute	Value	Range
Sustem&Device IP(102~103) [N]	1 💌	Registering Mode	Manual 🔻	
CO GW Sequence Number(104) [N]	2	Registration Status	Not Registered	
Flexible Station Number(105) [N]	3	IP Address	10.181.123.13	
Flexible Numbering Plan(106) [N]	4	IP Port	5588	
8 Digit Table(238) [N]	-	TRANSPORT		
Station Data	5	TRANSPORT	UDP	
Board Based Data	6	SIP Phone Type	IPCR •	
CO Line Data	7	Device NET Mode	AUTO V	PGM102-NET mode
System Data	8	Registration Timer Usage	OFF V	
Station Group Data	9	Registration Timer	3600	30-3600 sec
ISDN Line Data	10	Keep Alive Usage	OFF V	PGM210 Check Message Send Tir
SIP Data	11	Retry Count	3	3-10
SIP Common Attributoc(210) [N]	12 🖉	407 Authentication	ON V	
SIP CO Attributes(133) [N]	13	181 Being Forwarded	OFF T	
SIP User ID Attributes(126) [N]	14	100rel Support	OFF V	
SIP Phone Attributes(211) [N]	15	Session Timer Support		
SIP Phone Provisioning(212) [N]	10			400.0000
Provisioning File View&Delete [N]	10	Max Session Timer	1800	180-3000 Sec
VMEX Station Data(215) [N]	17	Min Session Timer	90	60-150 sec
VMEX Connection Table(216) [N]	18	Within Same Firewall with MFIM	ON V	Firewall Circumstance
lables Data	19 🕑	SRTP Usage	OFF V	
Networking Data	20 🕑	1ST CRYPTO	NONE	
RSGM Data	21 🗹	2ND CRYPTO	NONE	
Tnet Data	22	DTMF TYPE	INFO(DTMF RELAY)	
Zone Data	23	SMS TYPE	AUTO V	
Device Login	24	CO DIAL TONE	OFF V	
DECT Data	25	MWI NOTIFY	OFF •	3rd SIP Phone
Hotel Data	26	Request URI Type	Normal V	KT FMC

3.1.6 VM Group Configuration for IPCR Server

The Station associated with each IPCR server must be assigned to an External Voice Mail Group. The station number of the IPCR server is determined by the order of registration with the host system and the desired station number if requested in the Station User Login (PGM 443) and available. However, verify the station number assigned in PGM 443 before configuring the VM Group.

In the iPECS LIK/UCP Web Admin,

- Select the Administration tab,
- Select Station Group Data,
- Select Station Group Assignment,
- Enter the desired Station Group number and select Load,
- For Group Type, select Voice Mail,
- Enter the IPCR server Station number as the sole member of the group, and
- Select 'Save.

ipecs	Administration S/W Upgrade System Management
MFIM/VD93M-E,5Be SEP/10	[Station Group Assignment]
H/W issue-1	Group Number : Load Group Overview
Hide Menu	Group Number is 622
© System ID & Numbering Plans	Group Type : Voice Mail 🔜
© Station Data	Pick-up Attribute : OFF 👽
© Board Based Data	SAVE GRP TYPE
© CO Line Data	
© System Data	Add Group Member
Station Group Data	
Station Group Overview	ADD STA RANGE
Station Group Assignment(190)	
Station Group Attributes(191)	ADD/DEL STA NUM
Pick Up Group Overview	Index Member
Pick Up Group(192)	1 5814
© ISDN Line Data	
© SIP Data	3
© Tables Data	

If it's not assigned well, you can set IPCR type and SIP for member in ADM 191.

AUG/12	roup Number in 620			
	roup Type : Voice Mail Group			
	Pick-up Attribute : OFF			
ering Plans				
	Attribute	Value		Range
	wrap-Up Timer	2		000 - 999 (sec)
	Put Mail Index	1 😒		
	Oct Mail Index	2 🛩		
	Hunt Type	Terminal 💌		
	Overflow Timer	100		000 · 600 (sec)
2 (N) 2001(190) (N)		STA/NET or Hunt	and the second	Station or Group Number
SCIED ENT	Overflow Destination	VOF Announce O 0	Auto Drop	01 - 70
w [N]		SYS SPD 🔿		System Speed Dial
1		STAINET or Hunt		Station or Group Number
	Forced Forward Dectination	VSF Announce 🗢 0		01 - 70
		SYS SPD O		System Speed Dial
	Forced Forward Dect Ucage	OFF M		
	Group Name			Max 12 Characters
	Server Type	IPOR TYPE	·)	
	Server Number	0		01 - 10
	Manufact Time	LEUE TYPE AND	D History	0.70

3.1.7 Automatic Station Recording & Destination

The Auto Recording Option and Destination must be defined for Stations linked to an Agent in the IPCR Agent Table. The Auto Record Option enables recording and the Destination defines the Voice Mail Group of the associated Call Recording server. The station number assigned Agent ID is automatically ON 58th item (Automatic Talk Recording Option : ON).

In the iPECS LIK/UCP Web Admin,

- Select the Administration tab,
- Select Station Data,
- Select Station Attributes,
- Enter the desired Station number and select Load,
- Enable the Auto Record Option,
- Enter the destination IPCR server Voice Mail Group number, and
- Select 'Save'.
- 1. If linked object is station, it should be set as below.

iPecs	Admin	nistration	S/W Upgrade Syst	tem Management	🛃 Log Out
		-	Two West Personal		_
MFIM/GS98M-5,6Ah NOV/11	20		Two way kecora		_
Kernel Version-5,5Dd	29		Message Scroll Speed	3	Save
H/W issue-0	30		HOT DESR STATION	OFF 🕶	_
Find PGM	31		Prefer CO or Group	White	_
Hide Menu	32		Send SLT CLI Info	OFF 🗸	_
© System ID & Numbering Plans	3 3		UCD Login Priority	checked	
Station Data	34		EZ PWD Login	Enable 🗸	
Station Tupe (110) [N]	35		ADMIN	Enable 🗸	
Station Attributes(111-113)	36		VSF Access	Disable 🗸	
	37		Group Listening	Disable 🗸	
Station ISDN Attributes(114)	38		Override Privilege	Disable 🗸	-
Flex Buttons(115/129) [N]	39	Γ	SMDR Hidden Dialed Digits	Disable 🗸	
Station CDS(116) [N]	40		Voice Over	Enable V	-
CO/IP Group Access(117) [N]	41		Prime Line	WARM	-
Internal Page Zone(118) [N]	42		Alarm / Door Bell	Disable	-
Ptt Group Access(119) [N]	43		DID DISA Wait/Show 2'nd PSTN CLL		-
Preset Call Forward(120) [N]	44				-
Idle Line Selection(121) [N]	45		ERMIC Hacdrot		_
Station IP Attribute(122) [N]	45		Edmic Heduser	OFF V	-
Station Timer(123) [N]	40		ENDIOCR MODE	OFF V	_
Linked Station(124) [N]	47		VMID Number	1001	_
Station VM Attributes (127)	48		Retrieve MSG Method	LIFO V	_
[N]	49		ANTO ACD DND	NONE 🗸	
Station Name Display [N]	50		FWD if DDS	OFF 🗸	
Station Data Copy [N]	51		Back Light Usage	BUSY ONLY	
Station CTI IP Address [N]	52		Emergency CO or Group	White	
© Board Based Data	53		Station Account	ON 🗸	
© CO Line Data	56		SIP USER TABLE INDEX	White	
© System Data	57		VSF/VMIM GW Slot Seq.	White	
© Station Group Data	58		Automatic Talk Recording Option	ALL 🗸	
© ISDN Line Data	59	V	Automatic Talk Recording Dest,	620	
	60		L NCE Reading Delete Detrem		

2. If linked object is co, it should be set as below.

ipecs	Administra	ition S/W Upgrade	System Management		뉟 Log Out
Hide Mello		CO Line Signal	DTMF V		
© System ID & Numbering Plans		Flash Type	LOOP T		
System ID(100) [N]		Universal Answer	OFF T		Save
Device Port Num Change(101) [N]		CO/IP Group Authorization	OFF V		
System&Device IP(102~103) [N]		Data(Fax) Station Number			
CU GW Sequence Number(104) [N] Elexible Station Number(105) [N]		CO Tenancy Group	0	00-15	-
Flexible Numbering Plan(106) [N]		CO/IP Name Display	OFF T		-
8 Digit Table(238) [N]		CO Name Assign		Max 12 Characters	
© Station Data		SMDR Metering Unit	NONE T		
© Board Based Data		Line Drop (CPT)	OFF T		
• CO Line Data		Maintain CPT on Talking (Answered by User)	OFF V		
CO/IP Attributes(140~142) [N]		Automatic Talk Recording Dest.	620	Max 8 Characters	
DID Service Attributes(145) [N]		DISA Account Code	ON V	-	-
DISA Service Attributes(146) [N]		CO Line MOH	Int /Ext1		
CO/IP Preset Fwd Attr(147) [N]		CO Dial Tone	ON T		
MATM Attributes(149) [N]		CO Ring Back Tone	OFF T		k

3.1.8 Trace and Monitoring

1. If there are some problems, you can trace it as below in MFIM.

```
mon> t s call
mon> t s rawdata
mon> t s debug(there is no agent Id in ADM 237)
mon> t b 5 ( if 5 is slot of IPCR server, server cannot register system)
mon> t s fsipm ( if SIP phone of IPCR cannot register to System LIK)
mon> t v
...
mon> x
...
```

2. You can capture ethereal packets between IPCR and LIK system if there is no recorded files in IPCR.

3.2 iPECS CM

3.2.1 Unlock up to number of IPCR server and Agent ID

Lock key of IPCR should be unlock up to number of server and Agent ID. Server can be register up to 512. And so the servers can unlock up to 30000.

Agent can be register up to System station number, it's depend on system capacity.

enu Name Search	QLoad	× Close								
🗀 WMS Management 🕢	Index	Linense Lists	Used	Max	Status	Index	Linense Lists	Used	Max	Stat
System Management Overall CM Server Configuration	1	Server Canacity	472	30000	-	21	CMI JPCR-A	0	30000	-
System Environment			Dischied	Fachlad		21		0	0000	-
- CCM Server Configuration	2	CML-QSIG	Disabled	Enabled	•	22	CML-S2K-L	U	255	•
LCM Server Configuration	3	CML-HOTEL	Enabled	Enabled	۰	23	CML-VOIM8	0	1000	•
System CPT Tone	4	CML-STAT	Disabled	Enabled	۰	24	CML-VOIM24	0	1000	4
LANU Registration Detail	5	CML-NMS	Enabled	Enabled	0	25	CML-VMIM	0	1000	
- Un-registered Device List	6	CML-TAPI	Disabled	Enabled	0	26	CML-VSF	0	1000	
Device Restart Bincking Management	7	CML-IPEXT	66	30000	0	27	CML-MCIM	0	1000	
CCM Cluster Information	8	CML-SPB	0	30000	0	28	CML-DTIM8	1	1000	
CCM Cluster Management	9	CML-SPD	1	30000	0	29	CML-DTIM24	0	1000	
LCM Forced Switchover	10	CML-UCS	0	30000	•	30	CML-SLTM4	0	1000	
LCM State Information	11	CML-UCTIS	0	30000	0	31	CML-SLTM8	0	1000	
Channel State Information	12	CML-UCTID	0	30000	0	32	CML-SLTM32	0	1000	
Channel Detail Information	13	CML-IPATDS	1	3000	0	33	CML-LGCM4	0	1000	
SIP Stack Information	14	CML-IPATDD	0	3000	0	34	CML-LGCM8	0	1000	
- System Time Zone	15	CML-COMS	0	10000	0	35	CML-DIDM2	0	1000	
System DB initialization	16	CML-COMD	0	10000	0	36	CML-DIDM8	0	1000	
- MISC Detail Information	17	CML-IP3EXT	64	10000	0	37	CML-E1R2	0	1000	t
Clock Sync Priority Depart Language Configuration	18	CML-OCSSIP	32	20000	0	38	CML-T1R2	0	1000	t
⊡ Link State Information	19	CML-SCTI	32	30000	0	39	CML-PRIM	0	1000	ti
Data Management	20	CML-IPCR-S	0	512	0					
Application Information Billing Management		License Type	(Formal Lic	ensel is ner	manant					
Failure Management		cicense (jpc	p onnoi cic	ensel is ben	Trantant					

3.2.2 IPCR Agent ID

Agent ID should be matched with a station number that wants to be recorded.

3.2.3 IPCR SIP Station Registration

IPCR's sip station should be register through IPCR server process of registration.

QLoad SModfy Add Tole Koose DetensionIlloe DetensionExchange O (SIP Station) O (SIP Phone Setup) O (IP Phone Information)									
200									
Proprietary SIP Device									
Speaker									
Korean									
12 Hours									
Not Use									
NotUse									
s)									
Unknown									
Speaker Korean 12 Hours Not Use Not Use Image: Speaker Image: Speaker									

And set SIP user ID with tenant prefix number and make empty auth ID and password.

iPECS-CM Ver:30M-E.0Ac,Date:JUN/13							
iPECS-CM	System Configuratio	n	System Monitorin	g 🧊 User N Config	Nenu juration	Failure Report Window	🕞 Fil Με
All User Search Menu Group × Menu Name Search	i SIP Tel	rmina 0 🌲	I Configuration	•Modify	ose		
Memo Juser Management	III III III III III III III III IIII IIII	SIPTen	minal Configuration >	Change			
E _ Menu Management	li li lin	dex	UserID	Authentication ID	Authentication Password	Terminal T	ype
		1	5000			iPECS IPCR	•
En 🔁 Data Management		2	5001			Normal	•
Toport Information		3	5002			Normal	•
		4				Normal	Ŧ
🗄 💼 Terminal Information		5				Normal	Ŧ
Englishing (DN) Information		6				Normal	-
🗆 😋 SIP Extension Information		7				Normal	-
		8				Normal	-

iPECS-CM Ver:30M-E.0Ac,Date:JUN/13					
iPECS IPECS-CM	System Configuration		vstem onitoring	i tion _{Fa}	ilure port Window
All User Search Menu Group ×	🔂 IPCR D	evice Informati	on		_×
Menu Name Search	Tenant	₽ dÞ Pho	one No. 📄 🗧 🕸 🔍	Load 🚱 Modify	X Close
🖻 😋 WMS Management					Total Count 3
	Tenant	Phone No.	IP Address	Physical Address	AgentCount
∰⊷ WMS Configuration	1	5000 O	192.168.122.187	02C0	1000
Hing Menu Management	1	5001 O	0.0.0.0	02C1	
		5002 0	0.0.0.0	0000	
🕀 💼 Data Management		5002 0	0.0.0.0	0202	
🖻 😋 Application Information					
			01		
E ← CTI Information	Process Su	ccess!			
DB Sync Server Information					
ULS Server Information					
Edulo Server Information					
Cloud Server Information					

If a SIP is assigned to "Proprietary SIP Device", then you can see the IPCR Device Information.

You should set IP address of IPCR and the number of agent count. Agent count is restricted in license. Also, if the IPCR is completely registered to iPECS-CM, you can verify that the Terminal Type of the SIP Station is set to "IPCR".

ECS-CM Ver:30M-E.0Ac,Date:JUN/13									
iPECS IPECS-CM	System Configura	ation	System Monitoring	User Menu Configuration	Failure Report Window III Management				
All User Search Menu Group × 13 SIP Terminal Configuration									
Menu Name Search	Slot	1000 🗧	🗄 🗤 🔍 Load 🚱	Modify Close					
🖻 🚗 WMS Management				SIP Terminal Configuration > Display					
		Index	Extension Phone Nu	Index	1				
😟 🛅 WMS Configuration		IIIGGA	Extension none ru	Authentication ID					
🕀 🗀 Menu Management		1	5000	Authentication Recoward	****				
🗄 🗀 Log Management		2	5001	Addrenication Password					
🕀 🗀 System Management		3	5002	Connection Type (NAT)	Normal 👻				
🖻 😋 Data Management			0002	Terminal Type	IPECS IPCR				
The second		4		LCM Local SIP Term IP					
🗄 🔄 Lenant Information		5		EGW EBCal SIF Terrifie					
Extension mormation		6		SRTP Use	No 🔫				
Information Information		-		First / Second Key	ARIA_CM_192_HMAC_SHA1_80 -				
E Group Information		7		Call Recording Supported	No				
SIP Extension Information		8		Call Recording Supported	140				
				Tone Play Supported	No				
SIP Extension Attributes		nu Lini	(Use transparent SDP for SIP call	Not Use 👻				
	0	SIP Ext	ension Attributes						
SIP Terminal SRTP Setting									
SID Torrainal Authoritaction			L						

3.2.4 VM Group Configuration for IPCR Server

You don't need to program about this. iPECS CM uses a different mechanism.

3.2.5 Automatic Station Recording & Destination

An agent ID in IPCR means a station number which has to be programmed to record its voice. So, If Agent ID information is sent to iPECS-CM from IPCR, the Two-way record Device information is automatically set with IPCR SIP number on the agent ID number's DN Voice Mail Information Attribute in WMS and also the Two-way record start mode is automatically set according to the Agent ID recording type of IPCR.



3.3 iPECS MG

3.3.1 IPCR server and Agent Unlock Codes

Lock key of IPCR should be unlock up to number of server and Agent ID.Only one server can be registered. Agent can be register up to System station number, it's depend on system capacity.

Agent ID should be matched with a station number that wants to be recorded. You don't need to unlock programming

3.3.2 3.3.2 IPCR Agent ID

An agent ID in IPCR means a station number which has to be programmed to record its voice. So, If Agent ID information is sent to iPECS-MG from IPCR, the Two-way recording destination(PGM145-Index5) is automatically set with IPCR SIP number and also the Auto-Record Service mode(PGM145-Index 3) is automatically set according to the Agent ID recording type of IPCR.

IPECS-MG/GS55M-B.DAb AUG/11	[Stati	on VMIB Attribu	ite]	
Boot Version-1,1Ab AUG/11 OS Version-1,1Ab AUG/11 Find PGM	Enter St	ation Range :	- Load Overview]
Hide Menu	Station I	Range From 1000	to 1000	
	Order	Uncheck All	Attribute	Value
© Pre-Programmed Data			PGM 1	145
© Numbering Plan	1	•	VMIB Access	ENABLE 💌
© Station Port Data	2	2	Prompt Language Index	FIRST V
Station Number Data	3	V	Auto-Record Service	ON (NO-USB)
Station DN Assignment(130)[N]	4	2	Two-Way Record Access	DISABLE 💌
Station DN Attribute(131~135)[N]	5	V	I wo-Way Recording Destination (if not accioned ' Destination is Internal VMIB)	1032
Private CO Attribute(136)[N]	6		VM MSG Backup Deptage Number	
COS Assignment(137)[N]		-		
Auto Dial Attribute(138)[N]	1	V	VM MSG Backup Delete Option	DISABLE 💌
Preset Call Forward(142)[N]	8	V	VMIB Message Retrieve Type	LIFO 💌
Call Forward(143)[N]	9		VMIB Urgent Message No	000
VMIB Attribute(145,147)[N]	10		VMIB New Message No	000
Mobile Extension Attribute(146)[N]	11		VMIB Saved Message No	000
CO/IP Group Access(150)[N]	12	V	DND Forward to VMIB	
Page Group Access(151)[N]	10		Conserve Directory Float Name	
Command Group Access(152)[N]	13	M	Company Directory - First Name	
Station Name Display[N]	14	V	Company Directory – Last Name	

3.3.3 IPCR SIP Station Registration

IP address and SIP station number for IPCR server should be programmed in advance.

IPECS-MG/GS55M-B,0Ab AUG/11	[Syst	em Attributes]		
OS Version-1,1Ab AUG/11	Order	Attribute	Value	Range
Find PGM	1	Web Admin Password Encryption	OFF V	
Hide Menu	2	Pulse Dial Break/Make Ratio	66/33 🗸	
> Pre-Programmed Data	3	Voice Mail SMDI Interface	OFF V	
Numbering Plan	4	VMIB SMTP Port	25	0000-9999
Station Port Data	5	Network Time/Date	Disable 💉	
Station Number Data	6	CLI Print	OFF 🗸	
CO Line Data	7	TLS for Web	OFF 🗸	
Station Group Data	8	Web Server Port	80	00001-65535
System Data	9	Database Auto USB download	OFF 💌	
System Timer(220~222)[N]	10	Database Auto Download Hour	0	00-23
System Attribute(223)[N]	11.	UCS Server IP Address	0.0.0.0	IP address
System Password(226)[N]	12	CTI Server IP Address	0.0.0.0	IP address
Alarm Attribute(227)[N]	13	MODEM Associated CO Line	0	
External Control Contact(228)[N]	14	IP Phone Registration by STA Number	ON 💌	
Music Source(229)[N]	15	Analog Line BUSY Tone Detection Times	3 🗸	
RS-232 Setting(230)[N]	16	Analog Line ERROR Tone Detection Times	4 ~	
Serial Port Selection(231)[N]	17	PSII FAN Alarm	ON M	
SMDR Attribute(232,238)[N]	10	Line Foult Alarm		
System Date & Time(233)[N]	10		ON M	
EU Flashing Hate(234)[N]	19	Trattic Operation	OFF 💌	
PPP Attribute(235)[N]	20	Enhanced VM Features	OFF 💌	New Prompts Needed
Mobile Attribute (236)[N]	21	IPCR Server IP Address	192.168.122.94	IP address
Intercom Busy Digit(237)[N]	22	SIP EXT Number for IPCR	1032	Station number
Dial-Tone Digit Table(240)[N]			Line in the second s	

And set SIP user ID and make empty auth ID and password.

Mobile Attribute (236)[N]	E SIP S	tation Basic Re	gistration Table]		
Intercom Busy Digit(237)[N]		_			
Dial-Tone Digit Table(240)[N]					
Executive/Secretary Assign(241)[N]	Index S	tation Number	User ID	Authentication ID	Password
Executive Access(242)[N]	1	1032	(Max 52)	(Max 04)	(Max 52)
VM COS Attributes(243)[N]	2	1032	1032		
System Reroute Table(244)[N]		1000	1033	1033	1033
PPTP Attribute[N]	3	1034	1034	1034	1034
Web Access Authorization[N]	4	1035	1035	1035	1035
© Table Data	5	1036			
© Tenant Data	6	1037			
Reard Data	7	1038			
o board Data	8	1039			
O Voice Network	9	1040			
0 T-Net Data	10	1041			
H.323 Data	11	1042			
SIP CO Data	12	1043			
SIP Station Data	13	1044			
	14	1045			
CIP CTA Additional Pacint (201)[N]	15	1046			
SIP S TA Auditorial Regist (361)[N]	16	1047			
Sir Station Service(362)[14]	17	1048			
Zone Data	18	1049	[
SNMP Data	10	1050			
DECT Data	19	UCUI			

Also, if the IPCR is completely registered to iPECS-MG, you can verify that the Terminal Type of the SIP Station is set to "IPCR".

Mobile Attribute (236)[N]	[SIP Station A	dditional Registratio	n Attributes]	
Intercom Busy Digit(237)[N]				
Dial-Tone Digit Table(240)[N]	Enter Station Rang	je : 🔄 –	Load	Overview
Executive/Secretary Assign(241)[N]	Station Range Fro	m 1032 to 1032		
Executive Access(242)[N]	Uncheck All	Attribute	Value	Remark
System Bernute Table(244)[N]		Station Number	1032	
PPTP Attribute [N]		Registering Mode	Manual 💉	
Web Access Authorization[N]		Registration Status	Registered 🛛 👻	
Table Data	v	IP Address	192.168.122.94	(only for first station)
Tenant Data		IP Port	5060	
Roard Data	1	Device NAT Usage	NO NAT 🐱	
Voice Network	₹	Transfer Mode	UDP 🐱	
VOICE NETWOIR	V	SIP Phone Type	iPECS IPCR 💌	
T-Net Data		Registration Timer	3600	
H.323 Data	v	Keep Alive Usage	OFF 💌	
SIP CO Data				
SIP Station Data				
SIP STA Basic Registration(380)[N]				
SIP STA Additional Regist,(381)[N]				
SIP Station Service(382)[N]				
Zone Data				
SNMP Data				
DECT Data				
Green Mode				
Hotel Data				
Initialization				

VM Group Configuration for IPCR Server

You don't need to program about this. iPECS-MG uses a different mechanism.

3.3.4 Automatic Station Recording & Destination

An agent ID in IPCR means a station number which has to be programmed to record its voice. So, If Agent ID information is sent to iPECS-MG from IPCR, the Two-way recording destination(PGM145-Index5) is automatically set with IPCR SIP number and also the Auto-Record Service mode(PGM145-Index 3) is automatically set according to the Agent ID recording type of IPCR.

iPECS-MG/GS55M-B.0Ab AUG/11	[Stati	on VMIB Attrib	ute]	
Boot Version-1,1Ab AUG/11 OS Version-1,1Ab AUG/11 Find PGM	Enter St Station I	ation Range : 🗌	- Load Overview]
Hide Menu	Order	Uncheck All	Attribute	Value
© Pre-Programmed Data		Undire dir. / II	PGM	145
© Numbering Plan	1	v	VMIB Access	ENABLE V
© Station Port Data	2		Prompt Language Index	FIRST V
• Station Number Data	3	v	Auto-Record Service	ON (NO-USB) 🗸
Station DN Assignment(130)[N]	4	•	Two-Way Record Access	DISABLE V
Station DN Attribute(131~135)[N]	5	2	I wo-Way Recording Destination (if not assigned : Destination is Internal VMIR)	1032
Private CO Attribute(136)[N]	6	v	VM MSG Backup Phontage Number	
COS Assignment(137)[N]	7	2	VM MSG Backup Delete Option	DISABLE
Auto Dial Attribute(156)[N] Preset Call Forward(142)[N]	8	2	VMIB Message Retrieve Type	
Call Forward(143)[N]	9		VMIB Urgent Message No	000
VMIB Attribute(145,147)[N]	10		VMIB New Message No	000
Mobile Extension Attribute(146)[N]	11		VMIB Saved Message No	000
CO/IP Group Access(150)[N]	12	V	DND Forward to VMIB	DISABLE V
Page Group Access(151)[N]	13	2	Company Directory - First Name	
Command Group Access(152)[N] Station Name Display[N]	14	2	Company Directory - Last Name	

4.1 IPCR Installation

Follow the process below to install the IPCR application.

1. Login to terminal with the root Identification.

# su root			
Password			

- # su root Change to root identification
- Password Input the password
- 2. Download the Install file (install_ipcr.tar.gz) to the /root folder in the server. Locate the folder with the file and copy to the /root folder.

```
# cd `located folder'
# cp install_ipcr.tar.gz /root
```

- # cd 'located folder' Change directory to the folder with the file
- # cp install_ipcr.tar.gz /root Copy the install_ipcr.tar.gz file to /root
- 3. In the /root folder, extract the file.

tar xvfzp install_ipcr.tar.gz -C /

4. Check the install.sh permission.

ls -al install.sh

The server response should appear similar to below indicating the insall.sh is available.

-rwxrwxrwx 1 root root 1388 2010-07-21 09:01 install.sh

5. Install the IPCR application with the "install.sh" command.

./install.sh

Error Case: If it's failed and cannot create directory error,

You can delete /usr/furence as following

rm -rf /usr/furence

And retry to install again.

tar xvfzp install_ipcr.tar.gz -C /

Check the install.sh permission.

ls -al install.sh

6. After Installation is complete, the server will reboot.

The system is going down for reboot NOW!

- 7. After the reboot, the server *fcmanger* will start the IPCR application process.
- 8. Check the IPCR application status with the below command.

ps −ef | grep IPCR

The server should return the message with the PID

root	9522	1	0 13:48 ?	00:00:00 ./IPCR
root	10154	9756	0 13:48 pts/2	00:00:00 grep IPCR

Note a single line response as below is abnormal.

root 9519 9484 013:48 pts/1 00:00:00 grep I	PCR
---	-----

If the IPCR application is not running, execute the *fcmanager* status command to determine the *fcdaemon* status.

#	cd	/usr/furence/	/bin

./fcmanager status

- # cd /usr/furence/bin Change directory to the folder with the fcdaemon executable file.
- # ./fcmanager status Command to determine the *fcdaemon* status.

If fcdaemon is running, the server should return the PID messages

[pid] = 25626, [ppid] = 1, [name] = fcdaemon [pid] = 25627, [ppid] = 25626, [name] = SCHEDULER [pid] = 25628, [ppid] = 25626, [name] = EXECUTER [pid] = 25629, [ppid] = 25626, [name] = MONITOR

If the above command does not produce any information, restart as below.

./fcmanager start

 # ./fcmanager start – Command to restart fcmanager and fcdaemon, the IPCR application will restart automatically.

If fcdaemon is running but the IPCR application is not properly executed, verify the permission to run the IPCR application.

ls -al IPCR

• # Is -al IPCR – Command to determine the IPCR application status.

The server response should appear indicating the IPCR application is available.

-rwxr-xr-x 1 root root 3184807 2010-09-08 17:17 IPCR

If different from the above, run the following command to change the permission.

chmod 755 IPCR

• # chmod 755 IPCR - Change the permission to execute IPCR application.

4.2 Executing IPCR

The IPCR application can be started either directly or automatically.

To directly start the application: Login to the server root directory.

cd /usr/furence/bin
./IPCR

- # cd /usr/furence/bin Move to locate fcmanager file
- # ./IPCR Execute IPCR

To execute automatically: Login to the server using root Identification.

cd /usr/furence/bin
./fcmanager start

- # cd /usr/furence/bin Move to the folder containing the fcmanager file.
- # ./fcmanager start Execute fcmanager and start the IPCR application.

4.3 Terminate IPCR

Login to the server by root Identification though Terminal.

#	cd /usr/furence/bin
#	ps -ef grep IPCR
#	kill -9 xxxx
#	./fcmanager stop

- # cd /usr/furence/bin Change directory to locate the fcmanager file
- # ps –ef | grep IPCR Check Pid of IPCR
- # kill -9 xxxx When you get the PID from grep command, terminate the process
- # ./fcmanager stop Quit the fcmanager. If the IPCR application was initiate directly, there is no need to quit the fcmanager.

The IPCR application includes an integrated Web server that is employed for access to Administrative and User functions.

5.1 Access and login to Home Page

To access the Administrative and User functions:

- 1. Open a Web Brower, IE 8 or later is recommended.
- 2. Input IPCR Server IP address in the browser address box (Ex. http://150.150.150.56) and select Go.



• The IPCR Login screen will appear.

To login,

- 1. Select English or Local LANGUAGE, see Appendix B.
- 2. Input ID and PASSWORD, default ID and password are 'admin'.
- 3. If desired, check the 'Remember ID' box.
- 4. After login, you can configure Login ids and passwords for each User, see section 5.2.1.2.

LANGUAGE English	LOGIN	
Remember ID		
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5.2 Configuring IPCR

The IPCR Administration menu includes tabs at the top of the page for User registration, User admin level, PBX Registration, Channel registration, and Setting menus. Each tab displays the Web page associated with the menu and may include several lower level tabs.

Prior to configuring the User, Channel, and Settings menus, the IPCR server and application must be registered with and logged into the iPECS host. The host should be configured for registration and login, *see sections 3.1.1 to 3.1.3*, and the IPCR Server Registration, *section 5.2.5.1*, and the iPECS PBX Registration, *section 5.2.3*, should be configured in IPCR prior to registration and login.

5.2.1 Registering a User

User Registration establishes User Groups and details for each user. Each user is registered with the IPCR application at one of three class or group levels, establishing a hierarchy. This function is often used to separate departments and groups for easier user and administration access. The initial Web page indicates the number of Users for each Class level in the main window and a tree display of user groups in the left window.

To access the User Registration page,

- Select the Administration tab from the Home page,
- Select the User Registration tab

	Administration Search	Monitoring Statistics Logout
IP Call Recording	User registration User level admin	
ROOT	• No, of Class 1	2
🗄 📲 test2	• No, of Class 2	2
🖨 🚰 test3	• No, of Class 3	3
	• No, of users	8
- n member2 - n member3 - n 106 - n 107	User groups	

After selecting a Class (User Group) in the left window, the User details are defined under the User Registration menu, *section 5.3.1.2*.

5.2.1.1 User Group Registration

To add or modify a Class (User group),

- Select (click) a Class,
- Select the Add button,
- Enter a Class Name up to 40 characters,
- Select Save.

			- Class 1 Code	ibecr [Boba]
	- Class 1 Code	ipecs [0004]	- Class 2 Code	likmember [M004]
- Charx 1 Manu	+ Class 2 Name		· Class 3 Name	
Class 1 Code B304	- Class 2 Code	M004	- Class 3 Code	5005

The Class code is automatically assigned and cannot be changed. A Group can be deleted using the delete button at the bottom of the page.

5.2.1.2 User Registration

Each user is identified and a Name assigned. The User Id and password are the credentials employed by the user for login to the IPCR Web functions. The User Level is the User Admin Level that determines the functions and features available to the user as configured in *section 5.2.2*. Note the Agent Ids are available only after registration and login to an iPECS host with licensed Agents. If enabled, the user activity in the IPCR Web application is logged.

To add a user,

- Select a Class,
- Select Add,
- Enter the required User details, in red boxes,
- Enter any optional information as desired,
- Select Save.

;pecs	Administration Search	<u>Monitoring Statistics Logout</u>
IP Call Recording	User registration User level admin	PBX Registration Channel registration Setting
a∎ ROOT ⊟ a∎ test	Class 1 Code	test [B002]
😑 🔐 test2	Class 2 Code	test2 [M002]
= 1 test3	• Class 3 Code	test3 [S002]
member2	User ID	20002 Login ID, up to 12 Charactors
member3	• User Name	20002 up to 40 Charactors
106	Password	Initialization Login password :
	Password verification	up to 24 Charactors
🖻 🚰 q22	Agent ID	20002 [20002] • Select Agent ID
🛱 📲 q3	Recording activation	Yes V All Call Recording V Choice ACR or ODR
7028	Employee ID	
eeseel	User level	[member] User's Admin Level
🛖 Admin	Log activation	Ves V Use Log or Not
	Registration date	20120312

To modify user information or delete a User,

- Select the User Name,
- Modify the data and select Save or,
- Select Delete.

5.2.2 User Admin level

Based on the User Admin Level, a user is allowed access to specified features and functions of the IPCR Web Server. A maximum of 10 User Admin levels can be configured.

To access the User Admin Level settings,

- Select the Administration tab from the Home page,
- Select the User level admin tab,
- Input a Level, up to 15 characters
- · Check appropriate 'Activation' boxes for the User Level Admin
- Select Save.



A User admin level can be deleted using the Delete button.

5.2.3 iPECS PBX registration

IPCR can be configured to work with ten (10) iPECS systems simultaneously. Each iPECS system is defined under the PBX Registration tab. The SIP Id and password, the iPECS system Id and IP address are required. The Keep Alive timer is not used. The SIP Id and password are sent to the iPECS host during login. If assigned in the host, must match the Station User Id parameters in the iPECS host. Once the IPCR application is configured for PBX Registration and the iPECS host is configured for registration and login, the IPCR sever should be registered with the host.

Note a value must be entered for the Keep-alive timer however, the timer is not used.

To configure the iPECS host information for IPCR,

- Select the Administration tab from the Home page,
- Select the PBX Registration tab,
- Input the required iPECS host (PBX) information.
- Input optional information as desired.
- Select Save.

		and a state of the	teretinnin Sommenne		Construction of the				
+ PBX ID		100			- PBX Name		Test50b		
+ PBX IP		192.168.123.59			· Site name	0	lab		
+ SIP ID		5859			· SIP Pass	brow	-		
· Location					· Remarks				
 Keep alive of 	check interval	3600		(Sec)					
. <u></u>					-			Delete	Save Cle
PBX ID	PBX Name	PBX IP	Site name		SIP ID	SIP Password	Location	Remarks	Keep alive cher interval
100	Ted 50b	192 168 123 59	lab		5899	58**			3600

PBx ID : up to 5 Characters	PBx Name : up to 99 Characters
PBx IP : IP v4	Site Name : up to 99 Characters
SIP ID : up to 20 Characters	SIP Password : up to 20 Characters
Location : up to 99 Characters	Remark : up to 99 Characters

To delete a PBX ID,

- Select the PBX Id from the lower chart,
- Select Delete.

5.2.4 Channel registration

The IPCR will allocate channels based on the number of licenses defined for the server. Each channel is assigned an Agent Id, which is assigned a User name and is further associated with an object in the host iPECS database (PGM 237). The channel is configured to activate recording for all calls or on-demand, and log activation. One PBx needs at least one more channel. If there is no channel for one PBx, SIP of IPCR cannot work. Channel cannot erase it after register.

To configure IPCR channels,

- Select the Administration tab from the Home page,
- Select the Channel Registration tab,
- Input the channel characteristics including the Agent ID (up to 6-characters).
- Select Save.

122			Alministration I Sear	th Monitoring	Statistics Logout				
IP Cell Rec	ording		User registration User lev	el edmin - FBX Registration -	Channel registration Setting				
Channel No.	£		Channel No.	PBX ID	Agent ID	User name	Recording activation	Recording type	Log activation
PBX ID	600	*	15	lk120	1023	1023	Yes	ACR	Yes
Agent ID	106		4	600	106	105	Yes	ACR	No
User name	106	*	5	600 48	107		Yes	ACR	No
Recording	Yes	۲	6	600	20002	20002	Yes	ACR	Yes
Recording type	All Call Rec	~	1	600	3202	107	Yes	ACR	No
Log activation	No	*	8	600	3203		No		No
Save	Clear		2	LIK50	4171	member2	Yes	ACR	No
			3	LIK50	4172	member3	Yes	ACR	No
			7	600	5001	eeccel	Yes	ACR	No
			9	600	7008	7008	Yes	ACR	Yes

5.2.5 Setting

5.2.5.1 IPCR Server Registration

IPCR Server Registration defines the IPCR server information for the application including IP address and path for Back-up services. At least one back-up path must be assigned. When assigning a back-up path, first define the path then click the 'Path Test' button to verify the path exists then 'Save' to store the path information. Server IP and ID should be assigned for IPCR's operations.

To configure the IPCR server information,

- Select the Administration tab from the Home page,
- Select the Setting tab,
- Select IPCR Server Registration,
- Input information as desired.
 - ID: up to 5 character,
 - Server name: up to 20 characters.
- Select Save.

5.2.5.2 Set Multi IPCR Master IP

Multi IPCR Master IP: If this is inserted, it will work as Multi. If it's not, it will work as single.

In case of Multi, user should set Master IP. If the IP is same as mime, I am Master. If it's not, I am Slave.

IPCR Server Registration	- Multi IPCB Master II	P		1			Save	Delete
ault Management		6		<u> </u>		1		1
icense information	IPCR Server ID	C	R092		IPCR Server Name	IPCR Test Server		
Auto Backup Setting	+ IPCR Server IP	15	0.150.150.41					
IDCB Former Log View	Original path	N	ar/REC/RecSee_Data					
FTP Backain Setting	Backup path 1	M	ar/REC/RecSee_Back	up			Path Test	
General	Backup path 2						Path Test	
/ersion	• Backup path 3						Path Test	
						Delete	Save	Clear
	IPCR Server ID IPCR Se	rver Name	IPCR Server IP	IPCR Server Type		Backup path 1		
	CR092 IPCR T	est Server	150.150.150.41	Master	/var/REC/RecSee_Backup			

IPCR Server ID is shown after multi IPCR Master IP set.

IP Call Recording				Channel registration						
IPCR TYPE : MASTER							IPCR Server	ID CR092		•
IPCR Server Registration	· Multi IPCR Ma	ster IP	150 150 150 41					Save	Delete	T
Fault Management	· IPCR Server ID		· IPCR Server Name							
License information	IPCR Server IP									
- Auto Backup Setting	· Original path		var/REC/RecSe	e_Data						
· IPCR Server Log View	·Backup path 1						Path Te	st		
• FTP Backup Setting	·Backup path 2						Path Te	st		
• General	-Backup path S						Path Te	st.		
·Version										
							Delete	Save	Clear	-
	IPCR Server ID IPCR Server		ime	IPCR Server IP	IPCR Server Type		Backup path 1			
	CR092	IPCR Test Serv	er.	150.150.150.41	Master	/var/REC/RecSee_Backup				

5.2.5.3 Delete Multi IPCR Master IP

- 1. Click Delete Button
- 2. It's work as single. All information related to Multi functions will be deleted.

5.2.5.4 Fault Management

Fault management establishes CPU, Memory, and disk usage thresholds for notification to an assigned e-mail. The maximum notification settings should be limited to twenty (20).

To configure Fault thresholds and notification,

- Select the Administration tab from the Home page,
- Select the Setting tab,
- Select Fault Management in the left window,

;>=rs	Administration	<u>Search</u>	<u>Monitoring</u>	<u>Statist</u>	<u>ics</u>	<u>Loqout</u>					
IP Call Recording	<u>User registratio</u>	<u>user level admin</u>	PBX Registratio	on <u>Channel rec</u>		Setting					
IPCR TYPE : MASTER								IPCR Server	ID CR092		~
IPCR Server Registration	•Threshold •CP	u 0 v %	• MEMORY	0 ~%	• Disk	0	∽%			Modify	ī
Fault Management	• E mail notification										1
License information	• Name	'			•E mail						
Auto Backup Setting	1										-
IPCR Server Log View								Delete	SAVE	Clear	
FTP Backup Setting	No		Name					E mail			
• General											~
Version											

- Input the CPU, Memory, and Disk usage fault threshold levels.
- Input the Name and E-mail address to notify.
- Select Save.

To delete a notification,

- Select a notification number from the chart in the lower portion of the main window,
- Select Delete.
5.2.5.5 License Information

Selecting License Information displays the total available agents, assigned agents and available agents for each host iPECS platform.

To view the license information,

- Select the Administration tab from the Home page,
- Select the Setting tab,
- Select License Information.



5.2.5.6 Auto Backup Setting

The IPCR application will perform a periodic backup of recordings. Automatic Backup defines the interval between backups, the source and destination paths, and copy or move. When the backup is copied, the original recording is maintained on the IPCR server and copied to the back-up path. When 'Move' is selected, the recording files are moved to the back-up path and deleted from the IPCR server. A log of back-up activity is maintained.

To set-up Automatic Backup,

- Select the Administration tab from the Home page,
- Select the Setting tab,
- Select Auto Backup Setting
- Select the Add button
- Configure the desired Automatic Back-up parameters,
- Press the Save button

:>=rs	<u>Administration</u>	<u>Search</u>	<u>Monitoring</u>	Statistics Lo	ogout		
IP Call Recording	<u>User registration</u> <u>U</u>	lser level admin	PBX Registration Ch	annel registration Set			
IPCR TYPE : MASTER						IPCR Server ID CR092	~
IPCR Server Registration	• Back up schedule	• Month	01 🗸 🔹 🖓	vy 01 🗸	• Hour	01 🗸 • Minute	01 🗸
• Fault Management	• Back up path	Source	/var/REC/RecSee_Data		• Target	/var/REC/RecSee_Backup	
License information	• Back up ahead of_	Month 01		O Day 🗸		○ Hour ∨	
Auto Backup Setting	Copy/Move	Сору	•		-		
IPCR Server Log View	T	Move				Delete SAVE	Clear
• FTP Backup Setting	Month Day Hour Min	ute So	urce	Target	Copy/Move	Back up ahead o	of
• General							
• Version							
	-						
Copy: Data saved a	nd move						
Move: Data deleted	and move	Ex)	Back up befo	ore 1 month ag	go l	Ex) January 1st 01:0)1 Backup

To delete an Automatic Backup setting,

- Select the setting in the lower chart,
- Select the Delete button

5.2.5.7 IPCR Sever Log view

The Log view displays a log of various events and errors that occurred on the selected date, time, and type of log.

To view the IPCR Server log,

- Select the Administration tab from the Home page,
- Select the Setting tab,
- Select IPCR Log View from the left pane,

- Select the Log Date, Time, and/or Type,
- Select View.

iPecs	Administrat	ion I :	Search r level admin	Monitoring PBX Registration	Statistics Channel registr	Logout ation Setting	_	_	
IPCR TYPE : MASTER	• Log Date		2014-05-09	. Log	Time		• Log Type	+ IPCR Server ID CR092	View
· Fault Management	Log Date	Log Time	Server	Log Type	ExtNo		Log Co	ntents	
·License information	2014-05-09	10:01:08	CR092	7320		[MONITOR] total Memory	y = 8232216 kb, Free Memory =	193116 kb, Used Memory Percentage	= 2.35 *
Auto Backup Cotting	2014-05-09	10:01:08	CR092	7310		[MONITOR] CPU usage :	user = 0.12%, system = 0.16%	, waiting = 0.41%	
· Noto buckup setting	2014-05-09	10:01:08	CR092	7330		[MONITOR] disk usage p available snace = 40087	vercent = 1% at [/var/REC/RecS	ee_Data] mount position. total space =	423199192 kb,
IPCR Server Log View	2014-05-09	10:01:05	CR092	7320		[MONITOR] total Memory	y = B232216 kb, Free Memory -	192992 kb, Used Memory Percentage	= 2.34
· FTP Backup Setting	2014-05-09	10:01:05	CR092	7310		[MONITOR] CPU usage :	user = 0.19%, system = 0.18%	, waiting = 0.19%	
• General	2014-05-09	10:01:05	CR092	7330		[MONITOR] disk usage p available space = 40088	ercent = 1% at [/var/REC/Rec5 0004 kb	ee_Data] mount position. total space =	423199192 kb,
	2014-05-09	10:01:02	CR092	7500		[SCHEDULER] Enrolled P	rocesses = 0		
Version	2014-05-09	10:00:55	CR092	7320		[MONITOR] total Memory	y = 8232216 kb, Free Memory -	191588 kb, Used Memory Percentage	= 2.33
	2014-05-09	10:00:55	CR092	7310		[MONITOR] CPU usage :	user = 0.08%, system = 0.12%	, waiting = 0.33%	
	2014-05-09	10:00:55	CR092	7330		[MONITOR] disk usage p available space = 40088	vercent = 1% at [/var/REC/RecS 0004 kb	ee_Data] mount position. total space =	423199192 kb,

5.2.5.8 FTP Backup Setting

This is setting for backup using FTP. It can be backup automatically monthly, weekly and daily.

IPCR TYPE : MASTER											· IPCR :	erver, ID CR	192
IPCR Server Registration	•FTP	- If Re	CR Server	CR092		- IP	192.168.1	23.123	- ID	ftp			
Fault Management		. p	assword			• Port	21		· Protoco	FTP			
License information		• D	ate Settings	daily	-	·Time	01 -						
Auto Backup Setting		· c	heck Term	1	Minute								
IPCR Server Log View										D	elete SA\	rE Cle	ier
FTP Backup Setting	IPCR Server Registration	IP	ID	Password	Port	Protocol	FTP Backup Type	Mon Date	Mon Time	Day Of The Week	Weekly Time	daily Time	Check Term
	CR092	192.168.123.12	3 ftp		21	ftp	Daily		2	1.1	1.4.5	1	1

- 1. Setting: Administration > Setting > FTP Backup Setting, Check term can be used for interval of checking ftp backup. It can be saved using SAVE button.
 - Data Setting: monthly, weekly, and daily
 - Daily: It will work daily on the time
 - Monthly: It will work monthly on the day and time as below.

•Date Settings	monthly 🔹	• Day	•	• Time	00 💌	
----------------	-----------	-------	---	--------	------	--

• Weekly: It will work weekly on the day and time as below.

 Date Settings 	weekly 💌	• Week	Sunday	-	 Time 	00 👻	

- 2. Delete: Press Delete button.
- 3. Initialize: If you press Clear button, you can set an initial format.

5.2.5.9 General (Etc.) Setting

The general Settings encompass e-mail settings, notification interval, and a Keep Alive timer. The e-Mail System Info defines the e-mail account the IPCR application will use to send e-mail fault notifications. The notification will be sent at intervals defined by the Fault notification period until the fault is cleared. It is recommended this be a sufficiently long period, greater than 3600seconds, to allow correction of the fault. The Keep Alive check establishes the update timer for agent status on the Real Time monitor page.

This Web page also includes a Restart button. After changing information on a Web page, the button can be used to restart the IPCR application.

To modify the general settings,

- Select the Administration tab from the Home page,
- Select the Setting tab,
- Select Etc. Setting from the left pane,
- Input the desired settings,
- Select Save.

IPCR TYPE : MASTER				IPCR Server ID	CR092
- IPCR Server Registration	- Mail System Info				
- Fault Management	• Mail Server Address		· Send Address	C	
· License information	- Login ID		•Login PW		
- Auto Backup Setting	- To Address				Test Mail
• IPCR Server Log View	Fault notification period	6000	(sec)		
- FTP Backup Setting	• Real Time call Monioring	etc setting			
- General	Keep Alive Check	5	(sec)		
Version	IPKTS Alive check	🗣 Yes 🔿 No			
. 46 500	-Sip Log	O Yes No Path:/usr/furence/log/{Date}.IPKTS Path	: /usr/furence/log/{Date}.SIP		
	- Ethernet Card	Eth0 -			
	Encrypted File Download Optic	ons 🔿 Encrypt 🖲 Non-encrypt			
					SAVE
	• IPCR restart	Restart			
	· Voice file upload				
	- Voice file				찾아보기
		Max Upload Size : 100M			SAVE
	• Update				
	• Update file				ĝ01¥21
		Max Upload Size : 100M			
		X You should reboot the server to complete update after upload	ing a file.		SAVE

- 1. Mail Server Address, Second Address are up to 50 characters.
 - This Mail Server is used for testing.
- 2. IPKTS Alive Check is used for polling with LIK or UCP.
- 3. Voice file upload is used for announce of call recording. This wave file should be G.711 u-law.
- **4.** You can upgrade it using *upgrade.tar.gz* file. You should not upgrade it using *install_ipcr.tar.gz*. *install_ipcr.tar.gz* should install only first time after install Fedora 16.

5.3 Server and Call Statistics

In addition to logs, the Administrator and allowed Users can view the status of the Server and the Call Statistics report.

5.3.1 Server Status Report

The Storage Monitor graphically displays the current CPU, memory and backup memory usage as well as a graph of memory use over time.

To view the Server status report,

- Select the Monitoring tab from the Home page,
- Select the Storage Monitoring tab,
- The Server Status report displays.



5.4 Call Statistics

The Call Statistics Web page delivers a graphical and tabular view of call traffic to the IPCR application. The type of call (incoming or outgoing), number of each call type and duration of the calls is provided. In addition, the Call Statistics report can be downloaded as a worksheet file for further analysis. The drop-down at the bottom left of the page can be used to select the number of records displayed on the page in multiples of ten (10).

To view the Call Statistics report,

- Select the Statistics tab from the Home page,
- Select the Call Statistics tab,
- Enter search criteria (Start date, End date, and Type),
- Select Search

To download the Call Statistics report

- · Select Excel Download while viewing the desired report
- Follow the instructions to save the file locally.



Each Agent is assigned a User Id that is assigned with a User Admin level. The User Admin levels are configured to allow the user access to the various IPCR functions and features. In addition to access to the administrative and statistics, the User Admin Level can be configured to allow the user to search and play recordings, and monitor, in real-time, other users.

6.1 Search (Search & Play)

When a user is assigned a User Admin Level permitted access to Search and Play, the user may access the Search page. In the Search page, the user can input search criteria to locate specific call recordings. The user can listen to recordings, add a text memo to the recording log, and download the recording or log. In the upper left pane, the user can enter search criteria. Below the search entry area is the tree of users. At the top of the right pane are the typical playback controls (play, pause mute, volume, playback speed, etc.). Below the playback controls is a chart that will display a log of recordings matching the entered search criteria.

6.1.1 Search the Recording Log

The user can input various search criteria and display logs for recordings matching the search criteria. The Search page will display a list of recordings that match the search criteria. The number of records displayed on the page can be adjusted using the drop-down at the lower left of the main screen. Each record displays the Date, Time, CID, Agent and Call type as well as icons for listen, add a memo, or download the recording or log.

To search the recording log,

- Select the Search tab from the Home page,
- In the left pane, enter search criteria (Agent Id, User Id, CID, Type, Time and date),
- Select Search.

6.1.2 Listening to a Recording

To listen to a recording,

- Select the Listen icon, ≁, to the right of the desired recording,
- Use the controls at the top of the window to control playback of the recording.

6.1.3 Add a Memo to a Recording

To add or display a memo,

- Select the Memo icon, 🥒, to the right of the desired recording
- In the pop-up screen enter the desired memo,
- Select 'Save' to store the memo and 'Close' to close the memo pop-up screen.

If a memo has been entered for a recording, additional memos can be added. In this case, the additional memos will display in different colors.

	Admir Scr	nistration	Search	Monitoring	Statistic	s Logo	ut					_				
• IPCR ID			ţ	-				Date	2014-05-08	tal 00:0	0:00 Dati Time 10:11:59	Cell Time 00:00:16				
• CID	17	Date	Time	Duration	IPCR ID	Agent ID	1	Agent ID	1002	CID	1005			emo	Down	ſ
· Call	1	2014-05-08	14:55:45	00:00:26	CR092	1002	_						*	-	-	
. Time • •		2014-05-08	10:39:03	00:01:10	CR092	1002									-	
Start 2014-05-01	10	2014-05-08	10:27:45	00:00:26	CR092	1002								3	-	
End 2014-05-09	12	2014-05-08	10:12:33	00:00:18	CR092	1002								1	-	
Memo	10	2014-05-08	10:11:59	00:00:16	CR092	1002								1	-	
· artato	13	2014-05-01	14:53:46	00:00:49	CR092	1002								1	-	
Excel Down 😸 Multi Down 💄	10	2014-05-01	14:09:51	00:00:08	CR092	1002								1	-	
TR G001													-			
▼A GOO2 ▼A GOO3 □ 1002										2	LOSE					

6.1.4 6.1.4 Download Logs or Recordings

To download the recording logs,

- Check the box to the left of the desired records,
- Select the Excel download button, Excel Down
- Follow the on-screen instructions to name and save the log file.

To download a call recording,

- · Check the box to the left of the desired recordings log,
- Select the Multi download button, Multi Down
 ^{Multi Down}
 ^{Multi Down}
 ¹
- Follow the on-screen instructions to name and save the log file.

6.2 Real Time Call Monitoring

The Real-time Call Monitoring page presents the status of the recording Agents and permits monitoring in-process call recordings. Agents are displayed as an icon, see *section 6.2.1*, or a tabular entry (Grid), see *section 6.2.2*. The user may select the view using the 'Icon View' or 'Grid View' buttons at the top of the left pane.

Users can monitor an active recording by selecting the listen icon, \mathbf{n} , for the agent. For Ondemand recording Agents, a user can activate on-demand recording and listen to the live call. If desired the user can deactivate the on-demand recording. Note to monitor a call the user must have the 'RecSeeRM.ocx' component installed on their PC. When attempting to access an active Recording Agent without the component installed, the user will be asked to install the component.

6.2.1 Icon view

Selecting the Icon View button in the upper area of the left pane displays the recording Agent Icon View page below. Each Agent is represented by an icon with the User Id and name.



The icon indicates the Agent status as:

- E : Agent not active, logged out
- 🚟 : Agent logged in and idle
- E : ACR Agent busy and recording in process
- FFFF : ODR Agent busy, the call recording button will flash to indicate recording in process

To monitor the call of an Agent that is in the recording state,

- Click the yellow headset in the Agent icon, the headset will flash and audio for the call is presented to the PC. The ActiveX 'RecSeeRM.ocx' component is required for monitoring an Agent.
- This real time monitoring use port 5800 and 5801. If your Client wants to monitor it in NAT surroundings, you need port forwarding 5800 and 5801.

To activate call recording for an On-demand recording Agent,

- Select the record button,

 in the Agent icon, the button will flash and the Agent can be monitored as described above.
- To cancel the recording, press the record button again prior to completion of the call.

6.2.2 Grid view

Selecting the Grid View button in the upper area of the left pane displays the recording Agent Grid View page below. Each Agent is represented by an entry in the listing with the User Id name, Class (user group), Agent Id, and status icons.

						IPCR Server ID	CR092	٠
Icon View	User ID	User Name	No. of Class 1	No. of Class 2	No. of Class 3	Agent ID	Status	
B Grid View	1002	1002	8002	M002	\$002	1002	Login 🎧	
	1003	1003	8002	M002	\$002	1003	Login 🎧	
	1004	1004	8002	M002	\$002	1004	Login 🎧	
Total Call : 0 Call	2001	2001	8002	M002	5003	2001	Login M	
Incoming Call : 0 Call	2002	2002	8002	M002	5003	2002	Login 🎧	
Outgoing Call : 0 Call	2003	2003	8002	M002	5003	2003	Login M	
Etc Call : 0 Call								

The Agent status is indicated by the icons as below:

- LogOut ∩ : Agent not active, logged out
- 📻 Busy 🎧 : ACR Agent busy and recording in process
- Busy file () COR Agent busy, the call recording button will flash to indicate recording in process

To monitor the call of an Agent that is in the recording state,

Click the yellow headset in the Agent icon, the headset will flash and audio for the call is
presented to the PC. The ActiveX 'RecSeeRM.ocx' component is required for monitoring
an Agent.

To activate call recording for an On-demand recording Agent,

- Select the record button, •, for the Agent, the button will flash and the Agent can be monitored as described above.
- To cancel the recording, press the record button again prior to completion of the call.

6.3 Logout

When completed with an IPCR Web session, the user should log-out of the application.

To Log-out,

• Select the Logout tab from the Home page,



6.4 Change Language

IPCR Web Application can change a local language for your country as below. You can download language pack from ftp Client.

- 1. Connect IPCR server with general FTP Client Program.
- 2. Enter /var/www/html/work/lang/kr
- 3. Copy all files to your directory from the directory(/var/www/html/work/lang/kr).
- 4. You can change the red refer to the blue character.
 - Example: This is Korean.

```
<?xml version='1.0' encoding='EUC-KR'?>
<Request>
<data>
<list>
        <FRC_HeadTitle Stitle='===Setting====' Ttitle='===Setting====' />
        <FRC_BTN_save Stitle='저장' Ttitle='SAVE' />
        <FRC_BTN_modify Stitle='수정' Ttitle='Modify' />
        <FRC_BTN_del Stitle='삭제' Ttitle='Delete' />
        <FRC_BTN_clear Stitle='초기화' Ttitle='Clear' />
        <FRC_ProName Stitle='프로그램 이름' Ttitle='Program Name' />
        <FRC_GroupAuthority Stitle='계정 권한' Ttitle='Group Authority' />
        <FRC_Read Stitle='사용' Ttitle='Read' />
        <FRC_Write Stitle='M7' Ttitle='Write' />
</list>
</data>
</Request>
```

- 5. You should upload all files to the directory of IPCR server after modifying.
 - Object file list:
 - ProcSendControl.xml
 - a_user_regist.xml
 - agent_monitoring.xml
 - clNavigation.xml
 - detail.xml
 - lgnortel_top.xml
 - login.xml
 - mainframe.xml
 - permission.xml
 - r_channel.xml
 - r_logcheck.xml
 - r_user_regist.xml
 - report.xml
 - search_listen.xml
 - setting.xml
 - system_monitoring.xml
 - system_regist.xml
 - system_regist_ipcr.xml

7.1 Fedora-19-i386 Install Guide

7.1.1 Download path for installation file

IPCR employs Fedora-19 Linux provided by Red Hat and others. A copy of the Linux OS can be obtained from the below link.

http://ftp.neowiz.com/fedora/releases/19/Fedora/i386/iso/Fedora-19-i386-DVD.iso

This is the installation guide in VM-ware using Fedora-19. You can set as following using Fedora-19-i386-DVD.iso. It's the same as installation in your real PC.

Virtual Machine Settings		22
Hardware Options		
Hardware Options Device Memory Processors Hard Disk (SCSI) CD/DVD (IDE) Network Adapter USB Controller Sound Card Printer Display	Summary 1 GB 1 20 GB Using file E:₩Fedora 19 i386.iso NAT Present Auto detect Present Auto detect Auto detect	Device status © connected ♥ Connect at power gn Connection ● Use ghysical drive: ▲uto detect ● Use ISO image file: E:\WFedora 19 i386.iso ▲dtyanced
		OK Cancel Help

Or you can install Fedora-19 using DVD as following after making Fedora-19-i386-DVD.iso DVD.

7.1.2 Install Fedora-19-i386

Select the "Install system with basic video driver" **Option** > **Enter**.



► The media test is not required. Select "Skip" or practice as below.



1. Install language and Next.

		FEDORA 19 INSTALLATION
		🕮 us
v	VELCOME TO FEDORA 19.	
What language v	would you like to use during the installation	process?
Ervirjenta (Erviada)	Oreek (Oreece)	
English (United Kingdom)	English (United Kingdom)	
English (United States)	English (United States)	
Español (España)	Spanish (Spain)	
Eesti (Eesti)	Estonian (Estonia)	
Euskara (Espainia)	Basque (Spain)	
فارسی (ایران)	Persian (Iran)	
Suomi (Suomi)	Finnish (Finland)	
Français (France)	French (France)	
Type here to search.		B
Set keyboard to default layout for se	elected language.	
Quit		Continue

2. This is optional by language.

NGUAGE SUPPORT		FEDORA 19 INSTALLATIO
one		🕮 us
Select additional language sup	port to be installed	
English (United States)	English (United States)	
🗆 Español (España)	Spanish (Spain)	
🗌 Eesti (Eesti)	Estonian (Estonia)	
🗖 Euskara (Espainia)	Basque (Spain)	
فارسي (ايران) 📃	Persian (Iran)	
🗆 Suomi (Suomi)	Finnish (Finland)	
Français (France)	French (France)	
🗖 Galego (España)	Galician (Spain)	
🗏 ગુજરાતી (ભારત)	Gujarati (India)	
🗖 עברית (ישראל)	Hebrew (Israel)	
🔲 हिन्दी (भारत)	Hindi (India)	
🗆 Hrvatski (Hrvatska)	Croatian (Croatia)	
Type here to search.		•

3. DATE & TIME click.

INSTALLATION	ISUMMARY			FEDORA 19 INSTA	LLATION
				🕮 us	
LOCALIZA	TION				
Θ	DATE & TIME Asia/Seoul timezone		KEYBOARD English (Engli	ish (US))	
á	LANGUAGE SUPPORT English (United States)				
SOFTWAR	E				
\bigcirc	INSTALLATION SOURCE	27	NETWORK (Wired (eno16	CONFIGURATION 6777736) connecte	ed
	SOFTWARE SELECTION GNOME Desktop				
STORAGE					
Quit				Begin In	stallation
		И	Ve won't touch yo	our disks until you hit t	his button.
🛆 Please compl	ete items marked with this icon before continuing	g to the next s	step.		



4. TIME Select and click Done.

5. NETWORK CONFIGURATION Click.

INSTALLATION	ISUMMARY			FEDORA 1	9 INSTALLATION
				📟 us	
LOCALIZA	TION				
Θ	DATE & TIME Asia/Seoul timezone		KEYBOARD English (Engli	ish (US))	
á	LANGUAGE SUPPORT English (United States)				
SOFTWAR	E				
\bigcirc	INSTALLATION SOURCE	22	NETWORK (Wired (eno16	CONFIGUR 5777736) (ATION connected
6	SOFTWARE SELECTION GNOME Desktop				
STORAGE					
Quit					Begin Installation
		V	Ve won't touch yo	our disks until	you hit this button.
Δ . Please complete items marked with this icon before continuing to the next step.					

6. Configuration Click and Set IP.

NETWORK CONFIGURATION			FEDORA 19	INSTALLATION
Done			🕮 us	
Ethernet (eno16777736) Advanced Micro Devices, Inc. [AMD]		Ethernet (eno16 Connected	777736)	ON III
	Hardware Address	00:0C:29:AD:47:BC		
	Speed			
	IP Address	192.168.43.129		
	Subnet Mask	255.255.255.0		
	Default Route	192.168.43.2		
	DNS	192.168.43.2		
+ -			[Configure
<u>H</u> ostname: localhost.localdomain				

NETWORK CONFIGURATION	FEDORA 19 INSTALLATION
Done	m us
Editing eno1677773	5
Advanced Micro Devi Connection name: eno16777736	(36) ON
General / Ethernet / 802.1x Security IPv4 S	ettings Pv6 Settings
Method: Manual	~
Addresses	
Address Netmask Gatewa	y Add
	Delete
DNS servers:	
Search domains:	
DHCP client ID:	
Require IPv4 addressing for this connect	ion to complete
+ -	Routes Configure
	Cancel Save
Hostname: localhost.lc	

7. IPv4 Settings > Manual > Add > Set IP and Save – Done.

8. Set Server and SOFTWARE SELECTION Click.

INSTALLATION	N SUMMARY		FEDORA	19 INSTALLATION
			🕮 us	
LOCALIZA	TION			
Θ	DATE & TIME Asia/Seoul timezone		KEYBOARD English (English (US))	
á	LANGUAGE SUPPORT English (United States)			
SOFTWAR	E			
\odot	INSTALLATION SOURCE	Q 2	NETWORK CONFIGL Wired (eno16777736	IRATION ;) connected
	SOFTWARE SELECTION GNOME Desktop			
STORAGE				
Quit				Begin Installation
		ν	Ve won't touch your disks u	ntil you hit this button.
🛆 Please compl	lete items marked with this icon be	efore continuing to the next s	step.	

9. Set Web Server and PHP in right Add-Ons, and choice Perl for Web, PostgreSQL Database, Administratoin Tools, C Development Tools and Libraries, Development Tools & Done.

OFTWARE SELECTION	FEDORA 19 INSTALLATION
Done	🖽 us
Base Environment	Add-Ons for Selected Environment
MATE Desktop MATE Desktop is based on GNOME 2 and provides a powerful graphical user interface for users who seek a simple easy to use traditional desktop interface.	Use with MariaDB (MySQL). MongoDB Scalable high-performance NoSQL database. PHP
 Sugar Desktop Environment A software playground for learning about learning. 	General-purpose web development scripting language. Perl for Web Basic Perl web application support.
 Development and Creative Workstation Workstation for software, hardware, graphics, or content development. 	PostgreSQL Database This package group includes packages useful for use with Postgresql.
Web Server Server for serving static and dynamic internet content.	Python Basic Python web application support. Ruby on Rails Ruby on Rails web application stack.
 Infrastructure Server Server for operating network infrastructure services. Basic Desktop 	Administration Tools This group is a collection of graphical administration tools for the system, such as for managing user accounts and configuring system

	FEDORA 19 INSTALLATION
Base Environment MATE Desktop MATE Desktop is based on GNOME 2 and provides a powerful graphical user interface for users who seek a simple easy to use traditional desktop interface. Sugar Desktop Environment A software playground for learning about learning.	Add-Ons for Selected Environment Basic Fythion web application support. Ruby on Rails Ruby on Rails web application stack. Administration Tools This group is a collection of graphical administration tools for the system, such as for managing user accounts and configuring system hardware.
 Development and Creative Workstation Workstation for software, hardware, graphics, or content development. 	C Development Tools and Libraries These tools include core development tools such as automake, gcc and debuggers.
Web Server Server for serving static and dynamic internet content.	These packages are targeted towards professional designers, like the Fedora Design Team.
Infrastructure Server Server for operating network infrastructure services.	Development Tools These tools include general development tools such as git and cvs.
Basic Desktop	Fedora Eclipse

1 0.Setting Disk& STORAGE Click.

INSTALLATION	SUMMARY		FEDOR	A 19 INSTALLATION
			🖽 us	
	Asia/Seoul timezone		English (English (US))
	LANGUAGE SUPPORT English (United States)			
SOFTWAR	E			
\bigcirc	INSTALLATION SOURCE	D	NETWORK CONFIG Wired (eno1677773	SURATION (6) connected
	SOFTWARE SELECTION Web Server			
STORAGE				
	INSTALLATION DESTINATION Automatic partitioning selected			
Quit				Begin Installation
		И	/e won't touch your disks	until you hit this button.
🛆 Please compl	ete items marked with this icon before contin	uing to the next s	tep.	

1 1.Choice Disk for intall.

INSTALLATION DESTINATION	FEDORA 19 INSTALLATION
Done	🖽 us
Select the device(s) you'd like to install to. They will be left untouched until you Installation'' button.	click on the main menu's "Begin
Local Standard Disks	
20.48 GB	
Disks left unsel	ected here will not be touched.
Specialized & Network Disks	
Add a disk	
Full disk summary and bootloader	
1 disk selected; 20.48 GB capacity; 20.48 GB free	

1 2.Set partition user and Continue.

	TION DESTINATION	FEDORA 19 INST	ALLATION
Select the	e device(s) you'd like to install to. They will be left untouched until you cli	ck on the main me	nu's "Begin
Installati	INSTALLATION OPTIONS		
Local Sta	You have 20.48 GB of free space, which is enough to install Fedora. What we do?	ould you like to	- 1
	 A<u>u</u>tomatically configure my Fedora installation to the disk(s) I selected and the main menu. 	d return me to	
	I want to review/modify my disk partitions before continuing.		
	Partition scheme: LVM		
VMwa			
sda			
Specializ	Cancel & add more disks	<u>C</u> ontinue	ouched.
Add a	disk		
<u>Full disk s</u>	summary and bootloader		
1 disk sele	cted; 20.48 GB capacity; 20.48 GB free		

1 3.Set Basic partition and Click.



 ${\bf 1}$ ${\bf 4}$.Size of swap is twice of physical memory. " / " chosen and '—' Click & delete.

MANUAL PARTITIONING		FEDORA 19 INSTALLATION
Done		📟 us
New Fedora 19 Installation	sdal	
swap 2.08 GB	Name: sdal	
	Mount Point: /boot	
/boot 500 MB >	Label:	
	Desired Capacity: 500 MB	
fedora-root	Device Type: Standard Partition	- Encrypt
	File System: ext4	✓ 🗹 Reformat
+ - * C AVAILABLE SPACE 969.23 kB TOTAL SPACE 20.48 GB	Note: The settings you make until you click on the main i	Update Settings on this screen will not be applied menu's 'Begin Installation' button.
1 storage device selected		Reset All

MANUAL PARTITIONING	FEDORA 19 INSTALLATION
New Fedora 19 Installation	sdal
swap 2.08 GB	Name: sdal
fedora-swap SYSTEM	Mount Point: /boot
/boot 500 MB >	Label:
2004	Desired Capacity: 500 MB
	Device Type: Standard Partition
	File <u>System</u> : ext4 V Reformat
+ - % C 🗃	Update Settings Note: The settings you make on this screen will not be applied until you click on the main menu's 'Begin Installation' button.
AVAILABLE SPACETOTAL SPACE17.89 GB20.48 GB	
<u>1 storage device selected</u>	<u>R</u> eset All

1 5.Press + and partition "/" is amount of 10% of total space.

MANUAL PARTITIONING					FEDORA 19	INSTALLATION
New Fedora 19 Installat DATA	ion	sdal				
swap fedora-swap SYSTEM	2.08 GB ADD A NEW MC	DUNT POIN	т			
/boot	More customiz after creating t Mount Point: Desired Capacity:	ation options the mount po / 2000 Cancel	s are available int below. Add mount poir	ion t	~ ~	Encrypt Reformat
+ - % C E AVAILABLE SPACE 17.89 GB TOTAL SPACE 20.48 GB		Note: T. until	he settings you you click on th	ı make on e main me	this screen will nu's 'Begin Insta	not be applied illation' button. Reset All

1 6.Press + partition "/var/REC" as remained total space.

MANUAL PARTITIONING				FEDORA 19 INSTALLATION
 New Fedora 19 Installat DATA swap 	ion 2.08 GB	fedora-roo Name:	root	
SYSTEM /boot sdal	ADD A NEW MC More customiz after creating f Mount Point: Desired Capacity:	Cunt POINT ation options ar- the mount point /var/REC	e available below.	 ✓ Encrypt ✓ Reformat ✓ Modify
+ - % C AVAILABLE SPACE 15.89 GB 1 storage device selected		Note: The s until you	settings you make on I click on the main me	Update Settings this screen will not be applied nu's 'Begin Installation' button. Reset All

1 7 . Finally set as below structure and Click Done.

MANUAL PARTITIONING				FEDORA 19	NSTALLATION
Done				📟 us	
New Fedora 19 Installar DATA	tion	fedora-var_F	REC		
/var/REC	15.89 GB >	<u>N</u> ame:	var_REC		
swap	2.08 GB	Mount <u>P</u> oint:	/var/REC		
fedora-swap		<u>L</u> abel:			
/boot	500 MB	<u>D</u> esired Capaci	ty: 15.892 GB		
sdal	500115	Device <u>T</u> ype:	LVM	~	<u> </u>
/ fedora-root	2 GB	File <u>S</u> ystem:	ext4	~	✓ Reformat
		Volume Group	fedora	~	<u>M</u> odify
+ - * C* Image: C AVAILABLE SPACE TOTAL SPACE 20.48 GE 969.23 kB 20.48 GE 1 storage device selected	3	Note: The se until you	ettings you make on click on the main me	Up this screen will nu's 'Begin Insta	date Settings not be applied llation' button. Reset All

1 8. Click Accept Changes and Accept Change.

Your cus	tomizations will r	• esult in the following char	nges taking effect	on the disks you've	e selected:
Order	Action	Туре	Device Name	Mountpoint	
1	Destroy Format	Unknown	sda		
2	Create Format	partition table (MSDOS)	sda		
3	Create Device	partition	sdal		
4	Create Format	ext4	sdal	/boot	
5	Create Device	partition	sda2		
б	Create Format	physical volume (LVM)	sda2		
7	Create Device	lvmvg	fedora		
8	Create Device	lvmlv	fedora-var_REC		
9	Create Format	ext4	fedora-var_REC	/var/REC	
10	Create Device	lvmlv	fedora-root		
11	Create Format	ext4	fedora-root	/	

1 9.Click Begin Installation and start install.

INSTALLATION	ISUMMARY			FEDORA 19 INSTALLAT	ION
				🖽 us	
\bigcirc	DATE & TIME Asia/Seoul timezone		KEYBOARD English (Engl	ish (US))	
á	LANGUAGE SUPPORT English (United States)				
SOFTWAR	E				
\odot	INSTALLATION SOURCE	27	NETWORK (Wired (eno1)	CONFIGURATION 6777736) connected	
	SOFTWARE SELECTION Web Server				
STORAGE					
2	INSTALLATION DESTINATION Custom partitioning selected				
Quit				Begin Installat	ion
		И	/e won't touch ye	our disks until you hit this bu	tton.

2 0.Set root password.

CONFIGURATION		FEDORA 19 INSTALLATION
		I us
USER SETTINGS		
ROOT PASSWORD	US	ER CREATION
Root password is set	Ad	ministrator ipcr will be created
	_	
Complete!		
Fedora is now successfully installed on your syste	m and ready for you to	use! Go ahead and reboot to start using it!
econd is non successfully instance on your syste	in and ready for your	
		Reboot

2 1.If it's asked once again, click Done.

ROOT PASSWORD		FEDORA 19 INS	FALLATION
Done		🕮 us	
The root account i	is used for administering the system. Enter a pass	word for the root user.	
Root Password:			
c	e de la companya de l La companya de la comp	Empty	
Confirm:			
🛆 You must provide and confirm a	password.		

2 2.Click USER CREATION.



2 3.Click User Register and register IPCR user and Done.

CREATE USER	FEDORA 19 INSTALLATION
Done	🖽 us
Full name	ipcr
Username	
	Tip: Keep your username shorter than 32 characters and do not use spaces.
	Make this user administrator
	✓ Require a password to use this account
Password	•••••
	Weak
Confirm password	•••••
	Advanced
The password you have	a provided is weak. The password fails the distingant sheek - it is based on a distingant word. You
will have to press Don	e provided is weak. The password fails the dictionary check "it is based on a dictionary word. Fou

2 4.Click Reboot in right below after installation.



7.2 IPCR Language

7.2.1 Creating a Local Language File

The IPCR application supports two (2) languages, English and a 'Local' language. At login, the user can select the language for text displays. The text displays are contained in a number of XML files in the /var/www/html/work/lang/kr directory. The XML files deliver text to the application for a specific screen or sequence of displays. The XML file defines a 'Stitle' (Secondary title) for the Local language and the "Ttitle for English text. The files can be downloaded to a local computer, modified, and saved back to the /var/www/html/work/lang/kr directory to support a local language.

To create 'Local' language files'

1. Download all xml files from the /var/www/html/work/lang/kr directory to the local PC,

nortel	top.xml					_
_user_r	egist.xml					
						-
	리모트 사이트: /var/www/n	tmi/work/lang/kr				
	🖅 🤚 root					<u> </u>
	e work					
	🖃 👔 lang					
						-
	,	🕹 다운로드(D)	- 17	조리 /	[취조 스저 이 시	
		🔩 대기열에 추가(A)		0 7 4	꾀이 가이 같지	
	a_user_regist.xml		474	XML Doc	2010-09-01 오후 4:36:00	
	agent_monitoring, xml	이맥더디 빈물기(C)	 898	XML Doc	2010-09-01 오후 4:36:00	
	clNavigation, xml	삭제(E)	893	XML Doc	2010-09-01 오후 4:36:00	
	💽 detail, xml	이름 바꾸기(R)	407	XML Doc	2010-09-01 오후 4:36:00	
	💿 Ignortel_top, xml	클립보드로 복사(C)	427	XML Doc	2010-09-01 오후 4:36:00	
	🥃 login, xml	파일 속성(F)	840	XML Doc	2010-09-01 오후 4:36:00	
	🔎 mainframe, xml		1,285	XML Doc	2010-09-01 오후 4:36:00	
	permission, xml		466	XML Doc	2010-09-01 오후 4:36:00	
	ProcSendControl.xml		1,001	XML Doc	2010-09-01 오후 4:36:00	
	r_channel,xml		4,247	XML Doc	2010-09-01 오후 4:36:00	_
	◀					•

- 2. Open one of the XML files,
 - Example file:

```
<?xml version='1.0' encoding='EUC-KR'?>
<Request>
<data>
<list>
  <FRC_HeadTitle Stitle='====Setting====' Ttitle='====Setting====' />
    <FRC_BTN_save Stitle='저장' Ttitle='SAVE' />
    <FRC_BTN_modify Stitle='수정' Ttitle='Modify' />
    <FRC_BTN_del Stitle='삭제' Ttitle='Delete' />
```

```
<FRC_BTN_clear Stitle='초기화' Ttitle='Clear' />
<FRC_ProName Stitle='프로그램 이름' Ttitle='Program Name' />
<FRC_GroupAuthority Stitle='계정 권한' Ttitle='Group Authority' />
<FRC_Read Stitle='사용' Ttitle='Read' />
<FRC_Write Stitle='쓰기' Ttitle='Write' />
</list>
</data>
</Request>
```

- **3.** Modify the Stitle, using the English text as a guide to the purpose of the text. Assure the text is located between the single quotes, '', 'immediately to the right of "Stitle".
- 4. Repeat for each XML file.
 - XML Language File List:
 - ProcSendControl.xml
 - a_user_regist.xml
 - agent_monitoring.xml
 - clNavigation.xml
 - detail.xml
 - Igericsson_top.xml
 - login.xml
 - mainframe.xml
 - permission.xml
 - r_channel.xml
 - r_logcheck.xml
 - r_user_regist.xml
 - report.xml
 - search_listen.xml
 - setting.xml
 - system_monitoring.xml
 - system_regist.xml
 - system_regist_ipcr.xml

7.3 IPCR Database Backup, Create and Restore

7.3.1 IPCR Database Backup

Follow below process for backup IPCR Database

Login to terminal by root Identification and change to Database admin identification

# Su 1000	
Password:	
# su - postgrest	
 # su root – Change to root identification 	
Password: – Input the password	

• # su - postgrest - Change to Database admin identification.

Change to IPCR Database path and Database backup

```
# cd /var/furence/data
# pg_dump -F c recsee > recsee.sql
Password:
```

- # cd /var/furence/data Change to Database path
- # pg_dump -F c recsee > recsee.sql Backup Database
- Password: Input the password

7.3.2 PCR Database Create

Follow below process for create IPCR Database

Login to terminal by root Identification and change to Database admin identification.

# su root		
Password:		
# su - postgrest		

- # su root Change to root identification
- Password: Input the password
- # su postgrest Change to Database admin identification.

Change to IPCR Database path and Database backup

```
# cd /var/furence/data
# createdb recsee
```

Password:

- # cd /var/furence/data move to Database path
- # createdb recsee create IPCR Database
- Password: Input the password

7.3.3 IPCR Database Restore

Follow below process for restore IPCR Database

Login to terminal by root Identification and change to Database admin identification.

# su root		
Password:		
# su - postgrest		

- # su root Change to root identification
- Password: Input the password
- # su postgrest Change to Database admin identification.

Change to IPCR Database path and Database backup

```
# cd /var/furence/data
2# pg_restore -d recseel recsee.sql
Password:
```

- # cd /var/furence/data Move to Database path
- # pg_restore -d recsee1 recsee.sql Restore IPCR Database
- Password: Input the password

7.3.4 Another Method, using PgAdminIII application.

Recommend pgAdminIII. PgAdminIII are provides a GUI environment. You can download pgAdminIII from http://www.pgadmin.org/.

- 1. Connection to IPCRserver after pgAdminIII is installed.
 - ID : postgres
 - Password: postgers012
- 2. You can backup and restore easily using backup menu and restore menu in pgAdminIII.

7.4 Easy install with CloneZilla

Clonezilla with Fedora19 & 1.0Bh IPCR version.

- 1. Record the clonezilla-live-YYYY-MM-DD-19-img.iso Image to DVD. Or install it using VM ware with .iso file.
- 2. Insert the DVD and boot with it.
- 3. Upon prompting the following display, select the first menu and press Enter Key.

Clonezill Other work Local ope	a live with ing as of clonezil rating system	2013-00-29 In Lice with	16-ing (Bofau ing 2013-60-2 (if evailable	it settings. 9-16-img	UG J
Howtest & Hetwork b	PresiOS pot vie IPOS				~
1	Press	This to al	11-optiuns		
Ionezille i Iscinizer:	lue version: 2 Clowezille com	813-88-29-16- s with ABSO	ing. (C) 2003 UYELY HO Helds	-2013, HCHC, WITY	Taiw
100					

4. Upon prompting the following display after the booting procedures, select 'yes' for the next step.



5. Upon prompting the following display for the confirmation, select 'yes' for the next step.



6. After the automatic installation of Fedora 19 OS & IPCR S/W to each sections, remove the DVD and select (1) for reboot.



- Default password : root / p@ssw0rd 'a' -> @, 'o' -> number 0
- 7. After rebooting, configure the IP address of IPCR Server to eht0 and connect the cable for the operation with LIK.
- 8. If you want to change IP from DHCP to static, you can change it as below.
 - You can go to nework-scripts directory, and you can change the configuration in ifcfg-eth0.



- [root@IPCR] date 1220123013 (MMDDHHmmYY).
- [root@IPCR] hwclock -w

7.5 Easy DB Backup with PGAdmin

DB BackUp using PGAdmin.

- 1. Download pgadmin3-1.18.1.zip.
- 2. You can install it after extract it.

PostgreSOL: File Browser	nin@velease_vit.10_1/witi		
		Text Size: Normal / Large Donate Con	tect Search Search
	Post	The world's most advanced open source database.	
	Norma About	Download Documentation Community Developers Supp	ourt Your account
R	 Desribads Binary Source Software Catalog pgPoundry File Browser 	File Browser Ing - pandmin3 - release - y1.18.1 - win32 Directories Files Out. 11, 2013, 11:29 Out. 11, 20	s.m. 31 bytes a.m. 11.6 MB a.m. 72 bytes
		Current Maintainer Deve Jage dpageBpostgrasgi.org	
	Etivacy Palicy Alead, P Copyright @ 1996-2013	<u>MarsBQL</u> The PostpreSQL Blobal Development Group	

3. Let's connect old and new pc's IPCR DB.

🖤 pgAdmin III			
<u>File E</u> dit <u>P</u> lugins <u>V</u> iew <u>T</u> ools <u>H</u> elp			
	· ~~ (
1 🔁 🔍 💭 🖽 This is s	source, old PC's D	B and recsee	
Object browser			-
Server Groups	Property	Value	~
Bring IPCR_1T_CloneZilla (150.150.150.67:5432)	Description	IPCR_1T_CloneZilla	
E C Databases (2)	E Service		
postgres	- Hostname	150.150.150.67	
Tablespaces (2)	Host Address	F100	
Group Roles (D)		0432 not encrynted	
E Salar Cogin Roles (1)	SSL Certificate File	fiet of a prod	
E∽ [] IPCR_500G_Clonezialia_68 (150.150.150.68:5432)	CCI Voy Cilo		
		110	
	SQL pane		×
			_
■ A Login Roles (1) This is a	destination, new P	C's DB and recsee	
Potrioving details on corver 150 150 150 67 Desa			0.01 core
Retrieving details on server 130,130,130,07 Durie.			0.01 Sets

4. You can set it for connect with IPCR server.

👔 Server 150.150.150.67					
Properties SSL	SSH Tunnel Advanced				
Name	IPCR_1T_CloneZilla				
Host	150,150,150,67				
Port	5432				
Service					
Maintenance DB	postgres				
Username	postgres				
Password					
Store password	\checkmark				
Colour					
Group	Servers				
	7				
Help					

 You can backup it from old IPCR's postgres server to your PC. ** Format should be Directory. Others is default. Filename is your PC's directory.



T





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🎽 🛃 💼 🍢 🐼 🔎 🗐 📑 🌽
Object browser × Server Groups Servers (2)
Retrieving details on d Properties

7.6 Setup in VM-ware

1. Create a New Virtual Machine.



2. Select Typical (recommended).



3. Installer disc image file(iso):

New Virtual Machine Wizard				
Guest Operating System Installation A virtual machine is like a physical computer; it needs an operating system. How will you install the guest operating system?				
Install from:				
◎ Installer disc:				
DVD RW 드라이브 (E:)				
Installer disc image file (iso):				
ezilla₩donezilla-live-2013-12-16-pm22-5þ0GB-img.iso ▼ Browse				
Could not detect which operating system is in this disc image. You will need to specify which operating system will be installed.				
I will install the operating system later.				
The virtual machine will be created with a blank hard disk.				
Help < Back Next > Cancel				

4. Select Guest Operating system.



5. Name the Vitrual Machine.

New Virtual Machine Wizard	×
Name the Virtual Machine What name would you like to use for this virtual machine?	
Virtual machine name:	
ClonZilla500G	
Location:	
D:₩vm₩ClonZilla500G	Browse
The default location can be changed at Edit > Preferences.	
< Back Next >	Cancel

6. Specify Disk Capacity: You should set 500G for 500 Clonezilla. If it's 1T, you should set 1T. Don't wary about the size. VM-ware can use it virtually even though you got a small HDD.

New Virtual Machine Wizard
Specify Disk Capacity How large do you want this disk to be?
The virtual machine's hard disk is stored as one or more files on the host computer's physical disk. These file(s) start small and become larger as you add applications, files, and data to your virtual machine.
Maximum disk size (GB): 500 💌
Recommended size for Red Hat Enterprise Linux 6: 20 GB
○ Store virtual disk as a single file
Split virtual disk into multiple files
Splitting the disk makes it easier to move the virtual machine to another computer but may reduce performance with very large disks.
Help < Back Next Cancel

7. Ready to Create Virtual Machine :

ew Virtual Machine Wizard					
Ready to Create Virtual Machine Click Finish to create the virtual machine. Then you can install Red Hat Enterprise Linux 6.					
The virtual machine will be created with the following settings:					
Name:	ClonZilla500G				
Location:	D:\vm\ClonZilla500G				
Version:	Workstation 9.0		-		
Operating Syst	Red Hat Enterprise Linux 6		-		
Hard Disk:	500 GB, Split				
Memory:	2048 MB		-		
•		Þ			
Customize Hardwa	are				
Back Finish Cancel					

8. If you press the Power on, it's started as real installation of real Server.



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