

VIETTEL GROUP

**XXXXXXXXXXXXXXXXXX**

**INSTALLATION GUIDE**

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# INTRODUCTION

## Purpose of document:

This document is useful for deployment staff to be aware of installation environment requirements and follows all necessary steps to install the system in the most effective and fastest way. It defines all installation environment requirements, such as: system configuration, installation disk, directory naming conventions…) to facilitate system operation and maintenance. It also provides report template and guideline to check result of installation and how to write deployment report.

This document also helps system administrators understand the environmental requirements to install and implement the system accurately and fix any problems raised when using and installing the sytem.

Administrators are the target users of this document. They can use this document to manage system configuration and maintain the system.

System functions includes: system administration, user/right management, category management…

This document is used to support deployment staff in understanding installation environment requirements and installing the system in the most effective and fastest way. The document defines all installation environment requirements, such as: system configuration, installation disk, directory naming conventions…) to facilitate system operation and maintenance. It also provides report template and guideline for checking result of installation and how to write deployment report.

This document also helps system administrators understand the environmental requirements to install and implement the system accurately and fix any problems raised when using and installing the sytem.

Administrators are the target users of this document. They can use this document to manage system configuration and maintain the system.

System functions includes: system administration, user/right management, category management,etc…

## Terms and abbreviations

| **Terms** | **Definition** | **Description** |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## System architecture

Logical architecture of the system



Physical architecture of the system



## Document Structure:

This document has 5 sections:

* Section 1: Introduction: state the purpose of the document, terms and abbreviation and the user of document
* Section 2: State environment requirements of XXXXXXXXXXX System
* Section 3: Installation instruction
* Section 4: Security, backup policy of system
* Section 5: Appendix

# Installation environment requirement

## Application server requirement (Server):

* Minimum number of server: 2 server

|  |  |  |
| --- | --- | --- |
| Module | Specs | Num |
| XXXXXX | - CPU: 12x Intel(R) Xeon(R) CPU E7450 (2.4 GHz)  - RAM: 16 GB  - HDD: 4\*300GB 15Krpm  - NIC: 4 x 10/100/1000Mbps  - Supply: N+1 power supply.  - RAID: 0, 1, 5, 6  - OS: Linux  - Rack mount | 02 |

* + - Software requirement:
      * JDK 1.6 or above

## Database server requirement:

* + Database server requirement

|  |  |  |
| --- | --- | --- |
| Module | Specs | Num |
| DB | - CPU: 6 x Intel(R) Xeon(R) CPU E7450 (2.4 GHz)  - RAM: 10 GB  - HDD: 6\*300GB 15Krpm  - NIC: 4 x 10/100/1000Mbps  - Supply: N+1 power supply.  - RAID: 0, 1, 5, 6  - OS: Linux  - Rack mount | 02 |

* + - Software requirement:
      * JDK 1.6 or above
      * ORACLE DB RAC INSTALLED

## Client Server (Client):

N/A

## Communication environment:

N/A

# INSTALLATION STEPS

## Installation steps of Sip Proxy XXXXXXXXXX

### Server steup:

### Summary:

|  |
| --- |
| **Step 1:** Setup Centos 6.0 or above OS  **Step 2:** Build application  **Step 3:** Setup application  **Step 4:** Configure application  **Step 5**: Start application |

### Installation details:

* + Step 1: Setup centos >= 6.0 on server user guide of the product
  + Step 2: Download source of kamailio-4.0.4\_src.tar.gz

Create a folder to store this archive file, called KAMAILIO\_PATH

In source folder of kamailio, run those commands

|  |
| --- |
| *# make prefix=”KAMAILIO\_PATH” all* |

Note: If prompt missing any library on setup process, the administrator need to install those packages manually

* + Step 3: Install Kamailio

|  |
| --- |
| #make prefix “KAMAILIO\_PATH”install |

* + Step 4: Configure application
    - Configure module loaded, port declaration, SIP routing in file KAMAILIO\_PATH/etc/kamailio/kamailio.cfg. Important parameters are:

|  |
| --- |
| #port to listen XXXX message  port=XXXXX  #path to modules  mpath="/usr/local/lib/XXXXXX/modules\_k/:/ /u01/app/XXXXX/kamailio-4.0.4 /lib64/kamailio/modules/"  #load dispatcher modules  loadmodule "dispatcher.so"  #CONFIGURE DISPATCHER MODULES  modparam("dispatcher", "list\_file", "/u01/app/ivrbusiness/kamailio-4.0.4/etc/kamailio/dispatcher.list")  modparam("dispatcher", "force\_dst", 1)  modparam("dispatcher", "flags", 3)  modparam("dispatcher", "dst\_avp", "$avp(i:271)")  #main request routing logic  Request\_route {  ….  # add route service  route(SERVICES);  …..  }  # Route service logic, use dispatcher  route[SERVICES] {  xlog("L\_INFO", "ru = ($ru), rU = ($rU)");  # Call to service shortcode  if ($rU=~"^178.\*") {  ds\_select\_dst("1","4");  if (method=="INVITE") {  t\_on\_failure("2");  t\_on\_reply("1");  }  route(RELAY);  exit;  }  } |

In which,

XXXX: opened port to listen to SIP request and forwad the request to appropriate Media Server

XXXX: Service shortcode

* + - Configure Media Server to receive SIP request and process mechanism in XXXXXXX\_PATH/etc/kamailio/dispatcher.list

|  |
| --- |
| # SEMS Server list  1 sip:10.226.46.36:XXXXX |

In which,

1: group name, used in selection of routing algorithm in route[SERVICES]

Ip:port: ip and port of Media Server

* + - Configure PID of application in file KAMAILIO\_PATH/etc/kamailio/kamctlrc

|  |
| --- |
| PID\_FILE= /u01/app/ivrbusiness/kamailio-4.0.4 /sbin/kamailio.pid |

* + Step 5: Start application

|  |
| --- |
| cd /KAMAILIO\_PATH/sbin  ./kamctl start |

### System configuration:

### Client setup:

N/A



















































# system Security and backup

## System security

### XXXXXX

* + Username, password, IP, URL, port and other sensitive information is encrypted.
  + Applied security protocol of Viettel Software Center.

### XXXXXX SERVER

* + Username, password, IP, URL, port and other sensitive information is encrypted.
  + Applied security protocol of Viettel Software Center.

### XXXXX CONTROLLER

* + Username, password, IP, URL, port and other sensitive information is encrypted.
  + Applied security protocol of Viettel Software Center.

## System bakup policy

### XXXX PROXY

* + N/A.

### XXXXX SERVER

* + N/A.

### XXXXX CONTROLLER

* + N/A.