FreeSWITCH-CN第二届开发者沙龙

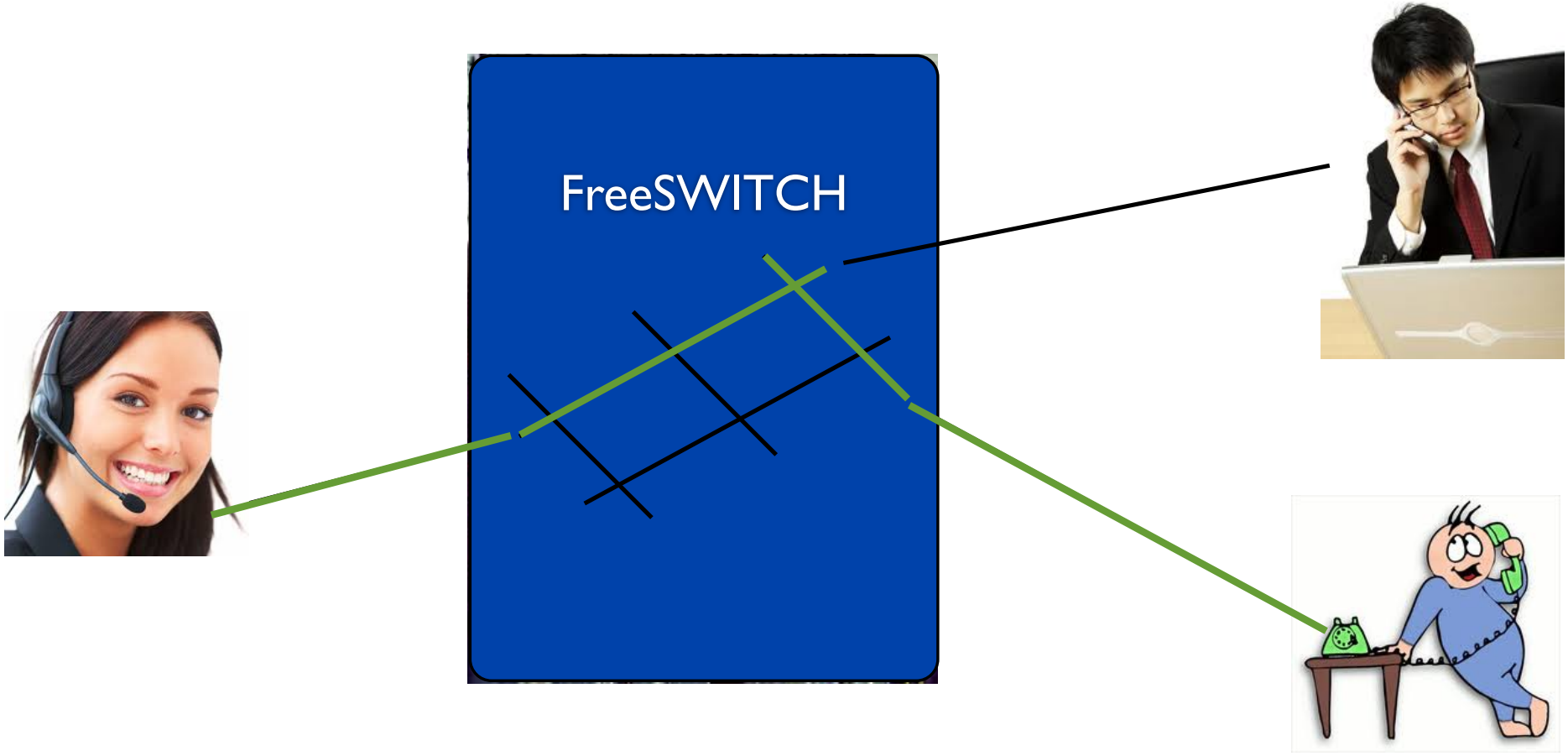
什么是FreeSWITCH?

FreeSWITCH

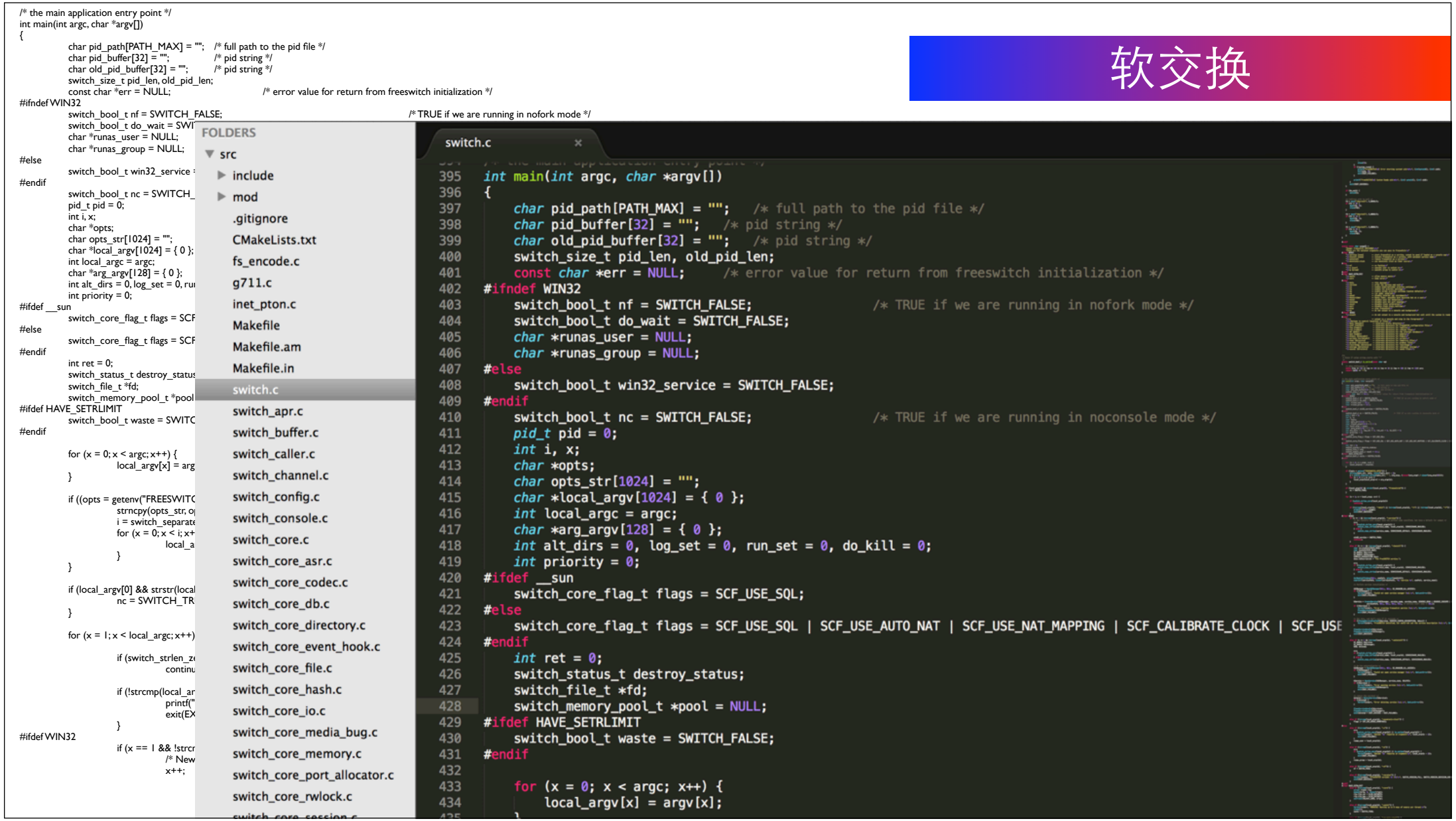
- 世界上第一个 First
- 跨平台 Cross-Platform
- 可伸缩 Scalable
- 免费　Free
- 多协议 Multi-Protocol
- 软交换 Soft-Switch

The World's First Cross-Platform Scalable FREE Multi-Protocol Soft Switch

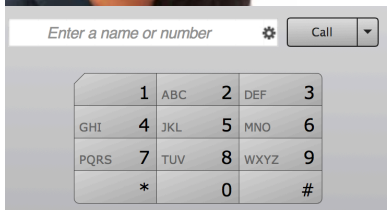
交换机



软交换


/* the main application entry point */
int main(int argc, char *argv[])
{
char pid_path[PATH_MAX] = "";
char pid_buffer[32] = "";
char old_pid_buffer[32] = "";
switch_size_t pid_len, old_pid_len;
const char *err = NULL;
#ifndef WIN32
switch_bool_t nf = SWITCH_FALSE;
switch_bool_t do_wait = SWI
char *runas_user = NULL;
char *runas_group = NULL;
#else
switch_bool_t win32_service =
#endif
switch_bool_t nc = SWITCH_
pid_t pid = 0;
int i, x;
char *opts;
char opts_str[1024] = "";
char *local_argv[1024] = { 0 };
int local_argc = argc;
char *arg_argv[128] = { 0 };
int alt_dirs = 0, log_set = 0, ru
int priority = 0;
#ifdef __sun
switch_core_flag_t flags = SCF
#else
switch_core_flag_t flags = SCF
#endif
int ret = 0;
switch_status_t destroy_status
switch_file_t *fd;
switch_memory_pool_t *pool
#ifdef HAVE_SETRLIMIT
switch_bool_t waste = SWITC
#endif
for (x = 0; x < argc; x++) {
local_argv[x] = arg
}
if ((opts = getenv("FREESWITC
strncpy(opts_str, o
i = switch_separate
for (x = 0; x < i; x+
local_a
}
}
if (local_argv[0] && strstr(local
nc = SWITCH_TR
}
for (x = 1; x < local_argc; x++)
if (switch_strlen_z
continu
if (!strcmp(local_ar
printf("
exit(EX
}
#ifdef WIN32
if (x == 1 && !strcr
/* New
x++;
FOLDERS
src
include
mod
.gitignore
CMakeLists.txt
fs_encode.c
g711.c
inet_pton.c
Makefile
Makefile.am
Makefile.in
switch.c
switch_apr.c
switch_buffer.c
switch_caller.c
switch_channel.c
switch_config.c
switch_console.c
switch_core.c
switch_core_asr.c
switch_core_codec.c
switch_core_db.c
switch_core_directory.c
switch_core_event_hook.c
switch_core_file.c
switch_core_hash.c
switch_core_io.c
switch_core_media_bug.c
switch_core_memory.c
switch_core_port_allocator.c
switch_core_rwlock.c
switch.c
395 int main(int argc, char *argv[])
396 {
397 char pid_path[PATH_MAX] = ""; /* full path to the pid file */
398 char pid_buffer[32] = ""; /* pid string */
399 char old_pid_buffer[32] = ""; /* pid string */
400 switch_size_t pid_len, old_pid_len;
401 const char *err = NULL; /* error value for return from freeswitch initialization */
402 #ifndef WIN32
403 switch_bool_t nf = SWITCH_FALSE; /* TRUE if we are running in nofork mode */
404 switch_bool_t do_wait = SWITCH_FALSE;
405 char *runas_user = NULL;
406 char *runas_group = NULL;
407 #else
408 switch_bool_t win32_service = SWITCH_FALSE;
409 #endif
410 switch_bool_t nc = SWITCH_FALSE; /* TRUE if we are running in noconsole mode */
411 pid_t pid = 0;
412 int i, x;
413 char *opts;
414 char opts_str[1024] = "";
415 char *local_argv[1024] = { 0 };
416 int local_argc = argc;
417 char *arg_argv[128] = { 0 };
418 int alt_dirs = 0, log_set = 0, run_set = 0, do_kill = 0;
419 int priority = 0;
420 #ifdef __sun
421 switch_core_flag_t flags = SCF_USE_SQL;
422 #else
423 switch_core_flag_t flags = SCF_USE_SQL | SCF_USE_AUTO_NAT | SCF_USE_NAT_MAPPING | SCF_CALIBRATE_CLOCK | SCF_USE
424 #endif
425 int ret = 0;
426 switch_status_t destroy_status;
427 switch_file_t *fd;
428 switch_memory_pool_t *pool = NULL;
429 #ifdef HAVE_SETRLIMIT
430 switch_bool_t waste = SWITCH_FALSE;
431 #endif
432
433 for (x = 0; x < argc; x++) {
434 local_argv[x] = argv[x];

多协议



FreeSWITCH

多协议

FreeSWITCH

SIP/H323

AVAYA

CISCO

E1/T1/IMS/SBC

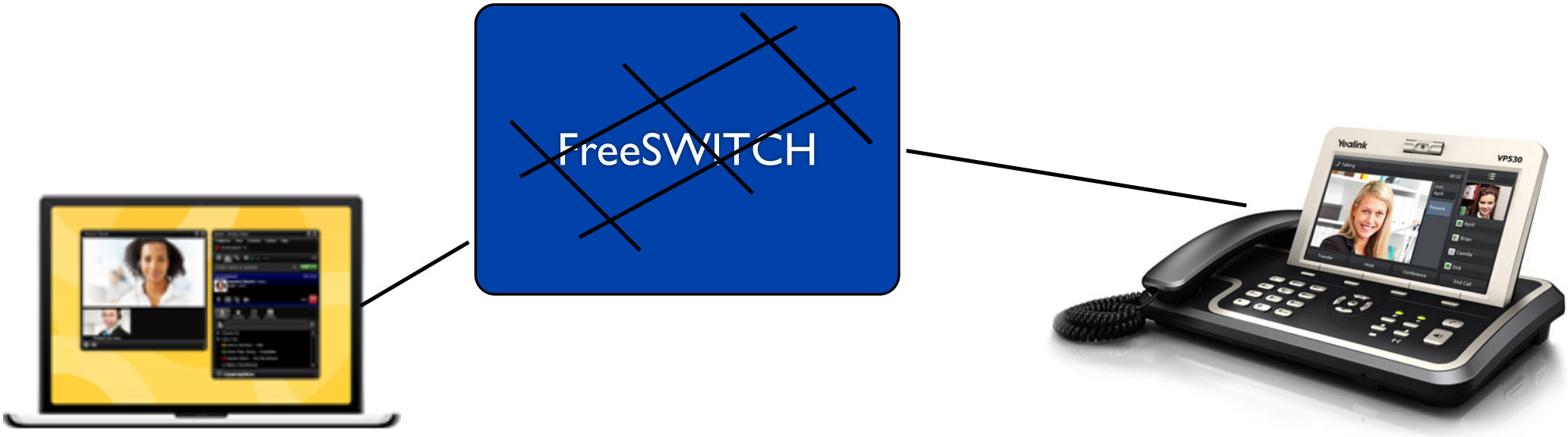
China unicom中国联通
让一切自由连通

中国移动通信 CHINA MOBILE
移 动 信 息 专 家

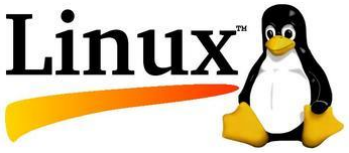
中国电信 CHINA TELECOM

at&t

视频通话、会议

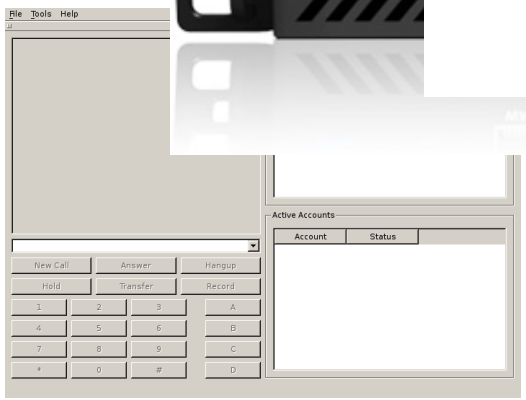


跨平台



Linksys NLS2

可伸缩性强



成千上万路通话...

B2BUA

FreeSWITCH

背靠背用户代理

FreeSWITCH到底能有多强?

跟软、硬件环境和具体业务场景有关

FreeSWITCH官方对压力测试从来都不热心

不过...
好像总有人惦记着这个...

Tony(Anthony Minessale II)在2011 ClueCon上

展示了FreeSWITCH运行着1000cps共3万个并发

同时，他也说过：

“Don’t try this at home!”

FreeSWITCH能做什么?

★PBX
★话务路由服务器
★语音编码转换服务器(B2BUA)
★IVR 及语音服务器
★语音和视频会议服务器
★语音信箱
★会话边界控制器(SBC)
★传真服务器
★可用作T.38 网关,或直接收发传真
★T.30 到T.38 或 T.38 到T.30 网关
★Call Center - 呼叫中心
★语音识别（ASR）及语音合成（TTS）系统对接
★Flash RTMP-SIP/PSTN 媒体网关 - 通过 Flash 客户端实现与 SIP 平台用户的语音、视频通讯及文字交谈能力

★ACD - 高级呼叫分配
★onhook/offhook坐席
★CTI - 计算机电话集成接口
★录音、录像服务器
★指挥调度系统平台
★视频监控
★电信运营 - 400/800 综合业务平台
★企业总机
★托管型呼叫中心及企业呼叫中心
★彩铃、统一通讯

FreeSWITCH简史

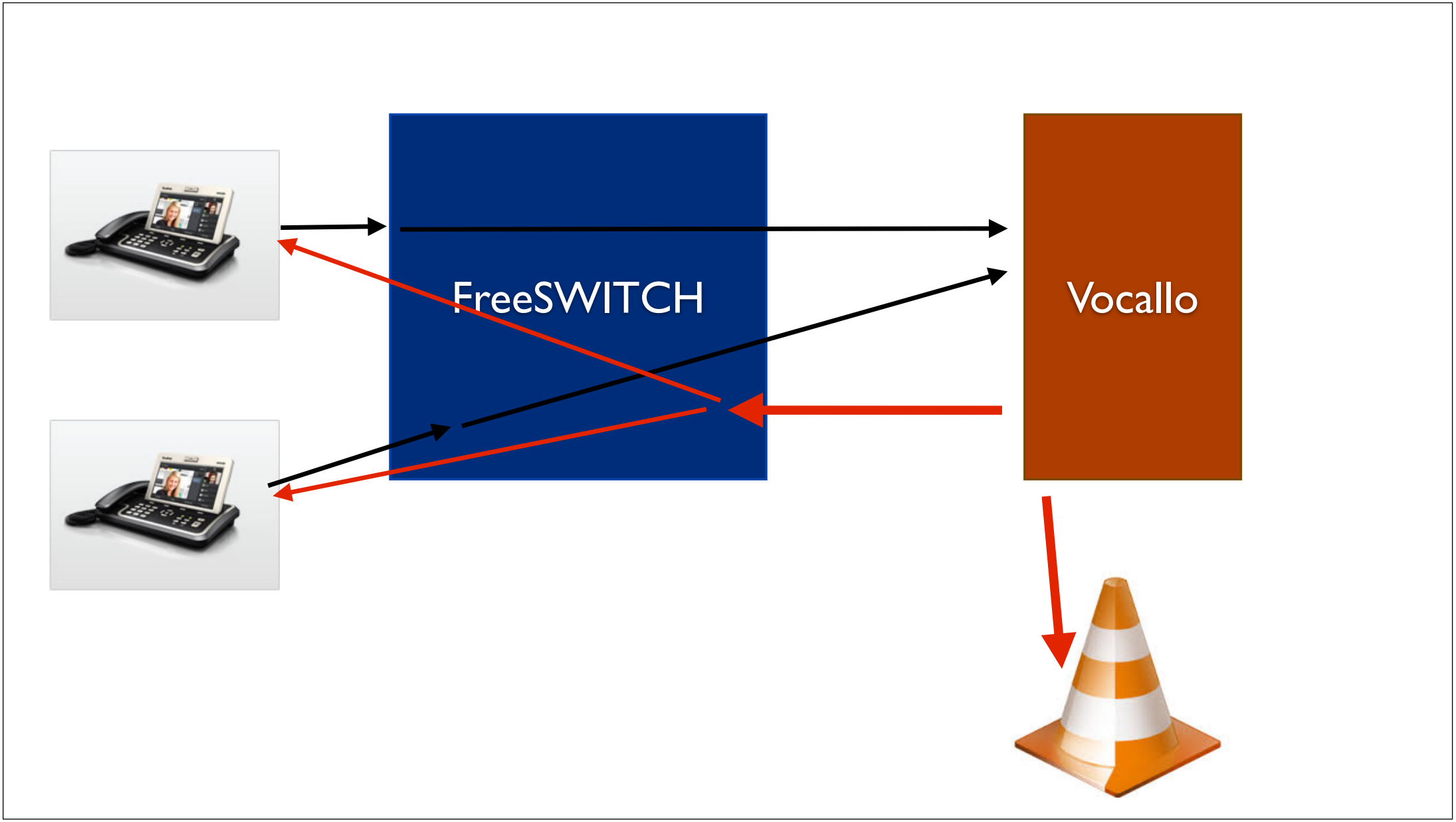
- VoIP时代兴起于世纪之交，以开源的OpenH323和Asterisk为代表
- 2002年，Anthony Minessale II 开始使用Asterisk
- 2005年，Anthony提议开发一个Asterisk 2.0分支，但未获支持
- 2006年1月，第一次O'Reilly Media's ETEL会议上宣布
- 2008年5月26日，FreeSWITCH 1.0.0版
- 2012年8月14日，发布1.2.1版
- 2013年6月，发布1.4 Beta版，支持WebRTC

Asterisk vs. FreeSWITCH

MPL1.1

Demos

- Video Conference
- WebRTC
- FreeSWITCH-Portal


FreeSWITCH
Vocallo

/assets/demos/index8.html

Dial Pad		
7	8	9
4	5	6
1	2	3
*	0	#
ACTIVE		

SessionID: 34dc2d35-bfee-46e2-bd3e-5733a173a794

1004 呼叫 挂断 设置

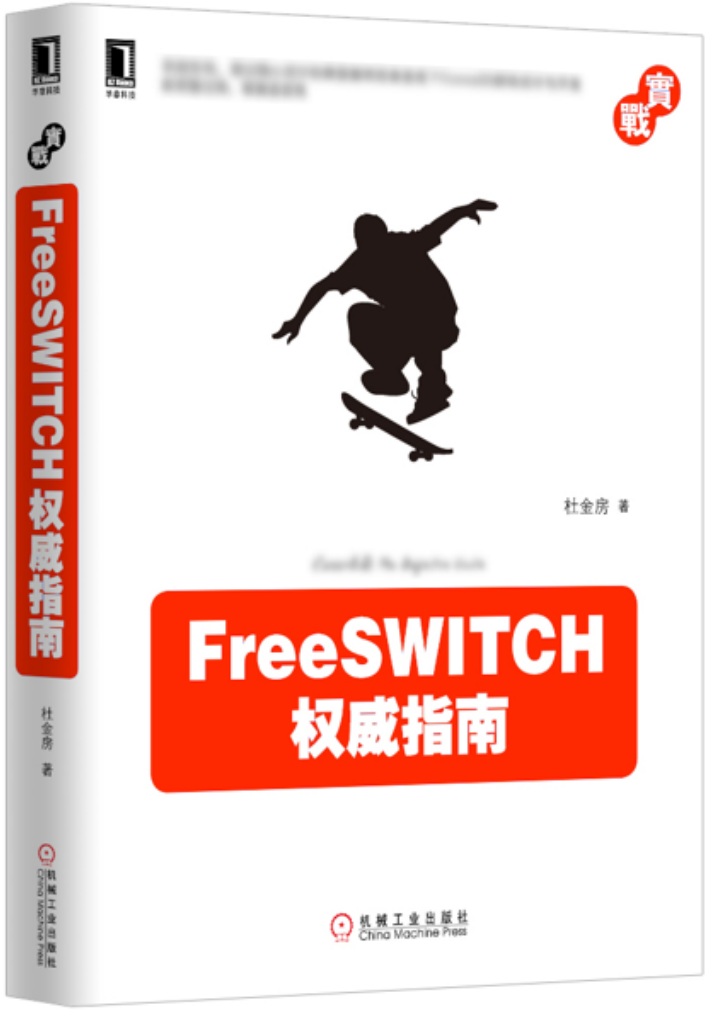
ClueCon

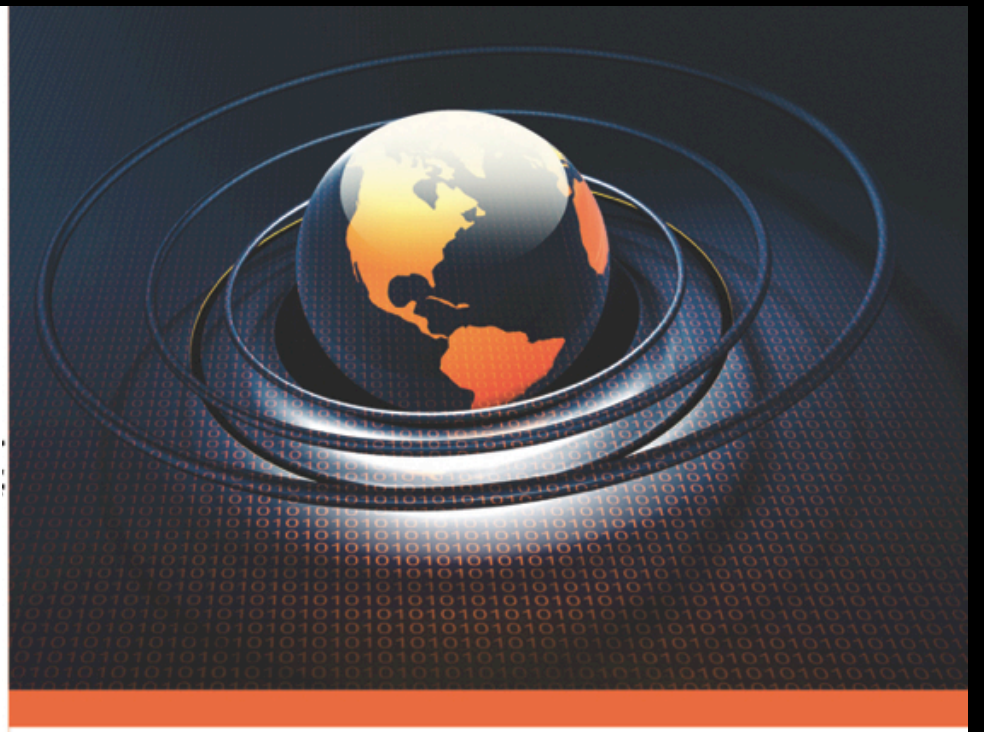
ClueCon

- www.cluecon.com
- 一年一度的电话系统开发者会议，在美国芝加哥举行
- 主题演讲 + 线下Party

我们的社区

- www.FreeSWITCH.org.cn 成立于2009年底
- FreeSWITCH-CN QQ群(190435825) 现有成员688名
- FreeSWITCH-CN邮件列表(在Google Groups上)现有成员234名
- 《FreeSWITCH:VoIP实战》第二章发布于2010年4月





FreeSWITCH VoIP 实战

杜金房 著

One more thing...

招聘 VoIP开发工程师

Jobs@x-y-t.com

FreeSWITCH-CN

www.FreeSWITCH.org.cn

Seven Du