主要步骤

（1）调用nice\_agent\_new（）创建一个NiceAgent对象。

agent = nice\_agent\_new(g\_main\_loop\_get\_context (gloop),

1

（2）设置agent的属性值（比如stun服务器的地址，端口等）

if (stun\_addr) {

g\_object\_set(agent, "stun-server", stun\_addr, NULL);

g\_object\_set(agent, "stun-server-port", stun\_port, NULL);

}

g\_object\_set(agent, "controlling-mode", controlling, NULL);

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（3）绑定事件的回调（比如candinate收集完成）

g\_signal\_connect(agent, "candidate-gathering-done",

G\_CALLBACK(cb\_candidate\_gathering\_done), NULL);

g\_signal\_connect(agent, "new-selected-pair",

G\_CALLBACK(cb\_new\_selected\_pair), NULL);

g\_signal\_connect(agent, "component-state-changed",

G\_CALLBACK(cb\_component\_state\_changed), NULL);

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（4）调用nice\_agent\_add\_stream创建stream

stream\_id = nice\_agent\_add\_stream(agent, 1);

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（5）调用nice\_agent\_attach\_recv绑定接收到的数据

nice\_agent\_attach\_recv(agent, stream\_id, 1,

g\_main\_loop\_get\_context (gloop), cb\_nice\_recv, NULL);

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（6）调用nice\_agent\_gather\_candidates开始收集候选candinate

if (!nice\_agent\_gather\_candidates(agent, stream\_id))

g\_error("Failed to start candidate gathering");

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（7）本地的candinate 收集完成后会回调cb\_candidate\_gathering\_done（），这时调用nice\_agent\_get\_local\_credentials（）和nice\_agent\_get\_local\_candidates（）可以获取candinate，ufrag及密码信息

if (!nice\_agent\_get\_local\_credentials(agent, \_stream\_id,

&local\_ufrag, &local\_password))

goto end;

cands = nice\_agent\_get\_local\_candidates(agent, \_stream\_id, component\_id);

if (cands == NULL)

goto end;

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（8）拿到远端的candinate调用nice\_agent\_set\_remote\_credentials（）和nice\_agent\_set\_remote\_candidates（）告诉本地的agent

if (!nice\_agent\_set\_remote\_credentials(agent, \_stream\_id, ufrag, passwd)) {

g\_message("failed to set remote credentials");

goto end;

}

// Note: this will trigger the start of negotiation.

if (nice\_agent\_set\_remote\_candidates(agent, \_stream\_id, component\_id,

remote\_candidates) < 1) {

g\_message("failed to set remote candidates");

goto end;

}

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（9）调用nice\_agent\_send将数据发给远端的agent

if (g\_io\_channel\_read\_line (source, &line, NULL, NULL, NULL) ==

G\_IO\_STATUS\_NORMAL) {

nice\_agent\_send(agent, stream\_id, 1, strlen(line), line);

g\_free (line);

printf("> ");

fflush (stdout);

} else {

nice\_agent\_send(agent, stream\_id, 1, 1, "\0");

// Ctrl-D was pressed.

g\_main\_loop\_quit (gloop);

}

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（附）sdp-example分析

sdp-example与simple-example基本逻辑是差不多的，主要区别是sdp-example是使用互通sdp信息来建立连接。

（10）调用nice\_agent\_generate\_local\_sdp获取sdp信息

sdp = nice\_agent\_generate\_local\_sdp (agent);

printf("Generated SDP from agent :\n%s\n\n", sdp);

1

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（11）调用nice\_agent\_parse\_remote\_sdp将远端的sdp信息设置到本地

if (sdp && nice\_agent\_parse\_remote\_sdp (agent, sdp) > 0) {

g\_free (sdp);

1

2

（12）协商成功后会回调cb\_component\_state\_changed（）接口并返回agent的状态为:NICE\_COMPONENT\_STATE\_READY。然后就可以调用发送数据的接口进行数据传输了。

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