

# ctys-uc-RDP(7) Use-Cases for RDP

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## 1 General

The RDP plugin supports access to remote desktops by the RDP protocol. The access could be an application, terminal server, or hypervisor supporting the RDP protocol.

## 2 Start a Local Desktop Session

This opens a local session, where the server as well as the RDP client are executed locally.

```
ctys -t RDP -a create=l:tst1,RDPPORT:3389
```

The "localhost" is hard-coded to behave as a sub-shell call too, thus the following call is internally handled identical to the previous

```
ctys -t RDP -a create=l:tst1,RDPPORT:3389 \ $USER@localhost
```

This case is called **DISPLAYFORWARDING** which is almost the same as the X11 display forwarding.

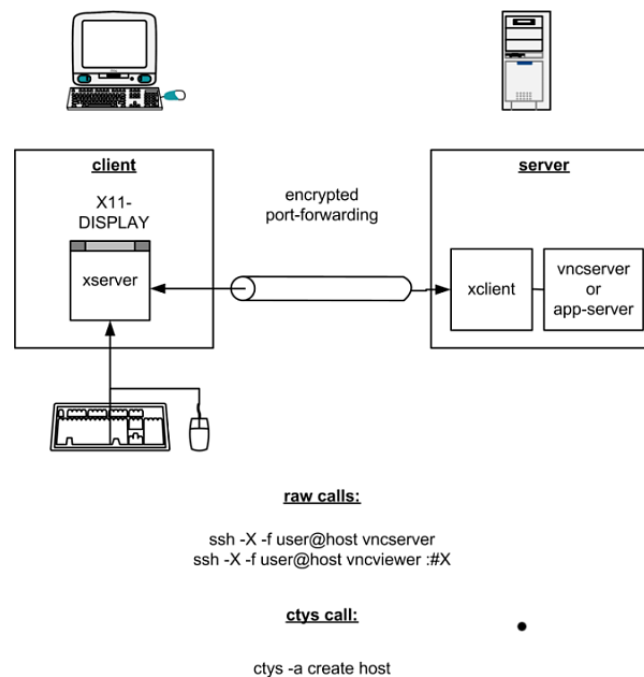
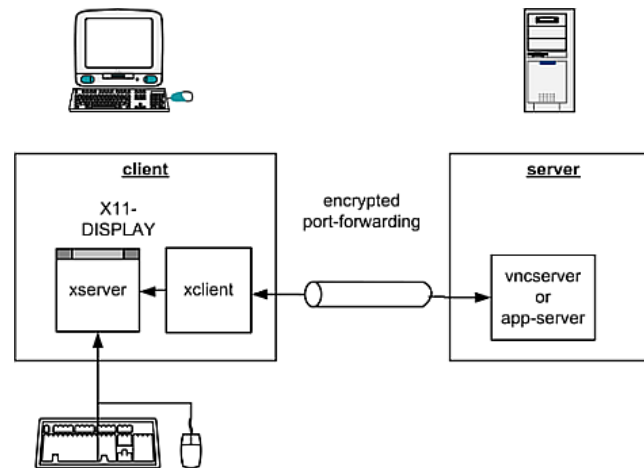


Figure 3: DISPLAYFORWARDING

## 3 Start a Remote Desktop with a Local Client

In case of a "Remote Desktop with Local Client" the server is running on the given <execution-target>, whereas the client is locally started on the caller's machine. This structure is called **CONNECTIONFORWARDING** and requires beneath the client and server processes a third, the connecting encrypted tunnel. The tunnel is established by means of OpenSSH and used as the local peer for the Client. This whole procedure of starting the processes and the establishment of the tunnel is controlled and preformed by ctys. The user has nothing else to do than setting the option '**-L CONNECTIONFORWARDING**' or for short '**-L CF**'.

raw calls:

```
ssh -X -f user@host vncserver
getRemotePort
cacLocalPort
ssh -f -N -L $Lport:localhost:$Rport user@host
getPidOfSSH
vncviewer $((lport-5900));kill PodOfSSH
```

ctys call:

```
ctys -a create -L CF host
```

ctys call when 5 sessions are required:

```
This opens e.g. 5 CF sessions for VNC:
ctys -a create -L CF host0 host1 host2 host3 host4
same again:
ctys -a create -L CF host{0,1,2,3,4}
```

Figure 4: DISPLAYFORWARDING

The scenario performed behind the scene by ctys varies slightly from the previous. In case of CONNECTION-FORWARDING the whole process is set up in two steps.

1. establishment of the encrypted tunnel
2. start and connect the client process to the tunnel

The tunnel is established in the so called **one-shot mode**, where the connection is opened for an initial time period and closes automatically when the life-time threshold is reached without an actual usage, or afterwards, when the client and server are disconnected. The period of the initial timeout for is defined by the variable "SSH\_ONESHOT\_TIMEOUT", which is by default set to 20seconds.

The following call starts a local client for a remote server.

```
ctys -t rdp -a create=1:tst -L CF lab00
```

The instances could be listed by the LIST action in several variants. The basic call with default selection executed on the caller workstation is:

```
ctys -t rdp -a list ws2
```

The standard assignment to LIST call is "tab\_tcp,both", which displays:

TCP-container	TCP-guest	label	sesstype	c	user	group
-----+-----+-----+-----+-----+-----						
ws2.soho	-	tst000	RDP	C	acue	ldapusers
ws2.soho	-	tst001	RDP	C	acue	ldapusers
ws2.soho	ws2.soho.	ws2	PM	S	-	-
ws2.soho	-	tst000	SSH(RDP)	T	acue	ldapusers
ws2.soho	-	tst001	SSH(RDP)	T	acue	ldapusers

Here the two tunnels could be identified as "sesstype=SSH(RDP)", and "c=T". This indicates, that the tunnels are created for the subsystem RDP with the session label "tst000" and "tst001".

The following call displays the same table, but with IDs instead of LABELS.

```
ctys -t rdp -a list=tab\_tcp,id ws2
```

Which results to the display:

TCP-cont	TCP-guest	id	sesstype	c	user	group
-----+-----+-----+-----+-----+-----						
ws2.soho	-	3389	RDP	C	acue	ldapusers
ws2.soho	-	3390	RDP	C	acue	ldapusers
ws2.soho	-	../pm.conf	PM	S	-	-
ws2.soho	-	5950-3389	SSH(VNC)	T	acue	ldapusers
ws2.soho	-	5951-3390	SSH(VNC)	T	acue	ldapusers

Indicating by the default ID of tunnels, that these are tunnels forwarding the ports "5950" to "3389" and "5951" to "3390".

The display could be changed as required by usage of specific free-customized tables, e.g. displaying LABEL and ID columns once.

The call with the whole set of involved machines as one call results to:

```
ctys -t rdp -a list=tab\_tcp,id ws2 lab00 lab01
```

TCP-contai	TCP-guest	id	sesstype	c	user	group
-----+-----+-----+-----+-----+-----						
ws2.soho	-	3389	RDP	C	acue	ldapusers
ws2.soho	-	3390	RDP	C	acue	ldapusers
ws2.soho	-	d/pm.conf	PM	S	-	-
ws2.soho	-	5950-3389	SSH(RDP)	T	acue	ldapusers
ws2.soho	-	5951-3390	SSH(RDP)	T	acue	ldapusers
lab00.soho	-	3784	CLI	C	acue	ldapusers
lab00.soho	-	31206	CLI	C	acue	ldapusers
lab00.soho	-	1	VNC	S	root	root
lab00.soho	-	2	VNC	S	acue	ldapusers
lab00.soho	-		XEN	S	-	-
lab00.soho	-	e/xen/tst1	XEN	S	-	-
lab00.soho	-	d/pm.conf	PM	S	-	-
lab01.soho	-		XEN	S	-	-
lab01.soho	-	d/pm.conf	PM	S	-	-

## 4 Start Remote Desktop Sessions by Native-RDP

This opens a remote session by using the RDP protocol via a remote connection to a boxed application or a terminal server. In this case actually the RDP client is attached 'from-outside' to an access port. This differs from the preferred 'localhost-access', where a pre-authorisation by SSH access is performed. Thus it is an exception to the common philosophy and therefore called 'INSECURE'.

The main application is the access to appliance-boxes when these provide an RDP access only, or to MS-Windows(TM) based OS.

```
ctys -t RDP -a create=l:tst1,RDPPORT:3389,INSECURE:lab02
```

Same could be applied in a relay-configuration.

```
ctys -t RDP -a create=l:tst1,RDPPORT:3389,INSECURE:lab02 lab05
```

## 5 SEE ALSO

*ctys*, *ctys-plugins(1)*

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