

# ctys-plugins(1)

for verification of current install status

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## 1 NAME

**ctys-plugins** - verifies current install status of ctys

## 2 SYNTAX

```
[ -d <common-debug-option>]
[ -E ]
[ -h ]
[ -H <help-options>]
[ -l <remote-user>]
[ --quick-list]
[ --quick-tab]
[ -t <plugin-type>]
[ -T <plugin-preload-typlist>]
[ -V ]
[ -X ]
[ -Z <set-sudo-ksu>]
<list-of-target-accounts>
```

## 3 DESCRIPTION

**ctys-plugins** is a test-tool for verification and analysis of the current status of the installation of ctys and present plugins.

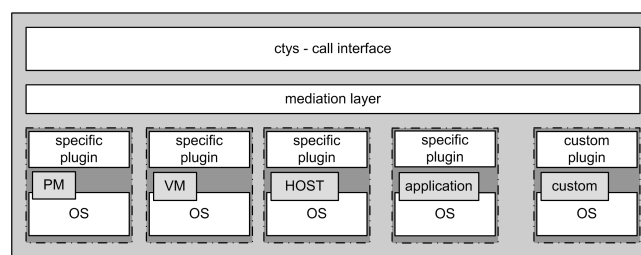


Figure 1: ctys SW-Layers and plugins

Due to some restrictions it operates partly on a basic level, involving some specific pre-defined trace levels for output control. The required options are documented in the following sections. Extended trace-levels necessarily require some deeper familiarity with internal design, which is normally not required for top-level handling.

The utility could be performed locally or remotely by full support of ctys-addressing but without context options on the command line. If for whatever reasons remote context options are required, then could be applied to macro definitions only. For now the following main tasks are performed by ctys-plugin:

- Display of operational states and capabilities of plugins
- Distinguish the check-scope of verified features by "-E" for client-site call-RELAY and server-site final-EXECUTION

- Display of called system tools with the actual resolved path-prefix
- Display of the actual access permissions as configured by one of:

```
/etc/sudoers
$HOME/.k5users
$HOME/.k5login
```

- display of any level of system initialization traces during call bootstrap, refer to common ctys-standard "-d" option

The output is splitted into **3 sections**:

- The **first section** is the **bootstrap of the tool itself**, this includes the basic initialization of the framework, where only framework specific options are evaluated. Typical for this is the "-d" option, which is prefetched by the library itself.
- The **second section** contains the trace output during **initialisation of the plugins**. The content depends on the chosen debug level. Error messages are displayed in any case.

```
Checking PLUGINS-STATES now...
-----
<trace-output>
-----
...results to:
```

- The **third section** contains the **processed results** of the evaluated raw component states. Therefore an basic overview of the hosting system is given, followed by a sum-up of the various sets of plugins related to the different operational states. The final list contains the operational details for each individual plugin.

## 4 OPTIONS

### -d <common-debug-option>

This option is the common analysis and debugging facility of the UnifiedSessionsManager. Due to the wide scope it is maybe somewhat "like a developer interface".

Anyhow, the **most important application** is for installation and first time systems configuration by **analysis of the called system utilities**. The difficulties with the bunch of utilized systems calls frequently leads to some trouble, which becomes immediately obvious, once the output of the following call is displayed:

```
"ctys-plugins -d 64,P -T all -E"
```

This call checks all system calls for the **current node as a final execution location**. The availability as well as (some) access permissions are evaluated. When things don't work, this call is the first instance to "ask". The "-d" option activates a bit-pattern style debug-level by "P" suboption. Then the bit "64" is set, which is the predefined variable "D\_SYS", tracing the internal call-wrapper, almost exclusively used for system calls. When not appropriate, the workaround is implemented in a neatless style. The "-T" option sets simply "all" plugins to be loaded and initialized. The "-E" option executes a final destination call, instead of an initial or intermediary RELAY-call.

The following call performs almost the same, but as **the current node as a client or RELAY**.

```
"ctys-plugins -d 64,P -T all"
```

**-E**

Check for **local host as final execution target**, this forces full verification. If "-E" is not set, only required functionality for a client role is validated, which could be for some packages almost the same and though treated as.

- This is e.g. the case for PM.
- This is e.g. not the case for XEN, which obviously requires a completely different runtime environment for it's clients than within the server as Dom0/DomU
- This e.g. could be or not the case for VMW, depends on type of product + version + requested type of client.

**-h**

Print help, refer to "-H" for additional information.

**-H <help-option>**

The extended help option is based on system interfaces for display of manpages, PDF and HTML documents. This comprises the man pages and installed manuals.

For additional help refer to the documents or type **ctys -H help**.

**-l <remote-user>**

The remote user.

**-quick-list**

Displays a short list of overall states for selected plugins on each target.

```
ctys-plugins -E -T all --quick-list localhost
```

Hostname	Plugin	Accelerator	Version	MAGIC-ID	State
acue@ws2	CLI		01.06.001a09	CLIBASH	ENABLED
acue@ws2	RDP		01.11.007alpha	RDPRD	ENABLED
acue@ws2	VNC		01.10.013	VNCR4	ENABLED
acue@ws2	X11		01.06.001a09	X11	ENABLED
acue@ws2	QEMU	QEMU	01.10.013	QEMU_091	DISABLED
acue@ws2	VBOX		01.11.006alpha	NOLOC	DISABLED
acue@ws2	VMW		01.11.005	VMW_GENERIC	DISABLED
acue@ws2	XEN		01.10.013	DISABLED	DISABLED
acue@ws2	PM	VMX	01.10.008	PM_Linux	ENABLED

**-quick-tab**

Displays a short table of overall states for selected plugins.

The following call contains the 'ctys-groups' call for stripping off context arguments, which in some cases are valid, thus could not be dropped in general. When this is not done, some might be detected as valid and lead to execution. In future releases a new scanner and parser are foreseen to be provided, which will clear this specific.

```
ctys-plugins -T all -E --quick-tab $(ctys-groups -X -m 8 netscan/all)
```

For limitation of error messages and some ssh info the error channel should be redirected.

```
ctys-plugins -T all -E --quick-tab $(ctys-groups -X -m 8 netscan/all) 2>/dev/null
```

This results to the following list, where the output order may vary call-by-call due to parallel execution.

Hostname	PM	CLI	X11	VNC	RDP	KVM	QEMU	VBOX	VMW	XEN
root@lab05.soho	PAE	x	x	x	x	-	-	-	S2	-
root@lab02.soho	VMX	x	x	x	x	-	QEMU	V	-	-
root@hydra.soho	VMX	x	x	x	x	-	-	-	-	-
root@delphi.soho	VMX	x	x	x	x	-	-	-	S1	-
root@olymp.soho	VMX	x	x	x	x	-	-	-	-	-
root@app1.soho	VMX	x	x	x	x	-	-	-	-	-
root@app2.soho	VMX	x	x	x	x	-	-	-	-	-
root@lab04	VMX	x	x	x	x	-	-	-	W7	-
acue@lab04	VMX	x	x	x	x	-	QEMU	-	W7	-
vadmin@delphi.soho	VMX	x	x	x	x	-	-	-	S1	-
acue@lab05.soho	PAE	x	x	x	x	-	-	-	S2	-
acue@lab02.soho	VMX	x	x	x	x	-	QEMU	V	-	-
acue@delphi.soho	VMX	x	x	x	x	-	-	-	S1	-
root@lab03	PAE	x	x	x	x	-	-	-	-	HVM
root@lab01.soho	PAE	x	x	x	-	-	-	-	-	PARA
5000@lab01.soho	PAE	x	x	x	-	-	-	-	-	-
acue@lab03	PAE	x	x	x	x	-	-	-	-	-
acue@app1.soho	VMX	x	x	x	x	KVM	KVM	-	-	-
acue@app2.soho	VMX	x	x	x	x	KVM	KVM	-	-	-

Where the fields have the semantics as given by following list, the values are forseen to be expanded for more details:

1. PM: Type of CPU support
  - VMX: Intel VT-X
  - SVN: AMD SVN
  - PAE: Extended Mem by PAE
2. HOSTS: CLI, X11, VNC, RDP
  - x: ENABLED
  - else: DISABLED
3. VMs: KVM, QEMU, VBOX, VMW, XEN
  - Common:
    - V: ENABLED
    - -: DISABLED
  - KVM: Fully ENABLED, else check
    - Module
    - VDE-Switch
  - QEMU: ENABLED without KVM-Support, else check
    - Module
    - VDE-Switch
  - VMW
    - P[123]: Player
    - S[12]: Server
    - W[67]: Workstation
  - XEN
    - HVM: Fully ENABLED, else check
      - \* Kernel
      - \* Access: sudo, ksu
    - PARA: ENABLED with para-virtualisation only, else check

- \* Kernel
- \* Access: sudo, ksu

The output displays that e.g.

- On app1+app2: The user acue has access to KVM and QEMU, but not root. This is due to missing VDE-switch for root, which has to be setup by 'ctys-setupVDE'
- On lab03: The user acue has no access to XEN, but root has. This is due to access permission by sudo for user acue.

**-t <plugin-type>**

The type of plugin to be set to BUSY(4), this is any SINGLE plugin as applicable by "ctys -t ..." call.

**-T <plugin-preload-typelist>**

The prefetch list of plugins to be set to IDLE(2), before performing, this is any comma seperated LIST of plugins as applicable by "ctys -T ..." call.

**-V**

Version.

**-X**

Terse output format, effects "-V" when set left-of.

**-Z <set-sudo-ksu>**

Sets appropriate **access permissions by sudoers and/or kerberos/ksu**. For additonal information refer to Z-OPTION.

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## 5 ARGUMENTS

An optional list of <execution-target>. When the "-P" option is choosen, the remote files will be updated, when suffitient permissions are available, else the output is collected locally. The call is simply mapped to a call of the CLI plugin with the option CMD, thus works synchronuous and sequential.

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## 6 EXIT-VALUES

**0: OK:** Result is valid.

**1: NOK:** Erroneous parameters.

**2: NOK:** Missing an environment element like files or databases.

## 7 SEE ALSO

**ctys plugins**

**PMs** *ctys-PM(7)*

**VMs** *ctys-KVM(7)*, *ctys-QEMU(7)*, *ctys-VMV(7)*, *ctys-XEN(7)*, *ctys-VBOX(7)*

**HOSTS** *ctys-CLI(7)*, *ctys-PM(7)*, *ctys-VNC(7)*, *ctys-X11(7)*

**ctys executables** *ctys-genmconf(1)*

**system executables** *dmidecode(8)*

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Commercial: <<http://www.i4p.com>>

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