

ctys-cloning-vms(7)

Cloning of VMs

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1 General

This document describes the automated change and configuration mainly provided by **ctys-createConfVM**. **ctys-cloneVM** is used for the creation of cloned VMs.

2 Preparations

The first step is the creation of a source VM. Which could be automated by **ctys-createConfVM**. This tool is used for **ctys-cloneVM** too in order to set new unique values for a cloned VM.

Once this step is completed, any VM could be used as a template for the creation of additional VMs. Therefore the virtual disk and the machine configuration data are separated, thus the majority of the number of the machine parameters could be altered by either using configuration utilities or by an ordinary ASC-II editor.

3 Receipts

3.1 QEMU/KVM

3.1.1 First Call Example

The configuration could be proceeded in two basic variants:

1. QEMU/KVM, Xen
The complete duplication and configuration could be proceeded by the utility **ctys-createConfVM**. The GuestOS has to be setup by common procedures in a second step.
2. VBOX, VMW
The VM has to be setup by the native OEM tools and could be registered for ctys by post creation of configuration files and collecting these into the registry. The GuestOS has to be setup by common procedures in a second step.

Therefore the following call could be executed.

```
ctys-cloneVM \  
-t xen \  
--label=tst02clone \  
--label-old=tst02 \  
--directory=/mntn/vmool/vmool105/xen/test/tst-ctys-call \  
--ip=14.14.14.14 \  
--mac=44:44:44:44:44:44 \  
--tcp=abc \  
--uuid=123412341234 \  
--vm-state=DISABLED \  
-f
```

This creates a complete clone, which just requires additional native configuration within the GuestOS.

3.1.2 Template Creation and Cloning

Create a Test-VM

The following call creates a dummy VM with a small dummy-image.

```
MAC=00:11:22:33:44:55 \  
IP=12.12.12.12 \  

```

```
TCP=gecko \
HDDBOOTIMAGE_INST_SIZE=128M \
HDDBOOTIMAGE_INST_BLOCKSIZE=32M \
HDDBOOTIMAGE_INST_BLOCKCOUNT=4 \
ctys-createConfVM \
  -t XEN \
  --label=tst02 \
  --auto-all \
  --create-image
```

Create defaults file from the Source-VM

The following call of *ctys-createConfVM(1)* creates the defaults file, which is used for pre-assignment of values from the source machine for the cloned machine. Some basic machine related IDs are required to be altered by command line assignment.

```
MAC=00:11:22:33:44:55 \
ctys-createConfVM \
  -t XEN \
  --label=tst02 \
  --defaults-file-create \
  --auto-all \
  --no-create-image \
  --no-save-para-kernel
```

Clone the Source-VM

The following call actually clones the source VM.

```
ctys-cloneVM \
  -t xen \
  --label=tst02clone \
  --label-old=tst02 \
  --directory=/mntn/vmool/vmool05/xen/test/tst-ctys-call \
  --ip=14.14.14.14 \
  --mac=44:44:44:44:44:44 \
  --tcp=abc \
  --uuid=123412341234 \
  --vm-state=DISABLED \
  -f
```

3.1.3 Display and modify attributes

1. List XEN configuration file:

```
ctys-attribute --list tst02clone.conf
```

2. List CTYS configuration file:

```
ctys-attribute --list tst02clone.ctys
```

3. Replace all values of an attribute in XEN configuration file:

```
ctys-attribute \
  --attribute-name='kernelbase' \
  --attribute-replace=ALL \
  --attribute-value-new="/nboot1" \
  tst02clone.conf
```

4. Replace string in all values of an attribute in XEN configuration file:

```
ctys-attribute \  
  --attribute-name='kernelbase' \  
  --attribute-replace=ALL \  
  --attribute-value-new="/nboot1" \  
  --attribute-value-old="/boot" \  
  tst02clone.conf
```

5. Replace string in **FIRST** value of an attribute in XEN configuration file:

```
ctys-attribute \  
  --attribute-name='kernelbase' \  
  --attribute-replace=FIRST \  
  --attribute-value-new="/nboot1" \  
  --attribute-value-old="/boot" \  
  tst02clone.conf
```

6. Replace string in **LAST** value of an attribute in XEN configuration file:

```
ctys-attribute \  
  --attribute-name='kernelbase' \  
  --attribute-replace=LAST \  
  --attribute-value-new="/nboot1" \  
  --attribute-value-old="/boot" \  
  tst02clone.conf
```

7. Replace string in **2.** value of an attribute in CTYS configuration file:

```
ctys-attribute \  
  --attribute-name='kernelbase' \  
  --attribute-replace=2 \  
  --attribute-value-new="/nboot1" \  
  --attribute-value-old="/boot" \  
  tst02clone.conf
```

8. Replace all values of an attribute in CTYS configuration file:

```
ctys-attribute \  
  --attribute-name='WRAPPERCALL' \  
  --attribute-replace=ALL \  
  --attribute-value-new="'123'" \  
  tst02clone.ctys
```

9. Create new attribute value assignment in CTYS configuration file:

```
ctys-attribute \  
  --attribute-create=TOP \  
  --attribute-name='NEWATTR' \  
  --attribute-value-new="'123'" \  
  tst02clone.ctys
```

10. Create new attribute value assignment in CTYS configuration file:

```
ctys-attribute \  
  --attribute-create=BOTTOM \  
  --attribute-name='NEWATTR' \  
  --attribute-value-new="'123'" \  
  tst02clone.ctys
```

11. Create new attribute value assignment in CTYS configuration file:

```
ctys-attribute \  
  --attribute-create=15 \  
  --attribute-name='NEWATTR' \  
  --attribute-value-new="'123'" \  
  tst02clone.ctys
```

12. Delete first occurrence of an attribute in CTYS configuration file:

```
ctys-attribute \  
  --attribute-delete \  
  --attribute-name='NEWATTR' \  
  tst02clone.ctys
```

or

```
ctys-attribute \  
  --attribute-delete=1 \  
  --attribute-name='NEWATTR' \  
  tst02clone.ctys
```

13. Delete ALL occurrences of an attribute in CTYS configuration file:

```
ctys-attribute \  
  --attribute-delete=ALL \  
  --attribute-name='NEWATTR' \  
  tst02clone.ctys
```

3.2 VBOX

ffs.

3.3 VMW

ffs.

3.4 XEN

ffs.

4 SEE ALSO

UserManual , *CommandReference* , *HowTo*

ctys-attribute(1) ,
ctys-cloneVM(1) ,
ctys-createConfVM(1) ,
ctys-convertVM(1)

5 AUTHOR

Maintenance: <acue_sf1@users.sourceforge.net>
Homepage: <<http://www.UnifiedSessionsManager.org>>
Sourceforge.net: <<http://sourceforge.net/projects/ctys>>
Berlios.de: <<http://ctys.berlios.de>>
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