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# LCF702 - Installation de Machines Virtuelles

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# LAB #1 - Installation d'une Machine Virtuelle CentOS 8

## 1.1 - Identification du Short ID

KVM sait virtualiser un grand nombre de systèmes d'exploitations. Pour consulter la liste complète des systèmes, il convient d'utiliser la commande **osinfo-query os** :

```
[root@centos8 ~]# osinfo-query os | more
```

| Short ID                                                                                      | Name               | Version | ID |
|-----------------------------------------------------------------------------------------------|--------------------|---------|----|
| -----+-----+-----+-----                                                                       |                    |         |    |
| alpinelinux3.10                                                                               | Alpine Linux 3.10  | 3.10    |    |
| <a href="http://alpinelinux.org/alpinelinux/3.10">http://alpinelinux.org/alpinelinux/3.10</a> |                    |         |    |
| alpinelinux3.11                                                                               | Alpine Linux 3.11  | 3.11    |    |
| <a href="http://alpinelinux.org/alpinelinux/3.11">http://alpinelinux.org/alpinelinux/3.11</a> |                    |         |    |
| alpinelinux3.12                                                                               | Alpine Linux 3.12  | 3.12    |    |
| <a href="http://alpinelinux.org/alpinelinux/3.12">http://alpinelinux.org/alpinelinux/3.12</a> |                    |         |    |
| alpinelinux3.13                                                                               | Alpine Linux 3.13  | 3.13    |    |
| <a href="http://alpinelinux.org/alpinelinux/3.13">http://alpinelinux.org/alpinelinux/3.13</a> |                    |         |    |
| alpinelinux3.5                                                                                | Alpine Linux 3.5   | 3.5     |    |
| <a href="http://alpinelinux.org/alpinelinux/3.5">http://alpinelinux.org/alpinelinux/3.5</a>   |                    |         |    |
| alpinelinux3.6                                                                                | Alpine Linux 3.6   | 3.6     |    |
| <a href="http://alpinelinux.org/alpinelinux/3.6">http://alpinelinux.org/alpinelinux/3.6</a>   |                    |         |    |
| alpinelinux3.7                                                                                | Alpine Linux 3.7   | 3.7     |    |
| <a href="http://alpinelinux.org/alpinelinux/3.7">http://alpinelinux.org/alpinelinux/3.7</a>   |                    |         |    |
| alpinelinux3.8                                                                                | Alpine Linux 3.8   | 3.8     |    |
| <a href="http://alpinelinux.org/alpinelinux/3.8">http://alpinelinux.org/alpinelinux/3.8</a>   |                    |         |    |
| alpinelinux3.9                                                                                | Alpine Linux 3.9   | 3.9     |    |
| <a href="http://alpinelinux.org/alpinelinux/3.9">http://alpinelinux.org/alpinelinux/3.9</a>   |                    |         |    |
| alt.p8                                                                                        | ALT p8 StarterKits | p8      |    |
| <a href="http://altlinux.org/alt/p8.starterkits">http://altlinux.org/alt/p8.starterkits</a>   |                    |         |    |
| alt.p9                                                                                        | ALT p9 StarterKits | p9      |    |

|                                                                                             |                         |          |  |
|---------------------------------------------------------------------------------------------|-------------------------|----------|--|
| <a href="http://altlinux.org/alt/p9.starterkits">http://altlinux.org/alt/p9.starterkits</a> |                         |          |  |
| alt.sisyphus                                                                                | ALT regular             | sisyphus |  |
| <a href="http://altlinux.org/alt/sisyphus">http://altlinux.org/alt/sisyphus</a>             |                         |          |  |
| alt8.0                                                                                      | ALT 8 Education         | 8.0      |  |
| <a href="http://altlinux.org/alt/8.0">http://altlinux.org/alt/8.0</a>                       |                         |          |  |
| alt8.1                                                                                      | ALT 8.1                 | 8.1      |  |
| <a href="http://altlinux.org/alt/8.1">http://altlinux.org/alt/8.1</a>                       |                         |          |  |
| alt8.2                                                                                      | ALT 8.2                 | 8.2      |  |
| <a href="http://altlinux.org/alt/8.2">http://altlinux.org/alt/8.2</a>                       |                         |          |  |
| alt9.0                                                                                      | ALT 9.0                 | 9.0      |  |
| <a href="http://altlinux.org/alt/9.0">http://altlinux.org/alt/9.0</a>                       |                         |          |  |
| alt9.1                                                                                      | ALT 9.1                 | 9.1      |  |
| <a href="http://altlinux.org/alt/9.1">http://altlinux.org/alt/9.1</a>                       |                         |          |  |
| altlinux1.0                                                                                 | Mandrake RE Spring 2001 | 1.0      |  |
| <a href="http://altlinux.org/altlinux/1.0">http://altlinux.org/altlinux/1.0</a>             |                         |          |  |
| altlinux2.0                                                                                 | ALT Linux 2.0           | 2.0      |  |
| <a href="http://altlinux.org/altlinux/2.0">http://altlinux.org/altlinux/2.0</a>             |                         |          |  |
| altlinux2.2                                                                                 | ALT Linux 2.2           | 2.2      |  |
| <a href="http://altlinux.org/altlinux/2.2">http://altlinux.org/altlinux/2.2</a>             |                         |          |  |
| altlinux2.4                                                                                 | ALT Linux 2.4           | 2.4      |  |
| <a href="http://altlinux.org/altlinux/2.4">http://altlinux.org/altlinux/2.4</a>             |                         |          |  |
| altlinux3.0                                                                                 | ALT Linux 3.0           | 3.0      |  |
| <a href="http://altlinux.org/altlinux/3.0">http://altlinux.org/altlinux/3.0</a>             |                         |          |  |
| altlinux4.0                                                                                 | ALT Linux 4.0           | 4.0      |  |
| <a href="http://altlinux.org/altlinux/4.0">http://altlinux.org/altlinux/4.0</a>             |                         |          |  |
| altlinux4.1                                                                                 | ALT Linux 4.1           | 4.1      |  |
| <a href="http://altlinux.org/altlinux/4.1">http://altlinux.org/altlinux/4.1</a>             |                         |          |  |
| altlinux5.0                                                                                 | ALT Linux 5.0           | 5.0      |  |
| <a href="http://altlinux.org/altlinux/5.0">http://altlinux.org/altlinux/5.0</a>             |                         |          |  |
| altlinux6.0                                                                                 | ALT Linux 6.0           | 6.0      |  |
| <a href="http://altlinux.org/altlinux/6.0">http://altlinux.org/altlinux/6.0</a>             |                         |          |  |
| altlinux7.0                                                                                 | ALT Linux 7.0           | 7.0      |  |
| <a href="http://altlinux.org/altlinux/7.0">http://altlinux.org/altlinux/7.0</a>             |                         |          |  |
| android-x86-8.1                                                                             | Android-x86 8.1         | 8.1      |  |

```

http://android-x86.org/android-x86/8.1
  android-x86-9.0      | Android-x86 9.0          | 9.0      |
http://android-x86.org/android-x86/9.0
  archlinux           | Arch Linux              |          |
http://archlinux.org/archlinux/rolling
  asianux-unknown     | Asianux unknown         | unknown  |
http://asianux.com/asianux/unknown
  asianux4.6          | Asianux Server 4 SP6    |          |
http://asianux.com/asianux/4.6
  asianux4.7          | Asianux Server 4 SP7    |          |
http://asianux.com/asianux/4.7
  asianux7.0          | Asianux Server 7        | 7.0      |
http://asianux.com/asianux/7.0
  asianux7.1          | Asianux Server 7 SP1    | 7.1      |
http://asianux.com/asianux/7.1
  asianux7.2          | Asianux Server 7 SP2    | 7.2      |
http://asianux.com/asianux/7.2
  asianux7.3          | Asianux Server 7 SP3    | 7.3      |
http://asianux.com/asianux/7.3
  asianux8.0          | Asianux Server 8        | 8.0      |
http://asianux.com/asianux/8.0
  caasp-unknown       | SUSE CaaS Platform Unknown | unknown  |
http://suse.com/caasp/unknown
  caasp1.0            | SUSE CaaS Platform 1.0   | 1.0      | http://suse.com/caasp/1.0
  caasp2.0            | SUSE CaaS Platform 2.0   | 2.0      | http://suse.com/caasp/2.0
  caasp3.0            | SUSE CaaS Platform 3.0   | 3.0      | http://suse.com/caasp/3.0
--More--

```

La liste des versions de Red Hat peut être consultée en recherchant la chaîne **Red Hat** dans la sortie de la commande précédente :

```

[root@centos8 ~]# osinfo-query os | grep "Red Hat"
  rhel-atomic-7.0      | Red Hat Enterprise Linux Atomic Host 7.0 | 7.0      |
http://redhat.com/rhel-atomic/7.0
  rhel-atomic-7.1      | Red Hat Enterprise Linux Atomic Host 7.1 | 7.1      |

```

|                                                                                   |                                          |         |                                                                 |
|-----------------------------------------------------------------------------------|------------------------------------------|---------|-----------------------------------------------------------------|
| <a href="http://redhat.com/rhel-atomic/7.1">http://redhat.com/rhel-atomic/7.1</a> |                                          |         |                                                                 |
| rhel-atomic-7.2                                                                   | Red Hat Enterprise Linux Atomic Host 7.2 | 7.2     |                                                                 |
| <a href="http://redhat.com/rhel-atomic/7.2">http://redhat.com/rhel-atomic/7.2</a> |                                          |         |                                                                 |
| rhel-atomic-7.3                                                                   | Red Hat Enterprise Linux Atomic Host 7.3 | 7.3     |                                                                 |
| <a href="http://redhat.com/rhel-atomic/7.3">http://redhat.com/rhel-atomic/7.3</a> |                                          |         |                                                                 |
| rhel-atomic-7.4                                                                   | Red Hat Enterprise Linux Atomic Host 7.4 | 7.4     |                                                                 |
| <a href="http://redhat.com/rhel-atomic/7.4">http://redhat.com/rhel-atomic/7.4</a> |                                          |         |                                                                 |
| rhel-unknown                                                                      | Red Hat Enterprise Linux Unknown         | unknown |                                                                 |
| <a href="http://redhat.com/rhel/unknown">http://redhat.com/rhel/unknown</a>       |                                          |         |                                                                 |
| rhel2.1                                                                           | Red Hat Enterprise Linux 2.1             | 2.1     |                                                                 |
| <a href="http://redhat.com/rhel/2.1">http://redhat.com/rhel/2.1</a>               |                                          |         |                                                                 |
| rhel2.1.1                                                                         | Red Hat Enterprise Linux 2.1 Update 1    | 2.1.1   |                                                                 |
| <a href="http://redhat.com/rhel/2.1.1">http://redhat.com/rhel/2.1.1</a>           |                                          |         |                                                                 |
| rhel2.1.2                                                                         | Red Hat Enterprise Linux 2.1 Update 2    | 2.1.2   |                                                                 |
| <a href="http://redhat.com/rhel/2.1.2">http://redhat.com/rhel/2.1.2</a>           |                                          |         |                                                                 |
| rhel2.1.3                                                                         | Red Hat Enterprise Linux 2.1 Update 3    | 2.1.3   |                                                                 |
| <a href="http://redhat.com/rhel/2.1.3">http://redhat.com/rhel/2.1.3</a>           |                                          |         |                                                                 |
| rhel2.1.4                                                                         | Red Hat Enterprise Linux 2.1 Update 4    | 2.1.4   |                                                                 |
| <a href="http://redhat.com/rhel/2.1.4">http://redhat.com/rhel/2.1.4</a>           |                                          |         |                                                                 |
| rhel2.1.5                                                                         | Red Hat Enterprise Linux 2.1 Update 5    | 2.1.5   |                                                                 |
| <a href="http://redhat.com/rhel/2.1.5">http://redhat.com/rhel/2.1.5</a>           |                                          |         |                                                                 |
| rhel2.1.6                                                                         | Red Hat Enterprise Linux 2.1 Update 6    | 2.1.6   |                                                                 |
| <a href="http://redhat.com/rhel/2.1.6">http://redhat.com/rhel/2.1.6</a>           |                                          |         |                                                                 |
| rhel2.1.7                                                                         | Red Hat Enterprise Linux 2.1 Update 7    | 2.1.7   |                                                                 |
| <a href="http://redhat.com/rhel/2.1.7">http://redhat.com/rhel/2.1.7</a>           |                                          |         |                                                                 |
| rhel3                                                                             | Red Hat Enterprise Linux 3               | 3       | <a href="http://redhat.com/rhel/3">http://redhat.com/rhel/3</a> |
| rhel3.1                                                                           | Red Hat Enterprise Linux 3 Update 1      | 3.1     |                                                                 |
| <a href="http://redhat.com/rhel/3.1">http://redhat.com/rhel/3.1</a>               |                                          |         |                                                                 |
| rhel3.2                                                                           | Red Hat Enterprise Linux 3 Update 2      | 3.2     |                                                                 |
| <a href="http://redhat.com/rhel/3.2">http://redhat.com/rhel/3.2</a>               |                                          |         |                                                                 |
| rhel3.3                                                                           | Red Hat Enterprise Linux 3 Update 3      | 3.3     |                                                                 |
| <a href="http://redhat.com/rhel/3.3">http://redhat.com/rhel/3.3</a>               |                                          |         |                                                                 |
| rhel3.4                                                                           | Red Hat Enterprise Linux 3 Update 4      | 3.4     |                                                                 |
| <a href="http://redhat.com/rhel/3.4">http://redhat.com/rhel/3.4</a>               |                                          |         |                                                                 |

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|---------------------------------------------------------------------|-------------------------------------|-----|--|
| rhel3.5                                                             | Red Hat Enterprise Linux 3 Update 5 | 3.5 |  |
| <a href="http://redhat.com/rhel/3.5">http://redhat.com/rhel/3.5</a> |                                     |     |  |
| rhel3.6                                                             | Red Hat Enterprise Linux 3 Update 6 | 3.6 |  |
| <a href="http://redhat.com/rhel/3.6">http://redhat.com/rhel/3.6</a> |                                     |     |  |
| rhel3.7                                                             | Red Hat Enterprise Linux 3 Update 7 | 3.7 |  |
| <a href="http://redhat.com/rhel/3.7">http://redhat.com/rhel/3.7</a> |                                     |     |  |
| rhel3.8                                                             | Red Hat Enterprise Linux 3 Update 8 | 3.8 |  |
| <a href="http://redhat.com/rhel/3.8">http://redhat.com/rhel/3.8</a> |                                     |     |  |
| rhel3.9                                                             | Red Hat Enterprise Linux 3 Update 9 | 3.9 |  |
| <a href="http://redhat.com/rhel/3.9">http://redhat.com/rhel/3.9</a> |                                     |     |  |
| rhel4.0                                                             | Red Hat Enterprise Linux 4.0        | 4.0 |  |
| <a href="http://redhat.com/rhel/4.0">http://redhat.com/rhel/4.0</a> |                                     |     |  |
| rhel4.1                                                             | Red Hat Enterprise Linux 4.1        | 4.1 |  |
| <a href="http://redhat.com/rhel/4.1">http://redhat.com/rhel/4.1</a> |                                     |     |  |
| rhel4.2                                                             | Red Hat Enterprise Linux 4.2        | 4.2 |  |
| <a href="http://redhat.com/rhel/4.2">http://redhat.com/rhel/4.2</a> |                                     |     |  |
| rhel4.3                                                             | Red Hat Enterprise Linux 4.3        | 4.3 |  |
| <a href="http://redhat.com/rhel/4.3">http://redhat.com/rhel/4.3</a> |                                     |     |  |
| rhel4.4                                                             | Red Hat Enterprise Linux 4.4        | 4.4 |  |
| <a href="http://redhat.com/rhel/4.4">http://redhat.com/rhel/4.4</a> |                                     |     |  |
| rhel4.5                                                             | Red Hat Enterprise Linux 4.5        | 4.5 |  |
| <a href="http://redhat.com/rhel/4.5">http://redhat.com/rhel/4.5</a> |                                     |     |  |
| rhel4.6                                                             | Red Hat Enterprise Linux 4.6        | 4.6 |  |
| <a href="http://redhat.com/rhel/4.6">http://redhat.com/rhel/4.6</a> |                                     |     |  |
| rhel4.7                                                             | Red Hat Enterprise Linux 4.7        | 4.7 |  |
| <a href="http://redhat.com/rhel/4.7">http://redhat.com/rhel/4.7</a> |                                     |     |  |
| rhel4.8                                                             | Red Hat Enterprise Linux 4.8        | 4.8 |  |
| <a href="http://redhat.com/rhel/4.8">http://redhat.com/rhel/4.8</a> |                                     |     |  |
| rhel4.9                                                             | Red Hat Enterprise Linux 4.9        | 4.9 |  |
| <a href="http://redhat.com/rhel/4.9">http://redhat.com/rhel/4.9</a> |                                     |     |  |
| rhel5.0                                                             | Red Hat Enterprise Linux 5.0        | 5.0 |  |
| <a href="http://redhat.com/rhel/5.0">http://redhat.com/rhel/5.0</a> |                                     |     |  |
| rhel5.1                                                             | Red Hat Enterprise Linux 5.1        | 5.1 |  |
| <a href="http://redhat.com/rhel/5.1">http://redhat.com/rhel/5.1</a> |                                     |     |  |

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|---------------------------------------------------------------------------------|------------------------------------|-----------|--|
| rhel5.10                                                                        | Red Hat Enterprise Linux 5.10      | 5.10      |  |
| <a href="http://redhat.com/rhel/5.10">http://redhat.com/rhel/5.10</a>           |                                    |           |  |
| rhel5.11                                                                        | Red Hat Enterprise Linux 5.11      | 5.11      |  |
| <a href="http://redhat.com/rhel/5.11">http://redhat.com/rhel/5.11</a>           |                                    |           |  |
| rhel5.2                                                                         | Red Hat Enterprise Linux 5.2       | 5.2       |  |
| <a href="http://redhat.com/rhel/5.2">http://redhat.com/rhel/5.2</a>             |                                    |           |  |
| rhel5.3                                                                         | Red Hat Enterprise Linux 5.3       | 5.3       |  |
| <a href="http://redhat.com/rhel/5.3">http://redhat.com/rhel/5.3</a>             |                                    |           |  |
| rhel5.4                                                                         | Red Hat Enterprise Linux 5.4       | 5.4       |  |
| <a href="http://redhat.com/rhel/5.4">http://redhat.com/rhel/5.4</a>             |                                    |           |  |
| rhel5.5                                                                         | Red Hat Enterprise Linux 5.5       | 5.5       |  |
| <a href="http://redhat.com/rhel/5.5">http://redhat.com/rhel/5.5</a>             |                                    |           |  |
| rhel5.6                                                                         | Red Hat Enterprise Linux 5.6       | 5.6       |  |
| <a href="http://redhat.com/rhel/5.6">http://redhat.com/rhel/5.6</a>             |                                    |           |  |
| rhel5.7                                                                         | Red Hat Enterprise Linux 5.7       | 5.7       |  |
| <a href="http://redhat.com/rhel/5.7">http://redhat.com/rhel/5.7</a>             |                                    |           |  |
| rhel5.8                                                                         | Red Hat Enterprise Linux 5.8       | 5.8       |  |
| <a href="http://redhat.com/rhel/5.8">http://redhat.com/rhel/5.8</a>             |                                    |           |  |
| rhel5.9                                                                         | Red Hat Enterprise Linux 5.9       | 5.9       |  |
| <a href="http://redhat.com/rhel/5.9">http://redhat.com/rhel/5.9</a>             |                                    |           |  |
| rhel6-unknown                                                                   | Red Hat Enterprise Linux 6 Unknown | 6-unknown |  |
| <a href="http://redhat.com/rhel/6-unknown">http://redhat.com/rhel/6-unknown</a> |                                    |           |  |
| rhel6.0                                                                         | Red Hat Enterprise Linux 6.0       | 6.0       |  |
| <a href="http://redhat.com/rhel/6.0">http://redhat.com/rhel/6.0</a>             |                                    |           |  |
| rhel6.1                                                                         | Red Hat Enterprise Linux 6.1       | 6.1       |  |
| <a href="http://redhat.com/rhel/6.1">http://redhat.com/rhel/6.1</a>             |                                    |           |  |
| rhel6.10                                                                        | Red Hat Enterprise Linux 6.10      | 6.10      |  |
| <a href="http://redhat.com/rhel/6.10">http://redhat.com/rhel/6.10</a>           |                                    |           |  |
| rhel6.2                                                                         | Red Hat Enterprise Linux 6.2       | 6.2       |  |
| <a href="http://redhat.com/rhel/6.2">http://redhat.com/rhel/6.2</a>             |                                    |           |  |
| rhel6.3                                                                         | Red Hat Enterprise Linux 6.3       | 6.3       |  |
| <a href="http://redhat.com/rhel/6.3">http://redhat.com/rhel/6.3</a>             |                                    |           |  |
| rhel6.4                                                                         | Red Hat Enterprise Linux 6.4       | 6.4       |  |
| <a href="http://redhat.com/rhel/6.4">http://redhat.com/rhel/6.4</a>             |                                    |           |  |

|                                                                                 |                                    |           |  |
|---------------------------------------------------------------------------------|------------------------------------|-----------|--|
| rhel6.5                                                                         | Red Hat Enterprise Linux 6.5       | 6.5       |  |
| <a href="http://redhat.com/rhel/6.5">http://redhat.com/rhel/6.5</a>             |                                    |           |  |
| rhel6.6                                                                         | Red Hat Enterprise Linux 6.6       | 6.6       |  |
| <a href="http://redhat.com/rhel/6.6">http://redhat.com/rhel/6.6</a>             |                                    |           |  |
| rhel6.7                                                                         | Red Hat Enterprise Linux 6.7       | 6.7       |  |
| <a href="http://redhat.com/rhel/6.7">http://redhat.com/rhel/6.7</a>             |                                    |           |  |
| rhel6.8                                                                         | Red Hat Enterprise Linux 6.8       | 6.8       |  |
| <a href="http://redhat.com/rhel/6.8">http://redhat.com/rhel/6.8</a>             |                                    |           |  |
| rhel6.9                                                                         | Red Hat Enterprise Linux 6.9       | 6.9       |  |
| <a href="http://redhat.com/rhel/6.9">http://redhat.com/rhel/6.9</a>             |                                    |           |  |
| rhel7-unknown                                                                   | Red Hat Enterprise Linux 7 Unknown | 7-unknown |  |
| <a href="http://redhat.com/rhel/7-unknown">http://redhat.com/rhel/7-unknown</a> |                                    |           |  |
| rhel7.0                                                                         | Red Hat Enterprise Linux 7.0       | 7.0       |  |
| <a href="http://redhat.com/rhel/7.0">http://redhat.com/rhel/7.0</a>             |                                    |           |  |
| rhel7.1                                                                         | Red Hat Enterprise Linux 7.1       | 7.1       |  |
| <a href="http://redhat.com/rhel/7.1">http://redhat.com/rhel/7.1</a>             |                                    |           |  |
| rhel7.2                                                                         | Red Hat Enterprise Linux 7.2       | 7.2       |  |
| <a href="http://redhat.com/rhel/7.2">http://redhat.com/rhel/7.2</a>             |                                    |           |  |
| rhel7.3                                                                         | Red Hat Enterprise Linux 7.3       | 7.3       |  |
| <a href="http://redhat.com/rhel/7.3">http://redhat.com/rhel/7.3</a>             |                                    |           |  |
| rhel7.4                                                                         | Red Hat Enterprise Linux 7.4       | 7.4       |  |
| <a href="http://redhat.com/rhel/7.4">http://redhat.com/rhel/7.4</a>             |                                    |           |  |
| rhel7.5                                                                         | Red Hat Enterprise Linux 7.5       | 7.5       |  |
| <a href="http://redhat.com/rhel/7.5">http://redhat.com/rhel/7.5</a>             |                                    |           |  |
| rhel7.6                                                                         | Red Hat Enterprise Linux 7.6       | 7.6       |  |
| <a href="http://redhat.com/rhel/7.6">http://redhat.com/rhel/7.6</a>             |                                    |           |  |
| rhel7.7                                                                         | Red Hat Enterprise Linux 7.7       | 7.7       |  |
| <a href="http://redhat.com/rhel/7.7">http://redhat.com/rhel/7.7</a>             |                                    |           |  |
| rhel7.8                                                                         | Red Hat Enterprise Linux 7.8       | 7.8       |  |
| <a href="http://redhat.com/rhel/7.8">http://redhat.com/rhel/7.8</a>             |                                    |           |  |
| rhel7.9                                                                         | Red Hat Enterprise Linux 7.9       | 7.9       |  |
| <a href="http://redhat.com/rhel/7.9">http://redhat.com/rhel/7.9</a>             |                                    |           |  |
| rhel8-unknown                                                                   | Red Hat Enterprise Linux 8 Unknown | 8-unknown |  |
| <a href="http://redhat.com/rhel/8-unknown">http://redhat.com/rhel/8-unknown</a> |                                    |           |  |



|                                                                                 |                                    |           |                                                                   |
|---------------------------------------------------------------------------------|------------------------------------|-----------|-------------------------------------------------------------------|
| rhel8.0                                                                         | Red Hat Enterprise Linux 8.0       | 8.0       |                                                                   |
| <a href="http://redhat.com/rhel/8.0">http://redhat.com/rhel/8.0</a>             |                                    |           |                                                                   |
| rhel8.1                                                                         | Red Hat Enterprise Linux 8.1       | 8.1       |                                                                   |
| <a href="http://redhat.com/rhel/8.1">http://redhat.com/rhel/8.1</a>             |                                    |           |                                                                   |
| rhel8.2                                                                         | Red Hat Enterprise Linux 8.2       | 8.2       |                                                                   |
| <a href="http://redhat.com/rhel/8.2">http://redhat.com/rhel/8.2</a>             |                                    |           |                                                                   |
| rhel8.3                                                                         | Red Hat Enterprise Linux 8.3       | 8.3       |                                                                   |
| <a href="http://redhat.com/rhel/8.3">http://redhat.com/rhel/8.3</a>             |                                    |           |                                                                   |
| rhel8.4                                                                         | Red Hat Enterprise Linux 8.4       | 8.4       |                                                                   |
| <a href="http://redhat.com/rhel/8.4">http://redhat.com/rhel/8.4</a>             |                                    |           |                                                                   |
| rhel9-unknown                                                                   | Red Hat Enterprise Linux 9 Unknown | 9-unknown |                                                                   |
| <a href="http://redhat.com/rhel/9-unknown">http://redhat.com/rhel/9-unknown</a> |                                    |           |                                                                   |
| rhel9.0                                                                         | Red Hat Enterprise Linux 9.0       | 9.0       |                                                                   |
| <a href="http://redhat.com/rhel/9.0">http://redhat.com/rhel/9.0</a>             |                                    |           |                                                                   |
| rhl1.0                                                                          | Red Hat Linux 1.0                  | 1.0       | <a href="http://redhat.com/rhl/1.0">http://redhat.com/rhl/1.0</a> |
| rhl1.1                                                                          | Red Hat Linux 1.1                  | 1.1       | <a href="http://redhat.com/rhl/1.1">http://redhat.com/rhl/1.1</a> |
| rhl2.0                                                                          | Red Hat Linux 2.0                  | 2.0       | <a href="http://redhat.com/rhl/2.0">http://redhat.com/rhl/2.0</a> |
| rhl2.1                                                                          | Red Hat Linux 2.1                  | 2.1       | <a href="http://redhat.com/rhl/2.1">http://redhat.com/rhl/2.1</a> |
| rhl3.0.3                                                                        | Red Hat Linux 3.0.3                | 3.0.3     |                                                                   |
| <a href="http://redhat.com/rhl/3.0.3">http://redhat.com/rhl/3.0.3</a>           |                                    |           |                                                                   |
| rhl4.0                                                                          | Red Hat Linux 4.0                  | 4.0       | <a href="http://redhat.com/rhl/4.0">http://redhat.com/rhl/4.0</a> |
| rhl4.1                                                                          | Red Hat Linux 4.1                  | 4.1       | <a href="http://redhat.com/rhl/4.1">http://redhat.com/rhl/4.1</a> |
| rhl4.2                                                                          | Red Hat Linux 4.2                  | 4.2       | <a href="http://redhat.com/rhl/4.2">http://redhat.com/rhl/4.2</a> |
| rhl5.0                                                                          | Red Hat Linux 5.0                  | 5.0       | <a href="http://redhat.com/rhl/5.0">http://redhat.com/rhl/5.0</a> |
| rhl5.1                                                                          | Red Hat Linux 5.1                  | 5.1       | <a href="http://redhat.com/rhl/5.1">http://redhat.com/rhl/5.1</a> |
| rhl5.2                                                                          | Red Hat Linux 5.2                  | 5.2       | <a href="http://redhat.com/rhl/5.2">http://redhat.com/rhl/5.2</a> |
| rhl6.0                                                                          | Red Hat Linux 6.0                  | 6.0       | <a href="http://redhat.com/rhl/6.0">http://redhat.com/rhl/6.0</a> |
| rhl6.1                                                                          | Red Hat Linux 6.1                  | 6.1       | <a href="http://redhat.com/rhl/6.1">http://redhat.com/rhl/6.1</a> |
| rhl6.2                                                                          | Red Hat Linux 6.2                  | 6.2       | <a href="http://redhat.com/rhl/6.2">http://redhat.com/rhl/6.2</a> |
| rhl7                                                                            | Red Hat Linux 7                    | 7         | <a href="http://redhat.com/rhl/7">http://redhat.com/rhl/7</a>     |
| rhl7.1                                                                          | Red Hat Linux 7.1                  | 7.1       | <a href="http://redhat.com/rhl/7.1">http://redhat.com/rhl/7.1</a> |
| rhl7.2                                                                          | Red Hat Linux 7.2                  | 7.2       | <a href="http://redhat.com/rhl/7.2">http://redhat.com/rhl/7.2</a> |
| rhl7.3                                                                          | Red Hat Linux 7.3                  | 7.3       | <a href="http://redhat.com/rhl/7.3">http://redhat.com/rhl/7.3</a> |
| rhl8.0                                                                          | Red Hat Linux 8.0                  | 8.0       | <a href="http://redhat.com/rhl/8.0">http://redhat.com/rhl/8.0</a> |

|      |                 |   |                                                               |
|------|-----------------|---|---------------------------------------------------------------|
| rh19 | Red Hat Linux 9 | 9 | <a href="http://redhat.com/rhl/9">http://redhat.com/rhl/9</a> |
|------|-----------------|---|---------------------------------------------------------------|

Afin d'installer une machine virtuelle nous avons besoin d'identifier le **Short ID** de la version à installer. Cette information se trouve dans la première colonne de la sortie de la commande. Les trois autres colonnes indiquent :

- Colonne 2,
  - **Name**,
    - Le nom officiel du système d'exploitation,
- Colonne 3,
  - **Version**,
    - La version du système d'exploitation,
- Colonne 4,
  - **ID**,
    - Un URL censé pointer vers la page officielle de la version de la distribution. Attention : ces URLs sont bien souvent inexactes,

Pour rechercher le Short ID de CentOS 8, recherchez **centos** dans la sortie de la commande **osinfo-query os** :

```
[root@centos8 ~]# osinfo-query os | grep centos
centos-stream8      | CentOS Stream 8          | 8          |
http://centos.org/centos-stream/8
centos5.0           | CentOS 5.0               | 5.0        |
http://centos.org/centos/5.0
centos5.1           | CentOS 5.1               | 5.1        |
http://centos.org/centos/5.1
centos5.10          | CentOS 5.10              | 5.10       |
http://centos.org/centos/5.10
centos5.11          | CentOS 5.11              | 5.11       |
http://centos.org/centos/5.11
centos5.2           | CentOS 5.2               | 5.2        |
http://centos.org/centos/5.2
centos5.3           | CentOS 5.3               | 5.3        |
http://centos.org/centos/5.3
centos5.4           | CentOS 5.4               | 5.4        |
http://centos.org/centos/5.4
```

|                                                                           |             |      |  |
|---------------------------------------------------------------------------|-------------|------|--|
| centos5.5                                                                 | CentOS 5.5  | 5.5  |  |
| <a href="http://centos.org/centos/5.5">http://centos.org/centos/5.5</a>   |             |      |  |
| centos5.6                                                                 | CentOS 5.6  | 5.6  |  |
| <a href="http://centos.org/centos/5.6">http://centos.org/centos/5.6</a>   |             |      |  |
| centos5.7                                                                 | CentOS 5.7  | 5.7  |  |
| <a href="http://centos.org/centos/5.7">http://centos.org/centos/5.7</a>   |             |      |  |
| centos5.8                                                                 | CentOS 5.8  | 5.8  |  |
| <a href="http://centos.org/centos/5.8">http://centos.org/centos/5.8</a>   |             |      |  |
| centos5.9                                                                 | CentOS 5.9  | 5.9  |  |
| <a href="http://centos.org/centos/5.9">http://centos.org/centos/5.9</a>   |             |      |  |
| centos6.0                                                                 | CentOS 6.0  | 6.0  |  |
| <a href="http://centos.org/centos/6.0">http://centos.org/centos/6.0</a>   |             |      |  |
| centos6.1                                                                 | CentOS 6.1  | 6.1  |  |
| <a href="http://centos.org/centos/6.1">http://centos.org/centos/6.1</a>   |             |      |  |
| centos6.10                                                                | CentOS 6.10 | 6.10 |  |
| <a href="http://centos.org/centos/6.10">http://centos.org/centos/6.10</a> |             |      |  |
| centos6.2                                                                 | CentOS 6.2  | 6.2  |  |
| <a href="http://centos.org/centos/6.2">http://centos.org/centos/6.2</a>   |             |      |  |
| centos6.3                                                                 | CentOS 6.3  | 6.3  |  |
| <a href="http://centos.org/centos/6.3">http://centos.org/centos/6.3</a>   |             |      |  |
| centos6.4                                                                 | CentOS 6.4  | 6.4  |  |
| <a href="http://centos.org/centos/6.4">http://centos.org/centos/6.4</a>   |             |      |  |
| centos6.5                                                                 | CentOS 6.5  | 6.5  |  |
| <a href="http://centos.org/centos/6.5">http://centos.org/centos/6.5</a>   |             |      |  |
| centos6.6                                                                 | CentOS 6.6  | 6.6  |  |
| <a href="http://centos.org/centos/6.6">http://centos.org/centos/6.6</a>   |             |      |  |
| centos6.7                                                                 | CentOS 6.7  | 6.7  |  |
| <a href="http://centos.org/centos/6.7">http://centos.org/centos/6.7</a>   |             |      |  |
| centos6.8                                                                 | CentOS 6.8  | 6.8  |  |
| <a href="http://centos.org/centos/6.8">http://centos.org/centos/6.8</a>   |             |      |  |
| centos6.9                                                                 | CentOS 6.9  | 6.9  |  |
| <a href="http://centos.org/centos/6.9">http://centos.org/centos/6.9</a>   |             |      |  |
| centos7.0                                                                 | CentOS 7    | 7    |  |
| <a href="http://centos.org/centos/7.0">http://centos.org/centos/7.0</a>   |             |      |  |

centos8 | CentOS 8  
<http://centos.org/centos/8>



**Important** : Notez que le Short ID de CentOS 8 est actuellement **centos8** quelque soit la version.

## 1.2 - Configuration du Stockage des ISOs

Afin d'installer la machine virtuelle il est nécessaire d'avoir accès à l'ISO de celui-ci. Pour des raisons de performances il est souhaitable que cet ISO soit stocké localement ou bien sur un système de fichiers distant sans latence. Un ISO de CentOS 8 a été préchargé dans le répertoire **/root** de votre VM. Cet ISO doit être placé dans un endroit accessible par l'utilisateur et le groupe **qemu**. Créez donc le répertoire **/isos**, placez l'ISO dans ce répertoire et accordez les permissions adéquates :

```
[root@centos8 ~]# ls -l | grep CentOS
-rw-r--r--. 1 root root 625999872 Sep  3 04:44 CentOS-8.1.1911-x86_64-boot.iso

[root@centos8 ~]# chmod 755 CentOS-8.1.1911-x86_64-boot.iso

[root@centos8 ~]# mkdir /isos

[root@centos8 ~]# mv CentOS-8.1.1911-x86_64-boot.iso /isos

[root@centos8 ~]# chown -R qemu:qemu /isos
```

## 1.3 - Installation du Domain

Démarrez maintenant l'installation d'une machine virtuelle **CentOS 8** grâce à la commande **virt-install** :

```
[root@centos8 ~]# virt-install --network bridge:virbr0 --name testvm1 --os-variant=centos8 --ram=2048 --vcpus=1 -
```

```
-disk path=/var/lib/libvirt/images/testvm1-os.qcow2,bus=virtio,size=5 --graphics none --
location=/isos/CentOS-8.1.1911-x86_64-boot.iso --extra-args="console=tty0 console=ttyS0,115200" --check all=off

Starting install...
Retrieving file vmlinuz...
| 7.7 MB 00:00:00
Retrieving file initrd.img...
| 59 MB 00:00:00
Allocating 'testvm1-os.qcow2'
| 5.0 GB 00:00:00
WARNING Overriding memory to 3072 MiB needed for centos8 network install.
Connected to domain testvm1
Escape character is ^]
[ 0.000000] Linux version 4.18.0-147.el8.x86_64 (mockbuild@kbuilder.bsys.centos.org) (gcc version 8.3.1
20190507 (Red Hat 8.3.1-4) (GCC)) #1 SMP Wed Dec 4 21:51:45 UTC 2019
...
```



**Important :** Notez que la quantité de mémoire est automatiquement et provisoirement augmentée à 3072 Mo afin que l'installation se déroule correctement. Notez aussi l'utilisation du mot **domain**. Un domain sous KVM est un terme utilisé pour décrire une machine virtuelle.

Dans cette commande on peut constater l'utilisation de plusieurs options importantes :

| Option           | Commentaire                                                                                           |
|------------------|-------------------------------------------------------------------------------------------------------|
| -network bridge: | Fixe la valeur du pont à utiliser par la VM à virbr0                                                  |
| -name            | Indique le nom de la VM                                                                               |
| -os-variant=     | Egal à la valeur du Short ID identifié au-dessus                                                      |
| -ram=            | Fixe la quantité de la RAM de la VM en Mo                                                             |
| -vcpus=          | Fixe le nombre de vCPUs de la VM                                                                      |
| -disk path=      | Crée une image pour la VM, au format indiqué et de la taille indiquée en Go, à l'emplacement spécifié |

| Option       | Commentaire                                                                                                                                         |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| -graphics    | La valeur <b>none</b> indique que l'installation aura lieu en mode texte. Notez que dans le cas d'une VM Windows™, la valeur doit être <b>spice</b> |
| -location=   | Indique l'emplacement de l'ISO à utiliser pour l'installation                                                                                       |
| -extra-args= | Indique les options de la connectivité de la console                                                                                                |

## Format des Images

Une image est un disque virtuel. KVM reconnaît les formats d'image suivants :

```
[root@centos8 ~]# qemu-img -h | grep Supported
Supported formats: blkdebug blklogwrites blkreplay blkverify copy-on-read file ftp ftps gluster host_cdrom
host_device http https iscsi iser luks nbd null-aio null-co nvme qcow2 quorum raw rbd ssh throttle vhd vmdk vpc
```



**Important** : Consultez [cette page](#) pour plus d'informations.

## Convertir le Format de l'Image

Il est possible de convertir un format d'image existante au format qcow2 avec la commande **qemu-img convert**, notamment les images au format **qed**, **raw**, **vdi**, **vhd** et **vmdk**. Par exemple :

```
# qemu-img convert -f vmdk -O qcow2 myimage.vmdk mynewimage.qcow2
```

Dans le cas d'une image au format **vdi** d'Oracle VirtualBox, il est préférable de créer une image au format **raw** en utilisant la commande **VBoxManage** :

```
# VBoxManage clonehd myimage.vdi myrawimage.img --format raw
```

Ensuite il convient d'utiliser la commande **qemu-img convert** pour convertir l'image au format raw en qcow2 :

```
# qemu-img convert -f raw -O qcow2 myrawimage.img mynewimage.qcow2
```

## 1.4 - Configuration de l'Installation de l'OS Invité

### Language Settings

Commencez par appuyer sur le choix **1** :

```
...
Starting installer, one moment...
anaconda 29.19.1.13-1.el8 for CentOS Linux 8 started.
* installation log files are stored in /tmp during the installation
* shell is available on TTY2
* if the graphical installation interface fails to start, try again with the
  inst.text bootoption to start text installation
* when reporting a bug add logs from /tmp as separate text/plain attachments
14:08:33 Not asking for VNC because we don't have a network
=====
=====
Installation

1) [x] Language settings                2) [x] Time settings
    (English (United States))          (America/New_York timezone)
3) [!] Installation source              4) [!] Software selection
    (Processing...)                    (Processing...)
5) [!] Installation Destination         6) [x] Kdump
    (No disks selected)                (Kdump is enabled)
7) [!] Network configuration           8) [!] Root password
    (Not connected)                    (Password is not set.)
9) [!] User creation
```

(No user will be created)

Please make a selection from the above ['b' to begin installation, 'q' to quit,  
'r' to refresh]: 1

```
=====
=====

3) Arabic                29) Hebrew                55) Norwegian Nynorsk
4) Assamese              30) Hindi                  56) Northern Sotho
5) Asturian              31) Croatian              57) Odia
6) Belarusian            32) Hungarian             58) Punjabi
7) Bulgarian             33) Interlingua           59) Polish
8) Bangla                 34) Indonesian            60) Portuguese
9) Tibetan               35) Icelandic             61) Romanian
10) Bosnian              36) Italian                62) Russian
11) Catalan              37) Japanese              63) Sinhala
12) Czech                38) Georgian              64) Slovak
13) Welsh                39) Kazakh                65) Slovenian
14) Danish               40) Khmer                  66) Albanian
15) German               41) Kannada               67) Serbian
16) Greek                42) Korean                68) Swedish
17) English              43) Lithuanian            69) Tamil
18) Spanish              44) Latvian               70) Telugu
19) Estonian             45) Maithili              71) Tajik
20) Basque               46) Macedonian            72) Thai
21) Persian              47) Malayalam             73) Turkish
22) Finnish              48) Marathi               74) Ukrainian
23) Filipino             49) Malay                 75) Urdu
24) French               50) Burmese               76) Vietnamese
25) Friulian             51) Norwegian Bokmål     77) Mandarin Chinese

Press ENTER to continue:
26) Irish                52) Low German            78) Zulu
```



Choisissez l'option **24** puis l'option **1** :

```
Please select language support to install ['b' to return to language list, 'c'
to continue, 'q' to quit, 'r' to refresh]: 24
```

```
=====
=====
Language settings
```

```
Available locales
```

- |                    |                         |                        |
|--------------------|-------------------------|------------------------|
| 1) French (France) | 3) French (Belgium)     | 5) French (Luxembourg) |
| 2) French (Canada) | 4) French (Switzerland) |                        |

```
Please select language support to install ['b' to return to language list, 'c'
to continue, 'q' to quit, 'r' to refresh]: 1
```

```
=====
=====
Installation
```

- |                                                                     |                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------------------------|
| 1) [x] Language settings<br>(French (France))                       | 2) [x] Time settings<br>(America/New_York timezone)                 |
| 3) [!] Installation source<br>(Error setting up software<br>source) | 4) [!] Software selection<br>(Error checking software<br>selection) |
| 5) [!] Installation Destination<br>(No disks selected)              | 6) [x] Kdump<br>(Kdump is enabled)                                  |
| 7) [!] Network configuration<br>(Not connected)                     | 8) [!] Root password<br>(Password is not set.)                      |
| 9) [!] User creation<br>(No user will be created)                   |                                                                     |

```
Please make a selection from the above ['b' to begin installation, 'q' to quit,
'r' to refresh]:
```

```
[anaconda]1:main* 2:shell 3:log 4:storage-log >Switch tab: Alt+Tab | Help: F1
```

## Network configuration

Choisissez maintenant l'option **7** :

```
=====
=====
Installation

1) [x] Language settings                2) [x] Time settings
    (French (France))                  (America/New_York timezone)
3) [!] Installation source              4) [!] Software selection
    (Error setting up software         (Error checking software
    source)                             selection)
5) [!] Installation Destination          6) [x] Kdump
    (No disks selected)                (Kdump is enabled)
7) [!] Network configuration            8) [!] Root password
    (Not connected)                    (Password is not set.)
9) [!] User creation
    (No user will be created)

Please make a selection from the above ['b' to begin installation, 'q' to quit,
'r' to refresh]: 7
=====
=====
Network configuration

Wired (enp1s0) disconnected

Host Name: localhost.localdomain

Current host name: localhost

1) Set host name
```

## 2) Configure device enp1s0

Choisissez ensuite l'option **1** pour définir le nom d'hôte de la VM :

```
Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to
refresh]: 1
=====
=====
Enter a new value for 'Host Name' and press ENTER: testvm1.ittraining.network
=====
=====
Network configuration

Wired (enp1s0) disconnected

Host Name: testvm1.ittraining.network

Current host name: localhost

1) Set host name
2) Configure device enp1s0
```

Choisissez l'option **2** pour configurer la connexion réseau :

```
Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to
refresh]: 2
=====
=====
Device configuration

1) IPv4 address or "dhcp" for DHCP
   dhcp
2) IPv4 netmask
3) IPv4 gateway
```

- 4) IPv6 address[/prefix] or "auto" for automatic, "dhcp" for DHCP, "ignore" to turn off  
auto
- 5) IPv6 default gateway
- 6) Nameservers (comma separated)
- 7) [ ] Connect automatically after reboot
- 8) [ ] Apply configuration in installer

Configuring device enpls0.

Laissez l'option **1** en **192.168.56.50**, l'option **2** en **255.255.255.0**, l'option **3** en **192.168.56.1** puis choisissez l'option **6** pour définir les serveurs DNS en **8.8.8.8,8.8.4.4** :

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: 6

Enter a new value for 'Nameservers (comma separated)' and press ENTER: 8.8.8.8,8.8.4.4

Device configuration

- 1) IPv4 address or "dhcp" for DHCP  
192.168.56.50
- 2) IPv4 netmask  
255.255.255.0
- 3) IPv4 gateway  
192.168.56.1
- 4) IPv6 address[/prefix] or "auto" for automatic, "dhcp" for DHCP, "ignore" to turn off  
auto
- 5) IPv6 default gateway
- 6) Nameservers (comma separated)

8.8.8.8,8.8.4.4

7) [ ] Connect automatically after reboot

8) [ ] Apply configuration in installer

Configuring device enpls0.

Il est important de configurer la prise en compte automatique de la configuration après le re-démarrage. Choisissez donc l'option **7** :

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: 7

=====

Device configuration

1) IPv4 address or "dhcp" for DHCP

192.168.56.50

2) IPv4 netmask

255.255.255.0

3) IPv4 gateway

192.168.56.1

4) IPv6 address[/prefix] or "auto" for automatic, "dhcp" for DHCP, "ignore" to turn off

auto

5) IPv6 default gateway

6) Nameservers (comma separated)

8.8.8.8,8.8.4.4

7) [x] Connect automatically after reboot

8) [ ] Apply configuration in installer

Configuring device enpls0.

Pour pouvoir installer les paquets logiciels, la configuration réseau doit être appliquée immédiatement. Choisissez donc l'option **8** :

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to

```
refresh]: 8
```

```
=====
```

### Device configuration

- 1) IPv4 address or "dhcp" for DHCP  
192.168.56.50
- 2) IPv4 netmask  
255.255.255.0
- 3) IPv4 gateway  
192.168.56.1
- 4) IPv6 address[/prefix] or "auto" for automatic, "dhcp" for DHCP, "ignore" to turn off  
auto
- 5) IPv6 default gateway
- 6) Nameservers (comma separated)  
8.8.8.8,8.8.4.4
- 7) [x] Connect automatically after reboot
- 8) [x] Apply configuration in installer

```
Configuring device enp1s0.
```

Validez les configurations actuelles en appuyant sur la touche **c** :

```
Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to  
refresh]: c
```

```
=====
```

### Network configuration

```
Wired (enp1s0) disconnected
```

```
Host Name: testvm1.ittraining.network
```

Current host name: localhost

- 1) Set host name
- 2) Configure device enp1s0

Pour retourner au menu principal, appuyez sur la touche **c** de nouveau :

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: c

=====

## Installation

- |                                                                  |                                                                  |
|------------------------------------------------------------------|------------------------------------------------------------------|
| 1) [x] Language settings<br>(French (France))                    | 2) [x] Time settings<br>(America/New_York timezone)              |
| 3) [!] Installation source<br>(Error setting up software source) | 4) [!] Software selection<br>(Error checking software selection) |
| 5) [!] Installation Destination<br>(No disks selected)           | 6) [x] Kdump<br>(Kdump is enabled)                               |
| 7) [x] Network configuration<br>(Wired (enp1s0) connected)       | 8) [!] Root password<br>(Password is not set.)                   |
| 9) [!] User creation<br>(No user will be created)                |                                                                  |

Please make a selection from the above ['b' to begin installation, 'q' to quit, 'r' to refresh]:

[anaconda]1:main\* 2:shell 3:log 4:storage-log >Switch tab: Alt+Tab | Help: F1

## Time settings

Choisissez maintenant l'option **2** pour définir le fuseau d'horaire de la VM :

```
=====
=====
Installation
```

- |                                                                     |                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------------------------|
| 1) [x] Language settings<br>(French (France))                       | 2) [x] Time settings<br>(America/New_York timezone)                 |
| 3) [!] Installation source<br>(Error setting up software<br>source) | 4) [!] Software selection<br>(Error checking software<br>selection) |
| 5) [!] Installation Destination<br>(No disks selected)              | 6) [x] Kdump<br>(Kdump is enabled)                                  |
| 7) [x] Network configuration<br>(Wired (enp1s0) connected)          | 8) [!] Root password<br>(Password is not set.)                      |
| 9) [!] User creation<br>(No user will be created)                   |                                                                     |

Please make a selection from the above ['b' to begin installation, 'q' to quit,  
'r' to refresh]: 2

```
=====
=====
Time settings
```

Timezone: America/New\_York

NTP servers: not configured

- 1) Change timezone
- 2) Configure NTP servers

Choisissez l'option **1** pour modifier le fuseau d'horaire :

```
Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to
refresh]: 1
=====
```



## =====

## Timezone settings

## Available regions

- |            |               |            |
|------------|---------------|------------|
| 1) Europe  | 5) Antarctica | 9) Indian  |
| 2) Asia    | 6) Pacific    | 10) Arctic |
| 3) America | 7) Australia  | 11) US     |
| 4) Africa  | 8) Atlantic   | 12) Etc    |

Appuyez sur la touche **1** pour choisir **Europe** :

Please select the timezone. Use numbers or type names directly ['b' back to region list, 'c' to continue, 'q' to quit, 'r' to refresh]: 1

- =====
- |                 |                 |                |
|-----------------|-----------------|----------------|
| 1) Amsterdam    | 21) Kaliningrad | 41) San_Marino |
| 2) Andorra      | 22) Kiev        | 42) Sarajevo   |
| 3) Astrakhan    | 23) Kirov       | 43) Saratov    |
| 4) Athens       | 24) Lisbon      | 44) Simferopol |
| 5) Belgrade     | 25) Ljubljana   | 45) Skopje     |
| 6) Berlin       | 26) London      | 46) Sofia      |
| 7) Bratislava   | 27) Luxembourg  | 47) Stockholm  |
| 8) Brussels     | 28) Madrid      | 48) Tallinn    |
| 9) Bucharest    | 29) Malta       | 49) Tirane     |
| 10) Budapest    | 30) Mariehamn   | 50) Ulyanovsk  |
| 11) Busingen    | 31) Minsk       | 51) Uzhgorod   |
| 12) Chisinau    | 32) Monaco      | 52) Vaduz      |
| 13) Copenhagen  | 33) Moscow      | 53) Vatican    |
| 14) Dublin      | 34) Oslo        | 54) Vienna     |
| 15) Gibraltar   | 35) Paris       | 55) Vilnius    |
| 16) Guernsey    | 36) Podgorica   | 56) Volgograd  |
| 17) Helsinki    | 37) Prague      | 57) Warsaw     |
| 18) Isle_of_Man | 38) Riga        | 58) Zagreb     |

|              |            |                |
|--------------|------------|----------------|
| 19) Istanbul | 39) Rome   | 59) Zaporozhye |
| 20) Jersey   | 40) Samara | 60) Zurich     |

Puis choisissez l'option **35** pour Paris :

```
Please select the timezone. Use numbers or type names directly ['b' back to
region list, 'c' to continue, 'q' to quit, 'r' to refresh]: 35
```

```
=====
=====
```

## Installation

- |                                                                     |                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------------------------|
| 1) [x] Language settings<br>(French (France))                       | 2) [x] Time settings<br>(Europe/Paris timezone)                     |
| 3) [!] Installation source<br>(Error setting up software<br>source) | 4) [!] Software selection<br>(Error checking software<br>selection) |
| 5) [!] Installation Destination<br>(No disks selected)              | 6) [x] Kdump<br>(Kdump is enabled)                                  |
| 7) [x] Network configuration<br>(Wired (enp1s0) connected)          | 8) [!] Root password<br>(Password is not set.)                      |
| 9) [!] User creation<br>(No user will be created)                   |                                                                     |

```
Please make a selection from the above ['b' to begin installation, 'q' to quit,
'r' to refresh]:
```

## Root password

Pour définir le mot de passe root de la VM, choisissez l'option **8** et indiquez le mot de passe **fenestros** :

```
=====
=====
```

## Installation

- |                                                                     |                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------------------------|
| 1) [x] Language settings<br>(French (France))                       | 2) [x] Time settings<br>(Europe/Paris timezone)                     |
| 3) [!] Installation source<br>(Error setting up software<br>source) | 4) [!] Software selection<br>(Error checking software<br>selection) |
| 5) [!] Installation Destination<br>(No disks selected)              | 6) [x] Kdump<br>(Kdump is enabled)                                  |
| 7) [x] Network configuration<br>(Wired (enp1s0) connected)          | 8) [!] Root password<br>(Password is not set.)                      |
| 9) [!] User creation<br>(No user will be created)                   |                                                                     |

Please make a selection from the above ['b' to begin installation, 'q' to quit,  
'r' to refresh]: 8

=====

Root password

Please select new root password. You will have to type it twice.

Password: fenestros

Password (confirm): fenestros

=====

Question

The password you have provided is weak: The password fails the dictionary check  
- it is based on a dictionary word  
Would you like to use it anyway?

Please respond 'yes' or 'no': yes

=====

```
=====
Installation

1) [x] Language settings                2) [x] Time settings
    (French (France))                  (Europe/Paris timezone)
3) [!] Installation source              4) [!] Software selection
    (Error setting up software         (Error checking software
    source)                             selection)
5) [!] Installation Destination          6) [x] Kdump
    (No disks selected)                (Kdump is enabled)
7) [x] Network configuration            8) [x] Root password
    (Wired (enpls0) connected)         (Password is set.)
9) [ ] User creation
    (No user will be created)

Please make a selection from the above ['b' to begin installation, 'q' to quit,
'r' to refresh]:
```

## Installation source

Choisissez l'option **3** :

```
=====
=====
Installation

1) [x] Language settings                2) [x] Time settings
    (French (France))                  (Europe/Paris timezone)
3) [!] Installation source              4) [!] Software selection
    (Error setting up software         (Error checking software
    source)                             selection)
5) [!] Installation Destination          6) [x] Kdump
    (No disks selected)                (Kdump is enabled)
```

```
7) [x] Network configuration      8) [x] Root password
   (Wired (enp1s0) connected)    (Password is set.)
9) [ ] User creation
   (No user will be created)
```

Please make a selection from the above ['b' to begin installation, 'q' to quit, 'r' to refresh]: 3

=====

Installation source

Choose an installation source type.

- 1) CD/DVD
- 2) local ISO file
- 3) Network

L'ISO utilisé est de type **net-install**. Choisissez donc l'option **3** :

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: 3

=====

Installation source

- 1) Closest mirror
- 2) http://
- 3) https://
- 4) ftp://
- 5) nfs

Choisissez l'option **3** et indiquez l'URL [https://vault.centos.org/8.1.1911/BaseOS/x86\\_64/os](https://vault.centos.org/8.1.1911/BaseOS/x86_64/os) :

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: 1

```
=====
=====
Installation
```

- |                                                                                                                                                                                   |                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Language settings<br>(French (France))                                                                                                     | 2) <input checked="" type="checkbox"/> Time settings<br>(Europe/Paris timezone) |
| 3) <input checked="" type="checkbox"/> Installation source<br><a href="https://vault.centos.org/8.1.1911/BaseOS/x86_64/os">https://vault.centos.org/8.1.1911/BaseOS/x86_64/os</a> | 4) <input type="checkbox"/> Software selection<br>(Nothing selected)            |
| 5) <input type="checkbox"/> Installation Destination<br>(No disks selected)                                                                                                       | 6) <input checked="" type="checkbox"/> Kdump<br>(Kdump is enabled)              |
| 7) <input checked="" type="checkbox"/> Network configuration<br>(Wired (enp1s0) connected)                                                                                        | 8) <input checked="" type="checkbox"/> Root password<br>(Password is set.)      |
| 9) <input type="checkbox"/> User creation<br>(No user will be created)                                                                                                            |                                                                                 |

Please make a selection from the above ['b' to begin installation, 'q' to quit, 'r' to refresh]:

## Software selection

Choisissez l'option **4** puis l'option **3** pour indiquer une installation minimale du système :

```
=====
=====
Installation
```

- |                                                                                                                                                                                   |                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Language settings<br>(French (France))                                                                                                     | 2) <input checked="" type="checkbox"/> Time settings<br>(Europe/Paris timezone) |
| 3) <input checked="" type="checkbox"/> Installation source<br><a href="https://vault.centos.org/8.1.1911/BaseOS/x86_64/os">https://vault.centos.org/8.1.1911/BaseOS/x86_64/os</a> | 4) <input type="checkbox"/> Software selection<br>(Nothing selected)            |
| 5) <input type="checkbox"/> Installation Destination                                                                                                                              | 6) <input checked="" type="checkbox"/> Kdump                                    |

```
(No disks selected)                (Kdump is enabled)
7) [x] Network configuration        8) [x] Root password
   (Wired (enp1s0) connected)      (Password is set.)
9) [ ] User creation
   (No user will be created)
```

Please make a selection from the above ['b' to begin installation, 'q' to quit, 'r' to refresh]: 4

=====

Software selection

Base environment

```
1) [ ] Server with GUI             4) [ ] Workstation
2) [ ] Server                     5) [ ] Virtualization Host
3) [ ] Minimal Install            6) [ ] Custom Operating System
```

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: 3

=====

Software selection

Base environment

```
1) [ ] Server with GUI             4) [ ] Workstation
2) [ ] Server                     5) [ ] Virtualization Host
3) [x] Minimal Install            6) [ ] Custom Operating System
```

Appuyez ensuite sur la touche **c** pour pouvoir éventuellement choisir des installations supplémentaires :

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: c

```
=====
=====
Software selection
```

```
Additional software for selected environment
```

- |                                                            |                                                       |
|------------------------------------------------------------|-------------------------------------------------------|
| 1) <input type="checkbox"/> Guest Agents                   | 8) <input type="checkbox"/> Headless Management       |
| 2) <input type="checkbox"/> Standard                       | 9) <input type="checkbox"/> Legacy UNIX Compatibility |
| 3) <input type="checkbox"/> Container Management           | 10) <input type="checkbox"/> Network Servers          |
| 4) <input type="checkbox"/> .NET Core Development          | 11) <input type="checkbox"/> Scientific Support       |
| 5) <input type="checkbox"/> RPM Development Tools          | 12) <input type="checkbox"/> Security Tools           |
| 6) <input type="checkbox"/> Development Tools              | 13) <input type="checkbox"/> Smart Card Support       |
| 7) <input type="checkbox"/> Graphical Administration Tools | 14) <input type="checkbox"/> System Tools             |

Ne choisissez rien dans la liste et appuyez simplement sur la touche **c** pour revenir au menu principal :

```
Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to
refresh]: c
```

```
=====
=====
Installation
```

- |                                                                                            |                                                                                 |
|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Language settings<br>(French (France))              | 2) <input checked="" type="checkbox"/> Time settings<br>(Europe/Paris timezone) |
| 3) <input type="checkbox"/> Installation source<br>(Processing...)                         | 4) <input type="checkbox"/> Software selection<br>(Processing...)               |
| 5) <input type="checkbox"/> Installation Destination<br>(No disks selected)                | 6) <input checked="" type="checkbox"/> Kdump<br>(Kdump is enabled)              |
| 7) <input checked="" type="checkbox"/> Network configuration<br>(Wired (enp1s0) connected) | 8) <input checked="" type="checkbox"/> Root password<br>(Password is set.)      |
| 9) <input type="checkbox"/> User creation<br>(No user will be created)                     |                                                                                 |

```
Please make a selection from the above ['b' to begin installation, 'q' to quit,
```



```
'r' to refresh]: r
=====
=====
Installation

1) [x] Language settings          2) [x] Time settings
    (French (France))             (Europe/Paris timezone)
3) [x] Installation source        4) [x] Software selection
    https://vault.centos.org/      (Minimal Install)
    8.1.1911/BaseOS/x86_64/os
5) [!] Installation Destination   6) [x] Kdump
    (No disks selected)            (Kdump is enabled)
7) [x] Network configuration      8) [x] Root password
    (Wired (enpls0) connected)     (Password is set.)
9) [ ] User creation
    (No user will be created)

Please make a selection from the above ['b' to begin installation, 'q' to quit,
'r' to refresh]:
```

## Installation Destination

Choisissez l'option **5** pour définir l'emplacement de l'installation :

```
=====
=====
Installation

1) [x] Language settings          2) [x] Time settings
    (French (France))             (Europe/Paris timezone)
3) [x] Installation source        4) [x] Software selection
    https://vault.centos.org/      (Minimal Install)
    8.1.1911/BaseOS/x86_64/os
```

```
5) [!] Installation Destination      6) [x] Kdump
    (No disks selected)              (Kdump is enabled)
7) [x] Network configuration         8) [x] Root password
    (Wired (enp1s0) connected)        (Password is set.)
9) [ ] User creation
    (No user will be created)
```

Please make a selection from the above ['b' to begin installation, 'q' to quit, 'r' to refresh]: 5  
Probing storage...

Sélectionnez le disque **vda** et appuyez sur la touche **c** :

```
=====
=====
Installation Destination

1) [x] : 5 GiB (vda)

1 disk selected; 5 GiB capacity; 5 GiB free ...

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to
refresh]: c
```

A ce stade il vous est possible de choisir l'option **4** et de créer des partitions spécifiques en termes de points de montage en fonction de l'utilisation prévue pour la VM. Dans le cas de ce LAB, appuyez simplement sur le choix **2** puis sur la touche **c** :

```
=====
=====
Partitioning Options

1) [ ] Replace Existing Linux system(s)
2) [ ] Use All Space
3) [ ] Use Free Space
```

#### 4) [ ] Manually assign mount points

Installation requires partitioning of your hard drive. Select what space to use for the install target or manually assign mount points.

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: 2

#### Partitioning Options

- 1) [ ] Replace Existing Linux system(s)
- 2) [x] Use All Space
- 3) [ ] Use Free Space
- 4) [ ] Manually assign mount points

Installation requires partitioning of your hard drive. Select what space to use for the install target or manually assign mount points.

Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to refresh]: c

A ce stade il vous est possible de choisir le type d'installation, soit **Standard Partition**, **LVM** ou **LVM Thin Provisioning**. Notez que le choix par défaut proposé est **LVM** :

#### Partition Scheme Options

- 1) [ ] Standard Partition
- 2) [x] LVM
- 3) [ ] LVM Thin Provisioning

Select a partition scheme configuration.

Bien que préférable de choisir l'option par défaut pour des VMs en production . Par contre, pour des raisons liées à la suite de ce LAB, choisissez l'option **1** puis sur la touche **c** :

```
Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to
refresh]: 1
```

```
=====
=====
```

Partition Scheme Options

- 1) ☒ Standard Partition
- 2) ☐ LVM
- 3) ☐ LVM Thin Provisioning

Select a partition scheme configuration.

```
Please make a selection from the above ['c' to continue, 'q' to quit, 'r' to
refresh]: c
```

Generating updated storage configuration

Checking storage configuration...

## Démarrer l'Installation

De retour au menu principal, choisissez l'option **b** pour démarrer l'installation :

```
=====
=====
```

Installation

- |                                                          |                                                      |
|----------------------------------------------------------|------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Language settings | 2) <input checked="" type="checkbox"/> Time settings |
| (French (France))                                        | (Europe/Paris timezone)                              |

- |                                                                                                                      |                                                                                |
|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 3) <input checked="" type="checkbox"/> Installation source<br>https://vault.centos.org/<br>8.1.1911/BaseOS/x86_64/os | 4) <input checked="" type="checkbox"/> Software selection<br>(Minimal Install) |
| 5) <input checked="" type="checkbox"/> Installation Destination<br>(Automatic partitioning<br>selected)              | 6) <input checked="" type="checkbox"/> Kdump<br>(Kdump is enabled)             |
| 7) <input checked="" type="checkbox"/> Network configuration<br>(Wired (enpls0) connected)                           | 8) <input checked="" type="checkbox"/> Root password<br>(Password is set.)     |
| 9) <input type="checkbox"/> User creation<br>(No user will be created)                                               |                                                                                |

Please make a selection from the above ['b' to begin installation, 'q' to quit,  
'r' to refresh]: b



**Important** : Notez que nous n'avons pas spécifié d'utilisateurs. Cette décision n'est pas bloquante pour la suite de l'installation.

L'installation démarre et se poursuit :

```
...
Configuring storage
.
Installing boot loader
.
Performing post-installation setup tasks
.

Configuring installed system
.....
Writing network configuration
.
Creating users
```

```
....  
Configuring addons  
Executing com_redhat_kdump addon  
Executing org_fedora_oscaps addon  
.  
Generating initramfs  
.  
Running post-installation scripts  
.  
Storing configuration files and kickstarts  
..
```

## Démarrer la VM

À l'issue de l'installation, appuyez sur la touche [Enter] pour démarrer la VM :

```
Installation complete. Press ENTER to quit:  
...  
[ OK ] Started Network Manager.  
        Starting Network Manager Wait Online...  
[ OK ] Reached target Network.  
        Starting OpenSSH server daemon...  
        Starting Permit User Sessions...  
        Starting Dynamic System Tuning Daemon...  
        Starting Hostname Service...  
[ OK ] Started OpenSSH server daemon.  
[ OK ] Started Permit User Sessions.  
        Starting Hold until boot process finishes up...  
[ OK ] Started Command Scheduler.  
        Starting Terminate Plymouth Boot Screen...  
[ 18.386454] IPv6: ADDRCONF(NETDEV_UP): enp1s0: link is not ready
```

## 1.5 - Vérification de la VM Invitée

Au prompt, connectez-vous en tant que **root** avec le mot de passe **fenestros** :

```
CentOS Linux 8
Kernel 4.18.0-305.12.1.el8_4.x86_64 on an x86_64

testvm1 login: root
Mot de passe : fenestros
[root@testvm1 ~]#
```

### Réseau

Vérifiez la prise en compte d'une adresse IPv4 dans le réseau 192.168.56.0/24 :

```
[root@testvm1 ~]# ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 52:54:00:44:af:a1 brd ff:ff:ff:ff:ff:ff
    inet 192.168.56.83/24 brd 192.168.56.255 scope global dynamic noprefixroute enp1s0
        valid_lft 3534sec preferred_lft 3534sec
    inet6 fe80::6191:6417:8b53:bcb9/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
```

## Internet

Vérifiez la connectivité de la VM :

```
[root@testvm1 ~]# ping www.free.fr
PING www.free.fr (212.27.48.10) 56(84) bytes of data.
64 bytes from www.free.fr (212.27.48.10): icmp_seq=1 ttl=46 time=29.9 ms
64 bytes from www.free.fr (212.27.48.10): icmp_seq=2 ttl=46 time=30.1 ms

--- www.free.fr ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 29.887/29.989/30.091/0.102 ms
```

Avant de poursuivre, exécutez les deux commandes suivantes pour réparer les dépôts cassés :

```
[root@centos8 ~]# sed -i 's/^mirrorlist/#mirrorlist/g' /etc/yum.repos.d/CentOS-*
[root@centos8 ~]# sed -i 's|#baseurl=http://mirror.centos.org|baseurl=http://vault.centos.org|g'
/etc/yum.repos.d/CentOS-*
```

Détachez-vous de la VM :

```
[root@testvm1 ~]# [ALT GR]+[CTRL]+[)]
[root@centos8 ~]#
```



**Important** : Notez l'utilisation de la séquence de touches [ALT GR]+[CTRL]+[)] sur un clavier français afin de se détacher de la VM. C'est-à-dire, la touche [AltGr] et rester appuyer plus la touche [Ctrl] et rester appuyer plus la touche [)]. Si cela ne fonctionne pas utilisez [CTRL]+[VER MAJ]+[5].



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