(swap):

- () Linux
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. : Astra Linux .

:

- Astra Linux Special Edition .10015-01 (1.7), .10015-10
- Astra Linux Special Edition .10015-17
- Astra Linux Special Edition .10015-37 (7.7)
- Astra Linux Special Edition .10015-03 (7.6)
- Astra Linux Special Edition .10152-02 (4.7)
- Astra Linux Special Edition .10015-01 (1.6)
- Astra Linux Special Edition .10015-16 . 1
- Astra Linux Special Edition .10015-16 . 2
- Astra Linux Special Edition .10265-01 (8.1)
- Astra Linux Common Edition 2.12

() Linux

SWAP – , (swap area swap space), ( ), .

Wikipedia .

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Linux- , , :

1. , , (,), .. ;
2. , .. , .

— . , , . , , , , .

(hibernation suspend to disk). . (,).

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Astra Linux , . , , , . , , . . , , , , .

Astra Linux . , () ()

```
sudo swapon
```

. Astra Linux .

filefrag:

sudo filefrag -v /example.swap

Ext4 e4defrag:

sudo e4defrag -v /example.swap

.

, Astra Linux 2-3 . (**hibernation suspend to disk**) , , , 2-3, , (.).

vm.swappiness, ( ), .

```
sudo sysctl vm.swappiness
```

vm.swappiness 60, .. , 60%.
, . **vm.swappiness**

```
sysctl -w vm.swappiness=<_>
```

, .

vm.swappiness .

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Astra Linux SE , , :

- 3;
- 63;
- .

Astra Linux SE .

, (. mkswap/swapon/swapoff, swapon()/swapoff()). , . , /swap_area :

```
#   1Gb
sudo fallocate -l 1G /swap_area

#
sudo chown root:root /swap_area
sudo chmod 600 /swap_area

#    (  Astra Linux Special Edition)
# -   3
# -   63
# -
sudo pdpl-file 3:63:-1 /swap_area

#
sudo mkswap /swap_area

#
sudo swapon /swap_area
```

, /etc/fstab . (/swap_area):

```
/swap_area    none    swap    sw    0 0
```

:

- (Astra Linux Special Edition):
  - Ext2/Ext3/Ext4 – secdel /etc/fstab;
  - — swap-wiper . . « », . 8.1).
- (. (SSD):):
  - Ext4 – discard /etc/fstab;
  - – blkdiscard:

```
sudo blkdiscard /dev/sda5
```

swap-wiper, Astra Linux Special Edition , , .
/usr/lib/parsec/bin/swap-wiper . swap-wiper

/etc/parsec/swap_wiper.conf ENABLED=Y, ..

ENABLED=Y , fly-admin-smc, :

```
"" - " " - "" - " " - " " - "  "," ")
```

, . (SSD):

Astra Linux .
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(0 vm.swappiness):

```
sysctl -w vm.swappiness=0
```

(-a --all swapoff):

```
swapoff -a
```

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, , **mlock() mlockall()**:

```
#include <sys/mman.h>
int mlock(const void *addr, size_t len);
int munlock(const void *addr, size_t len);
int mlockall(int flags);
int munlockall(void);
```

mlock() **mlockall**() , . **munlock**() **munlockall**() , . .

```
man mlock
```

cgroups, ( ) memory.swappiness . vm.swappiness, __, , , .

( ) , , .

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