Time tick: 1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 0

Активная виртуальная страница: 9

Кол-во виртуальных страниц: 14, в памяти: 12

Процесс: Game; pid: 0

Осталось времени: 22

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | false | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Time tick: 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 0

Активная виртуальная страница: 8

Кол-во виртуальных страниц: 14, в памяти: 12

Процесс: Game; pid: 0

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 26

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |

Time tick: 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 1

Кол-во виртуальных страниц: 3, в памяти: 0

Активная страница используется впервые, выделяем память для неё

Процесс: Game; pid: 0

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 25

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | -1 | -1 |

Time tick: 4

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 3, в памяти: 1

Активная страница используется впервые, выделяем память для неё

Процесс: Game; pid: 0

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 24

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Time tick: 5

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 1

Кол-во виртуальных страниц: 3, в памяти: 2

Процесс: Game; pid: 0

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 23

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Time tick: 6

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 0

Активная виртуальная страница: 8

Кол-во виртуальных страниц: 14, в памяти: 12

Процесс: Game; pid: 0

Осталось времени: 20

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 23

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Time tick: 7

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 0

Активная виртуальная страница: 10

Кол-во виртуальных страниц: 14, в памяти: 12

Активная страница используется впервые, выделяем память для неё

Процесс: Game; pid: 0

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 23

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Time tick: 8

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 1

Кол-во виртуальных страниц: 3, в памяти: 2

Процесс: Game; pid: 0

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 22

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Time tick: 9

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 3, в памяти: 2

Процесс: Game; pid: 0

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | false | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Time tick: 10

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 0

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 14, в памяти: 13

Процесс: Game; pid: 0

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | true | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Time tick: 11

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 0

Кол-во виртуальных страниц: 3, в памяти: 2

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 0, physical addr: 0)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | -1 | -1 |
| 1 | false | false | false | 1 | 1 |
| 2 | false | true | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 20

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Time tick: 12

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 0

Активная виртуальная страница: 0

Кол-во виртуальных страниц: 14, в памяти: 12

Активная страница была выгружена ранее, загружаем её

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 1, physical addr: 1)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | true | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 20

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Time tick: 13

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 0

Кол-во виртуальных страниц: 3, в памяти: 3

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | true | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Time tick: 14

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 3, в памяти: 3

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | true | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Time tick: 15

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 0

Кол-во виртуальных страниц: 3, в памяти: 3

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | true | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Time tick: 16

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 3, в памяти: 3

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | true | false | 2 | 1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 21

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | -1 | -1 |
| 13 | true | false | false | -1 | -1 |

Time tick: 17

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 4

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 5, в памяти: 0

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 2, physical addr: 2)

Страница была изменена. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 20

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | -1 | -1 |
| 13 | true | false | false | -1 | -1 |

Time tick: 18

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 4

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 5, в памяти: 1

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | -1 | -1 |
| 13 | true | false | false | -1 | -1 |

Time tick: 19

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 3, в памяти: 3

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | false | 3 | 1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | -1 | -1 |
| 13 | true | false | false | -1 | -1 |

Time tick: 20

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 5

Активная виртуальная страница: 8

Кол-во виртуальных страниц: 14, в памяти: 0

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 3, physical addr: 3)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | false | 4 | 1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 7

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | -1 | -1 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 21

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 5

Активная виртуальная страница: 12

Кол-во виртуальных страниц: 14, в памяти: 1

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 4, physical addr: 4)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 6

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 22

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 0

Активная виртуальная страница: 9

Кол-во виртуальных страниц: 14, в памяти: 9

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | false | 5 | 1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 6

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 23

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 5

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 14, в памяти: 2

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 5, physical addr: 5)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | false | 6 | 1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 24

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 6

Активная виртуальная страница: 3

Кол-во виртуальных страниц: 7, в памяти: 0

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 6, physical addr: 6)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | true | -1 | -1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 9

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | 6 | 24 |
| 4 | false | false | false | -1 | -1 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 25

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 5

Активная виртуальная страница: 12

Кол-во виртуальных страниц: 14, в памяти: 3

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | true | -1 | -1 |
| 7 | false | false | false | 7 | 1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 9

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | 6 | 24 |
| 4 | false | false | false | -1 | -1 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 26

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 6

Активная виртуальная страница: 4

Кол-во виртуальных страниц: 7, в памяти: 1

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 7, physical addr: 7)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | true | -1 | -1 |
| 7 | false | false | true | -1 | -1 |
| 8 | false | true | false | 8 | 1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | 6 | 24 |
| 4 | false | false | false | 7 | 26 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 27

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Background Task; pid: 2

Активная виртуальная страница: 2

Кол-во виртуальных страниц: 13, в памяти: 1

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 8, physical addr: 8)

Страница была изменена. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | true | -1 | -1 |
| 7 | false | false | true | -1 | -1 |
| 8 | false | false | true | -1 | -1 |
| 9 | false | true | false | 9 | 1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | true | false | 8 | 27 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 19

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 5

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | 6 | 24 |
| 4 | false | false | false | 7 | 26 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 28

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 4

Активная виртуальная страница: 4

Кол-во виртуальных страниц: 5, в памяти: 1

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 9, physical addr: 9)

Страница была изменена. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | true | -1 | -1 |
| 7 | false | false | true | -1 | -1 |
| 8 | false | false | true | -1 | -1 |
| 9 | false | false | true | -1 | -1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | true | false | 8 | 27 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | true | false | 9 | 28 |

Процесс: Browser Page; pid: 5

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | 6 | 24 |
| 4 | false | false | false | 7 | 26 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 29

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Game; pid: 1

Активная виртуальная страница: 0

Кол-во виртуальных страниц: 3, в памяти: 3

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | true | -1 | -1 |
| 7 | false | false | true | -1 | -1 |
| 8 | false | false | true | -1 | -1 |
| 9 | false | false | true | -1 | -1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 10 | 1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 14

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | true | false | 8 | 27 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | true | false | 9 | 28 |

Процесс: Browser Page; pid: 5

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | 6 | 24 |
| 4 | false | false | false | 7 | 26 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |

Time tick: 30

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

Активный процесс: Browser Page; pid: 3

Активная виртуальная страница: 5

Кол-во виртуальных страниц: 11, в памяти: 0

Активная страница используется впервые, выделяем память для неё

Не найдено свободной памяти, начинаем процесс своппинга...

Начинаем выгружать страницу на диск (process: Game; pid: 0, virtual addr: 12, physical addr: 10)

Страница НЕ была изменена, но не найдена на диске. Выгружаем её

Процесс: Game; pid: 0

Осталось времени: 16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | true | 1 | 12 |
| 1 | false | false | true | -1 | -1 |
| 2 | false | false | true | -1 | -1 |
| 3 | true | false | true | -1 | -1 |
| 4 | true | false | true | -1 | -1 |
| 5 | false | false | true | -1 | -1 |
| 6 | false | false | true | -1 | -1 |
| 7 | false | false | true | -1 | -1 |
| 8 | false | false | true | -1 | -1 |
| 9 | false | false | true | -1 | -1 |
| 10 | false | true | false | 14 | 7 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | true | -1 | -1 |
| 13 | false | false | false | 11 | 1 |

Процесс: Game; pid: 1

Осталось времени: 14

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | 0 | 11 |
| 1 | false | false | false | 12 | 3 |
| 2 | true | false | false | 13 | 4 |

Процесс: Background Task; pid: 2

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | true | false | 8 | 27 |
| 3 | false | false | false | 15 | 9 |
| 4 | true | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | true | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | true | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 3

Осталось времени: 17

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | false | false | false | -1 | -1 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | true | false | 10 | 30 |
| 6 | false | false | false | -1 | -1 |
| 7 | false | false | false | -1 | -1 |
| 8 | false | false | false | -1 | -1 |
| 9 | false | false | false | -1 | -1 |
| 10 | false | false | false | -1 | -1 |

Процесс: Browser Page; pid: 4

Осталось времени: 18

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | true | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | 2 | 17 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | true | false | 9 | 28 |

Процесс: Browser Page; pid: 5

Осталось времени: 4

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | true | false | false | -1 | -1 |
| 2 | false | false | false | 5 | 23 |
| 3 | false | false | false | -1 | -1 |
| 4 | false | false | false | -1 | -1 |
| 5 | false | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |
| 7 | true | false | false | -1 | -1 |
| 8 | false | false | false | 3 | 20 |
| 9 | false | false | false | -1 | -1 |
| 10 | true | false | false | -1 | -1 |
| 11 | false | false | false | -1 | -1 |
| 12 | true | false | false | 4 | 21 |
| 13 | true | false | false | -1 | -1 |

Процесс: Game; pid: 6

Осталось времени: 8

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| virtualAddress | readOnly | changed | wasSwapped | physicalAddress | lastAllocationTime |
| 0 | false | false | false | -1 | -1 |
| 1 | false | false | false | -1 | -1 |
| 2 | true | false | false | -1 | -1 |
| 3 | true | false | false | 6 | 24 |
| 4 | false | false | false | 7 | 26 |
| 5 | true | false | false | -1 | -1 |
| 6 | false | false | false | -1 | -1 |