



Basic Commands

Prerequisite

Install Linux kernel header package(s) if you want to collect data using the LiKI DKLM module

Installation:

```
rpm --install --nodeps linuxki-5.3-1.noarch.rpm  
dpkg --install linuxki_5.3-1_all.deb
```

Collect KI Dump:

```
cd /dev/shm                # if memory is available  
runki [-d <secs>]          # default is 20 secs
```

Post-process KI Dump data

```
kiall [-r]
```

Mounting the debug filesystem (debugfs)

```
mount -t debugfs debugfs /sys/kernel/debug
```

Curses-base live mode

```
mount -t debugfs debugfs /sys/kernel/debug  
kiinfo -live [-a <secs>]    # default is 5 secs
```

Clean-up KI files in cwd

```
kiclean -p -v -f
```

KI dump collection Examples

KI dump help

```
runki -h
```

Collect for 60 seconds

```
runki -d 60
```

Collect with all subsystems

```
runki -e all -R
```

Collect using ftrace with all subsystems

```
runki -f -e all
```

Collect with all subsystems, excluding some system calls

```
echo "time" >sysignore  
echo "futex" >>sysignore  
echo "gettimeofday" >>sysignore  
runki -e all -I sysignore
```

Collect using PID filtering for 2 minutes

```
runki -P 26814 -d 120
```

Collect and include scsi subsys

```
runki -e default -s scsi
```

Collect with Collect/MW, sar, perf data and Java stacks

```
runki -M -U -X -j
```

Collect data and add a comment

```
runki -c "slow run, only 30 MB/sec"
```

KI Dump Post Processing Examples

Post-processing help

```
kiall -h
```

Create <hostname>/<timestamp> subdir structure

```
kiall -r
```

Create Visualization charts and graphs

```
kiall -V
```

Create Kparse Report in text format

```
kiall -x
```

Online kiinfo Examples

kiinfo help

```
kiinfo -h
```

PID Analysis Report with multiple PID filters for 30 seconds

```
kiinfo -kipid pid=6814,pid=6815,scdetail -a 30
```

Disk Analysis report to show top 10 pids accessing a specific dev every 5 seconds for a minute

```
kiinfo -kidsk dev=0x00800010,npid=10 -a 5 -p 12
```

CPU/RunQ Analysis with IRQ events

```
kiinfo -kirunq events=default,subsys=irq -a 5
```

Show just SCSI Synchronize Cache commands for 1 minute

```
kiinfo -kitrace subsys=scsi -a 60 | grep -i  
synchronize_cache
```

KI Dump kiinfo Examples

PID Analysis Report with System Call details, Cooperating Task details, and per-pid RunQ Histogram

```
kiinfo -kipid scdetail,coop,rqhist -ts  
0416_1523
```

PID Analysis Report with Time filtering

```
kiinfo -kipid scdetail -start 3.0 -end 4.0 -ts  
0416_1523
```

Disk Analysis Report with modify I/O Histogram

```
echo "2 5 10 20 50 100" >bkfname  
kiinfo -kidsk bkfname=bkfname -ts 0416_1523
```

Kitrace Report with formatted time and the per-cpu sequence counter for a specific CPU

```
kiinfo -kitrace seqcnt,fmttime,cpu=4 -ts  
0416_1523
```

```

runki [-h] [-L] [-M] [-U] [-X] [-a] [-j] [-J path] [-f | -p] [-n interface] [-v] [-d duration] [-t maxrun] [-P pid] [-G tgid] [-C cpu] [-D dev]
[-R] [-e vent] [-s subsys] [-I sysignore] [-T timestamp] [-c "comment"]
    -h                Help
    -L                Gather minimal data for local analysis...no gzip/tar
    -M                Include Collectl/MeasureWare data collection
    -U                Include userspace profile (perf) data collection
    -X                Include sar data collection
    -a                Execute 'perf annotate' on userspace profile (perf) data
    -j                Collect Java stacks
    -J <path>         Location of Java jstack command
    -n <interface>    Gather tcpdump trace data
    -v                Skip vxfs, misc disc data collection
    -d <secs>         Duration of KI data collection. Defaults to 20 secs if not specified.
    -t <secs>         Maximum time for data collection tools to run. Defaults to 120 secs if not specified.
    -p                Use liKI DLKM instead of kiinfo/ftrace to dump trace data (DEFAULT).
    -f                Use ftrace tracing instead of liKI DLKM tracing to dump trace data.
    -P <pid>          Filter collection on Task ID or PID (LiKI only)
    -G <tgid>         Filter collection on Task Group ID or TGID (LiKI only)
    -C <cpu>          Filter collection on cpu (LiKI only)
    -D <dev>          Filter collection on device (LiKI only)
    -R                Advance CPU stats (Freq, CPI, LLC Hit%) using MSR registers (LiKI only)
    -e <event>        Identify events to dump. Possible values are: default | all | <event>
    -s <subsys>       Identify subsys to dump. For example: irq, scsi, block, etc.
    -I <sysignore>    File to specify ignored system call (liki only)
    -T <timestamp>    Should be of the form MMDD_HHMM
    -c "comment"      echo comment into comment.$tag file

```

```

kiall [-h] [-l] [-m] [-r] [-f] [-c] [-x] [-t timestamp]
    -h                Help
    -l                Lite version - bypasses some options
    -m                Do not process collectl or MWA data
    -r                restore into created subdir - <host>/<MMDD_HHMM>
    -f                Find KI files in pwd and any directories below
    -c                Cluster-wide processing
    -x                Generate Kparse text format instead of html format
    -V                Use visualization options where possible in reports
    -t <timestamp>    Only process KI budle with matching timestamp

```

```

kiclean [-h] [-r] [-f] [-p] [-v]
    -h                Help
    -r                Recursively traverse sudirs looking for KI data to archive
    -p                Remove PIDS subdirectory
    -v                Remove VIS subdirectory & rel. sh/php/html files
    -f                Force remove misc/tmp files

```