

# Core API Documentation

This is the beginning of a manual for core kernel APIs. The conversion (and writing!) of documents for this manual is much appreciated!

## Core utilities

This section has general and "core core" documentation. The first is a massive grab-bag of kerneldoc info left over from the docbook days; it should really be broken up someday when somebody finds the energy to do it.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\ (linux-master) (Documentation) (core-api) index.rst, line 16)**

Unknown directive type "toctree".

```
.. toctree::
   :maxdepth: 1

   kernel-api
   workqueue
   printk-basics
   printk-formats
   symbol-namespaces
```

## Data structures and low-level utilities

Library functionality that is used throughout the kernel.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\ (linux-master) (Documentation) (core-api) index.rst, line 30)**

Unknown directive type "toctree".

```
.. toctree::
   :maxdepth: 1

   kobject
   kref
   assoc_array
   xarray
   idr
   circular-buffers
   rbtree
   generic-radix-tree
   packing
   bus-virt-phys-mapping
   this_cpu_ops
   timekeeping
   errseq
```

## Low level entry and exit

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\ (linux-master) (Documentation) (core-api) index.rst, line 50)**

Unknown directive type "toctree".

```
.. toctree::
   :maxdepth: 1

   entry
```

## Concurrency primitives

How Linux keeps everything from happening at the same time. See Documentation/locking/index.rst for more related documentation.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\linux-master) (Documentation) (core-api) index.rst, line 61)**

Unknown directive type "toctree".

```
.. toctree::
    :maxdepth: 1

    refcount-vs-atomic
    irq/index
    local_ops
    padata
    ../RCU/index
```

## Low-level hardware management

Cache management, managing CPU hotplug, etc.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\linux-master) (Documentation) (core-api) index.rst, line 75)**

Unknown directive type "toctree".

```
.. toctree::
    :maxdepth: 1

    cachetlb
    cpu_hotplug
    memory-hotplug
    genericirq
    protection-keys
```

## Memory management

How to allocate and use memory in the kernel. Note that there is a lot more memory-management documentation in Documentation/vm/index.rst.

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```
.. toctree::
    :maxdepth: 1

    memory-allocation
    unaligned-memory-access
    dma-api
    dma-api-howto
    dma-attributes
    dma-isa-lpc
    mm-api
    genalloc
    pin_user_pages
    boot-time-mm
    gfp_mask-from-fs-io
```

## Interfaces for kernel debugging

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\linux-master) (Documentation) (core-api) index.rst, line 108)**

Unknown directive type "toctree".

```
.. toctree::
    :maxdepth: 1

    debug-objects
    tracepoint
    debugging-via-ohci1394
```

## Everything else

Documents that don't fit elsewhere or which have yet to be categorized.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\linux-master) (Documentation) (core-api) index.rst, line 120)**

Unknown directive type "toctree".

```
.. toctree::
   :maxdepth: 1

   libs
```

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\linux-master\Documentation\core-api\linux-master) (Documentation) (core-api) index.rst, line 125)**

Unknown directive type "only".

```
.. only:: subproject and html

   Indices
   =====

   * :ref:`genindex`
```