☞ This utility is shipped only with the Adaptive Partitioning Technology
Development Kit.

Syntax:

```
aps show [-d delay] [-f shorthand] [-l] [-v...]
         [partition_name ...]

aps create -b budget [-B critical_budget] partition_name

aps modify [-b budget] [-B critical_budget] partition_name

aps modify [-y bankruptcy_policy ...] [-S scheduling_policy...]
           [-s security_policy ...] [-w windowsize_ms]
```

Options:

-B *milliseconds*	Specify the critical CPU budget, in milliseconds. The default is 0.
-b *budget*	Specify the CPU budget as a percentage.
-d *delay*	The delay period, in tenths of a second, when using the **-l** option. The default is 50.
-f *shorthand*	Display the information specified by *shorthand*:

- **all** — all the below
- **overall_stats** — information about the last bankruptcy
- **scheduler** — parameters for the scheduler, including the current security setting, bankruptcy policy, and the size of the averaging window
- **partitions** — information about the partitions, including their names, IDs, parent IDs, budgets, critical budgets, and the process and thread IDs of the last thread to go bankrupt

- **usage** — the amount of budget and critical budget that each partition is currently using

The default is **usage**.

-l   ("el") Loop mode; display the information at the interval specified by the **-d** option.

-s *scheduling policy* ...

Specify the policies for the adaptive partitioning scheduler. Each *scheduling policy* must be one of:

- **normal**
- **freetime by ratio**
- **bmp safety**

The default is **normal**. For more information about the policies, see "Scheduling policies" in the entry for *SchedCtl()* in the Neutrino *Library Reference*.

-s *security policy* ...

Specify the security policies to add to the system. Each *security policy* must be one of:

- **root0 overall**
- **root makes partitions**
- **sys makes partitions**
- **parent modifies**
- **nonzero budgets**
- **root makes critical**
- **sys makes critical**
- **root joins**
- **sys joins**
- **parent joins**
- **join self only**
- **partitions locked**

- **recommended**

- **flexible**

- **basic**

- **none**

    The default is **none**. For more information about
    the policies, see the description of
    SCHED_APS_ADD_SECURITY in the entry for
    SchedCtl( ) in the Neutrino *Library Reference*.

☞ Once you've added a security policy, you can't remove it, except by
rebooting the system.

-v...   Be verbose; display more information with the
                      show command:

- **-v** — display the budget usage over the last
  averaging window, window 2 (typically 10 times
  the length of the averaging window), and
  window 3 (typically 100 times the length of the
  averaging window)

- **-vv** — display the budget usage and critical
  budget usage over the last averaging window,
  window 2, and window 3

-w *windowsize_ms*

                      Set the size of the averaging window, in
                      milliseconds, for the system. You can set the
                      window size to any value from 8 ms to 400 ms.

☞ If you change the tick size of the system at runtime, do so before
defining the adaptive partitioning scheduler's window size. That's
because Neutrino converts the window size from milliseconds to
clock ticks for internal use.

                      For more information, see "Choosing the window
                      size" in the System Considerations chapter of the
                      Adaptive Partitioning TDK *User's Guide*.

-y *bankruptcy_policy* ...

> Set the bankruptcy policy for the system to the specified items. Each *bankruptcy_policy* must be one of:
>
> - **cancel_budget** — set the offending partition's critical budget to zero, which forces the partition to be scheduled by its percentage CPU budget only. This also means that a second bankruptcy can't occur.
> - **log** — not currently implemented.
> - **reboot** — cause the system to crash with a brief message identifying the offending partition. This is the most severe response, suggested for use while testing a product, to make sure bankruptcies are never ignored. You probably shouldn't use this option in your finished product.
> - **basic** — deliver bankruptcy-notification events and make the partition out-of-budget for the rest of the scheduling window (nominally 100 ms).
> - **recommended** — the combination of **cancel_budget** and **log**.
> - **none** — do nothing.
>
> The default is **basic**. For more information about the policies, see "Handling bankruptcy" in the entry for *SchedCtl()* in the Neutrino *Library Reference*.

Description:

Use the **aps** command to create, modify, and query adaptive partitions from the command line, as well as to set the averaging window, and the security and bankruptcy policies for the entire system.

☞ You can't include slashes (**/**) in a partition name.

To launch an application into a partition, use the **-Xaps** option to the **on** command.

Examples:

Create a partition called **Drivers** with a budget of 20% and a critical budget of 5 milliseconds:

```
aps create -b 20 -B 5 Drivers
```

Change the **Drivers** partition's budget to 25% and its critical budget to 7 milliseconds:

```
aps modify -b 25 -B 7 Drivers
```

Specify a bankruptcy policy of **recommended** and a security policy of **root_makes_partitions** for the entire system:

```
aps modify -y recommended -s root_makes_partitions
```

Display the amount of the budget and critical budget that the partitions are using, every 2 seconds:

```
aps show -l -d 20 -f usage
```

Since **usage** is the default shorthand for the **-f** option, the above command is the same as:

```
aps show -l -d 20
```

See also:

on, **pidin**

SchedCtl( ) in the Neutrino *Library Reference*

Adaptive Partitioning TDK *User's Guide*