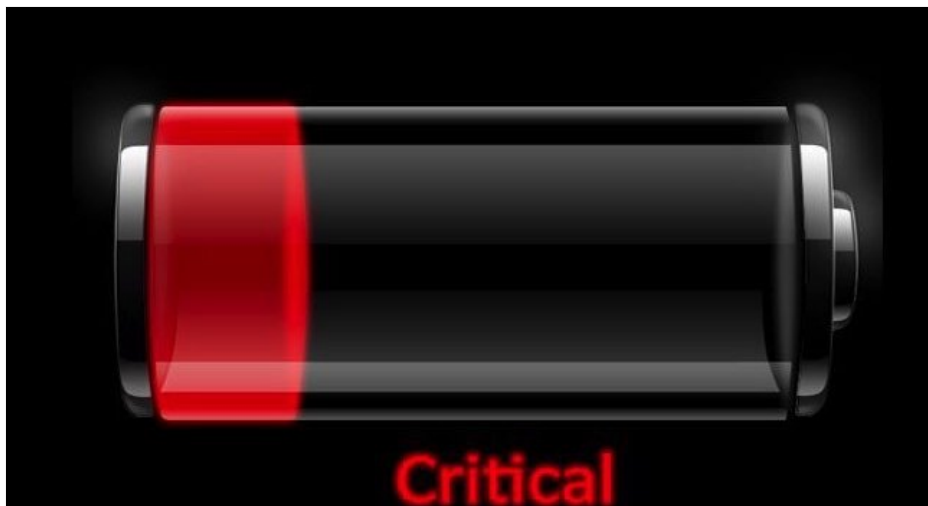


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Router configurations suck (power out of mobile devices, that is)

RFC asks IPv6 admins to quiet routers so mobile devices don't have to wake up quite so often

16 Feb 2016 at 00:58, [Richard Chirgwin](#)

11



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Unknown and unseen to most users, your smartphone is "talking" in its sleep, and that can sap your battery.

The problem? Routing advertisements, one of the fundamental operating principles of the Internet, can demand enough communications to have a noticeable impact on battery life.

Router advertisements are multicasts that remind the devices they serve what IP address the router's interface is using (in the old IPv4 world, 192.168.0.1, for example). However, when the smartphone receives that advertisement, it has to process it, even if the screen stays dark.

Over at the IETF, a Cisco* engineer called Andrew Yourtchenko and Google* researcher Lorenzo Colitti are suggesting ways that sysadmins can lighten the load on users, at least in the IPv6 world.



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might fly around every few seconds, don't translate well to the world of mobile devices.

In [RFC 7772](#), the pair lay down the current best practice for configuring systems so that on devices like phones and tablets, router advertisements don't suck more than 2 per cent of a device's power during sleep mode.

They note that "current-generation devices might consume on the order of 5 mA when the main processor is asleep. Upon receiving a packet, they might consume on the order of 200 mA for 250 ms, as the packet causes the main processor to wake up, process the RA, attend to other pending tasks, and then go back to sleep. Thus, on such devices, the cost of receiving one RA will be approximately 0.014 mAh".

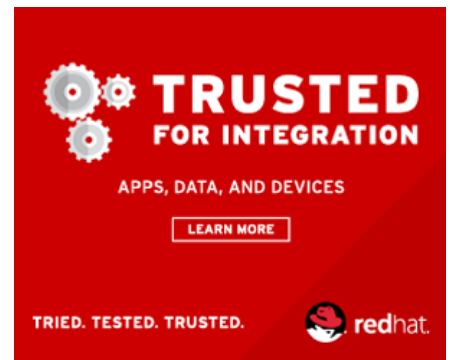
That's too high, the RFC contends: to keep to their suggested two per cent power budget, the document says the average power budget for router advertisements has to be kept to 0.1 mA, which equates to the device receiving seven advertisements per hour.

The RFC lays out how admins can configure devices to throttle down the frequency of router

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advertisements, and notes that devices that don't need connectivity while they're asleep should be allowed to disconnect from the network completely.

The authors note that the recommendations will also be important in the burgeoning Internet of Things world.

***Bootnote:** While IETF authors identify their employers, their contributions are on their own behalf.

Tips and corrections

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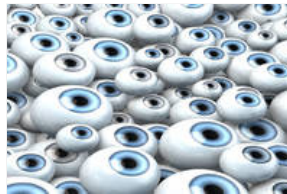
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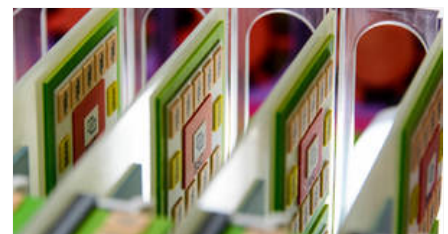
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