

## RE: Questions about PC clock operations

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*Source:* <http://www.derkeiler.com/Mailing-Lists/securityfocus/security-basics/2006-08/msg00317.html>

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- *From:* "Scott Ramsdell" <[Scott.Ramsdell@xxxxxxxxxxx](mailto:Scott.Ramsdell@xxxxxxxxxxx)>
  - *Date:* Tue, 29 Aug 2006 13:25:25 -0400
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Ricci,

In a corporate environment you would typically deploy a network time protocol server (NTP). The NTP server either points to an external reference NTP server, or to its own BIOS clock if corporate policy prevents syncing to an external time source.

Then, all \*nix computers and all appliances, firewalls, IDS, routers, etc. are pointed to the NTP server. You would also specify the NTP server as the time source in the appropriate reg key on your Windows domain controllers. Typically, the DC running the FSMO role for PDC Emulator is also the NTP server.

When a Windows client logs in, it checks it's time against the DC, and adjusts accordingly. You can find the exact way a Windows client adjusts itself on the Microsoft site, I know it's there somewhere as I had to do this years ago. The formula depends on how far out of agreement the client is.

It is very important that all of your devices agree what time something occurred on your network, and the NTP server is the way you do that.

Best Regards,  
Scott Ramsdell

-----Original Message-----

From: ricci@xxxxxxxxxxx [<mailto:ricci@xxxxxxxxxxx>]  
Sent: Monday, August 28, 2006 5:05 PM  
To: security-basics@xxxxxxxxxxxxxxxxxxxxxx  
Subject: Questions about PC clock operations

Hello All,

As you know time is a piece of information critical to digital forensics investigation. However, as the paper in DFRWS 2006 pointed out, the PC clock is not steady but drifting.

So can any one let me know how the PC clock operates? Is there any difference between the time between Linux clock and Windows? Will the

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operating system be affecting the clock?

Please advise.

Thx.

Ricci

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