



PROFESSIONAL SERVICES TECH NOTE #045

Time Services

The Concept

Communications between systems and applications on a network require a common time reference to ensure information is processed in synchrony. An unsynchronized network is vulnerable to security exploits (insertion of network packets). This is one reason why Active Directory servers stop providing authentication services to clients more than five minutes out-of-sync. Time services are configured using the **options** command and adjusted using the **date** command.

Examples

```
fas1> options timed.enable - set to 'on'
```

```
fas1> options timed.proto - the default is 'rtc' or 'rdate' but should be set to 'ntp'
```

```
fas1> options timed.servers - typically this is the hostname or IP address of local time servers. It will accept internet-based time servers such as tick.ucla.edu or pool.ntp.org
```



```
fas1> options timed.max_skew - this option will be deprecated in the future. Until then it should be set to '4m' for CIFS environments.
```



```
fas1> date 20100118 | 0852 - the clock can be manually adjusted by entering the date, the time (using 24-hour time) or by combining both (201001180852).
```

What It Means To You

Old systems sometimes may begin to drift, especially after being powered off or losing network connectivity. After physically moving systems always verify the time and fix drift issues. Clustered systems require both nodes be synchronized for failover/giveback to occur. Any issues with time services are logged to /etc/messages. It is not unusual to see adjustments of a few microseconds or even seconds during the week. Multiple messages every day indicate a faulty system clock (motherboard replacement) or network latency issues (verify ports TCP 13, TCP/UDP 37, and UDP 123 are open on the firewall).

Note: When replacing a motherboard or upgrading to a newer model, ensure the engineer removes drift settings stored in the registry by following the commands in internal Knowledge Base article KB15662.

More Information

Refer to the Data ONTAP System Administration Guide:

http://now.netapp.com/NOW/knowledge/docs/ontap/rel732_vs/html/ontap/sysadmin/GUID-02B695C2-EAF0-414A-921B-72AE8EF77EB8.html

For a list of timer servers and information on time visit the website of the National Institute of Standards and Technology: <http://tf.nist.gov/service/its.htm>

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