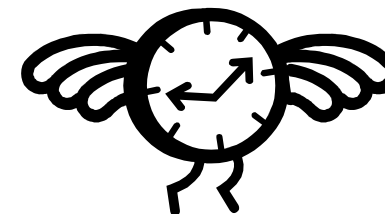


Rätt tid ?

Vad är rätt tid i mitt system?



Didrik Ehrenborg
från

Ehrenborg Networks AB

Ehrenborg Networks AB





Rätt tid?

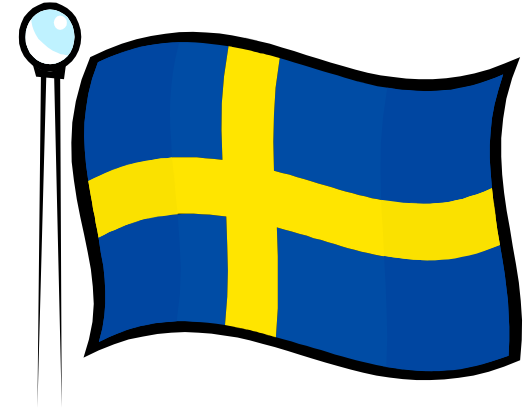


**Lagar
Spårbarhet
NTP
Hot**



Ehrenborg Networks AB

Svensk lag om tid



SFS1979:988 UTC+1 timme

Vad är UTC?



UTC

Universal Coordinated Time

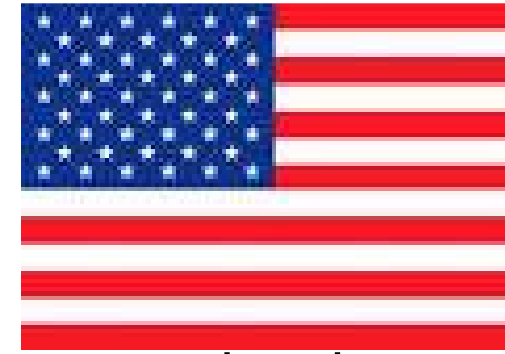


- UTC, TA1 och UT1
- UTC, tidskod **NTP**, “IRIG B” etc.....
- UTC, distribueras via **GPS**, Loran C, “DCF77”, Galileo, Glonass
- UTC(NTP) kan fås från **NTP-servers**

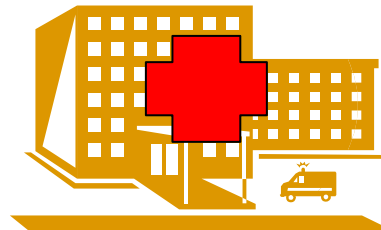
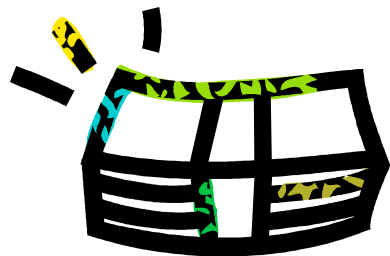


NTP Network time protocol

US law, SOX



- NASD has rules about how member firms record order transactions, or related data.
- All systems which are used:



Should have right time as the homeland laws

- **FDA** force Swedish medical companies to have right time, which is NTP from GPS with back up for a week.
- So **FDA** read the law GPS, UTC, NTP

EU lag 2002/58/EG

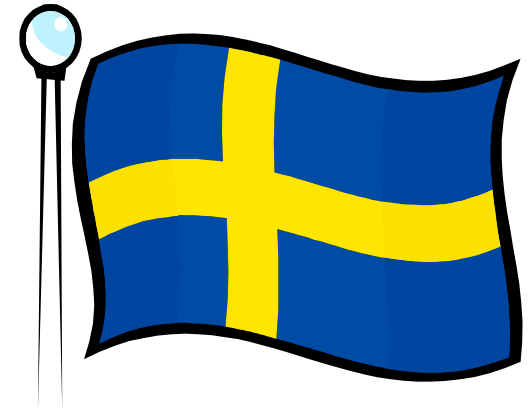


All data från trafik skall sparas i minst 6 månader. **Tid**, plats och vem.

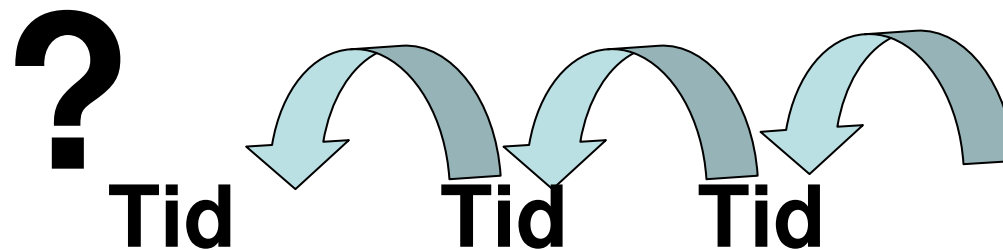
(Boström lag förslag 1 år och data)

- Network Transfer Protocols skall vara Network Time Protocols. Står det i fotnot.
- UTC(NTP)

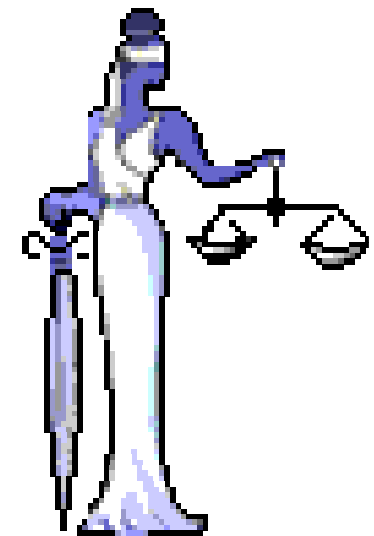
Svensk lag 1992:1514



- Tid är en “SI-enhet”
- Du skall vara spårbar i dina mätningar och kunna bevisa att rätt tid är rätt.

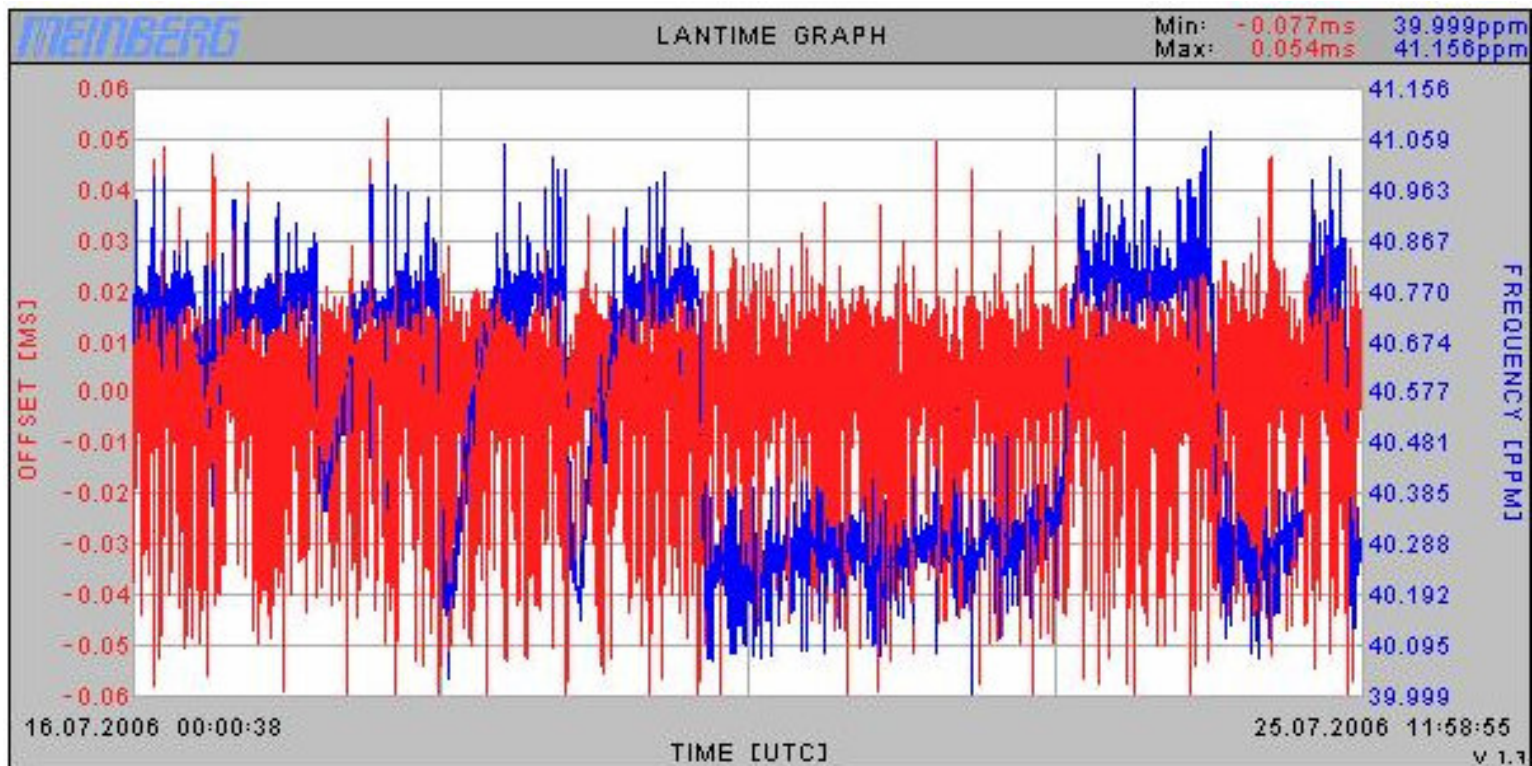


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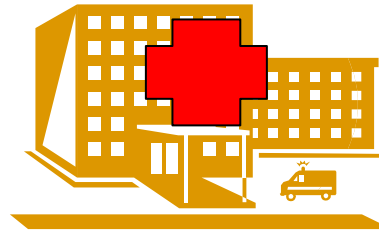
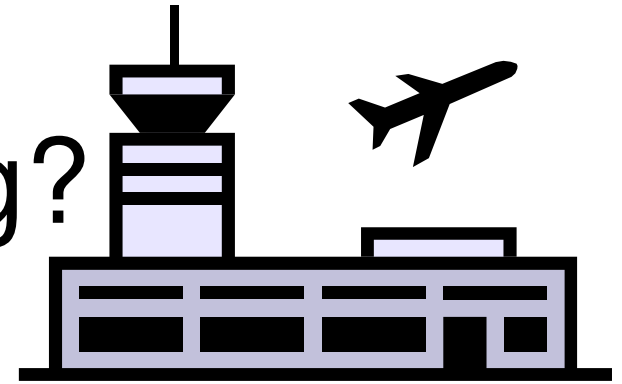
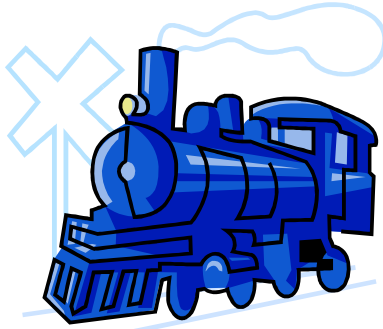
Spårbarhets program

Free to down load on www.meinberg.de



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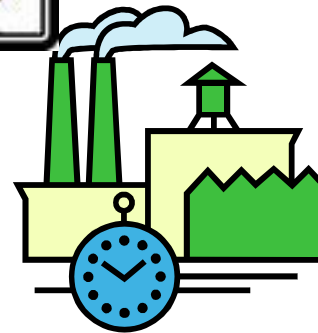
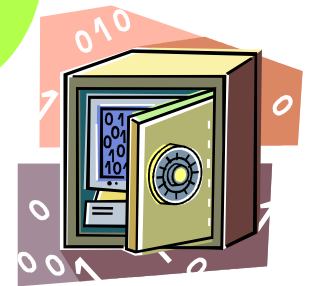
Berör detta mig?



Tid



Windows
Unix
Linux



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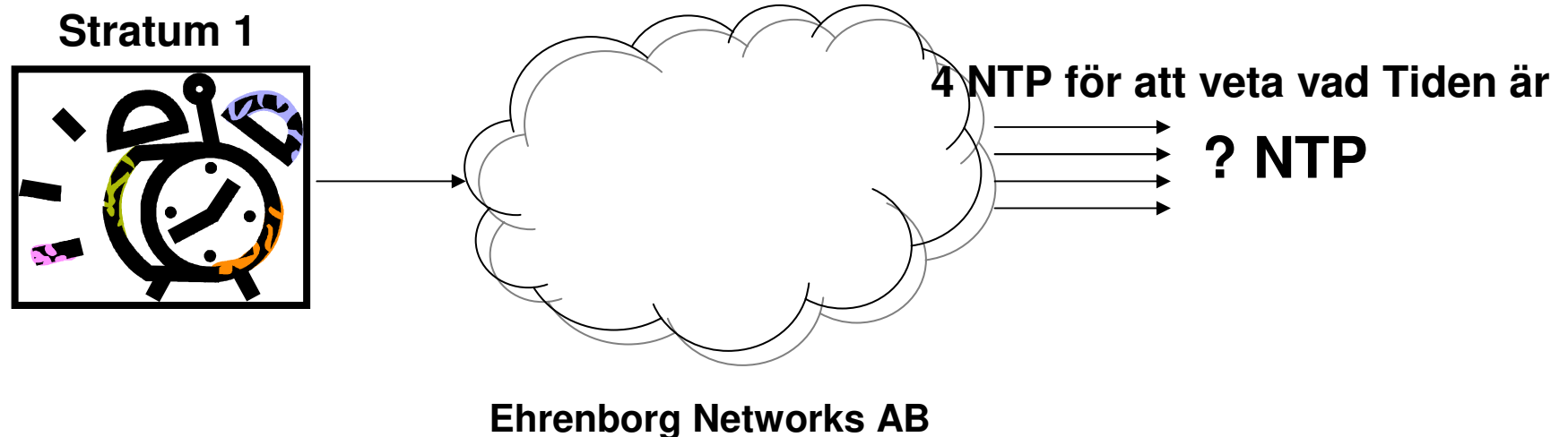
Telekom

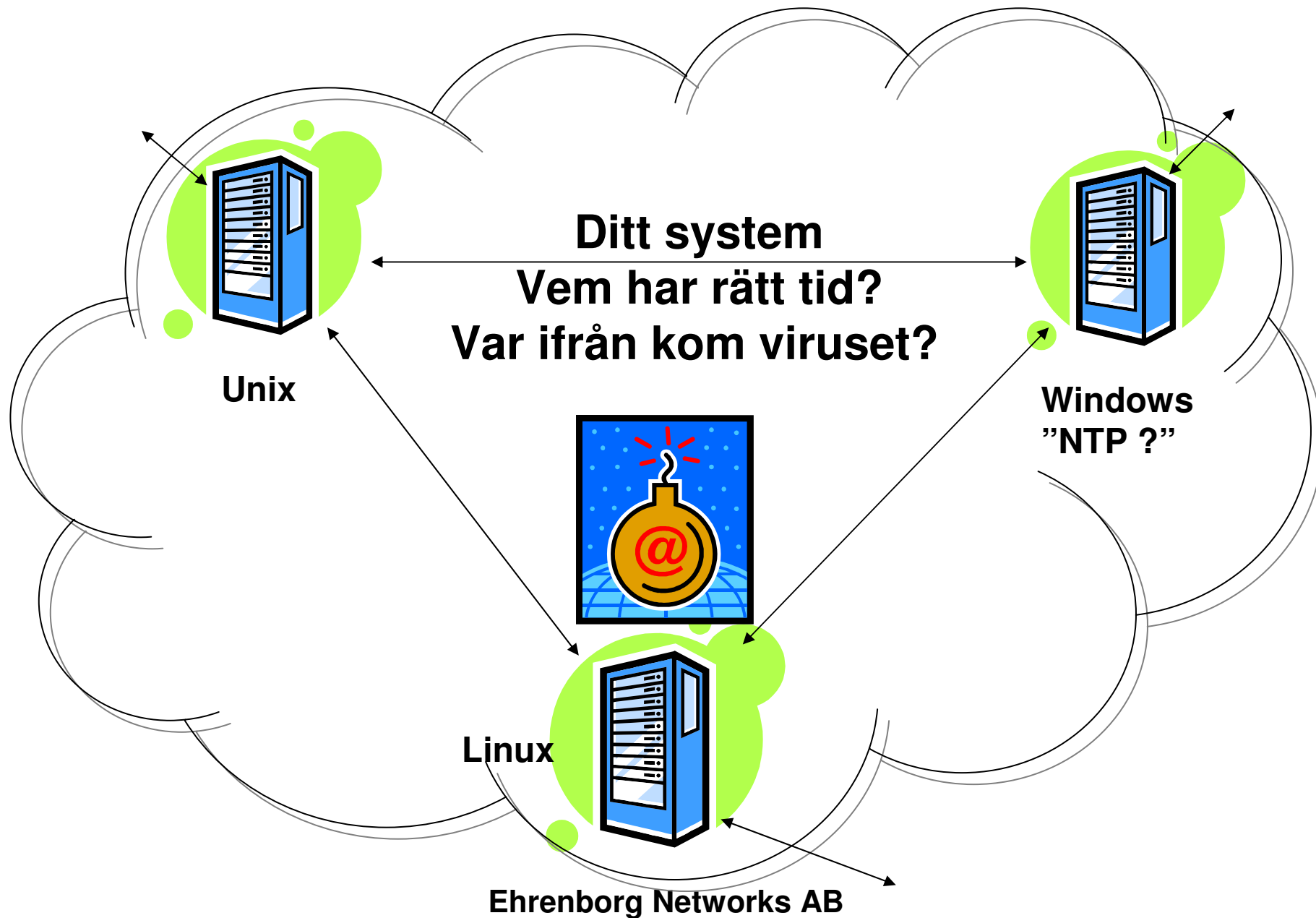
- Teleoperatörerna har blivit tillsagda att använda Netnod NTP till sina servrar från PTS.
- Polisen förlitar sig på att operatörerna har rätt tid.



NTP-servers

- Alla kan placera ut en NTP-server på Internet.
- **MEN**, Spårbar till UTC, GPS antenn, Kraft, Back up batteri, redundans, underhåll, spam, “NTP vandalism”
- SP/Netnod.





Ditt system
Vem har rätt tid?
Var ifrån kom viruset?

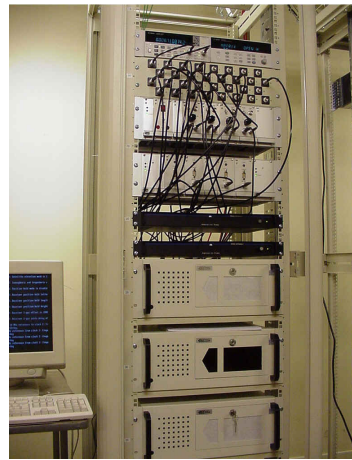
Unix

Windows
"NTP ?"

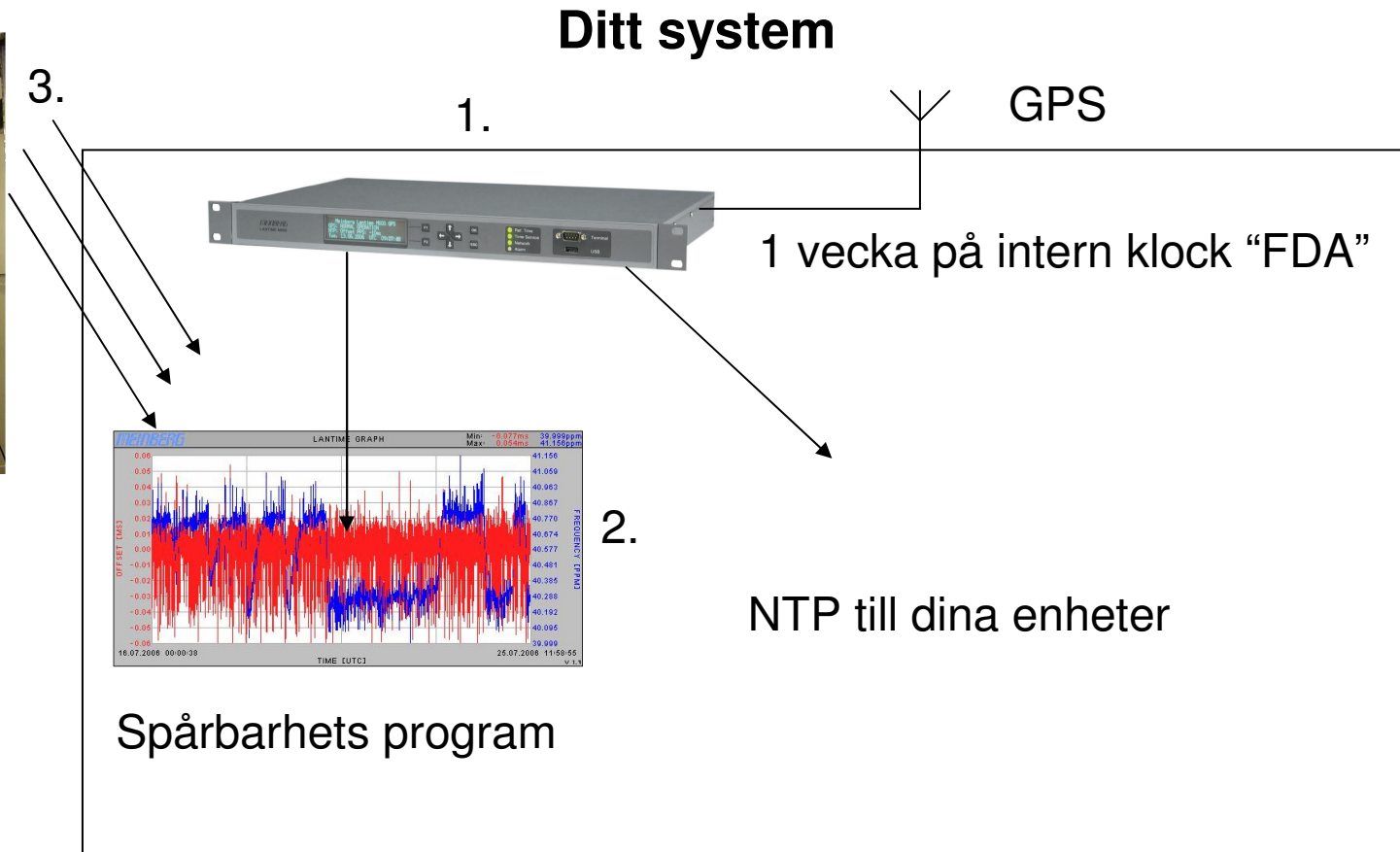
Linux

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Vad måste ni göra?

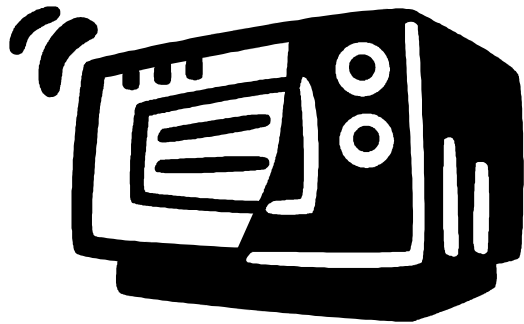


SP/Netnod



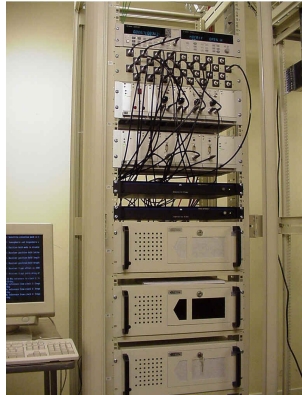
Framtida hot EU 2009

- EU möte i Sverige år 2009
- "Telekrig" vid alla EU möten
- GPS, GSM, 3G jammers.
- HPM vapen

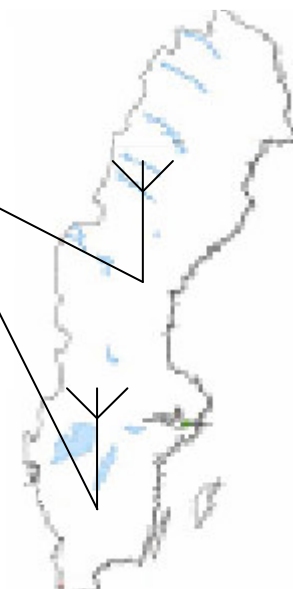
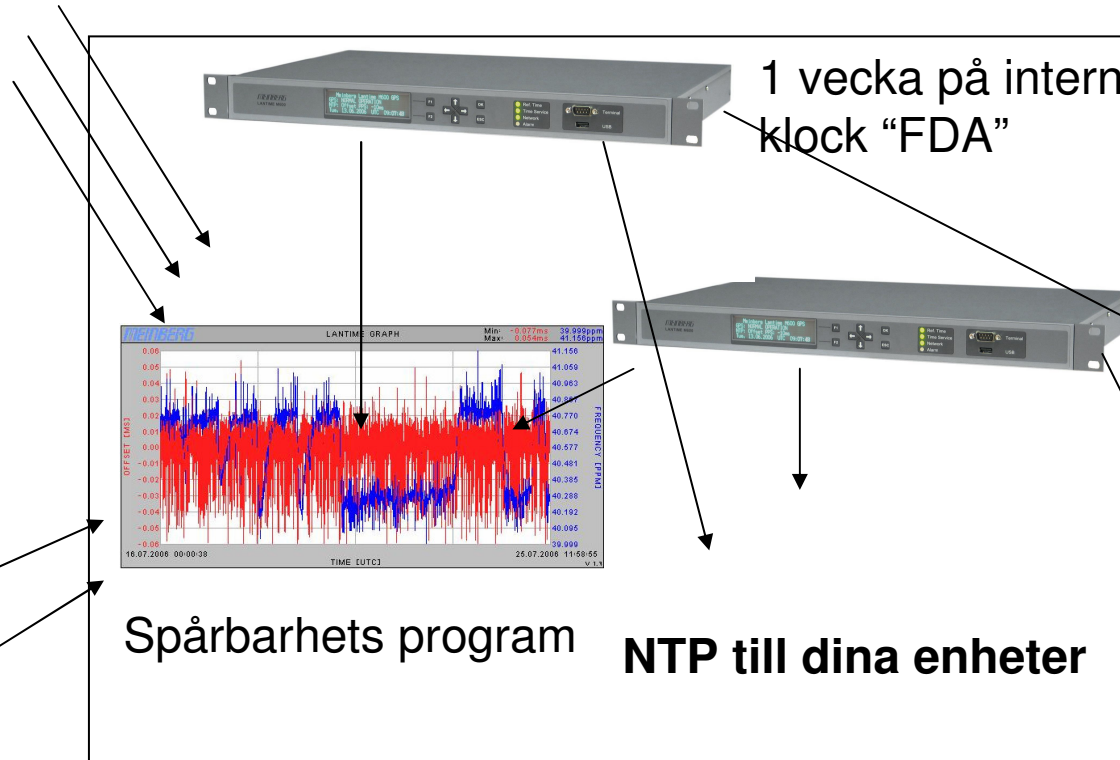
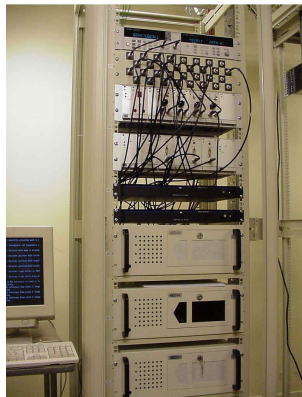


Vad måste ni göra?

Håll ditt system hemligt



SP/Netnod



- **Justitiedepartementet**
Diare nr Ju 2005/9817/L5
- **Näringsdepartementet**
Diare nr N 2006/1796/ITFoU.
- www.sp.se
- www.netnod.se
- **NTP till Windows servers**
<http://www.meinberg.de/english/sw/ntp.htm>
- **Andra bra länkar om NTP**
<http://ntp.isc.org/bin/view/Main/ExternalTimeRelatedLinks>
<http://tf.nist.gov/timefreq/general/softwarelist.htm>
- **didrik@ehrenborg.com**