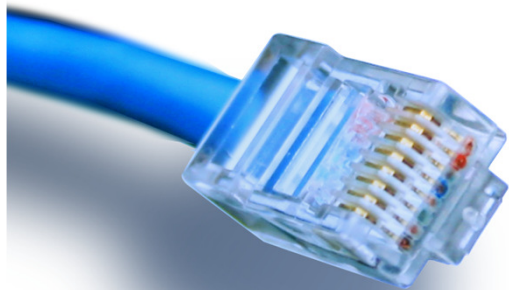


HOUSE OF  
TECHNOLOGY



- en del af **mercantec**<sup>+</sup>



# Et netværk bliver til ...

- historien om internettet!

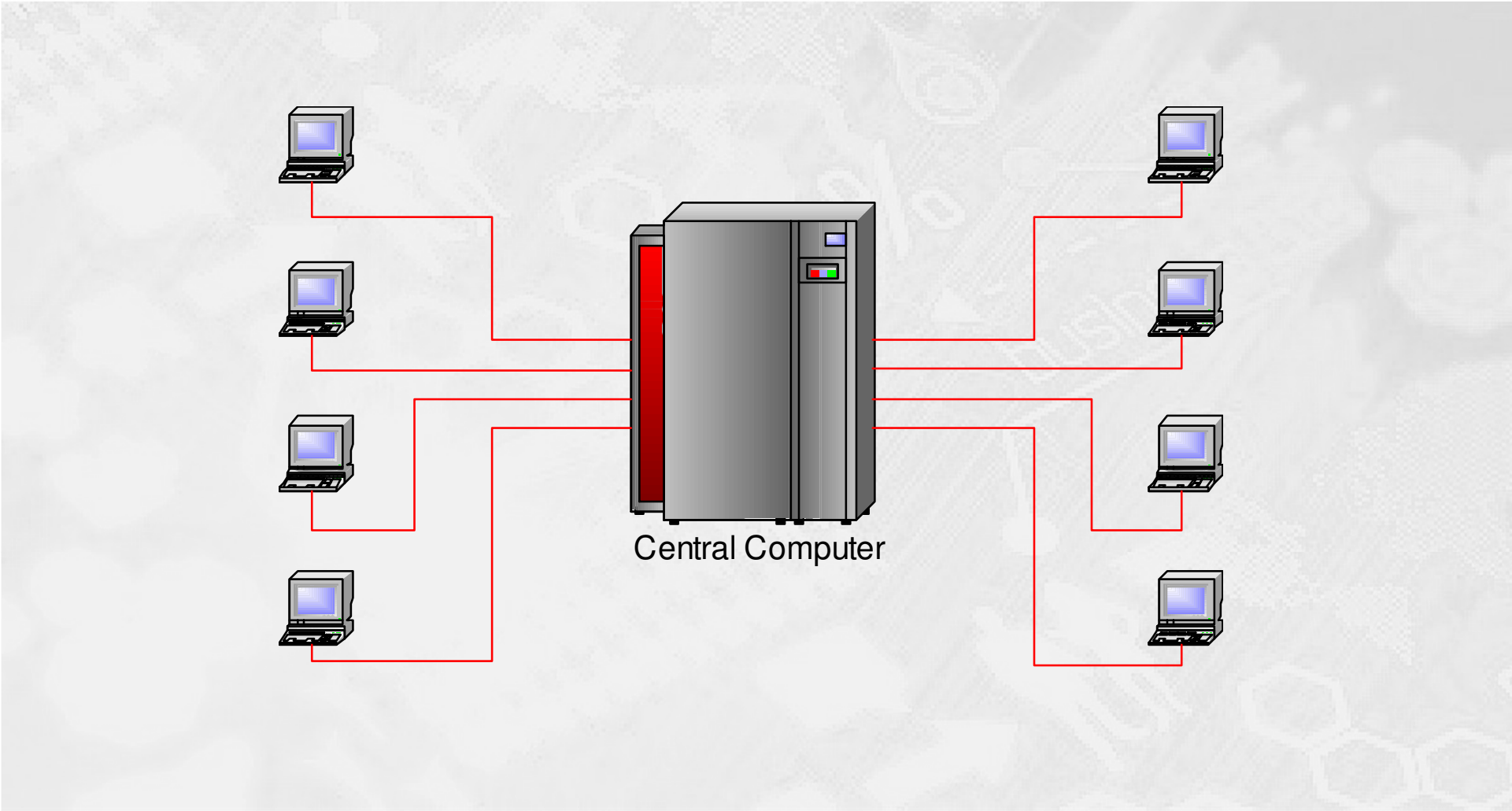
## Netteknik 1

Der var engang ...

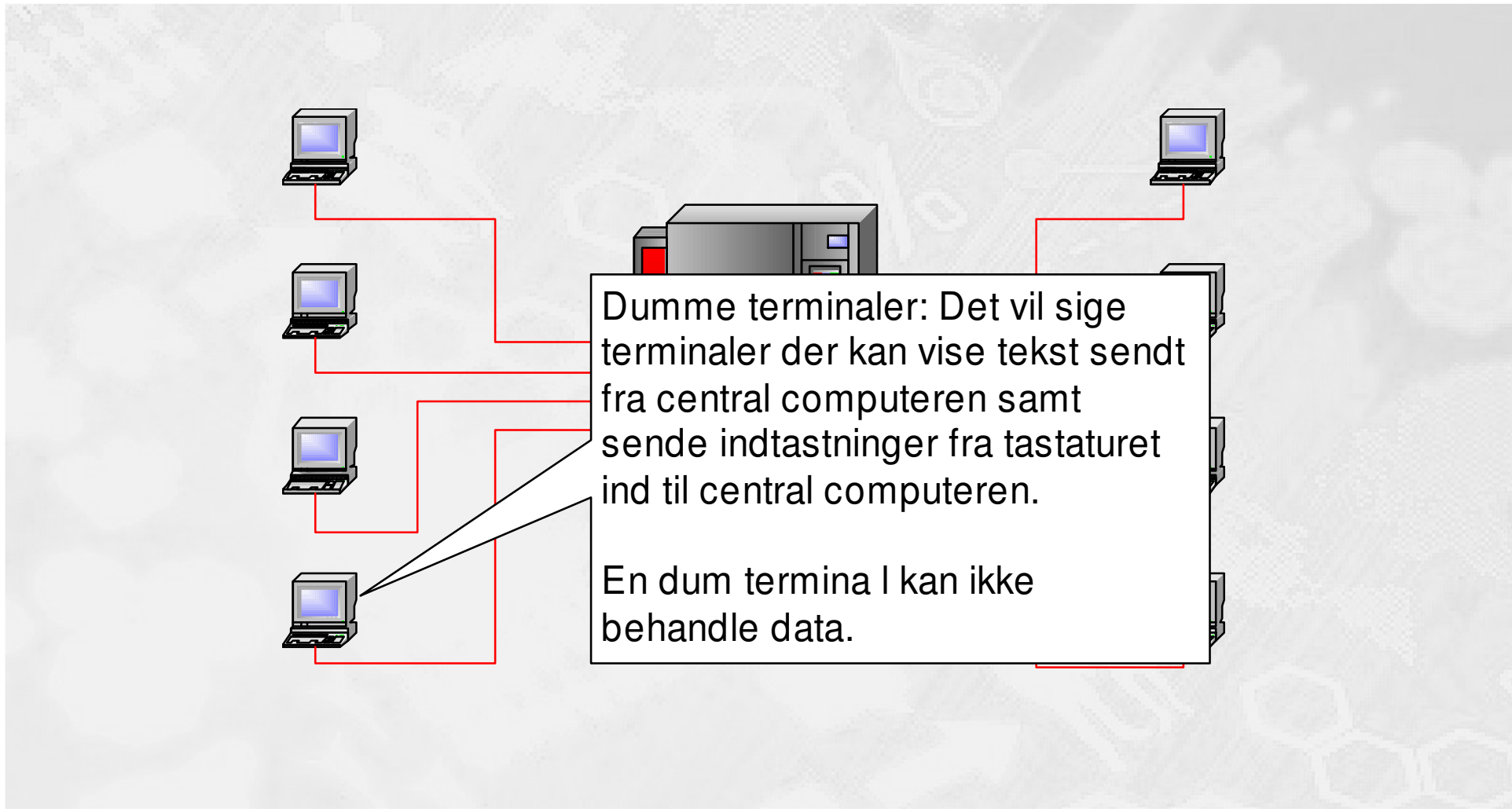
HOUSE OF  
TECHNOLOGY



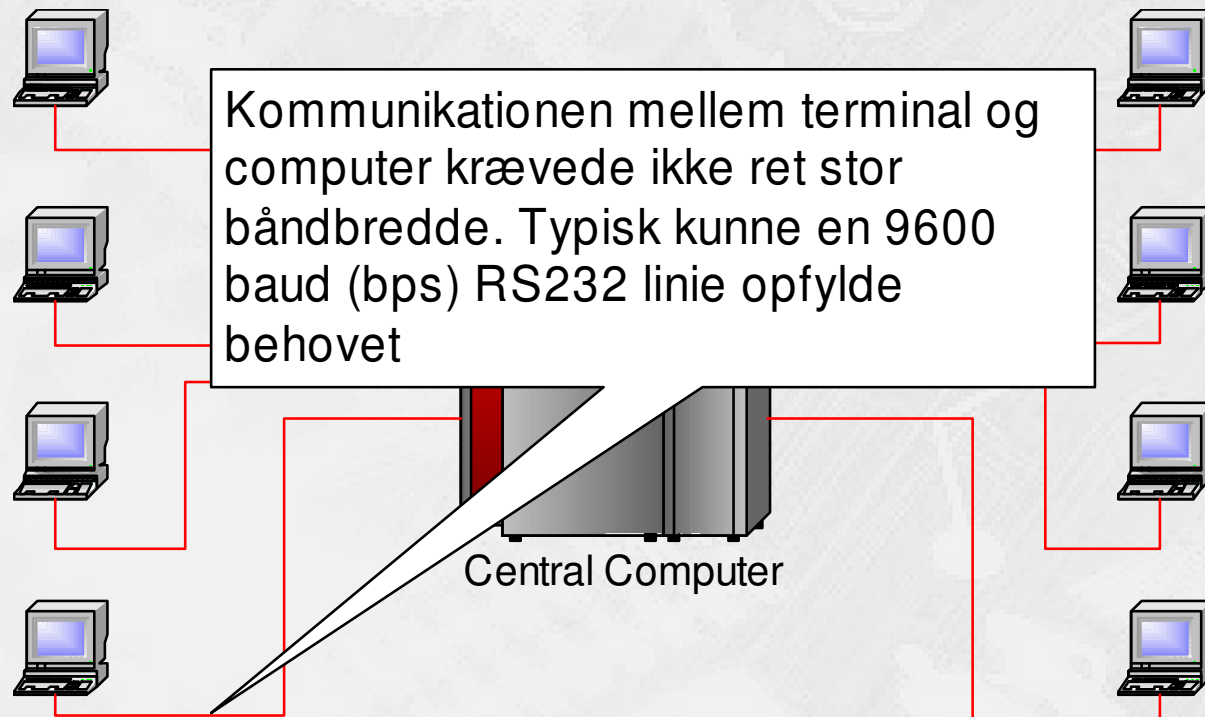
- en del af **mercantec**<sup>+</sup>



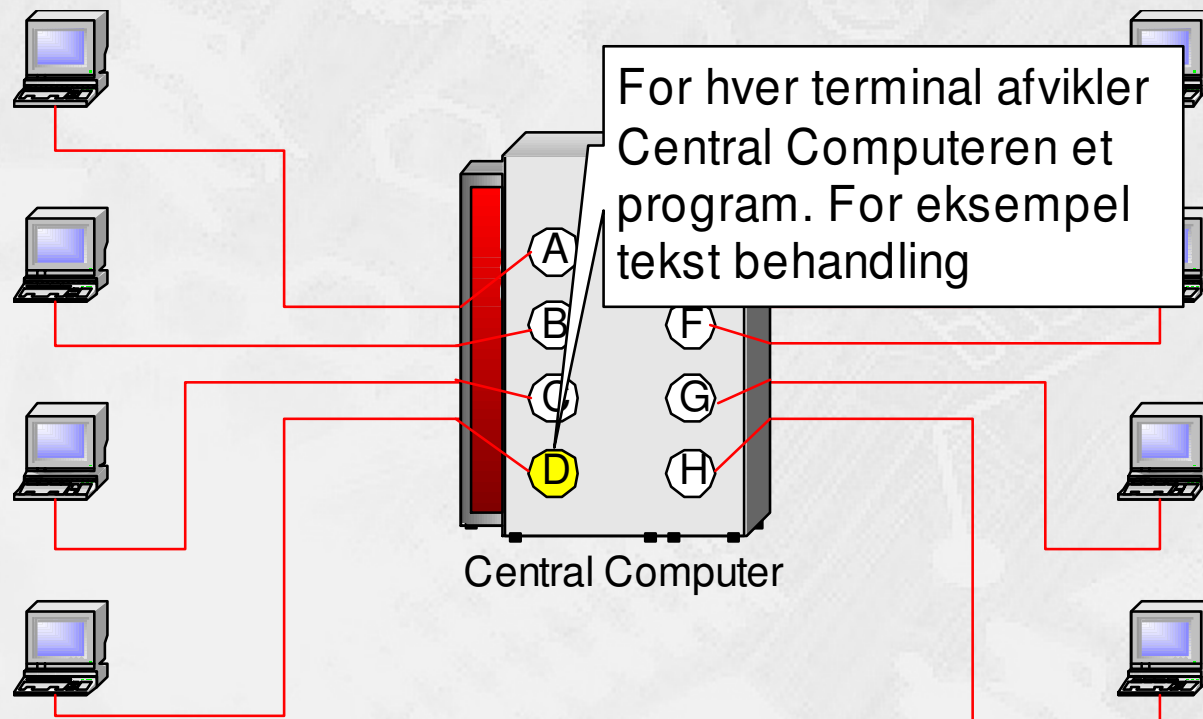
# "Dumme" Terminaler



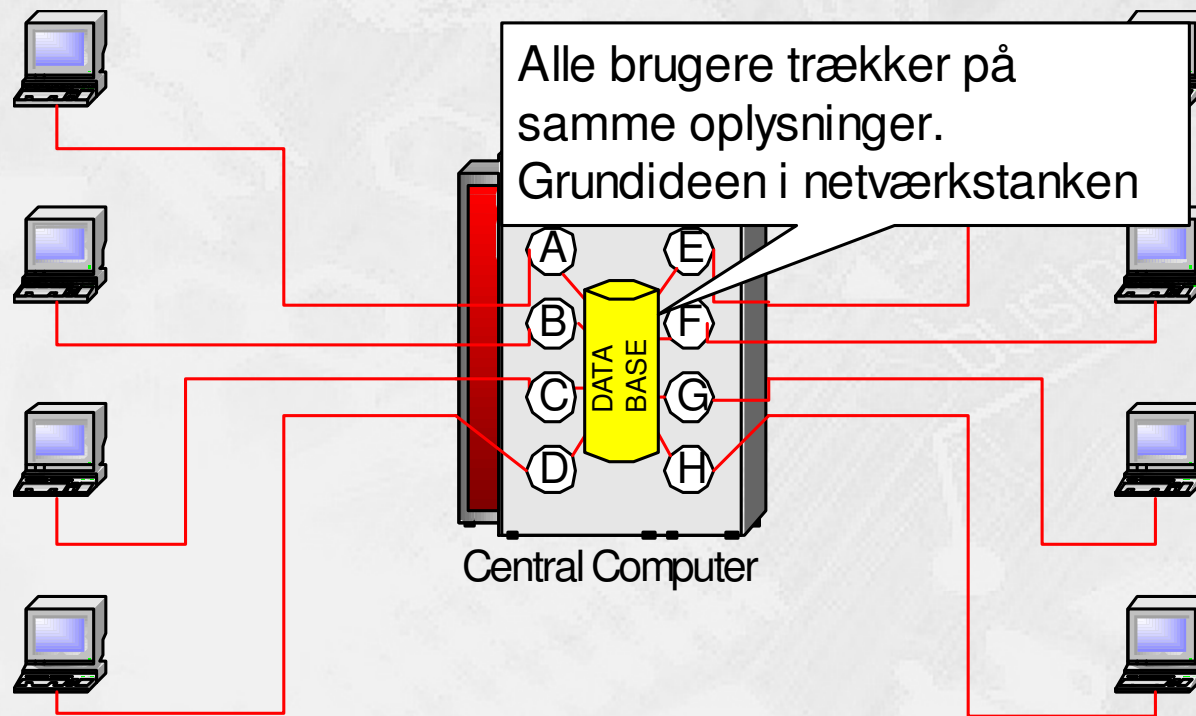
# Lille båndbredde



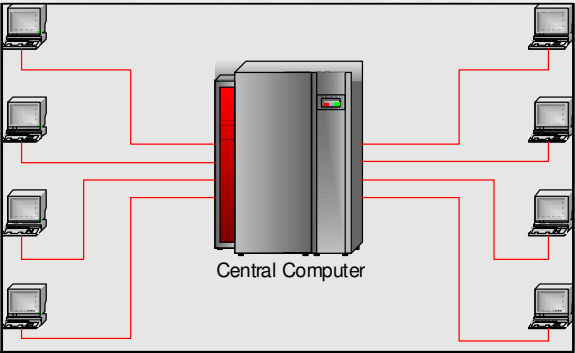
# Multiuser operativsystem



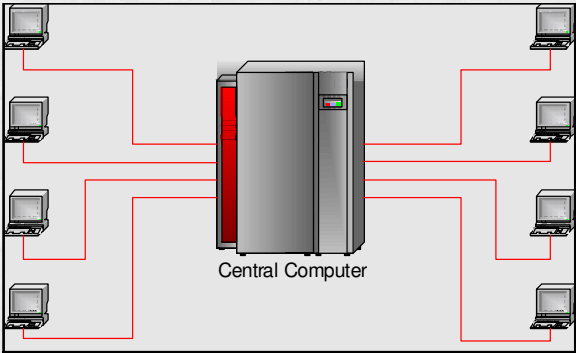
# Samtidig adgang til fælles data



# Dobbelt-registrering af data



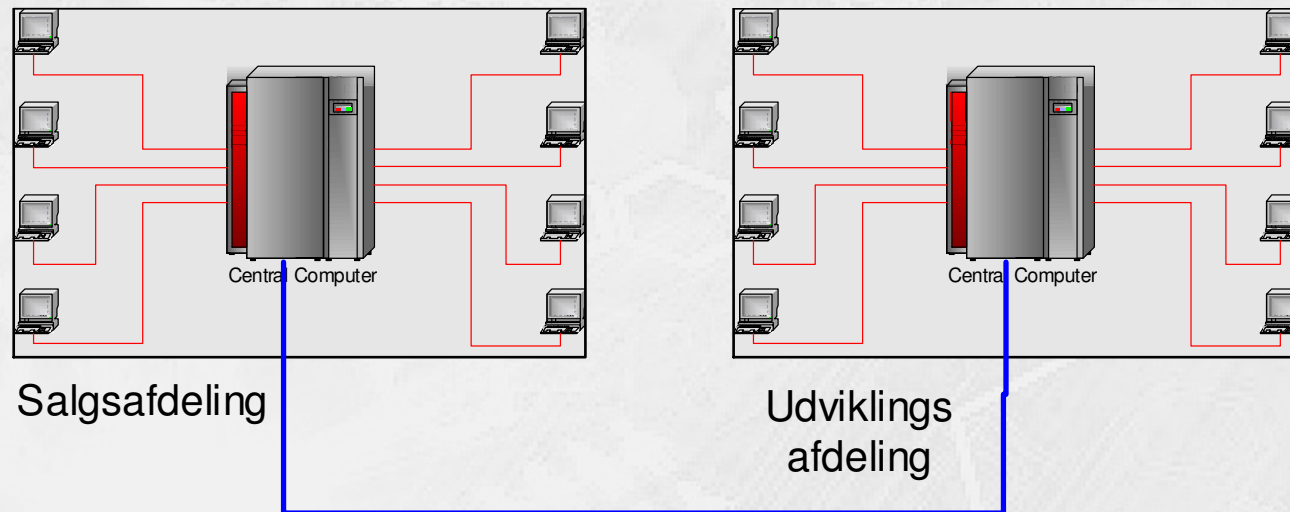
Salgsafdeling



Udviklings  
afdeling

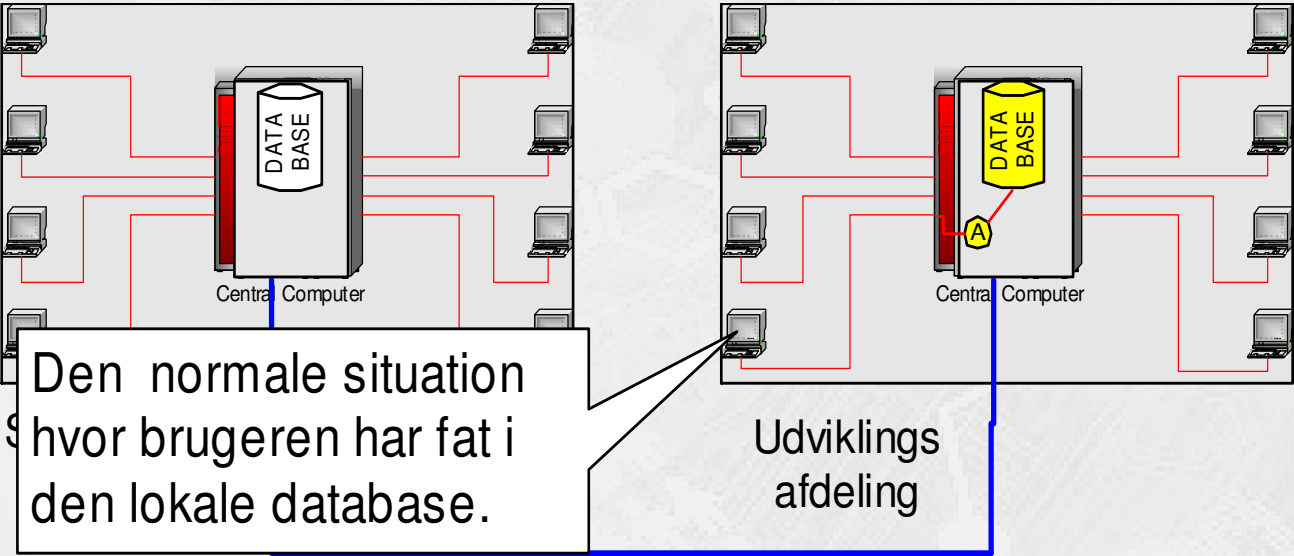
- et problem!

# Point-to Point forbindelse

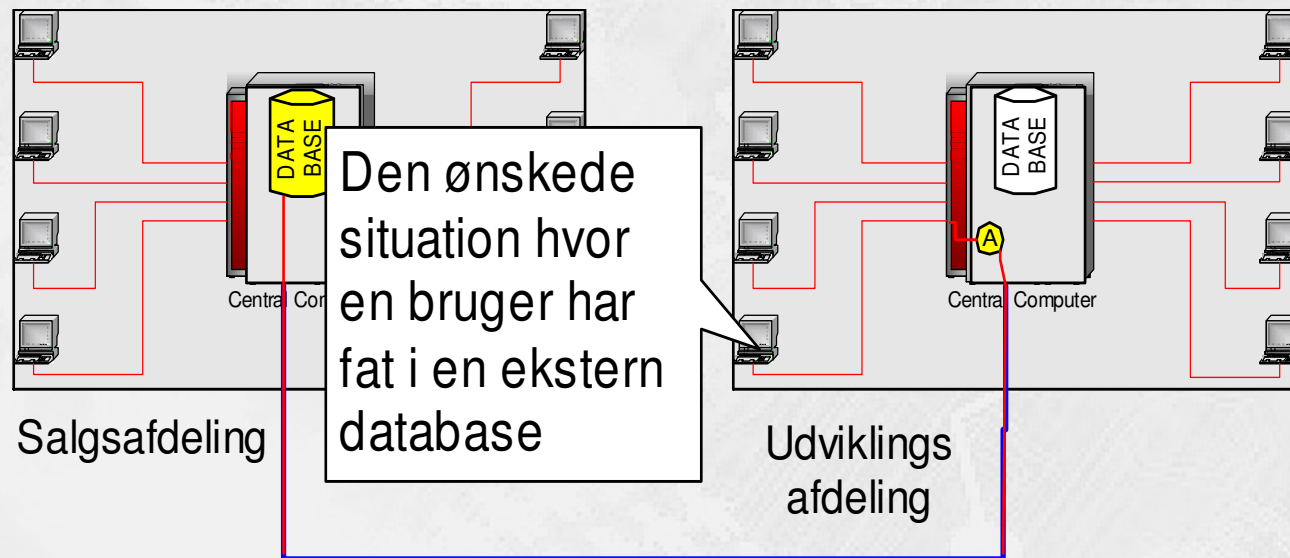




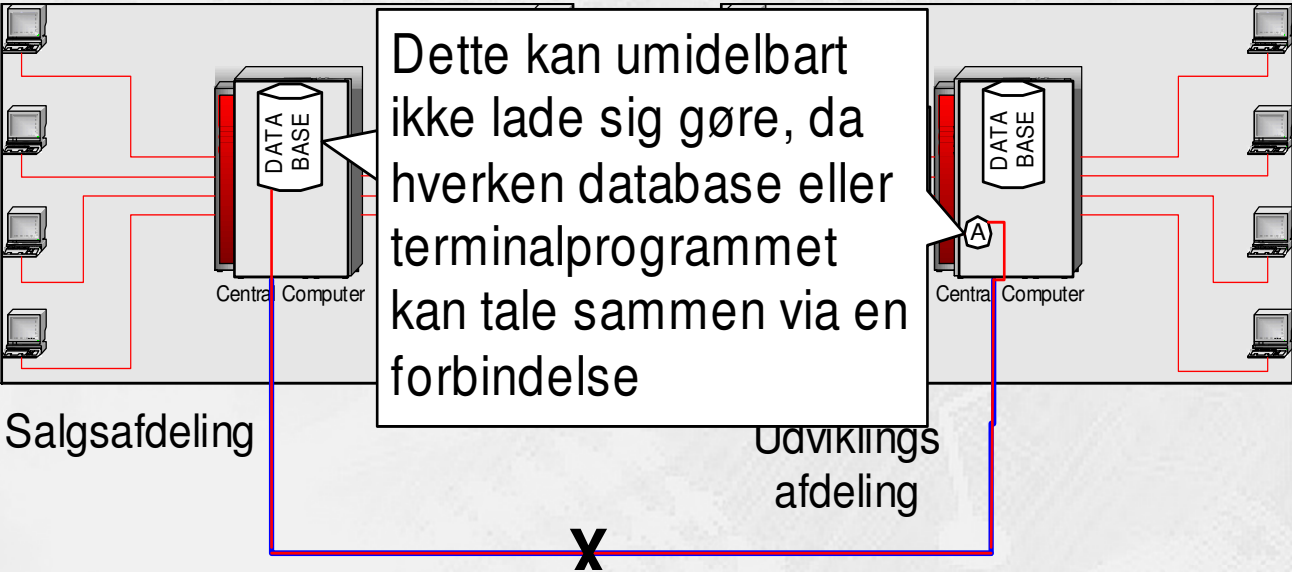
# Den 'normale' situation



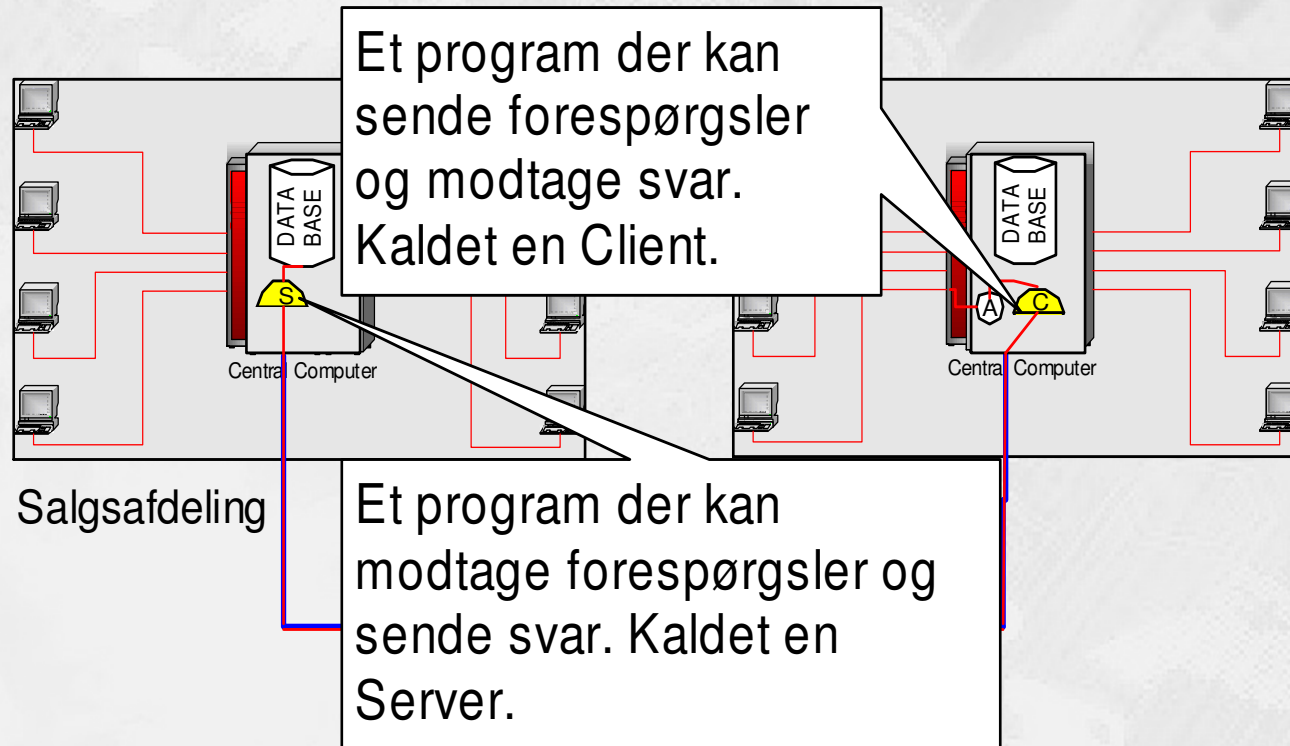
# Vores mål



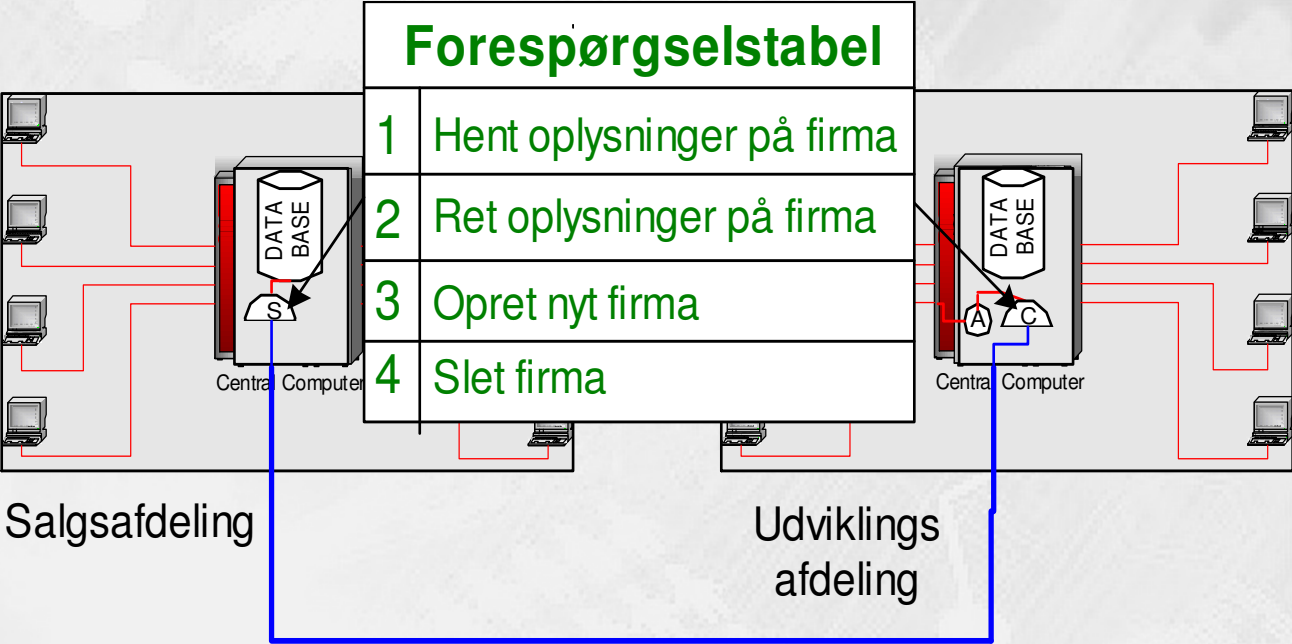
# Behovet for en netværksprotokol



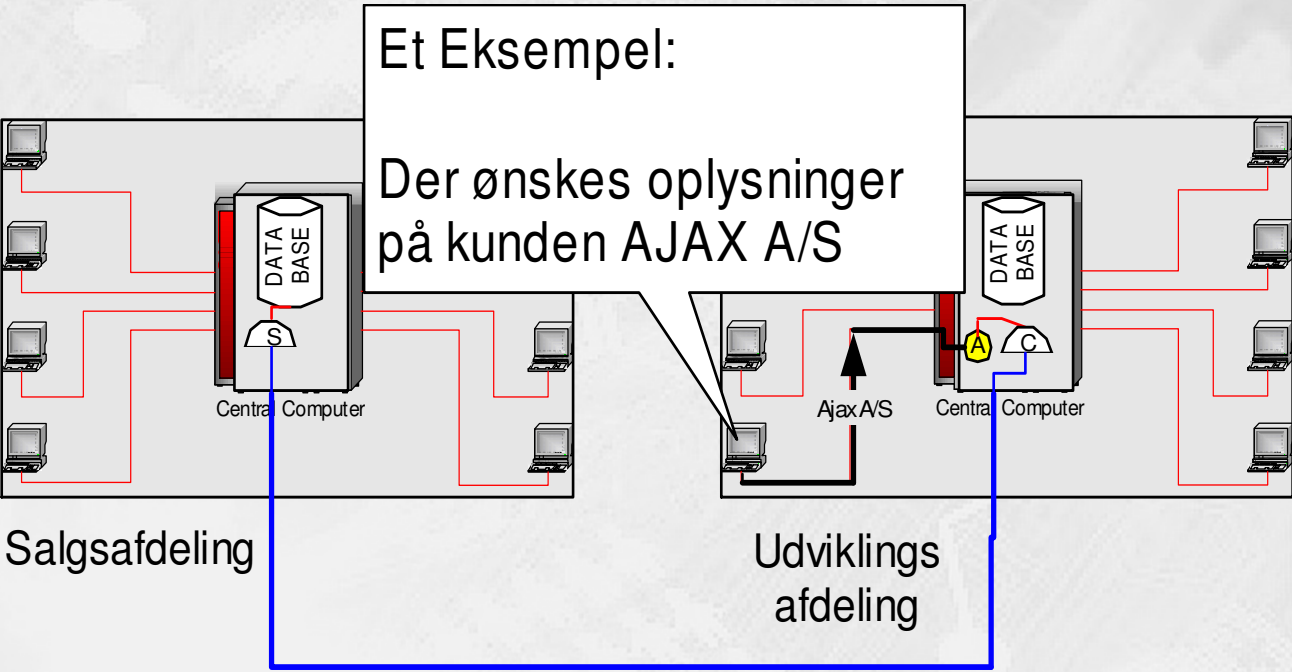
# Client/Server princippet



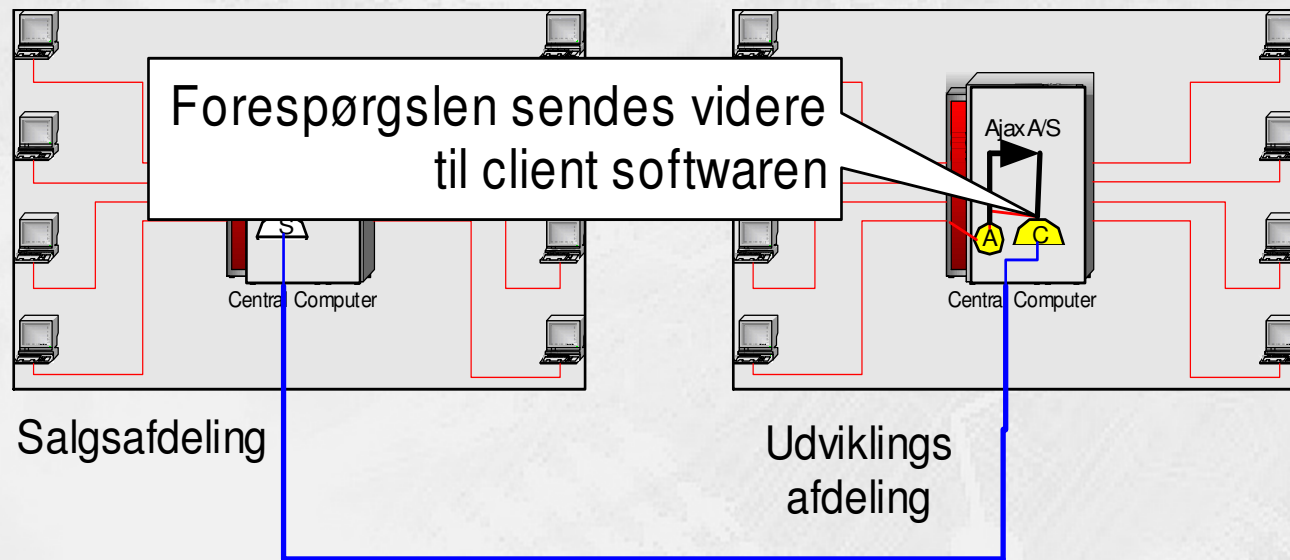
# En protokol er fælles regler



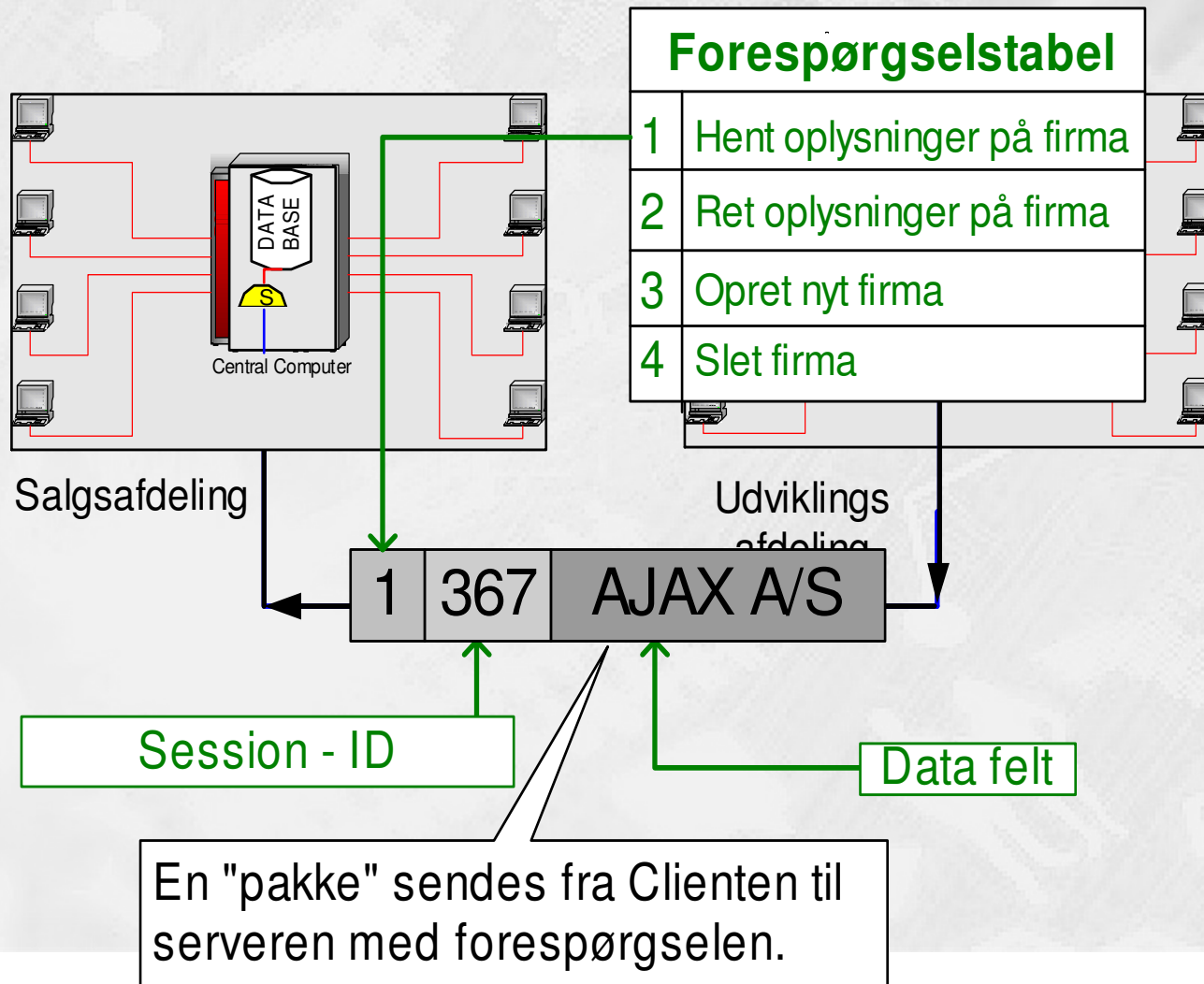
# En forespørgsel sendes



# En forespørgsel sendes

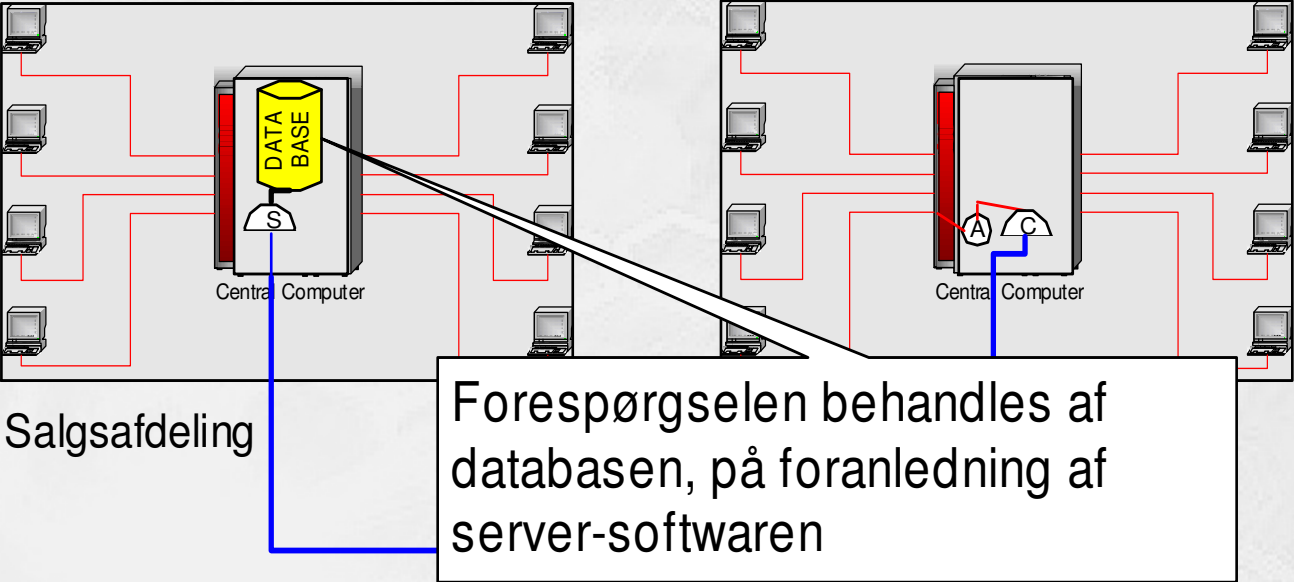


# En 'datapakke' er på vej

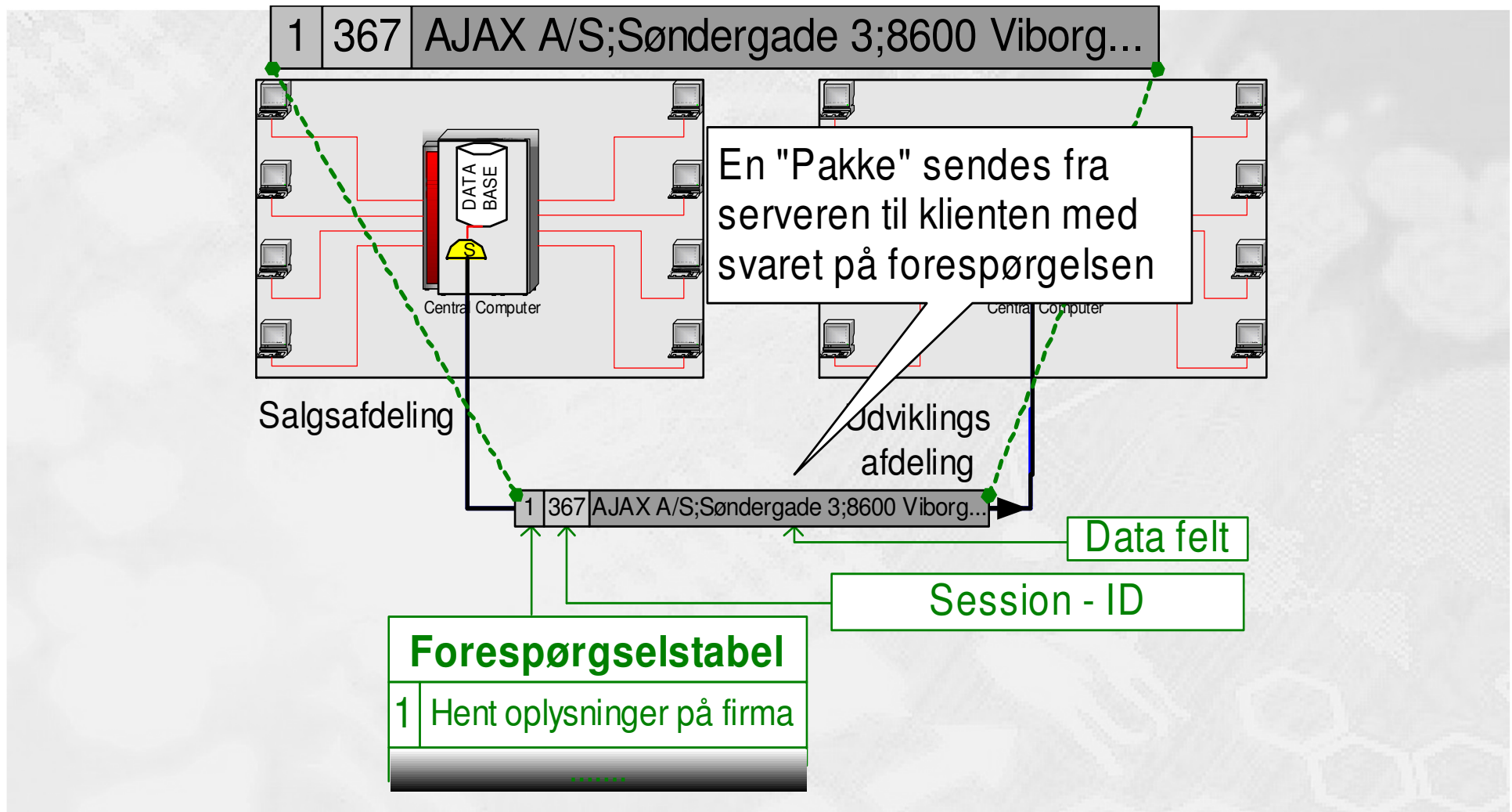




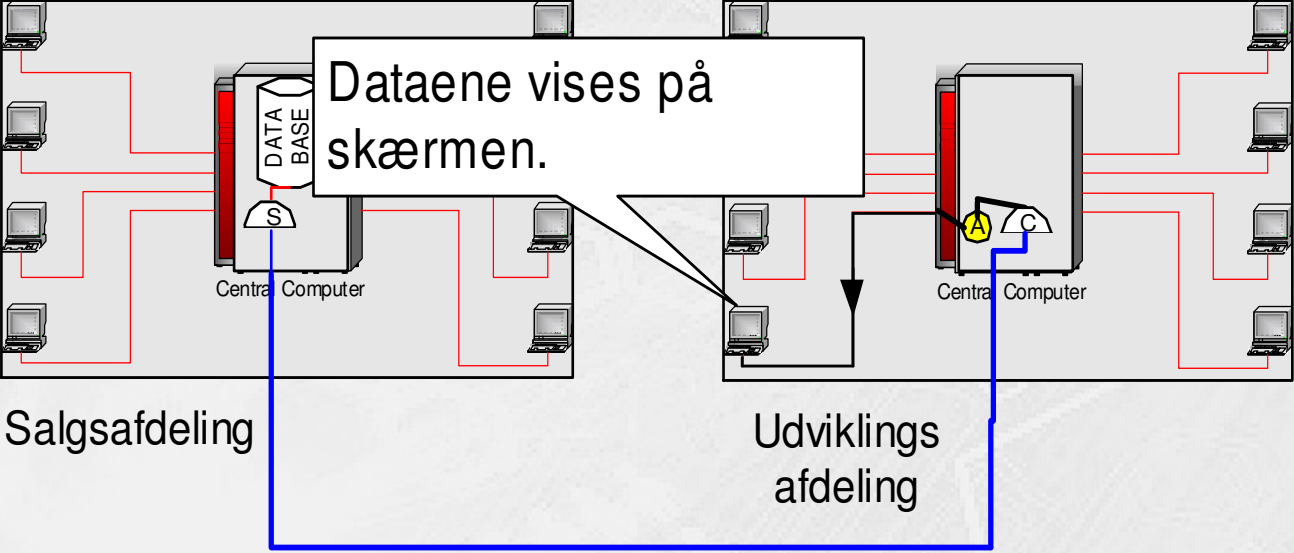
# En forespørgsel behandles



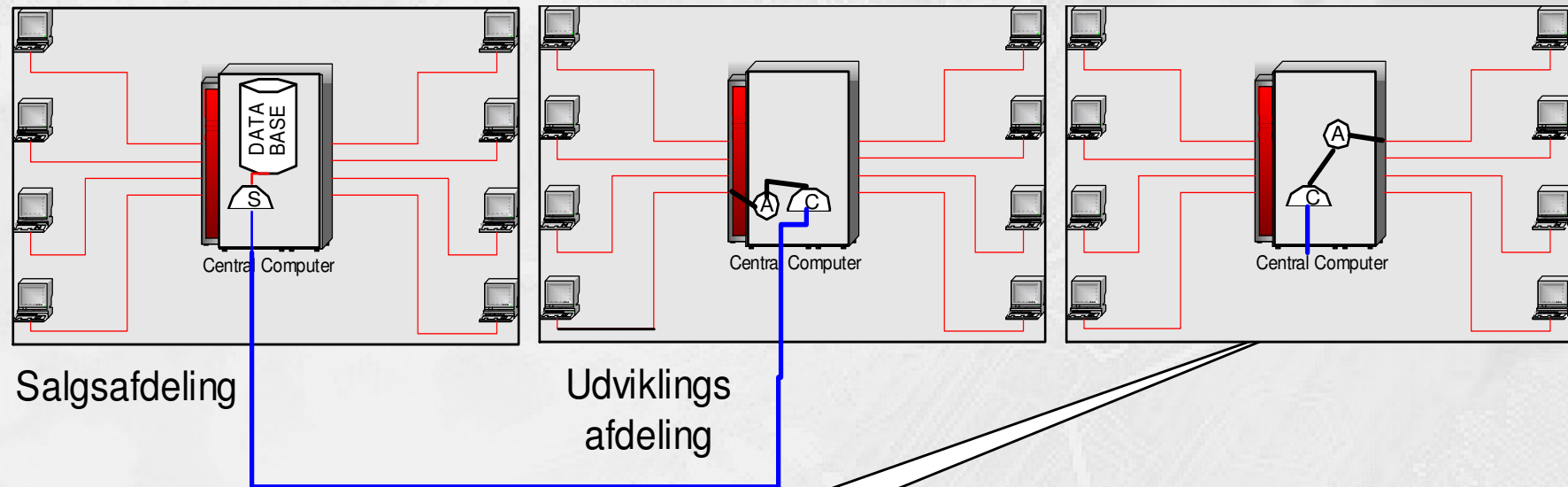
# En forespørgsel besvares



# En forespørgsel lykkes!

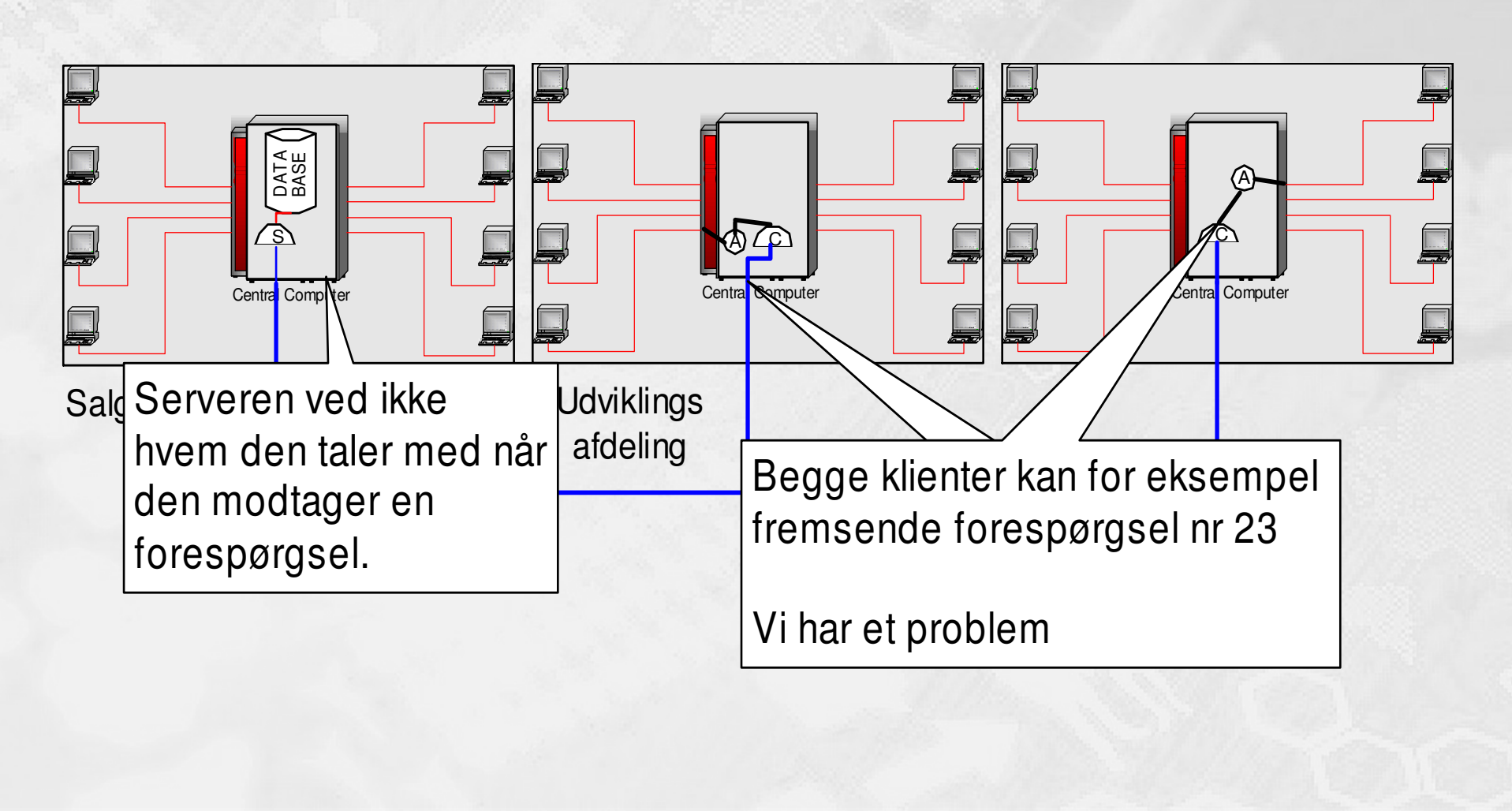


# Situationen ændrer sig ...

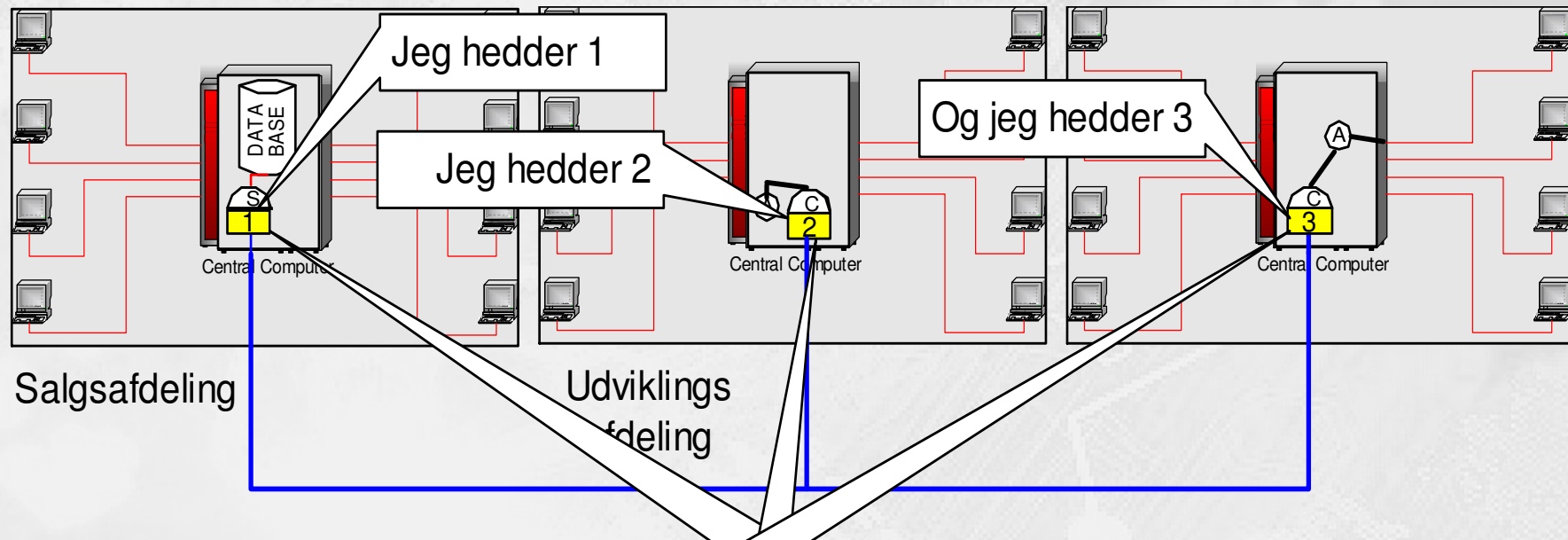


Vi ønsker at koble flere computere på.  
Vi ønsker et netværk.

# Fra Point-to-Point til Multipoint

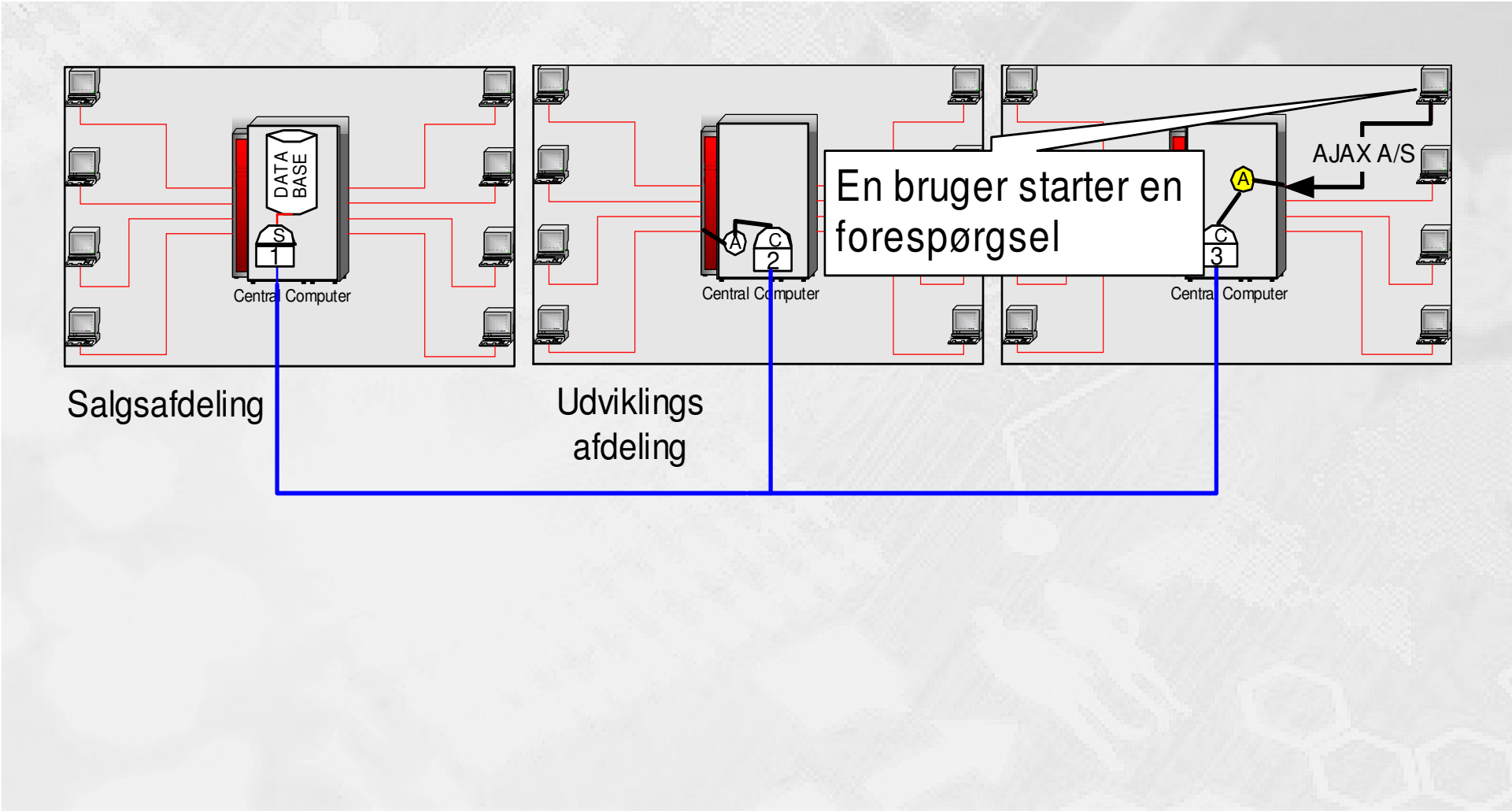


# Hvem er hvem?

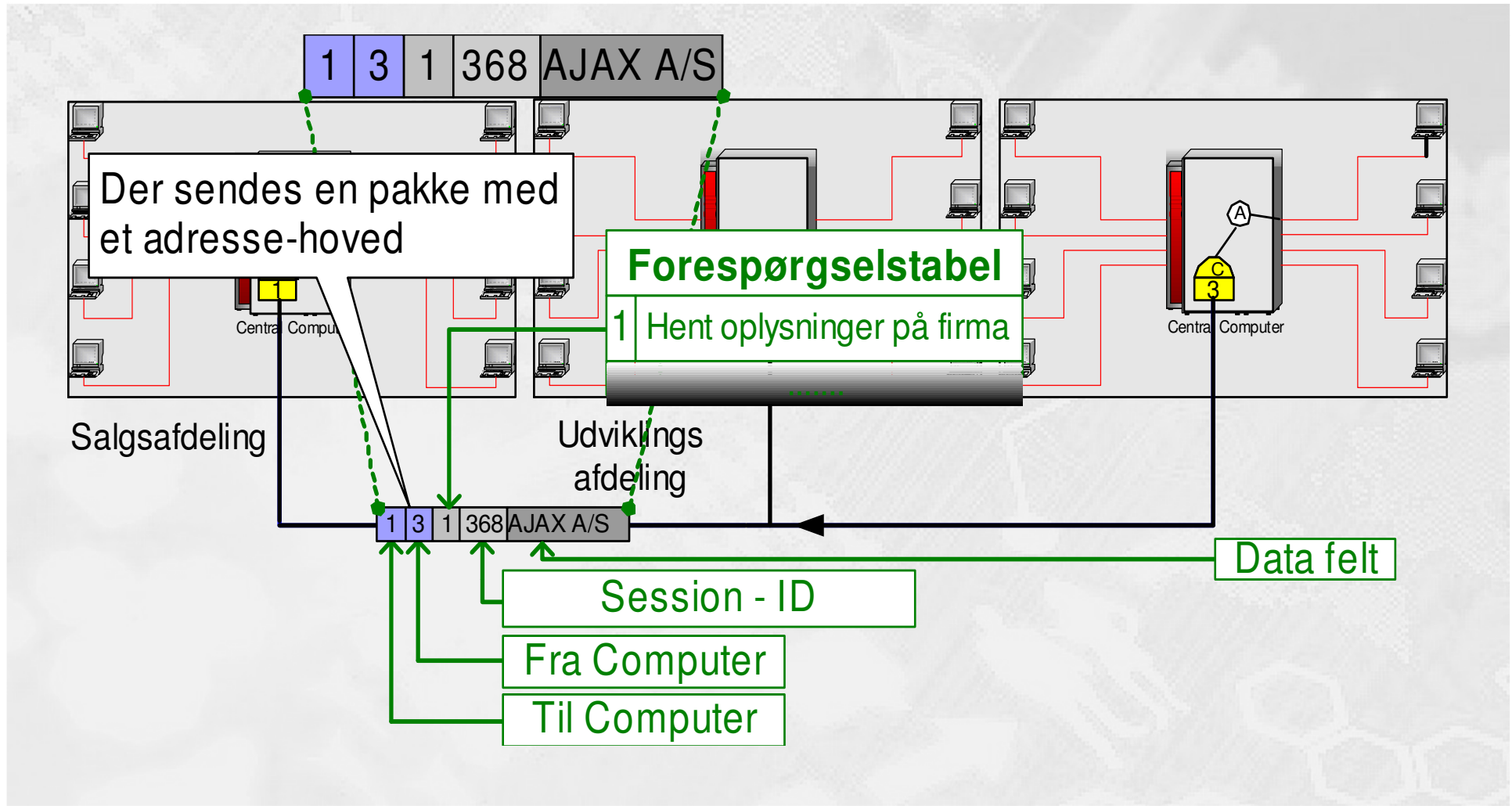


For at se hvem "pakkerne" er fra indføres et computernavn samt noget software som holder styr på computernenavnene

# Et netværk er født!

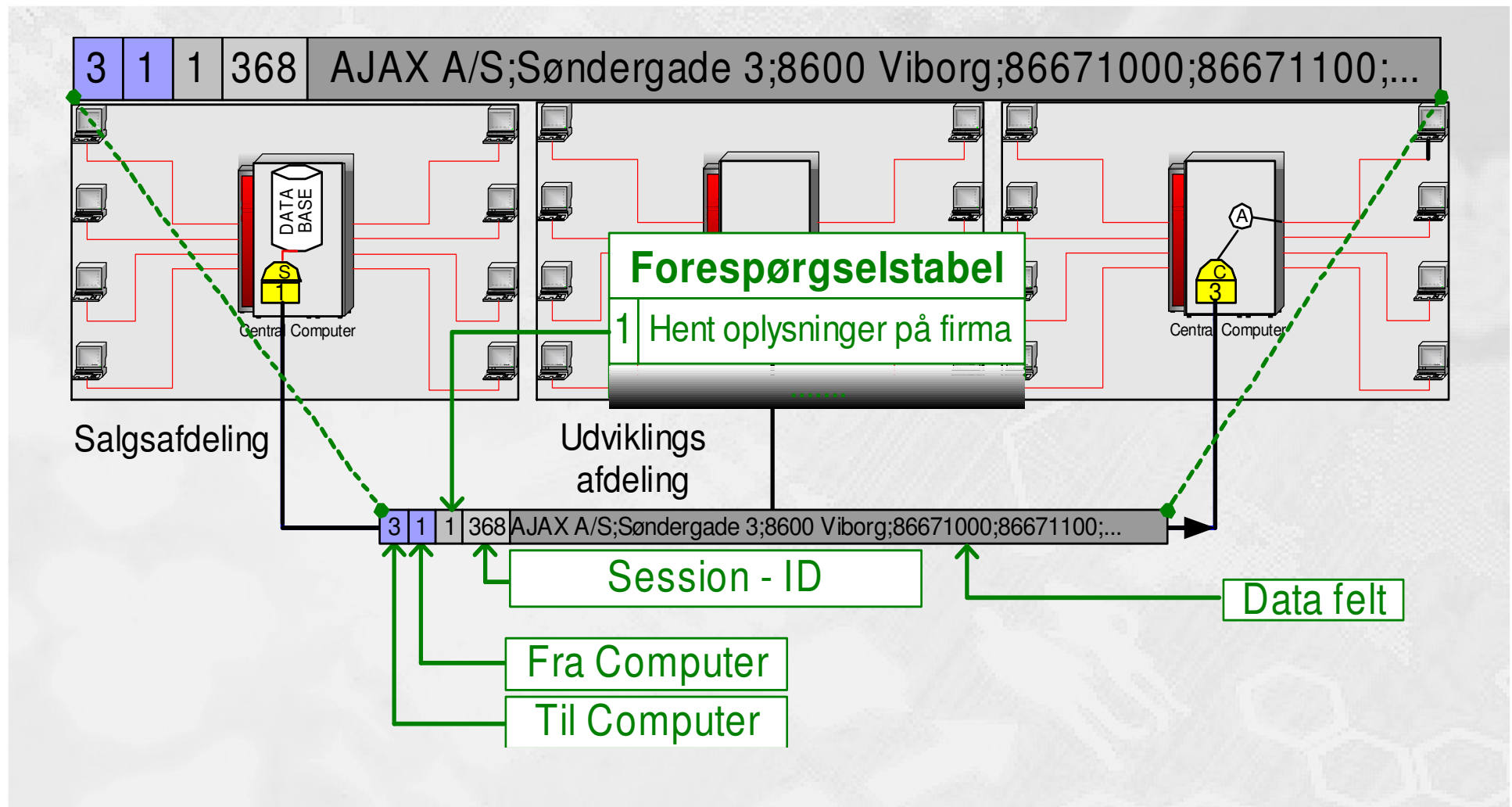


# Address-header

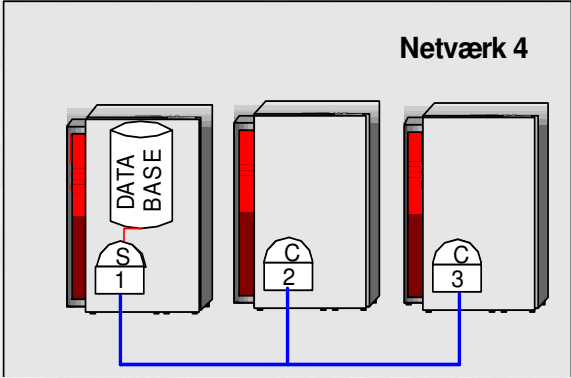
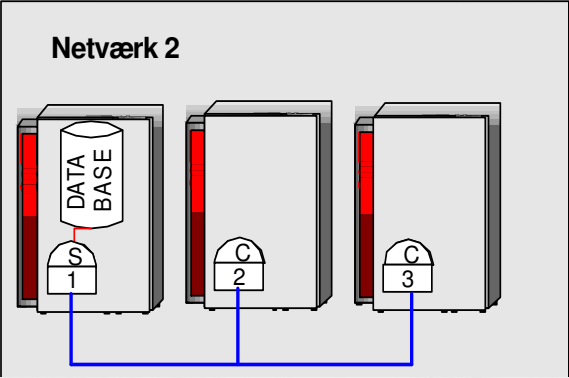
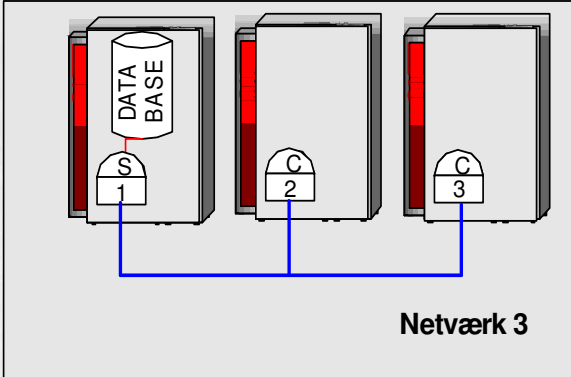
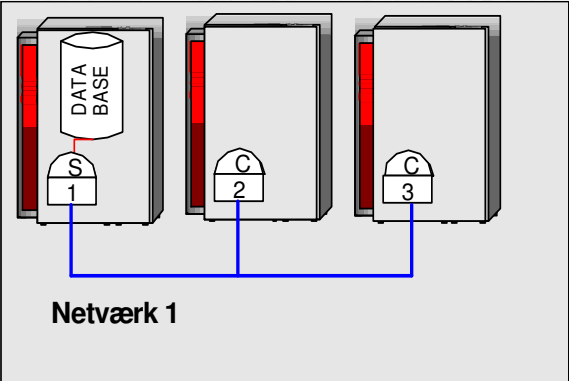




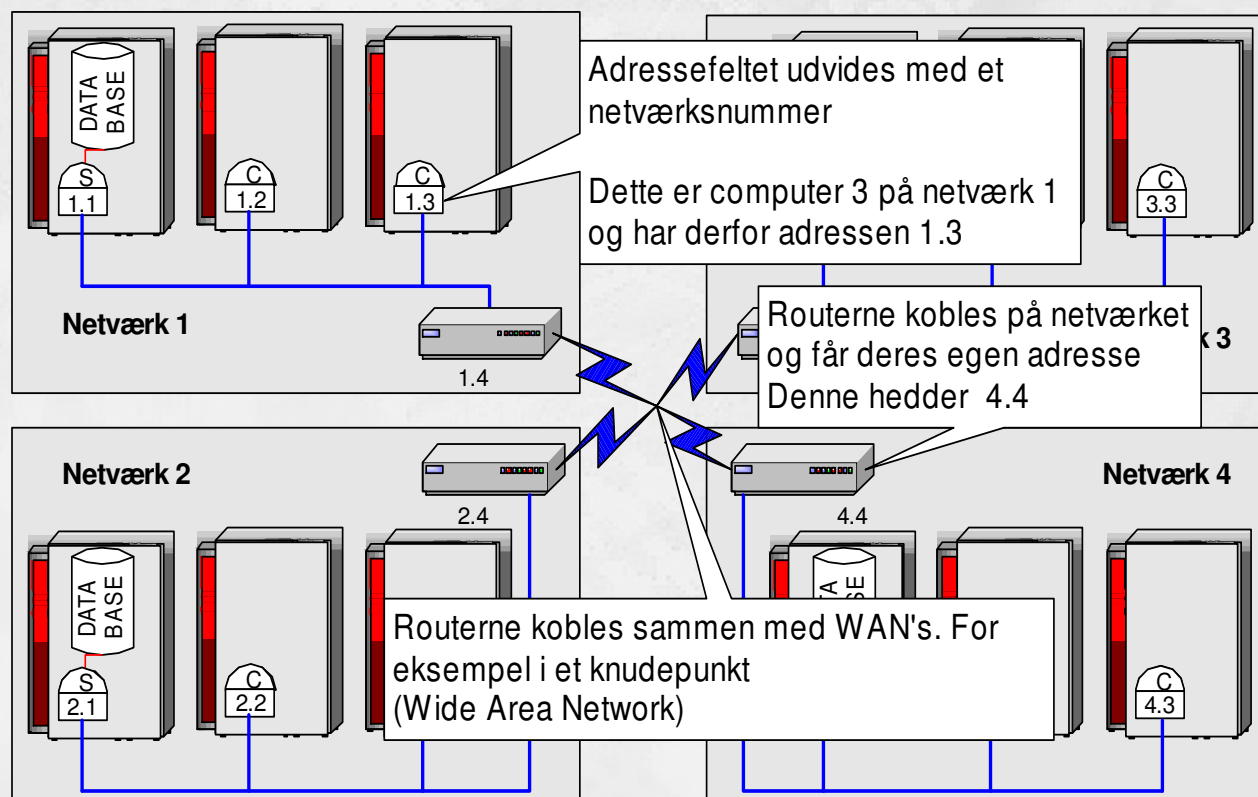
# Adresserings-mekanismen



# Flere netværk kobles sammen

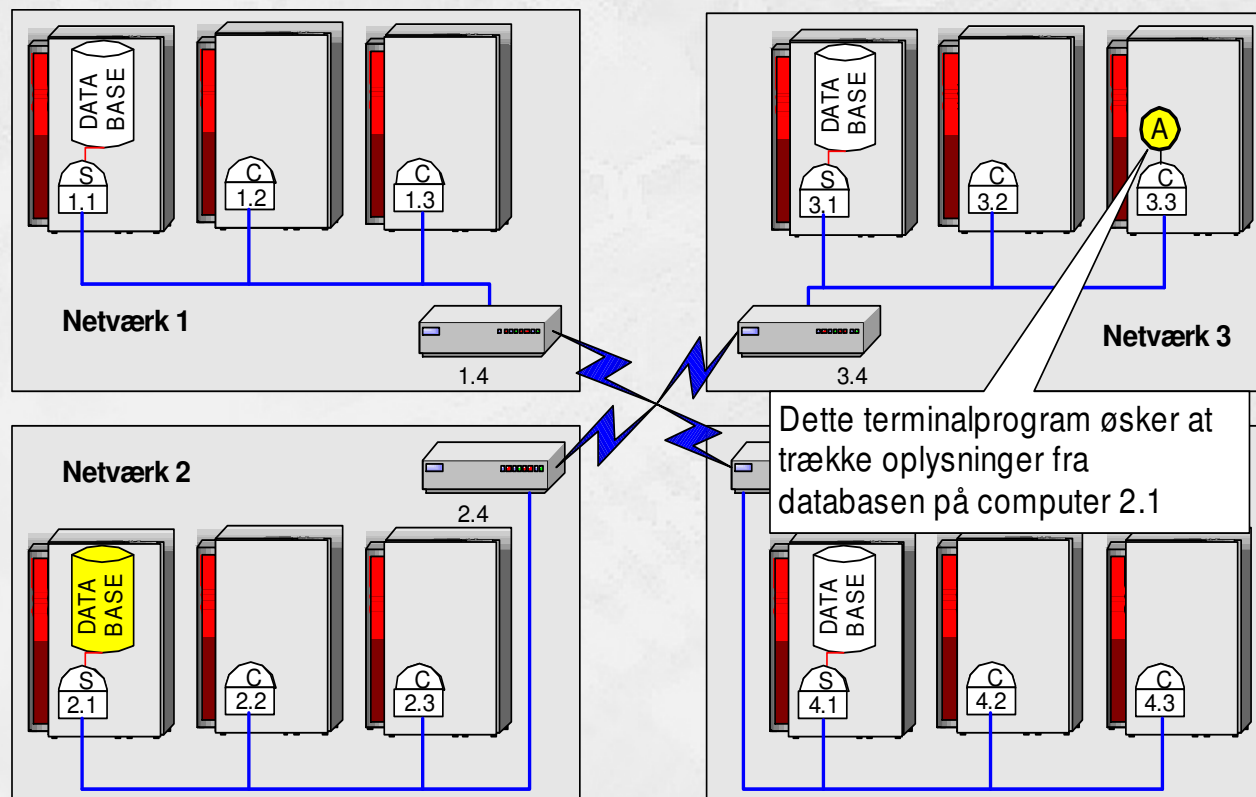


# Routeren introduceres



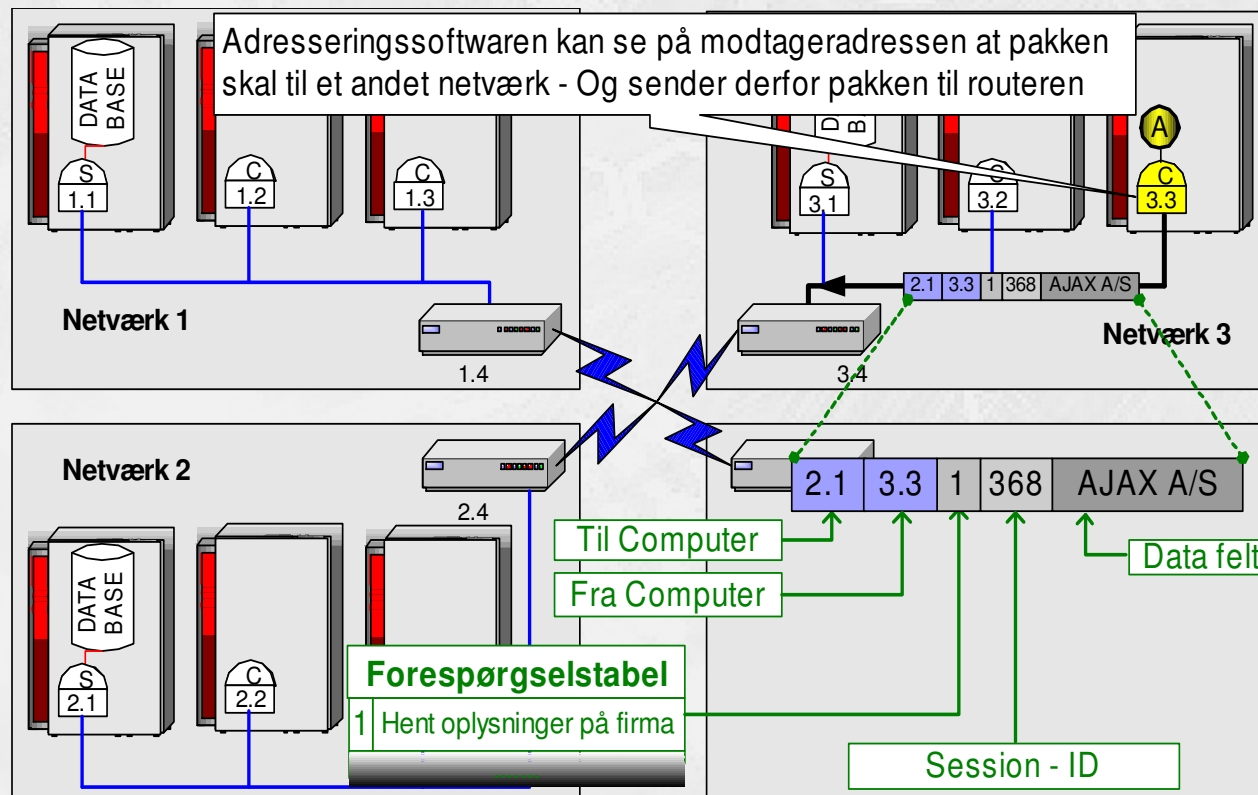
# Routingens princip

- Terminalprogrammet kender ikke de andre netværk:



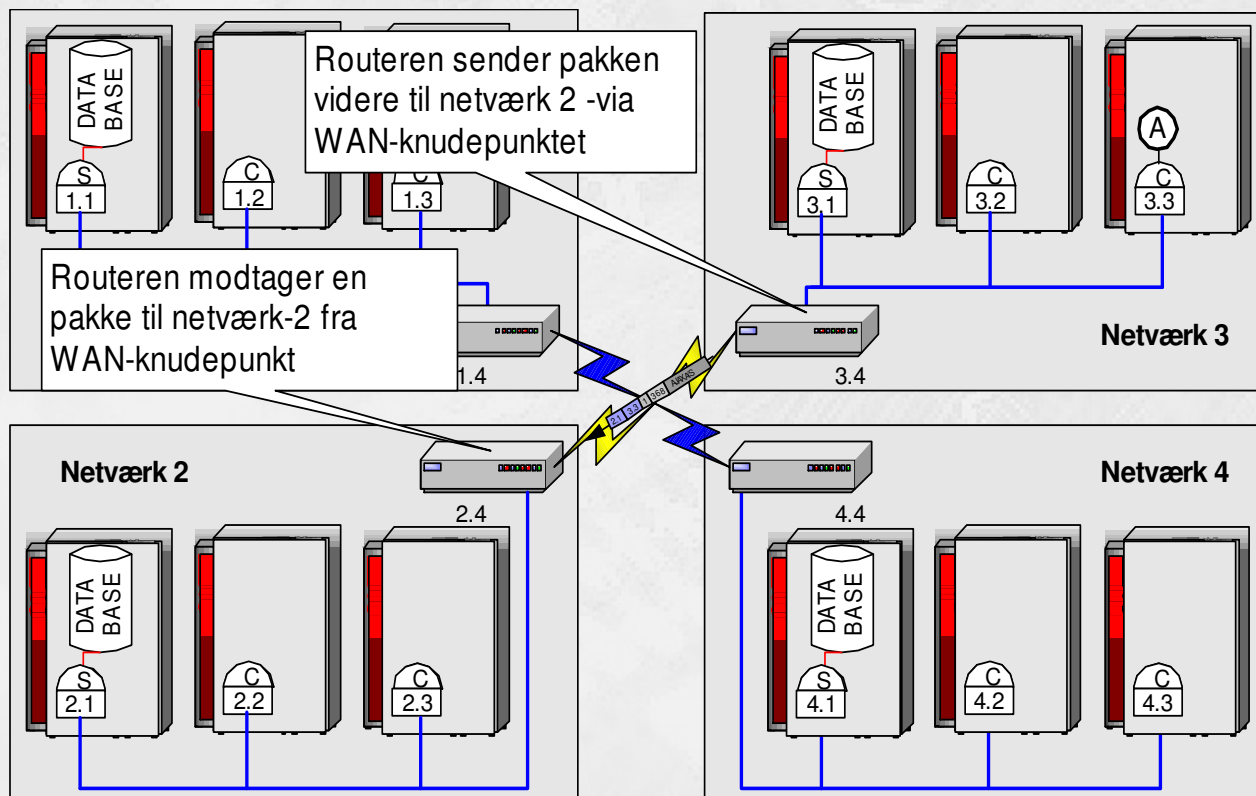
# Routeren er 'Default gateway'

- Adresseringssoftwaren kender vejen til routeren:



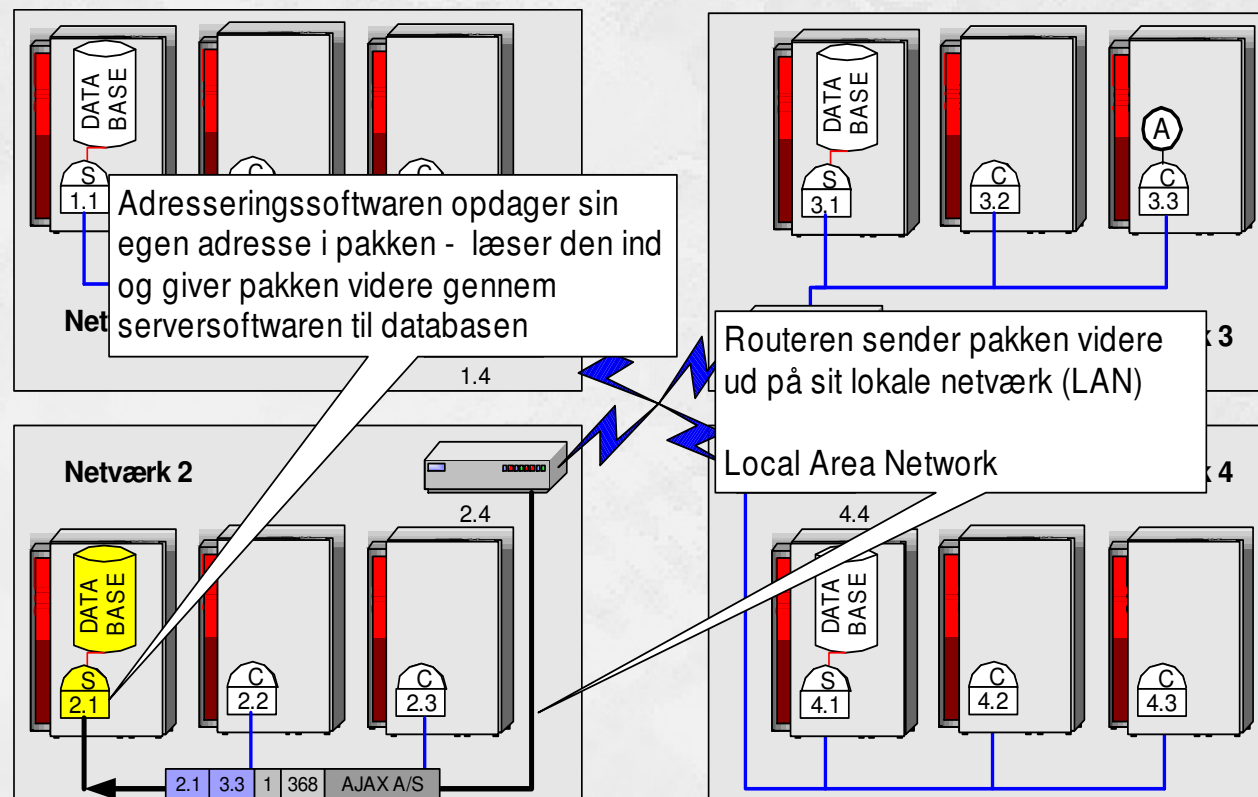
# Routerne "snakker" sammen

- ... så routerne kender hinandens netværk:



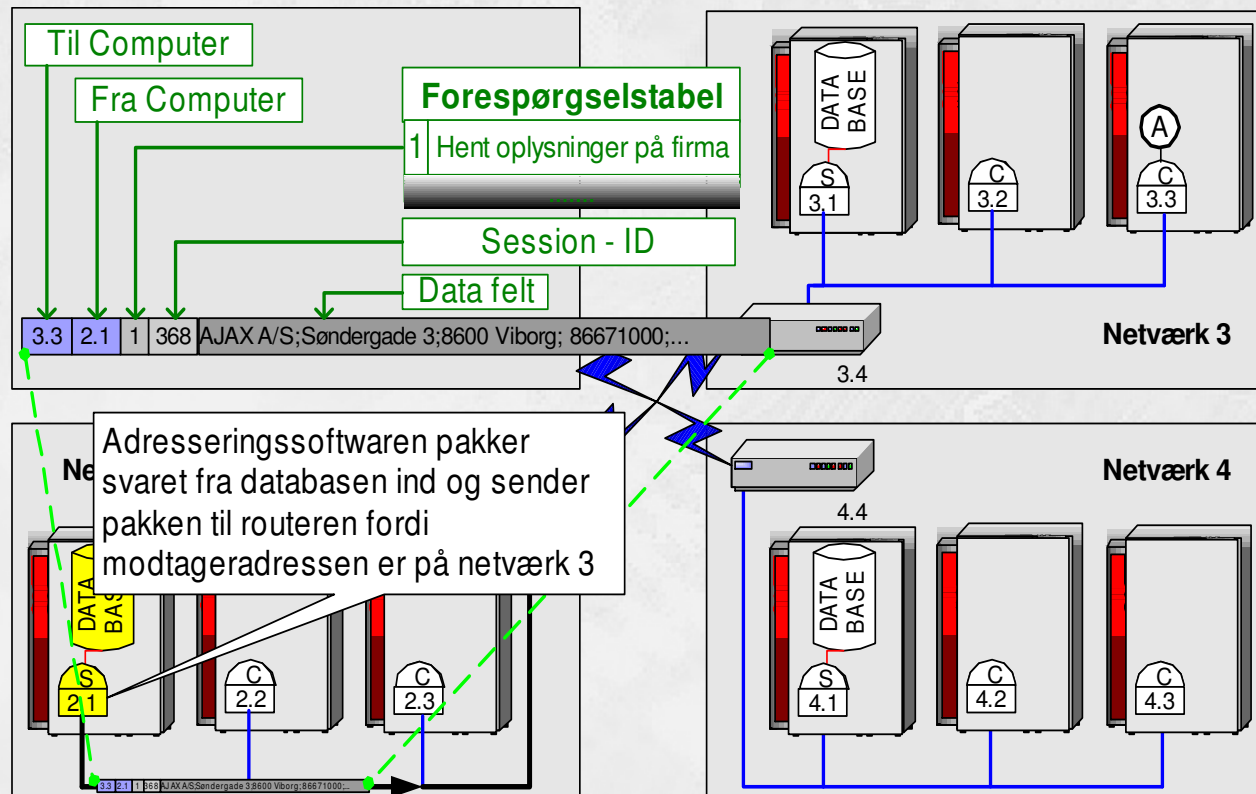
# LAN og WAN

- En router har typisk forbindelse til to net; et LAN og et WAN:



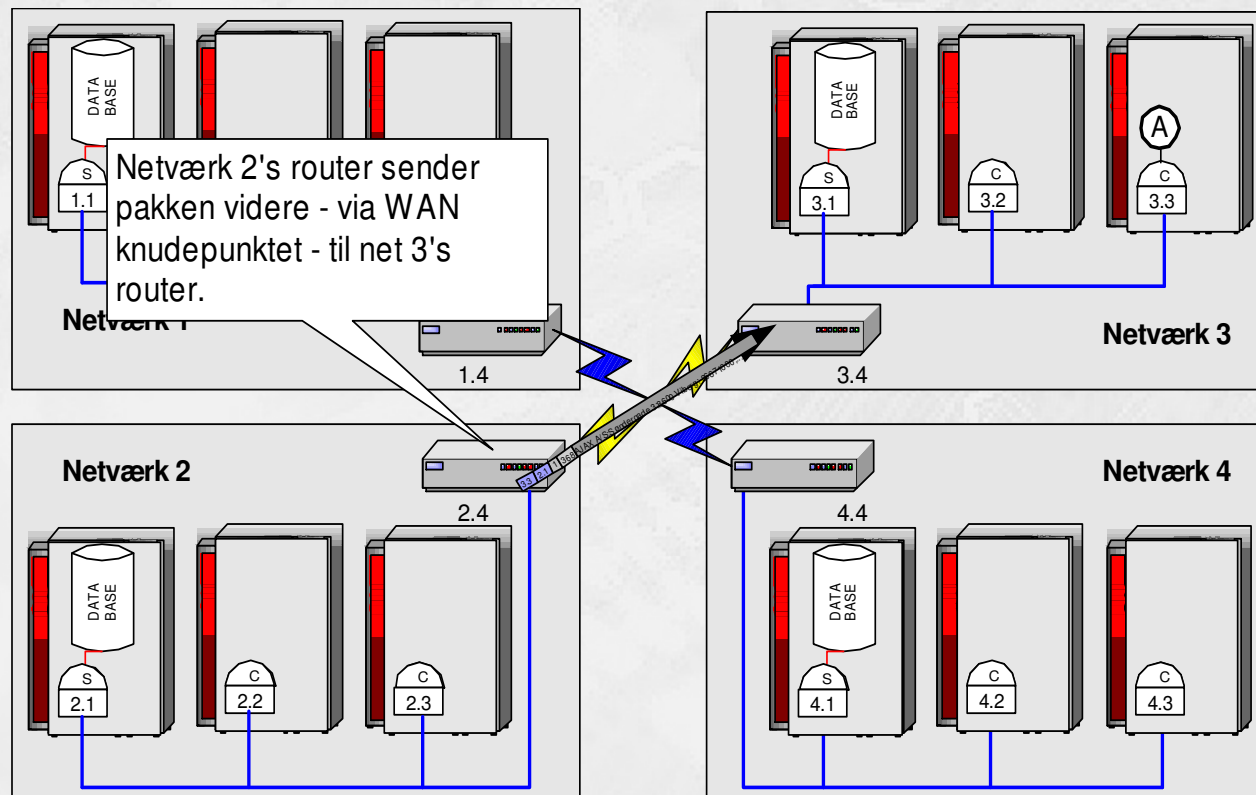
# Adresserings-mekanismen

- Når pakken besvares kender afsender adressen på modtager:

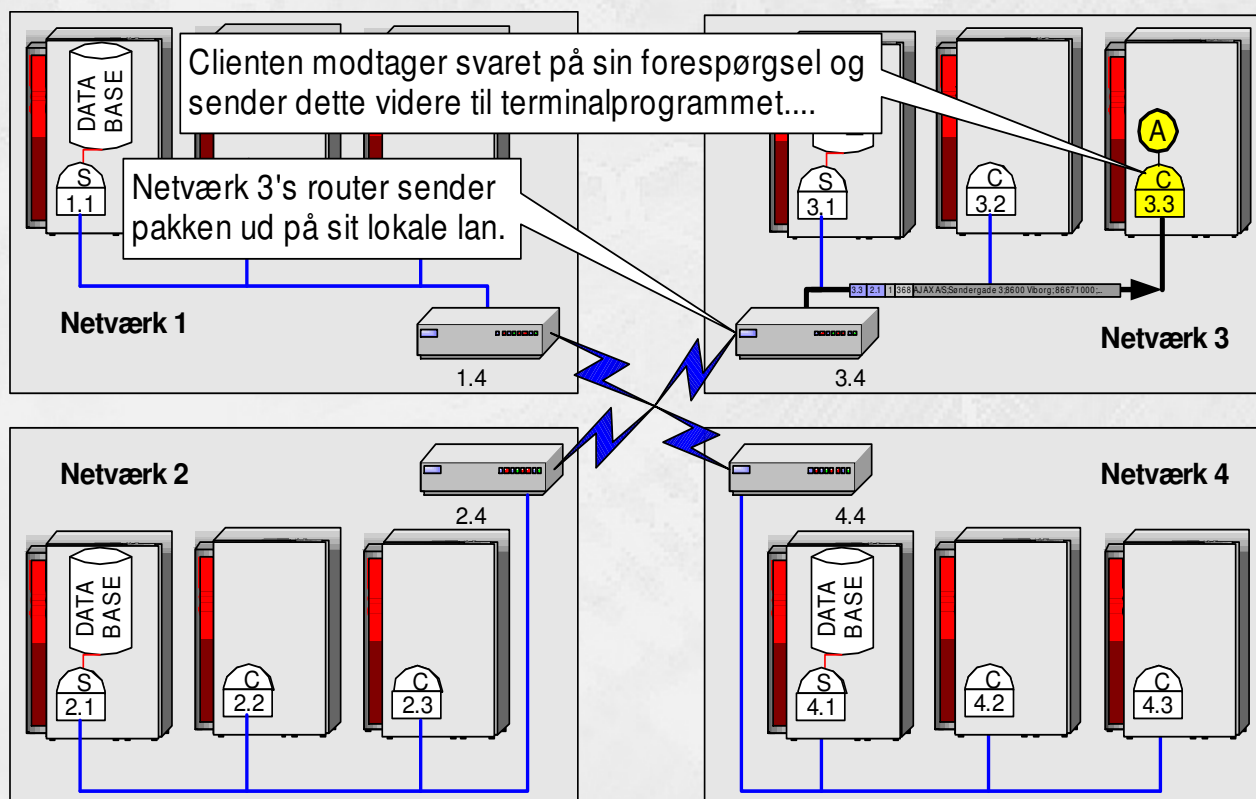




- Routers "snakker" sammen med routningsprotokoller, f.eks. RIP:



- Routers og computere husker netværksadresser i en Routetabel:



# Hvad var det lige vi gennemgik?

- En Client kan sende forespørgsler til en Server
  - Princippet kaldes Client/Server eller C/S.
- Ved flere end 2 deltagere er det nødvendigt med en maskine-adressering.
- Ved sammenkobling af flere net er det også nødvendigt med en net-adressering.
- For tillade flere samtidige forespørgsler fra samme maskine er det også nødvendigt med et forespørgselsnummer
  - Også kaldet en Session-ID.

# Og - sådan fungerer Internettet!

- En IP-adresse fylder 4 bytes.
  - For eksempel 194.182.53.14
- En IP-adresse er sammensat af to adresser:
  - En net-adresse 194.182.53.14
  - En maskine-adresse 194.182.53.14
- Sagt på en anden måde:
  - Maskinen hedder 14 og er medlem af netværket 194.182.53