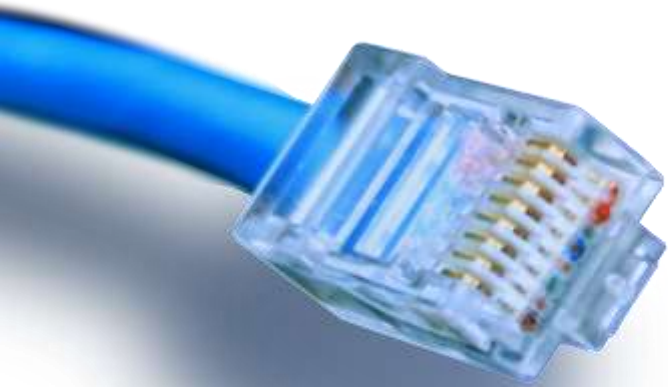


ARP



HOUSE OF
TECHNOLOGY



- en del af **mercantec**⁺

Grundlæggende netværk

Region Syd Grundlæggende netværk



ARP



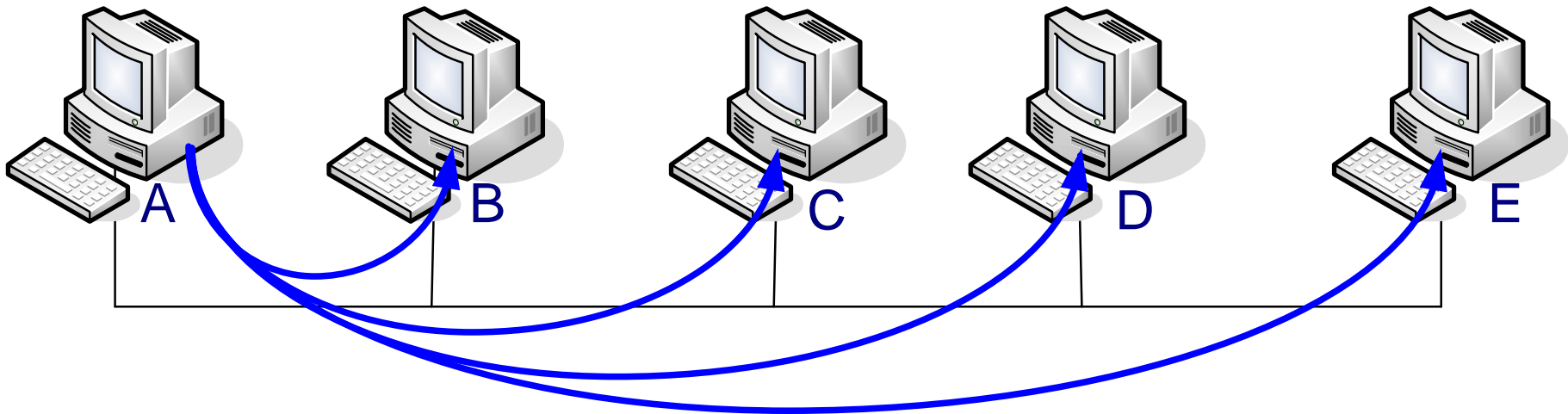
```
C:\Comman  
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Inter  
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194  
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```

```
S  
mic  
mic  
mic
```



Broadcast

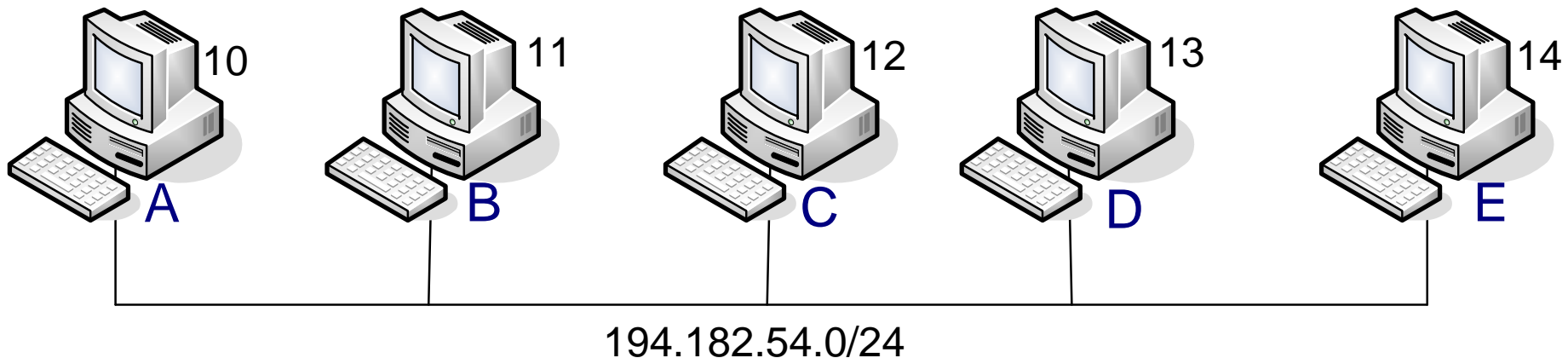
- Ethernet adapters listens for
 - Ethernet frames to its own MAC address
 - Frames to the MAC address FF-FF-FF-FF-FF-FF
- Sending frames to FF-FF-FF-FF-FF will be received by all adapters on the physical network





ARP

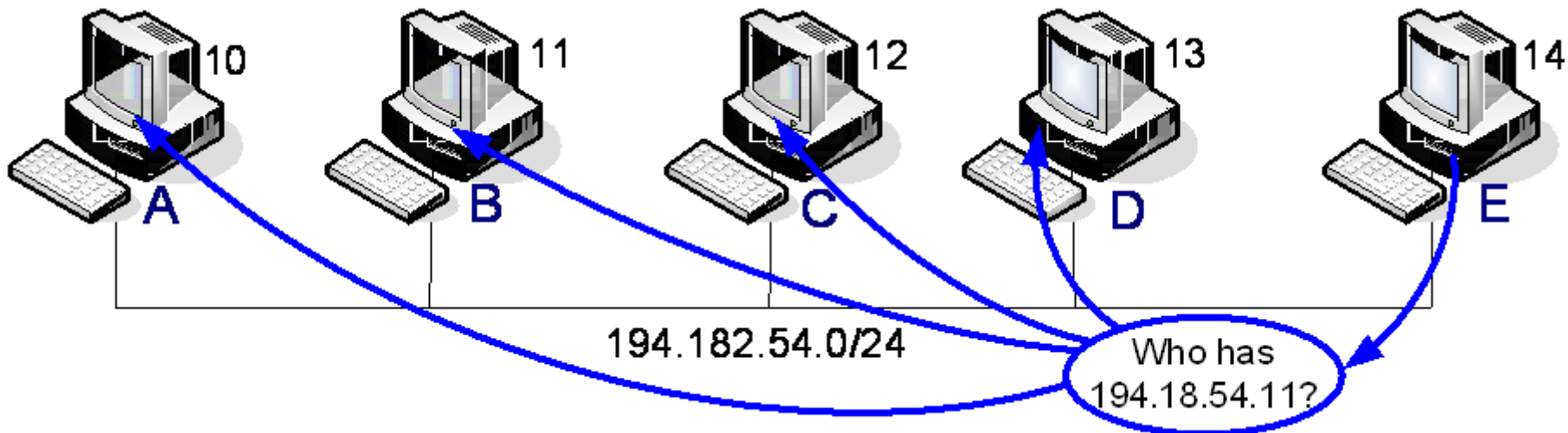
- To exchange unicast IP packets between two hosts the transmitting host need to know the MAC address of the receiving host.
- ARP (Address Resolution Protocol) is used to find the MAC address of a given hosts IP address.





ARP

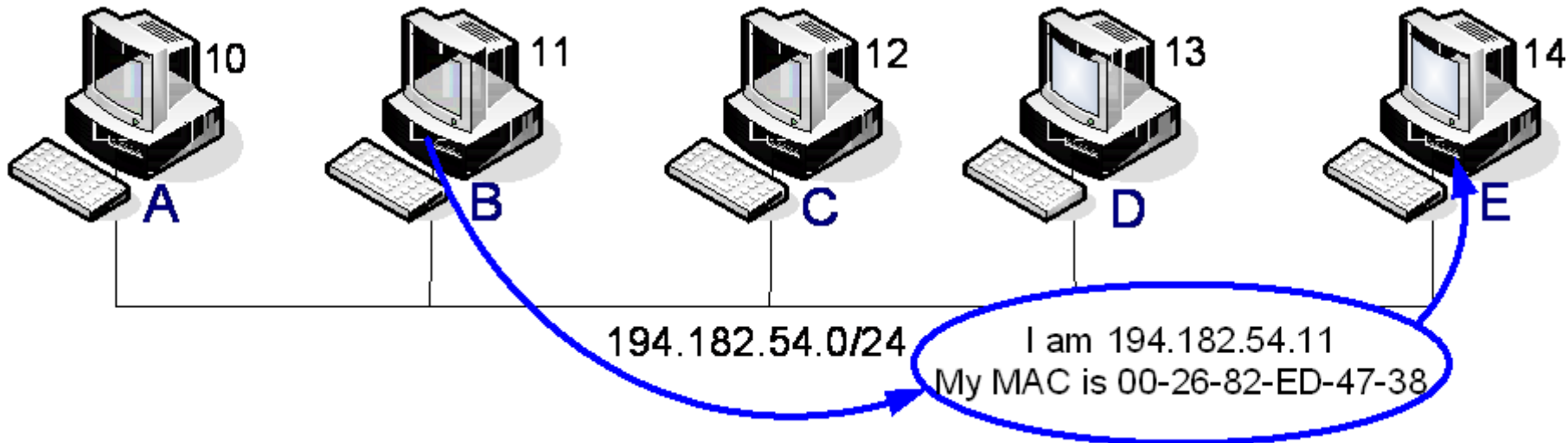
- If host E – 194.182.54.14 – wants to communicate with host B – 194.168.54.11 – it need to know its MAC address first.
- Host E broadcasts on the physical network
 - Who has the IP address 194.182.54.11 ??
 - Host B responds with its MAC address





ARP

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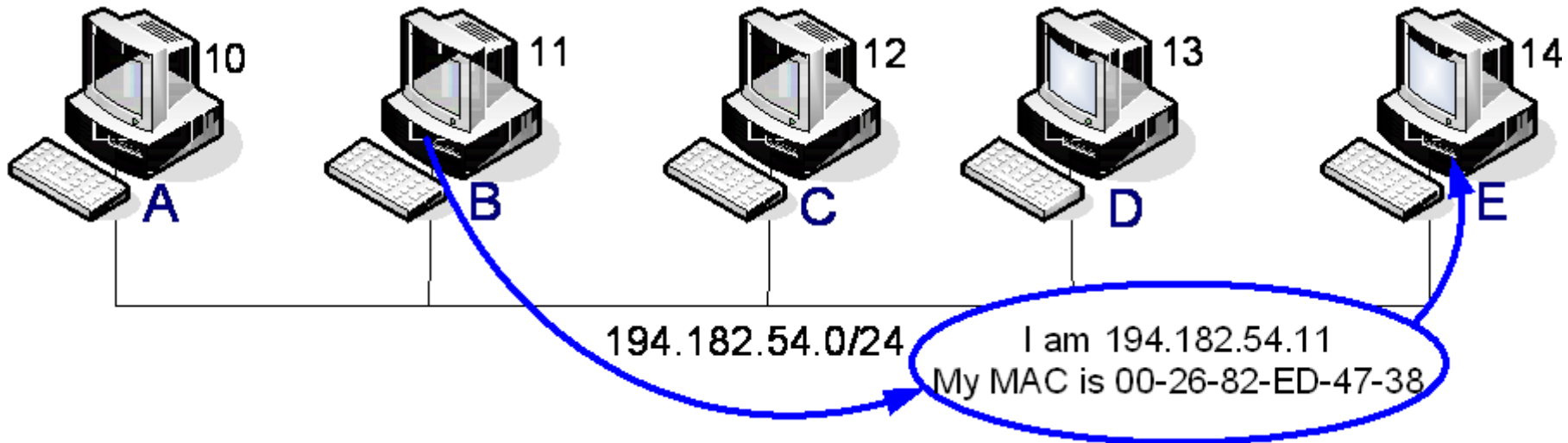




The ARP table

```
Command Prompt
C:\temp>arp -a

Interface: 194.182.53.13
Internet Address      Physical Address      Type
194.182.53.1         01-00-5e-7f-ff-fa    dynamic
194.182.53.12        01-00-5e-7f-ff-fd    dynamic
194.182.53.11        00-26-82-ed-47-38    dynamic
```





ARP - Task

- Show the arp cache on you owne computer using the `arp -a` command
- What is the MAC address of the default gateway?
- Add the last 4 digits of the MAC to your diagram
- Which company is your default GW from? (OUI)

