

Remote access

- Consider that remote access is possible both text-based and graphically.
 - ssh: “secure shell”, log in on a remote system to get access to a CLI running on that remote system.
 - RDP protocol: get a “remote desktop” on a remote Windows system. Microsoft Remote Desktop Client.

Layered approach

- The monolithic approach that we have just seen can also be strictly layered.
- Each layer is constructed based on the layer below it.
- First system built in this way: THE system, TH Eindhoven, 1968.

Layered approach (2)

- Example layer structure:

Layer	Function
5	The Operator
4	User programs
3	I/O management
2	Operator-process communication
1	Memory management
0	Processor allocation and scheduling

- Finally linked into a single object, so only a design aid!

Layered approach (3)

- In MULTICS concentric rings were used instead of layers.
- Inner rings were more privileged & protected
- Only accessible using a trap instruction, so protection enforced by hardware.