OSI Model Acronyms

What is the OSI Reference Model?

The Open Systems Interconnection (OSI) model is a way to represent how devices communicate with one another. It consists of seven layers:

1. Physical layer
2. Data link layer
3. Network layer
4. Transport layer
5. Session layer
6. Presentation layer
7. Application layer

You receive data from layers 1 through 7, and data transfer occurs in the opposite direction. That's because every layer of the OSI Model handles a specific job and passes data to and from the layers above and below itself. For example, the data link layer is responsible for media access control and logical link control.

Although building computing devices doesn't require the OSI model, it's proven helpful in troubleshooting computer networking problems. That's because the OSI model gives technicians an in-depth method to dissect the network problem to find its root cause. The solution often becomes clear by narrowing it down to a specific model layer.

Learn more about the OSI model with our cheat sheet here.

OSI Layers

The infographic below summarizes the seven layers of the OSI reference model. If you need a quick refresher, this is the image to download.

The 7-Layer OSI Model

No.	Layer	Function	Data unit	Hardware	Protocols
7	Application	Human-computer interaction through applications that access network services	Message/data	Gateway	UPnP, DHCP, DNS, HTTP, HTTPS, NFS, NTP, POP3, SMTP, SNMP, FTP, Telnet, SSH, TFTP, IMAP
6	Presentation	Data formatting and encryption/ decryption	Message/data	Gateway redirector	TLS, SSL, AFP
5	Session	Inter-host communication	Message/data	Gateway	NetBIOS, RPC, SMB, Socks
4	Transport	Data transmission	TCP: segment; UDP: datagram	Gateway	TCP, UDP, SCTP
3	Network	Path determination and logical addressing	Packet, datagram	Router, Brouter	ARP, IP, NAT, ICMP, IPsec, ICMP (ping)
2	Data Link	Physical addressing	Frame, cell	Switch, bridge, NIC	ARP, Ethernet, L2TP, LLDP, MAC, NDP, PPP, PPTP, VTP, VLAN
1	Physical	Binary signal transmission over physical media	Bit, frame	Cables, modem, hub, repeater, NIC, multiplexer	Ethernet, IEEE802.11, ISDN, USB, Bluetooth

How to Remember the Layers

This section has two subsections: OSI model acronyms from the physical layer to the application layer and in the reverse direction. The more ridiculous the mnemonic appears, the more memorable it becomes.

Physical → Application	Application → Physical
Please Do Not Throw Sausage Pizza Away	All People Seem To Need Data Processing
Play Dough Nunchucks To Smash Antiques	All Pros Search Top Notch Donut Places
Pete Doesn't Need To Sell Pickles Anymore	Alotta Pros Solve The Nation's Digital Problems
Piper Doesn't Need To Sell Pepper Anymore	A Penguin Said That Nobody Drinks Pepsi
Parents Definitely Need To Solve Problems Always	A Priest Saw Two Nuns Doing Pushups
Public Discourse Nonsense That Suave Pranksters Appreciate	Atypical Problems Swarm This New Digital Platform
People, Do Not Teach Smart People Acronyms	All Prudent Students Take Notes During Picnics

Receiving Data: Physical Layer → Application Layer

The physical layer, data link layer, network layer, and so on, up to the application layer, is the direction you receive data in a computer network. Hence, the OSI mnemonic takes the form P-D-N-T-S-P-A.

- **Please Do Not Throw Sausage Pizza Away**
  - This absurd acronym is popular because of the mismatch between the formal phrasing of "please do not" and the casualness of a pizza.

- **Play Dough Nunchucks To Smash Antiques**
  - We tamed a mnemonic with the potential for violence, thanks to the nature of playdough.
- **Pete Doesn't Need To Sell Pickles Anymore**
  - Adapted from the tongue twisters "Peter picked a peck of pickled pepper…" and "She sells sea shells on the sea shore."
- **Piper Doesn't Need To Sell Pepper Anymore**
  - Same as above.
- **Parents Definitely Need To Solve Problems Always**
  - This acronym is for the moms and dads out there.
  - You can replace "Parents" with Presidents, Pastors, Priests, Professionals, Possums, and any other plural noun beginning with P.
- **Public Discourse Nonsense That Suave Pranksters Appreciate**
  - This acronym is for those who read/watch the news by habit.
- **People, Do Not Teach Smart People Acronyms**
  - The reason is smart people can come up with their own.

You may also construct mnemonics where D-N-T could be the words "do not" followed by a verb beginning with T, the phrase "doesn't need to," or an inside joke. The possibilities are endless.

Transmit Data: Application Layer → Physical Layer

The application layer, presentation layer, session layer, and so on, down to the physical layer, is the direction you send data in a computer network. Hence, the OSI mnemonic takes the form A-P-S-T-N-D-P.

- **All People Seem To Need Data Processing**
  - This data-related mnemonic is the most popular acronym for serious students who want acronyms to match the description of the OSI model.

- **All Pros Search Top Notch Donut Places**
  - Why donuts? Why not something else?
- **Alotta Pros Solve The Nation's Digital Problems**
  - Experts are indeed a major driving force in technological innovation.
  - "Alotta" is an informal contraction of "A lot of."
- **A Penguin Said That Nobody Drinks Pepsi**
  - Another ridiculously memorable mnemonic because, as we all know, the penguin who said this loves Pepsi.
- **A Priest Saw Two Nuns Doing Pushups**
  - Such a headline might appear on a religious satire website.
- **Atypical Problems Swarm This New Digital Platform**
  - You might find similar headlines on popular technology news sites.

- **All Prudent Students Take Notes During Picnics**
  - Never stop learning, eh?

Try coming up with your own OSI acronym in either direction. Apart from having a personalized memorization device, you might find the process entertaining and your motivation for studying the OSI model heightened.

Conclusion

We hope this list of OSI model acronyms helps you study for your examinations and work in networking in a light and fun way as a professional. For more resources on networking, check out our articles and courses on the subject, and remember to leave a comment below.