
Alice and Bob look at PLUS

— A momentary diversion into —
Architecture

Endpoints tell each other about transport state



Endpoints tell each other about transport state



SYN



Endpoints tell each other about transport state



SYN-ACK



Endpoints tell each other about transport state



ACK



All that is in cleartext



Devices on path can see the exchange. And they may act on it by:

- ❑ adding state to tables
- ❑ opening firewall pinholes
- ❑ setting aside various resources

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Devices on path can see the exchange. And they may act on it:

- ❑ adding state to tables
- ❑ opening firewall pinholes
- ❑ setting aside various resources
- ❑ **copying everything to vast data stores.**

Enter Encryption

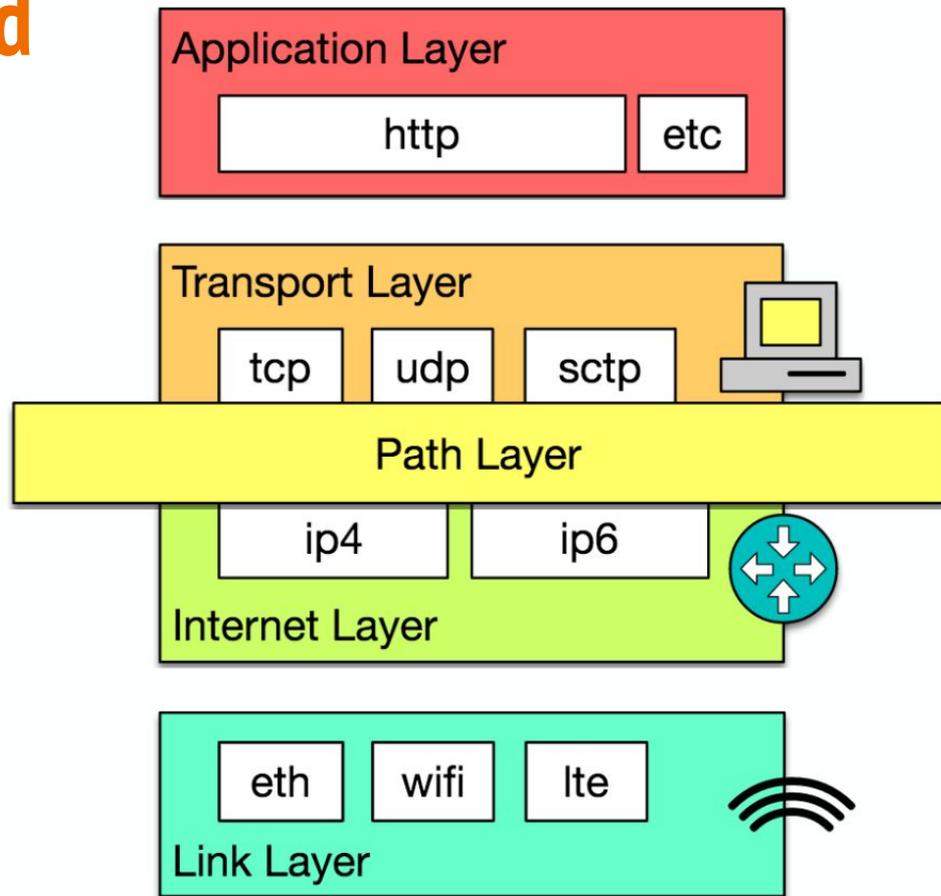
To dodge that last bullet, we're encrypting more data [and more metadata](#).

But that leaves all the other items in a more fragile state, because the network elements were using them to maintain the path between Alice and Bob.

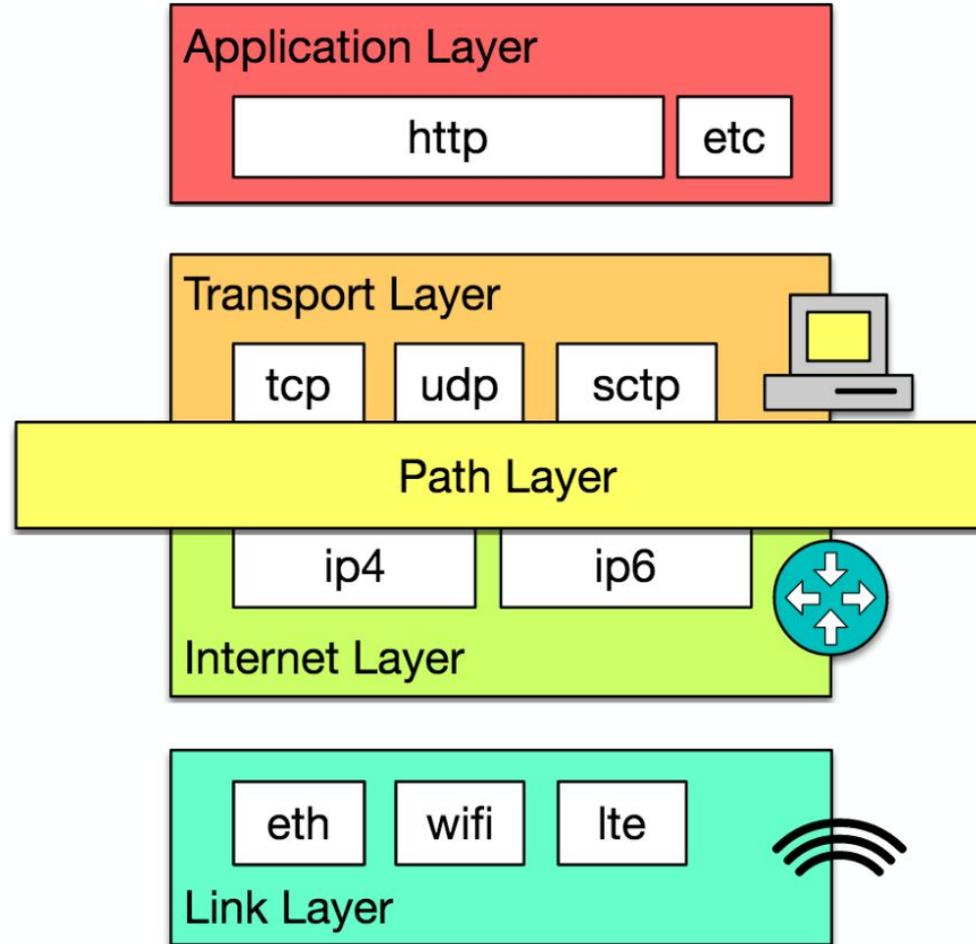
An implicit layer revealed

Those cleartext messages were from Alice to Bob, and vice versa. But they created a set of signals to the path elements as well.

That was, and is, an implicit path layer that we don't usually discuss.

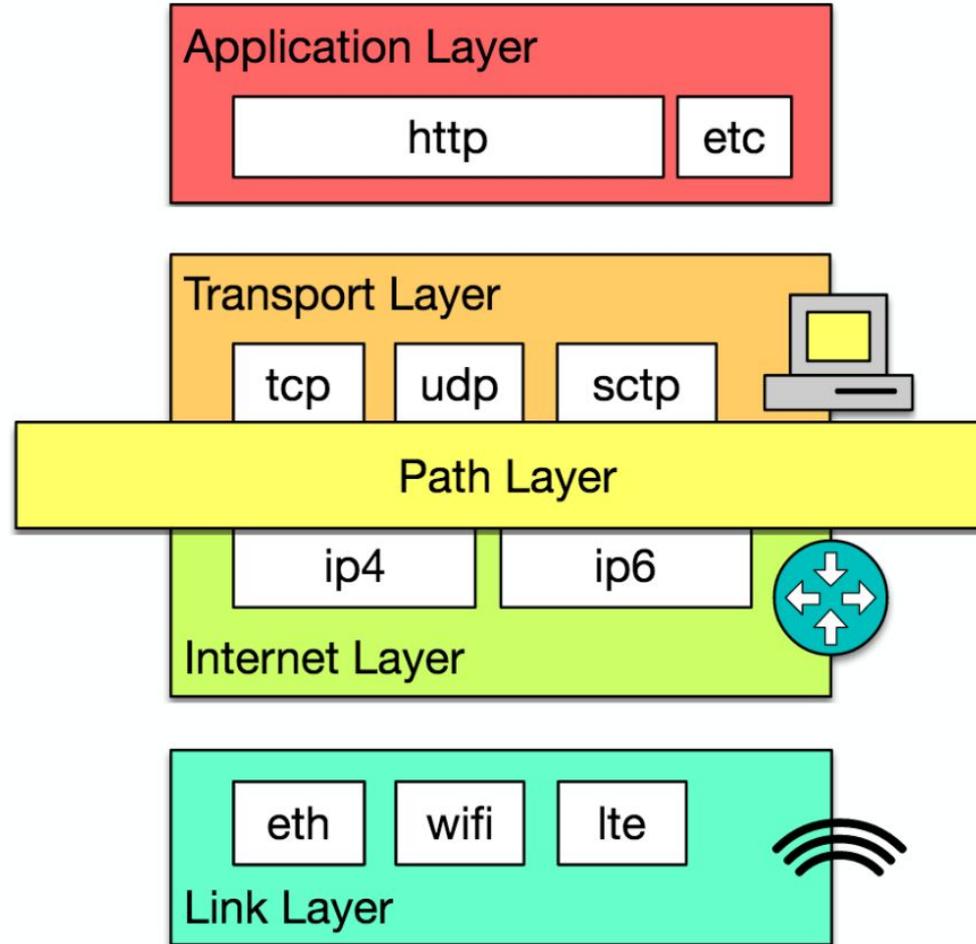


Options



Options

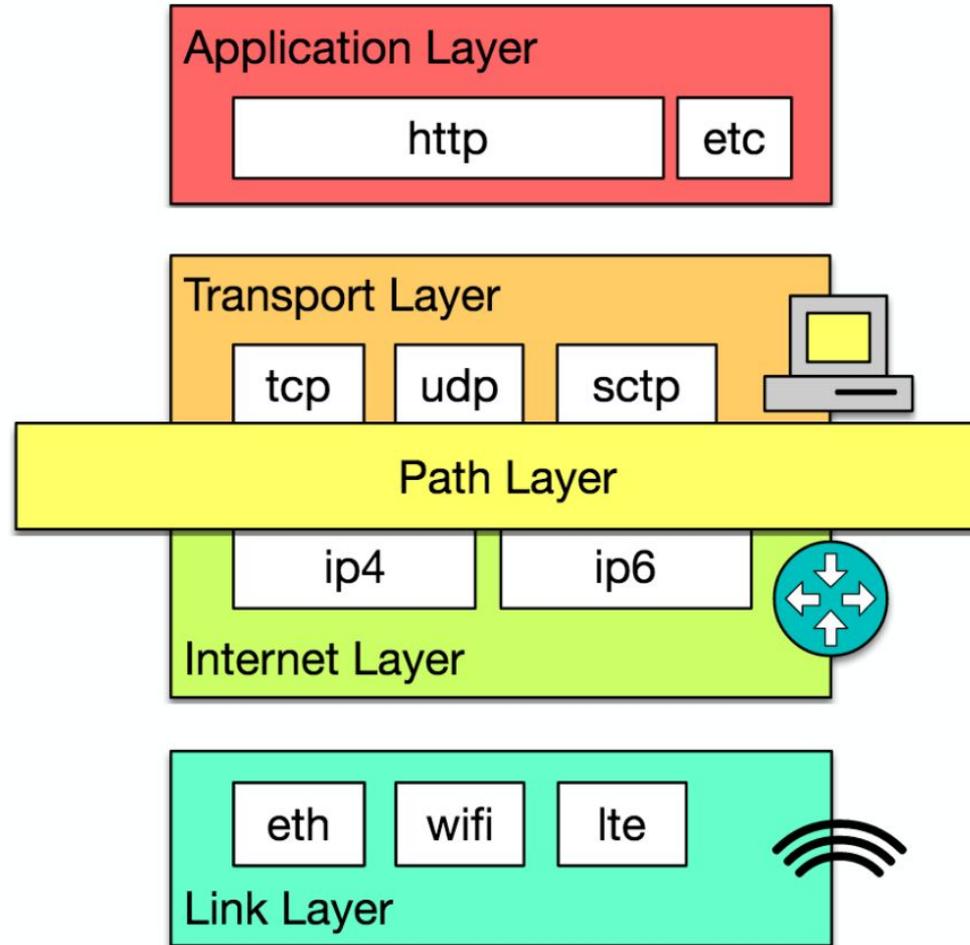
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Options

You could use Internet layer facilities to send these signals.

You could bolt these signals onto each transport.

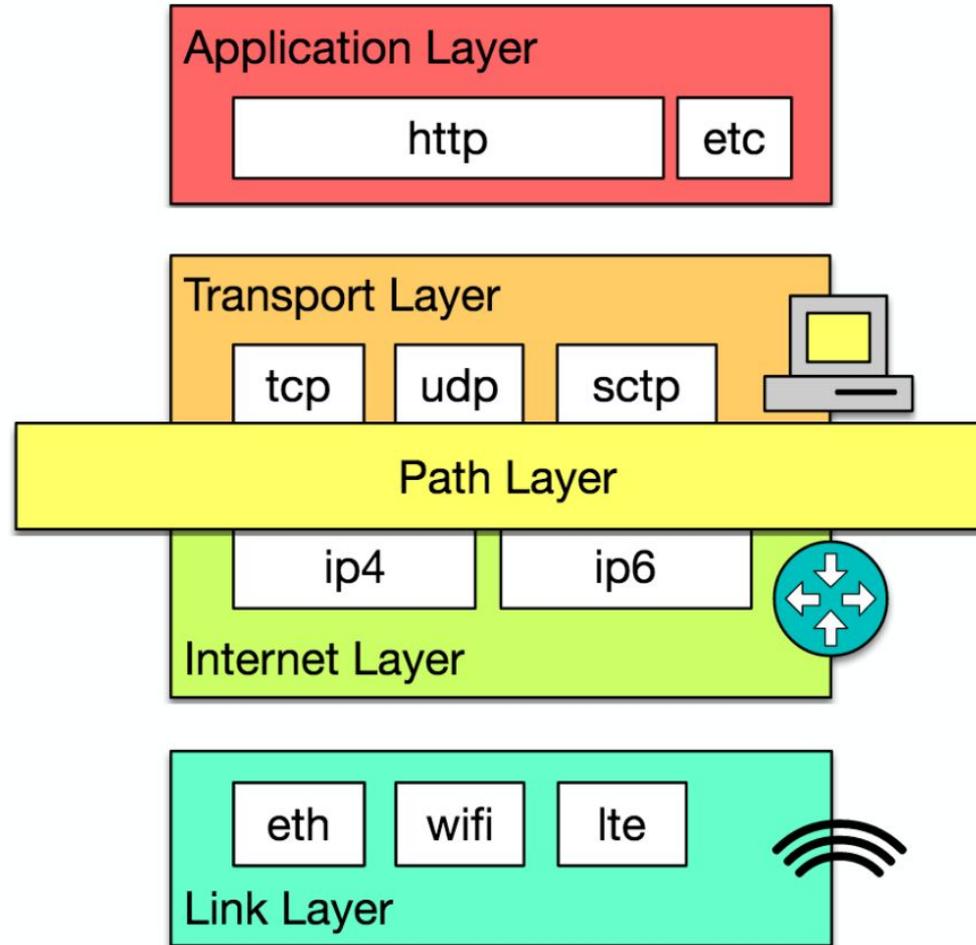


Options

You could use Internet layer facilities to send these signals.

You could bolt these signals onto each transport.

You could do nothing.



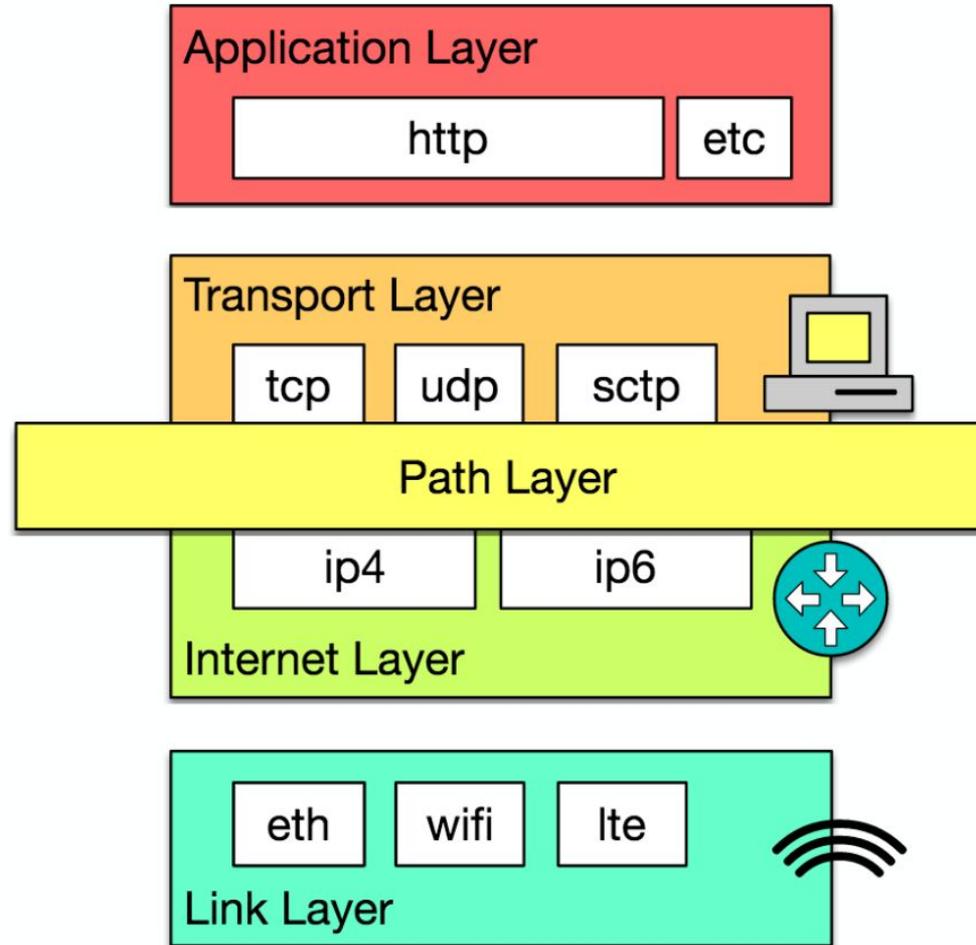
Options

You could use Internet layer facilities to send these signals.

You could bolt these signals onto each transport.

You could do nothing.

You could restore the implicit signal by encrypting less.



Or

Or

We could make that
implicit layer explicit.

