

Getting Cloud Networking into your Head

Your Handy Dandy Tool for Troubleshooting Every Cloud Issue

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“Work hard, be kind” ❤️

I would like to make a phone call (not really)



Is this local, long distance, or international?



Which phone am I using?



... it's ringing! (cue existential dread)



Did someone pick up? Do I understand them?



Why did I call this person in the first place?

I would like to make a network call (really)



Is this across my local network, region, or public Internet?



Is my source my network, or public Internet?



I made the request and it was routed!



Did the call connect on the port / protocol?



Perform the desired action and hang up.

What is this all about?

Mental models help to learn complex things.



Clouds are complicated, so let's make a model.



Things will go wrong.



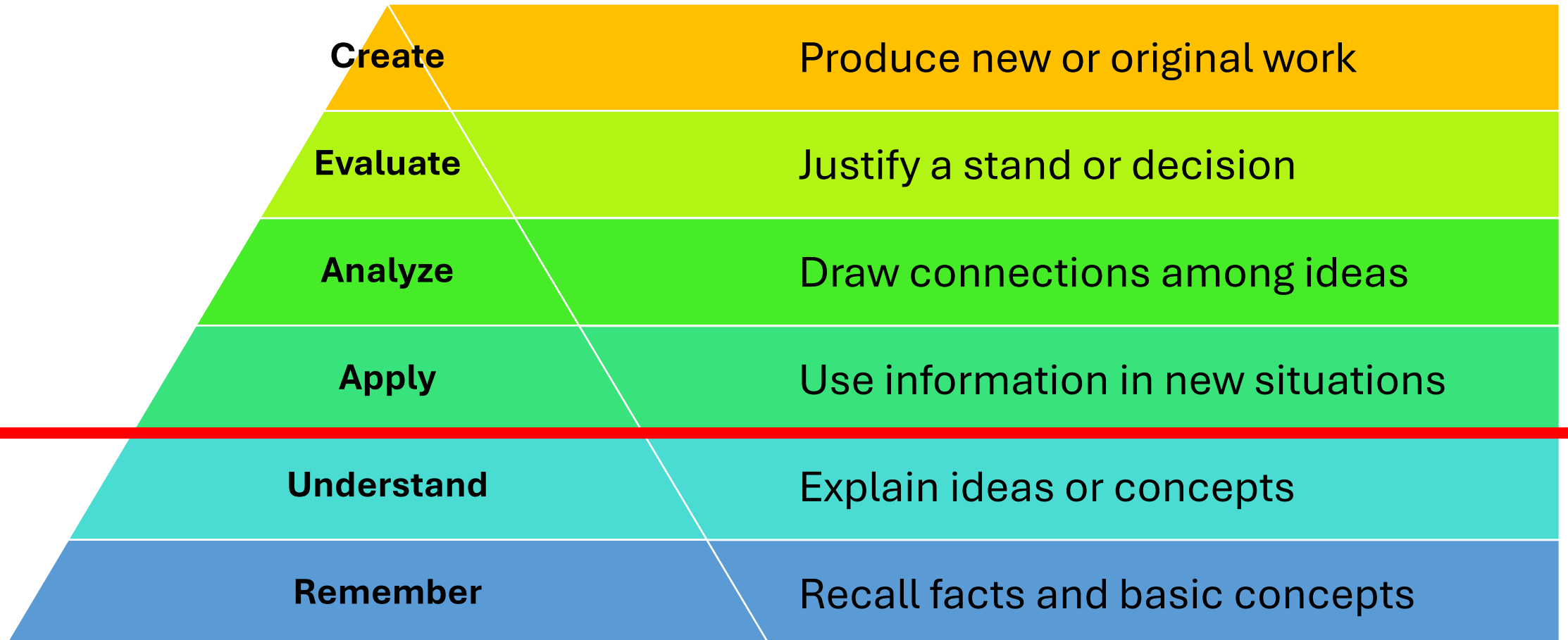
How do we resolve our issues?



Learning and Mental Models

Bloom's Taxonomy

Framework for learning, teaching, and educational achievement

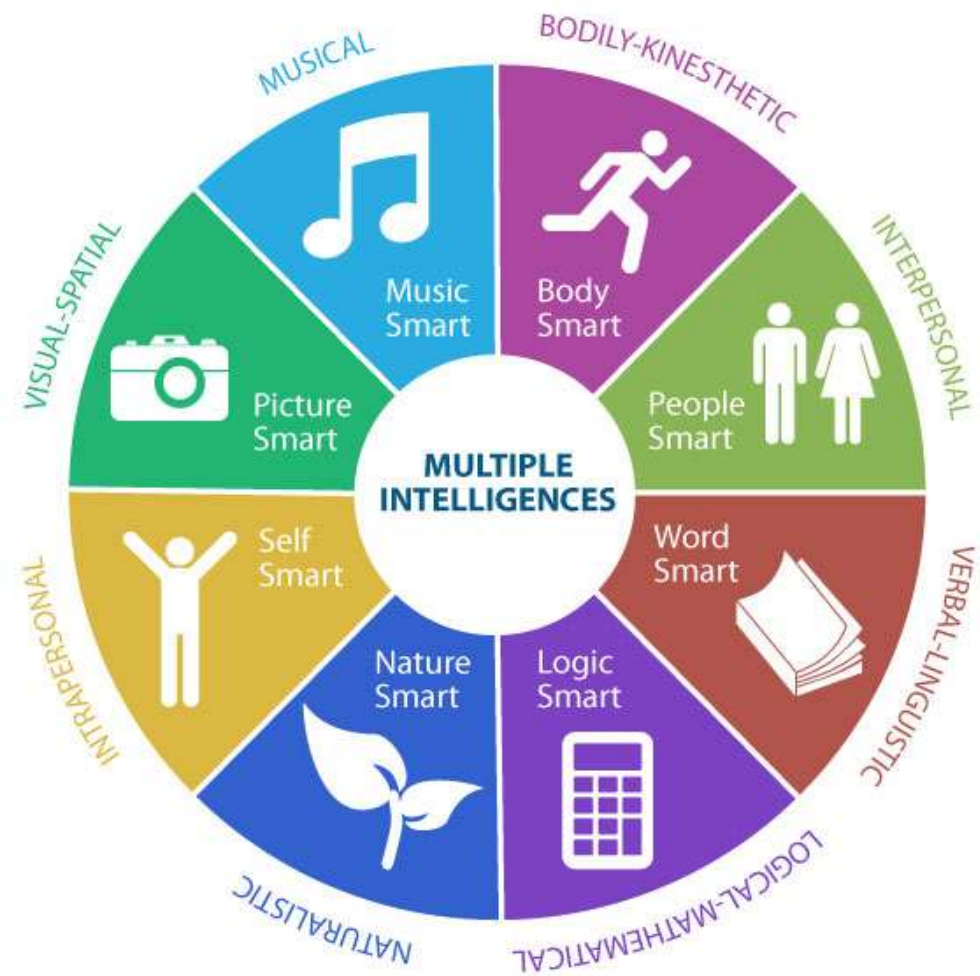


<https://www.bloomstaxonomy.net/>

Gardner's Theory of Multiple Intelligences

Mix multiple types of learning to improve absorption and retention of new information.

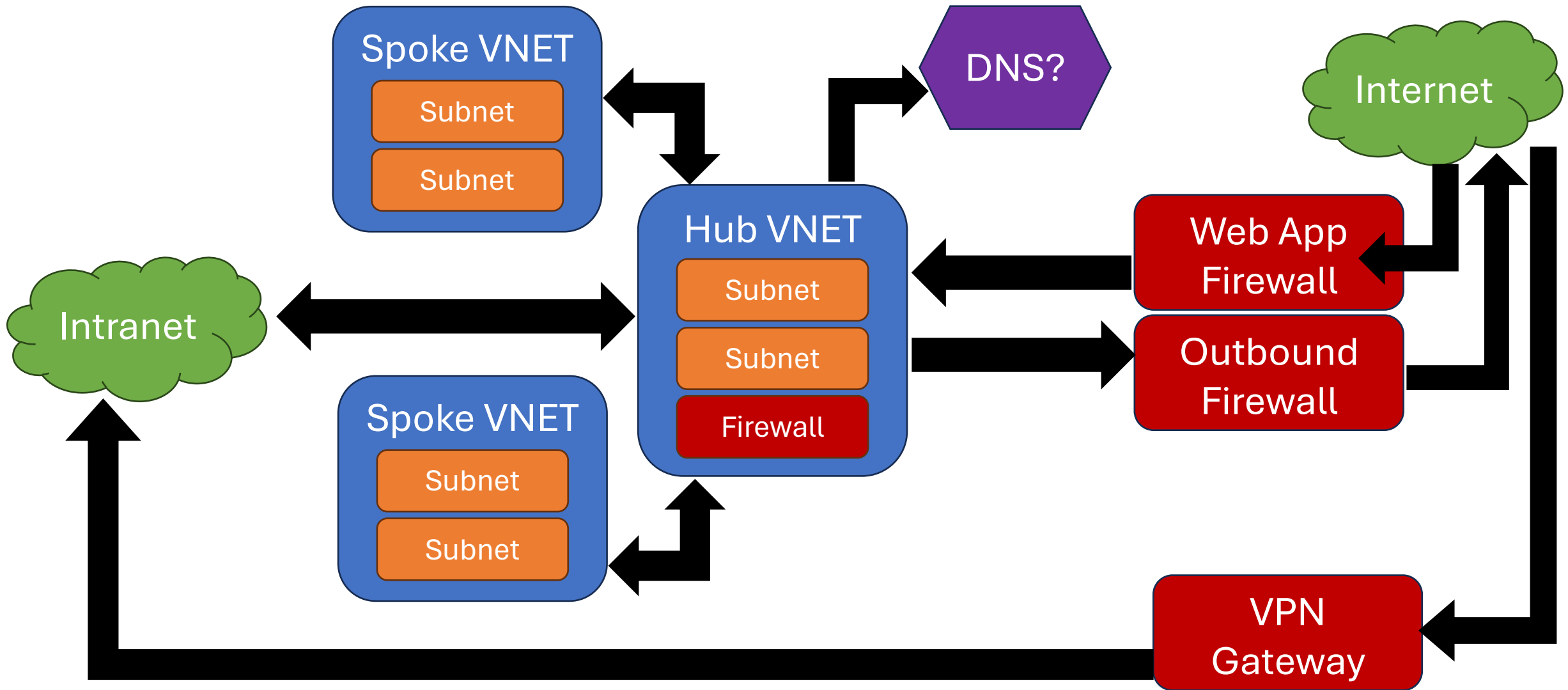
Some learning and teaching methods will be more effective for different people.



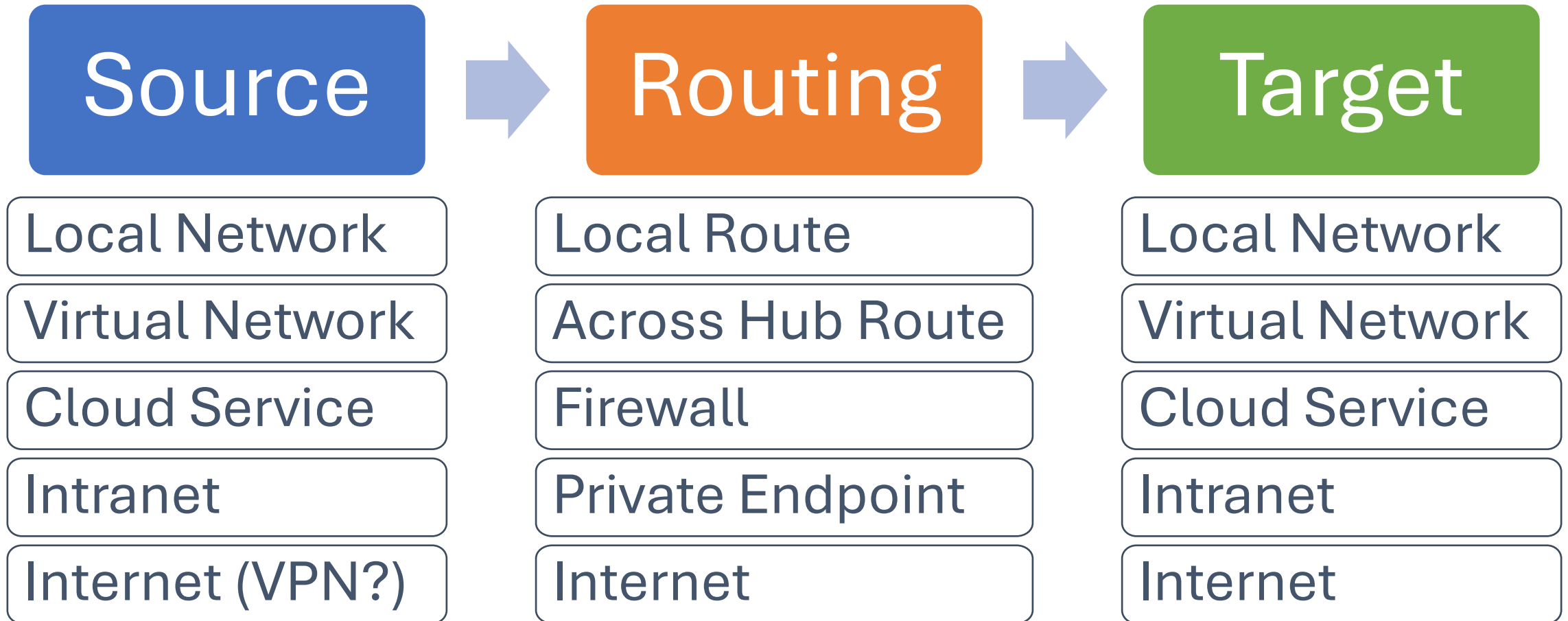
A large, fluffy white cloud is the central focus, set against a clear blue sky. Four wooden ladders are positioned on a green ground surface, leaning against the base of the cloud. The ladders are arranged in a way that suggests an attempt to reach the cloud. The overall scene is surreal and symbolic.

Clouds are complicated.

Cloud Networks are Complicated



Anatomy of a Network Request





Things will go
wrong

Issues at the Source

Source

Local Network

Virtual Network

Cloud Service

Intranet

Internet (VPN?)

DNS Resolution

Identify Source Location

Firewall Rules or
Network Security Groups

Issues in Routing

Routing

Local Route

Across Hub Route

Firewall

Private Endpoint

Internet

Misconfigured Routes

IP Address Overlaps

Firewall Rules

SSL Proxying

Issues at the Target

Target

Local Network

Virtual Network

Cloud Service

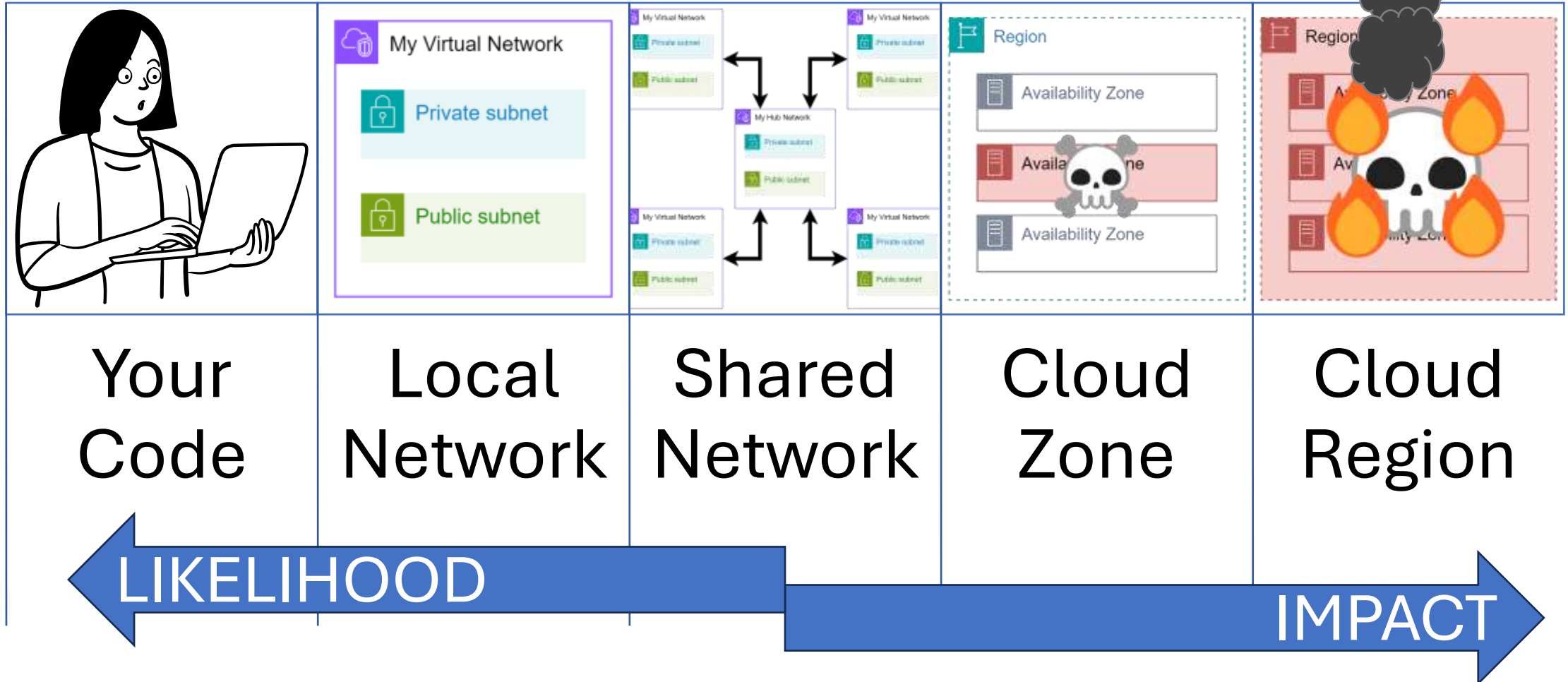
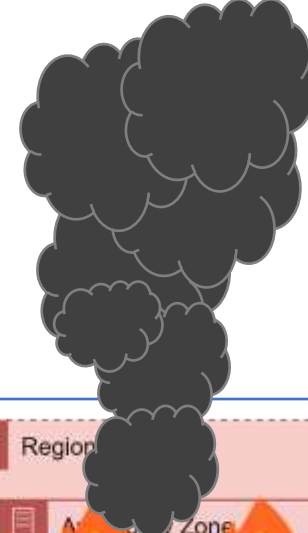
Intranet

Internet

Firewall Rules or
Network Security Groups

Permission Issues

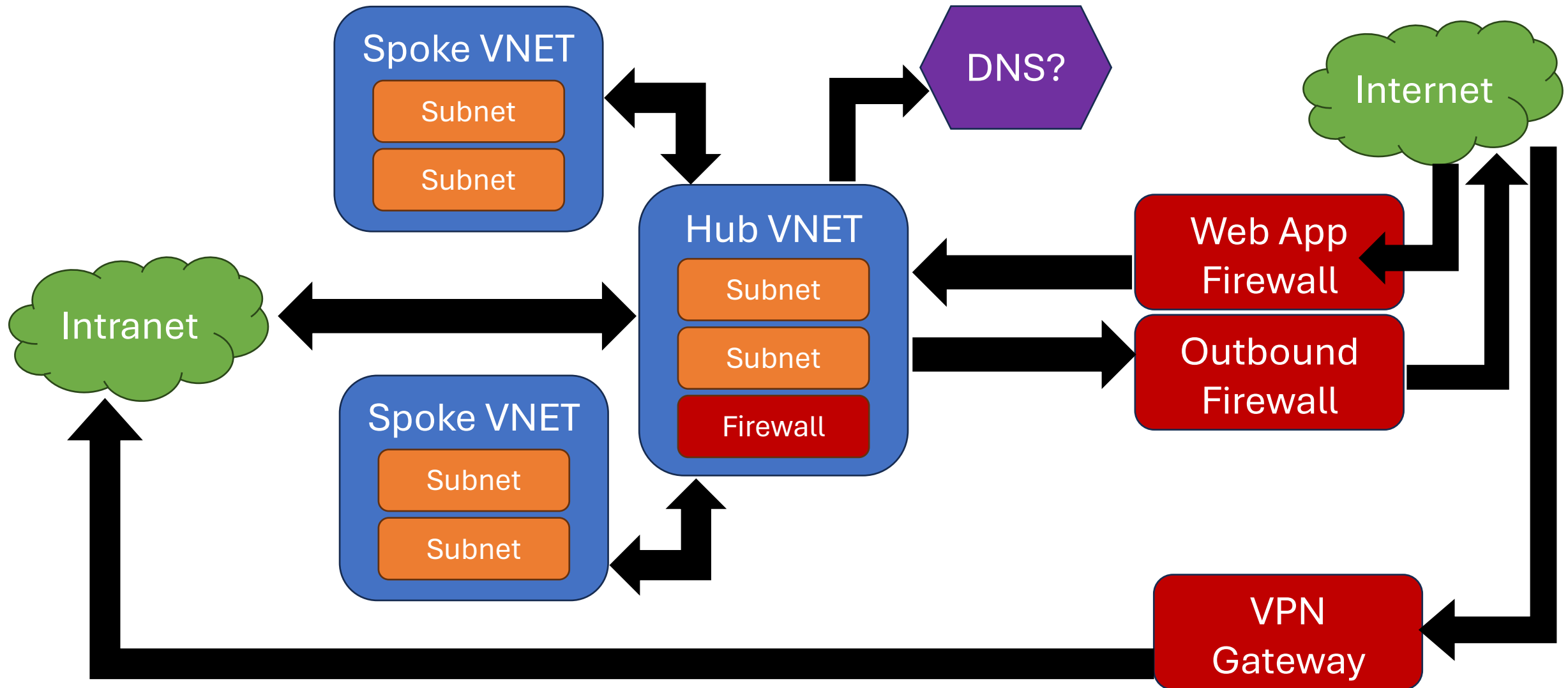
What could go wrong in the cloud?



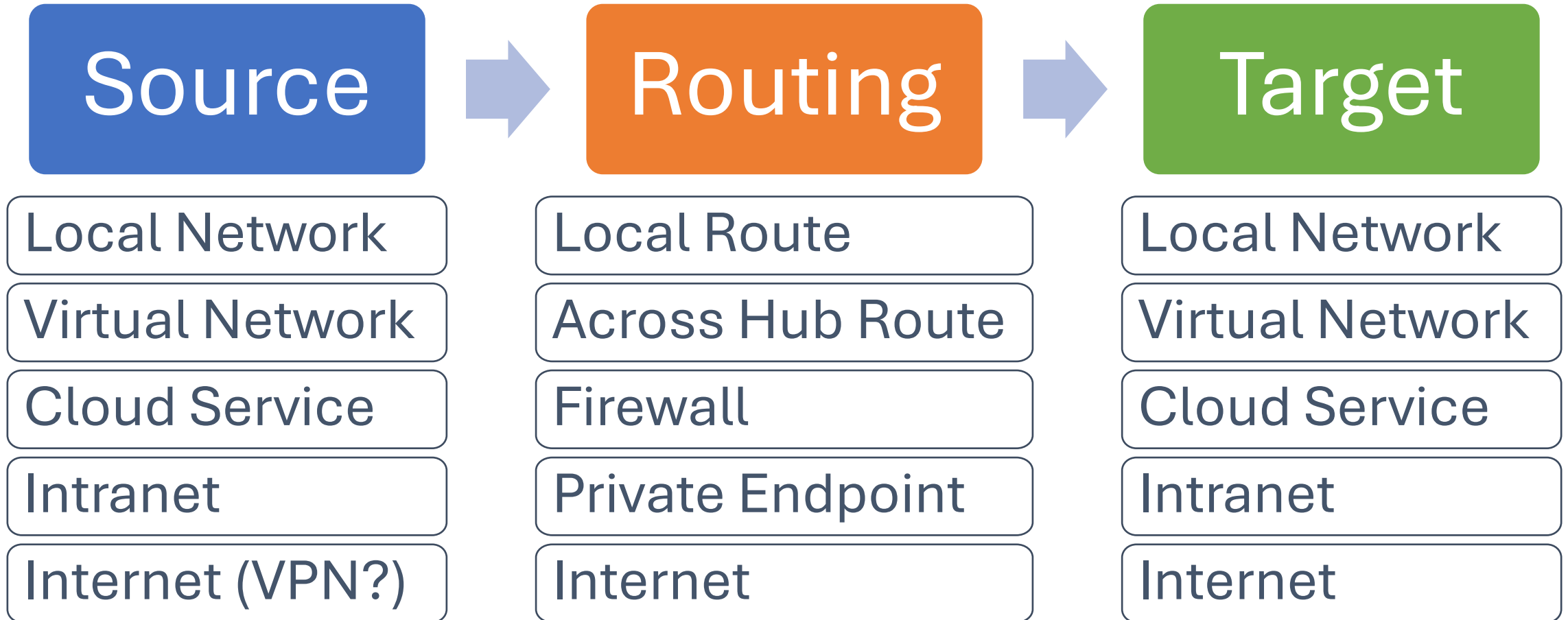
How do we resolve
our issues?



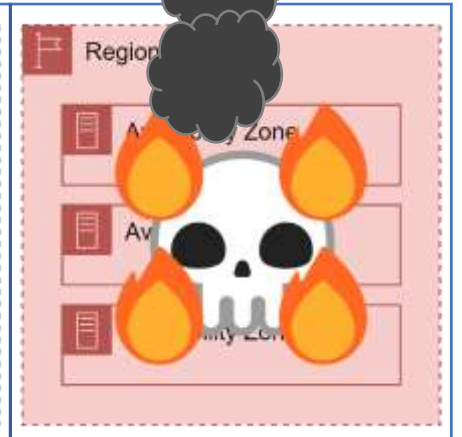
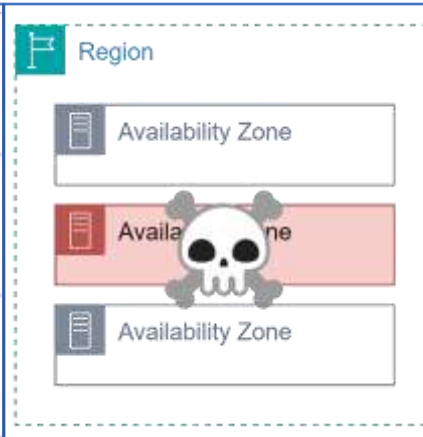
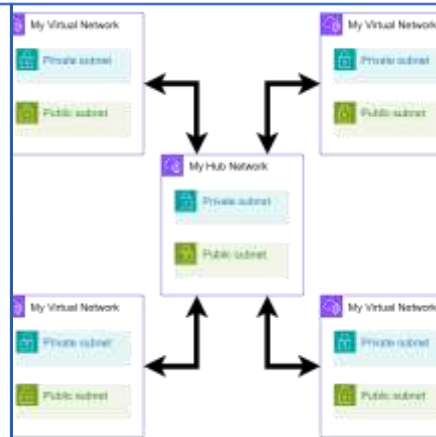
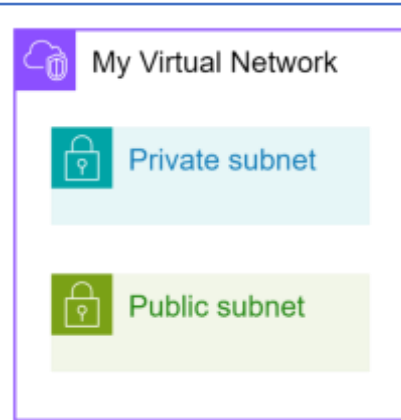
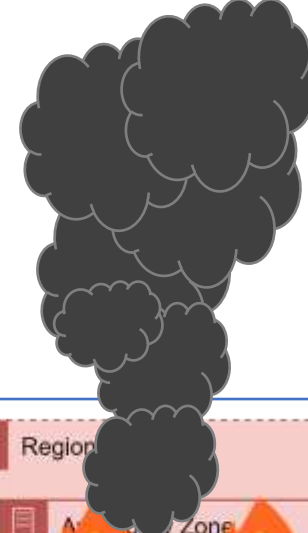
Draw a picture of your network (and share it)



Make a checklist (and share it)



Submit a ticket to the *right* queue



Bug Report

Ops Team or IT Support

Network or Firewall Team

Cloud Vendor Escalation

Preferred Spiritual Support

Know your organization's process and use it!

Work together to solve the issue



Be excellent
to each other



Thank you for being here!

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