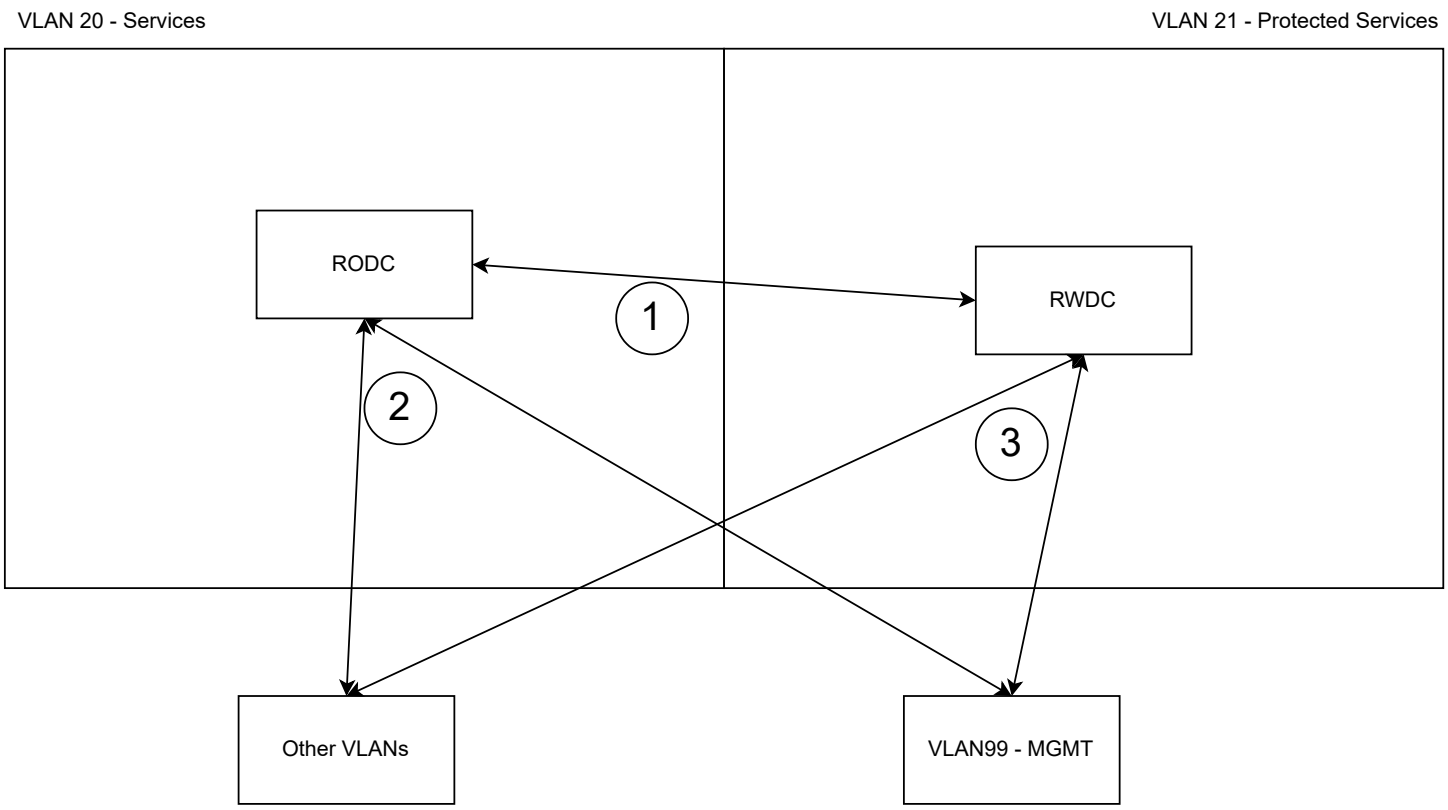
Identity Services Ecosystem Data Flows



Data Flows			
ID	Port/Proto	Description	Controls
1	636/TCP 3269/TCP 88/TCP-UDP 53/TCP-UDP 135/TCP 49152-65535/TCP 445/TCP	Domain Controller Replication, including LDAPS, Global Catalog, Kerberos, DNS, and RPC control and data, and SMB.	Inter-VLAN traffic will be evaluated at the core firewall level, and restricted with Proxmox VM-level firewalls.
2	88/TCP-UDP 53/UDP 445/TCP	Read-Only operations, including Kerberos, DNS lookups, and GPO downloads.	SRV record weights preference all hosts to RODCs for all operations, which refer write operations to WDCs. Site segmentation also ensures DC Locator will locate RODCs first in all cases except for the Protected Services VLAN. Inter-VLAN traffic will be evaluated at the core firewall level and restricted with Proxmox VM-level firewalls.
3	88/TCP-UDP 53/UDP 445/TCP 5986/TCP	Must-Write operations and domain admin functions, including declarative specifications for the domain, users, and groups, as well as adhoc changes included Group Managed Service Accounts (gMSAs).	SRV record weights preference all hosts to RODCs for all operations, which refer write operations to WDCs. Site segmentation also ensures DC Locator will locate RODCs first in all cases except for the Protected Services VLAN. Inter-VLAN traffic will be evaluated at the core firewall level and restricted with Proxmox VM-level firewalls.

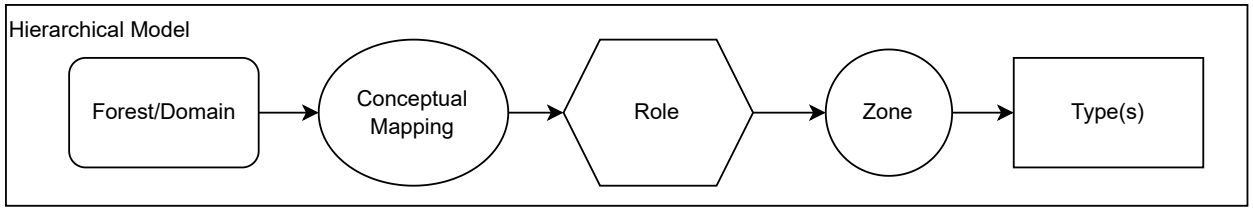
Active Directory Site Architecture				
ID	Site Name	Subnets	DC Type	Description
1	Protected-Core	10.0.21.0/24	W	Only the protected services get direct access to the WDCs via DC Locator. This IP Space correlates with the Core physical site.
2	Primary-Core	10.0.20.0/24 10.0.40.0/24 10.0.99.0/24	RO	The Primary set of IP spaces at the Core Physical Site, associated with the RODCs at the Core site. No domain joins on 10.0.99.0/24; only DC Locator
3	DMZ-Core	10.0.30.0/24	RO	The DMZ at the Core physical site.

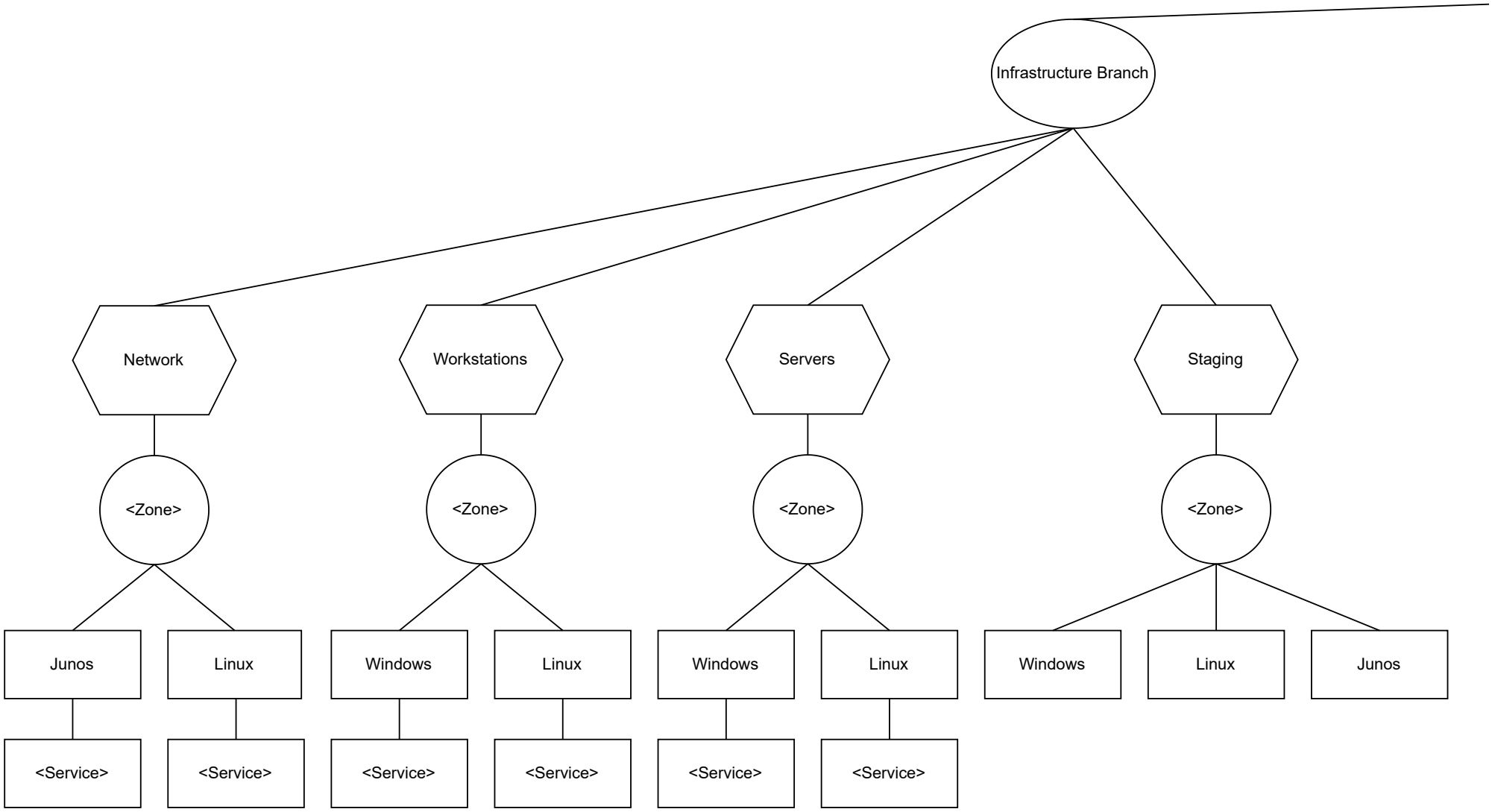
Site Links				
ID	Site1	Site2	Directionality	Description
1	Protected-Core	Primary-Core	Bi-Directional	Always on, cost-biased towards RODCs, and not schedule limited. Sites are physically at the same location, so bandwidth/latency isn't a concern
2				

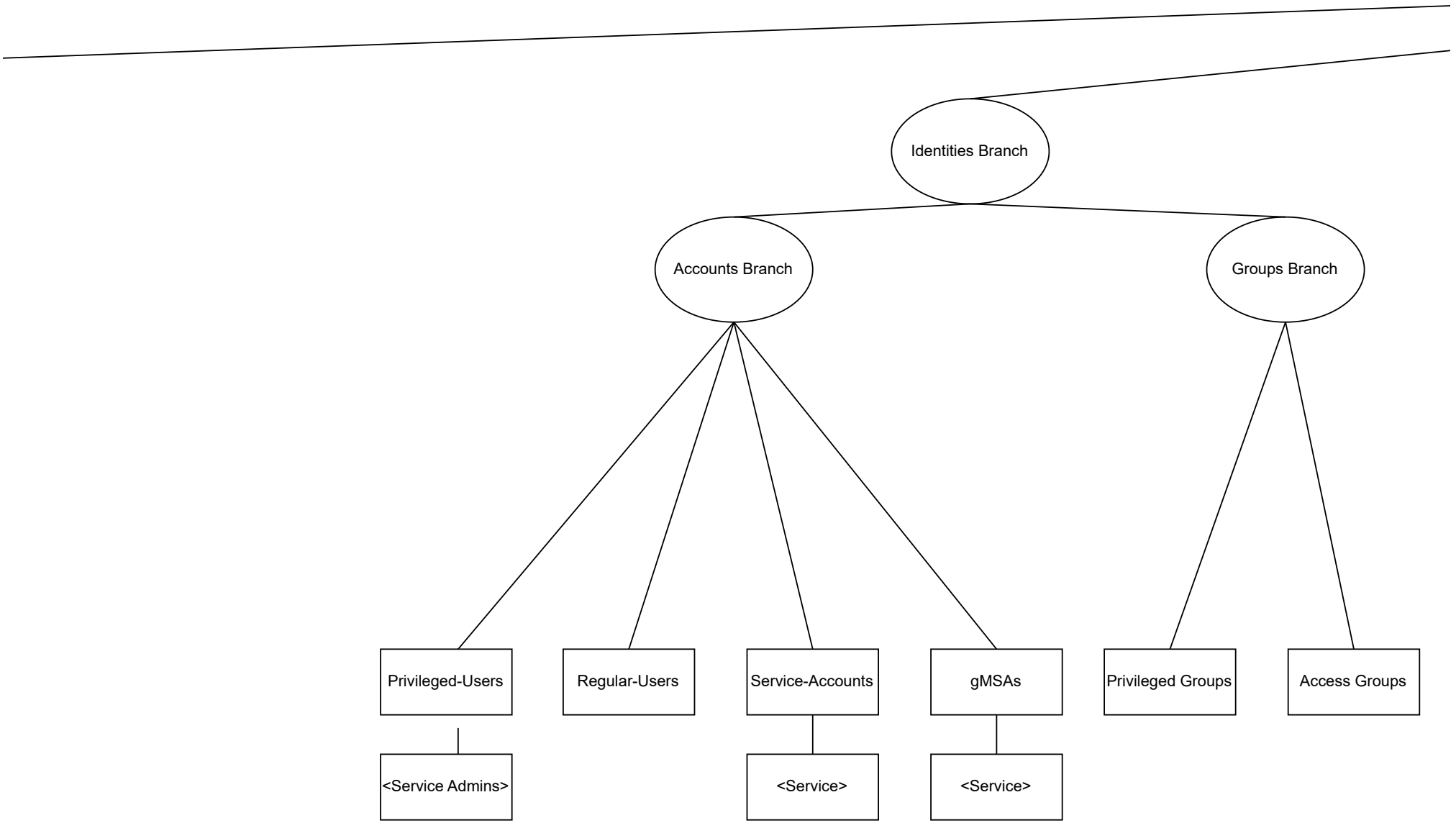
Must-Write Use Cases			
ID	Application	Function	Description
1	General	Domain Joins	Domain Joins possible from any subnet in the domain; will hit the RODC first before getting referred to the RWDC.
2	General	DNS Updates	DHCP hosts can update their own DNS records; will hit the RODC first before getting referred to the RWDC.
3	General	gMSA	Group Managed Service Accounts (gMSAs) are service accounts that can manage their own password, removing the need for a human to set a potentially insecure password. They need direct access to RWDCs to retrieve and roll their credential.
4	TBD	Schema Mods and Attribute Stamping	TBD - will be filled in once applications are identified
5			

FSMO Roles			
Role	Host	Drift?	Description
PDCe	Core RWDC	NO	Responsible for synchronizing time in the enterprise
Schema Master	Core RWDC	NO	Schema Master controls updates to the directory schema
Domain Naming Master	Core RWDC	NO	Responsible for making forest-wide changes to the domain name space; the only DC that can add or remove a domain from the directory.
RID Master	Core RWDC	NO	Processes RID Pool requests and moves objects between domains
Infrastructure Master	Core RWDC	NO	Updates and maintains object SIDs and DNs. All DCs will host Global Catalog

Forest OU Structure



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Groups Branch
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Regular-Users
Service-Accounts
gMSAs
Privileged Groups
Access Groups
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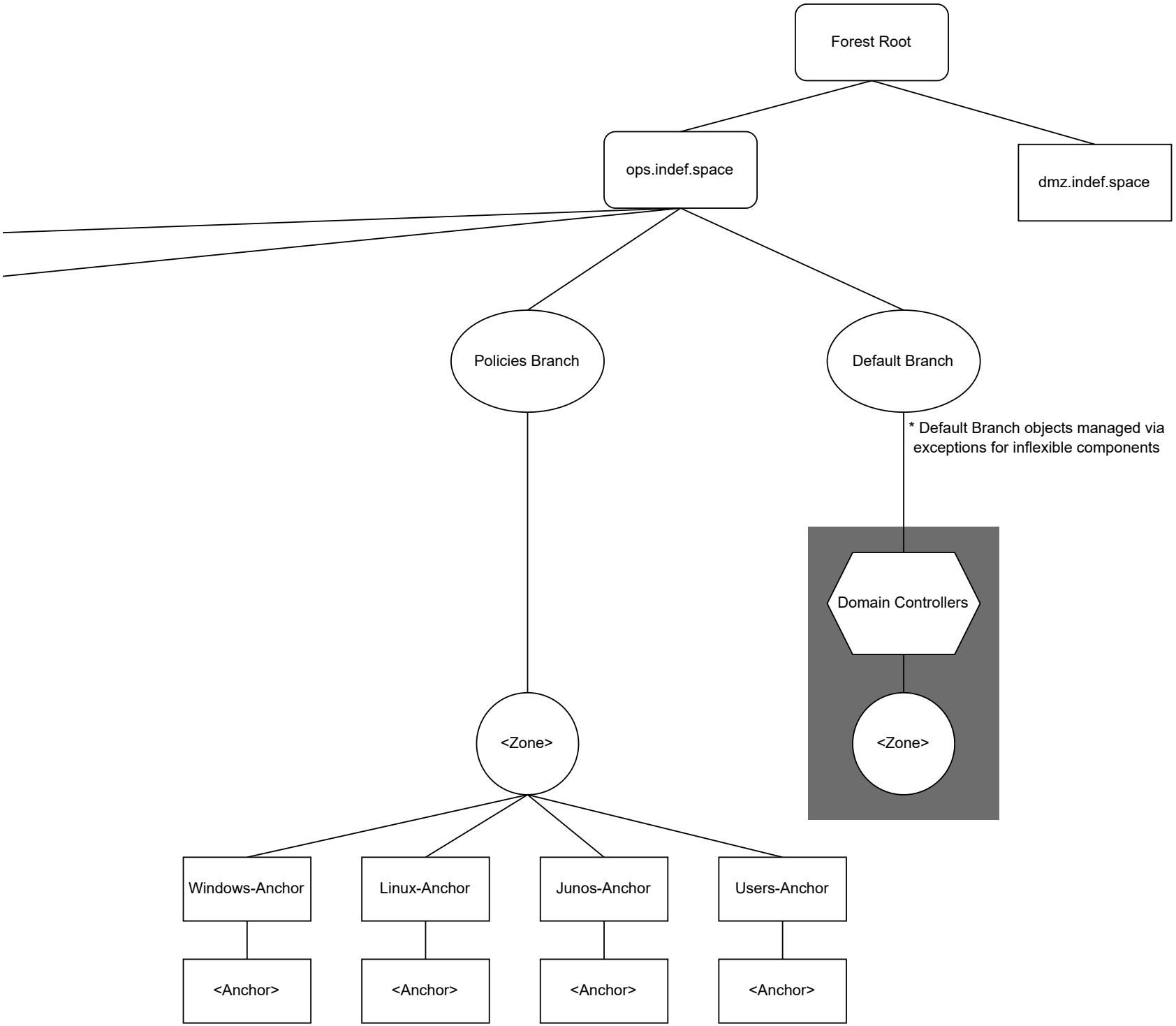
<Service>


Forest Root
ops.indef.space
dmz.indef.space
Policies Branch
Default Branch
* Default Branch objects managed via exceptions for inflexible components
Domain Controllers
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Windows-Anchor
Linux-Anchor
Junos-Anchor
Users-Anchor
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