

Brocade[®] SANnav[™] Zone Inventory View: Understanding Entity Types

Version 1.0

Introduction

SAN fabric zoning concepts are best modeled using a software tree structure with nodes and edges. Nodes represent SAN zoning objects such as zone configurations, zones, zone aliases, and zone members. Edges represent the relationship between nodes, such as a zone being contained within a zone configuration or a zone referring to a zone alias.

The Brocade[®] SANnav[™] **Zone Inventory** view is essentially a visual representation of the fabric zoning tree in a flat table with rows and columns. This technical brief explains how to correctly interpret the rows and the columns of the **Zone Inventory** table in order to derive the actual tree relationships (edges) between zoning objects (nodes). The key to understanding and correctly interpreting the zone inventory is a special column in the table called **Entity Type**.

A fabric zone database (zone DB) has three top-level elements:

- Zone configuration Contains one or more zones. Fabric zone databases can contain one or more zone configurations, but only one zone configuration can be *activated*. This is the *effective* zone configuration. Zones assigned to the effective zone configuration allow communication between members of a particular zone.
- Zone Contains one or more zone members. A zone member can be a zone alias, a host/storage port WWN, or a Domain, Port Index. Zones are typically assigned to one or more zone configurations.
- Zone alias Represents one or more members, that is, host port or storage port (referred to as "WWN zoning") or switch port (referred to as "Domain, Port Index zoning"). Zone aliases can be associated with one or more zones.

The SANnav **Zone Inventory** view presents the elements in a hierarchical tree structure. Figure 1 is a graphical representation of the memberships and relations between the different elements.



Figure 1: SAN Zoning – Hierarchical Tree Structure

Figure 2 is an actual representation in SANnav 2.2. SANnav 2.2 introduces a new zoning GUI with a comprehensive **Zone Inventory** view. This technical brief provides insights on how to interpret and use the information presented in this view, with a specific focus on the entity type.

In the following table, columns 3 through 6 each represent part of the tree shown in Figure 1; more specifically, a view of Fabric_A, with a focus on the effective zone configuration, ZonecfgA. Each alias that is part of a zone appears in its own row.

Figure 2: Zone DB Tree and Representation in SANnav Zone Inventory

Zone Configura	ations Zo	nes Zone Aliases	Zone Inventory	Policies Z	Cone Inventory (10)		
٩		zonelnv.	. 🕶 💿 +Add 👻				Active	Fabric_A -
Entity Type 🔅	Fabric 🗢	Zone Configur 💠	Zone *	Zone Alias 🗢	Member WWN / D,P 💠	Member 💠	Status 🗢	Host/Sto 🌣
Zone Configur	Fabric_A	ZonecfgA	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Active	AFA
Zone Configur	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Online	Active	Host7
Zone Configur	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Online	Active	Host5
Zone Configur	Fabric_A	ZonecfgA	P_Peer2_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Active	AFA
Zone Configur	Fabric_A	ZonecfgA	P_Peer2_AFA_A	Host1A	21:00:00:24:FF:7F:12:7E	Online	Active	Host1

The zone inventory has many more columns, which provide additional information about the elements. You can display these columns in the order you choose.

SANnav Zone Inventory View

The SANnav Zoning tab shows four subtabs:

- Zone Configurations
- Zones
- Zone Aliases
- Zone Inventory

The first three tabs provide insights and operations that apply on a *per-fabric* basis; whereas the **Zone Inventory** tab can span multiple fabrics in one view and provides a *member-centric* (host/storage port or switch port) view of all zone members. Each output row provides complete details about a given zone member, such as the zone alias name, zone name, zone configuration name, fabric, and status of the zone alias. The **Zone Inventory** list displays one zone member (WWN; Domain, Port Index) per row. Figure 3 shows an example of the zone inventory.

Figure 3: Zone Inventory Entity Type

Zone Confi	gurations Zones	Zone Aliases Zone Inv	Policies	Zone Inventor	y (4)			
Q. 20:04:C4	4:F5:7C:4E:96:5D	+					All	✓ All Fabrics ▼
Fabric 🗢	Zone Configuration \$	Zone 🗢	Zone Alias 💠	Member WWN / D,P 🔅	Memb ¢	Entity Type 🔅	Status +	Peer Z 💠
Fabric_A	-	-	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Zone Alias	Inactive	-
Fabric_A	-	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Zone	Inactive	-
Fabric_A	ZonecfgA	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Inactive	-
Fabric_A	ZonecfgA	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Active	π.

Looking for a host port WWN as shown in Figure 3 yields the results that can be interpreted by looking at Figure 4 and Figure 3 together. In Figure 3, there are four rows and one key column called **Entity Type**, which essentially indicates where you are in the zoning database tree. The values for the **Entity Type** column are **Zone Alias** (first row), **Zone** (second row), and **Zone Configuration** (third and fourth rows), with active or inactive status shown in the **Status** column. In Figure 4, the "Defined [Inactive] Zone Database" box shows three entity types: Zone Alias, Zone, and Zone Configuration. The "Effective [Active] Zone Database" box shows one Zone Configuration entity type. Each of the trees shown in Figure 4 corresponds to the rows listed in Figure 3, where the **Entity Type** column is set accordingly. Figure 4 shows the exact same configuration in a different format.

Figure 4: Interpreting SANnav Inventory



Entity Types

The SANnav **Zone Inventory** view provides a *member-centric* (host/storage port or switch port) view of all zone members. Each row in the **Zone Inventory** view provides complete details about a zone member. The **Entity Type** column in the **Zone Inventory** view can have one of four values, referring to the relations (references/associations) between elements:

- Zone Configuration
- Zone
- Zone Alias
- Zone Member
- **NOTE:** Based on the entity type selected in the view, you can perform relevant actions (add to zone, create alias, and so on), in single or bulk mode, on the rows in the **Zone Inventory** list by clicking the downward arrow on the far right of the window. Refer to the *Brocade SANnav Management Portal User Guide* for more information on what operations are allowed for each entity type.

To explain the SANnav **Zoning Inventory** view, it is helpful to use a concrete example (hypothetical, but realistic) of a zoning tree. Figure 5 shows the example that is used in the rest of the document, where the nodes represent the zoning objects and the edges represent relationships between the nodes. Note that this figure shows a zoning tree for one fabric (Fabric A) and the associated entity types at every layer of the tree. It is important to understand that there is one tree for each fabric managed by SANnav.



Figure 5: SANnav Zone Inventory – Example Use Case

Zone Configuration

The fabric zone DB contains one or more zone configurations, only one of which is in effect or active. This is referred to as the *effective zone configuration*. The zones and zone members that belong to the effective zone configuration are referred to as *active*. Other zone configurations are referred to as *defined*, that is *inactive*. If there are no differences between both versions (effective and defined), the defined version is an *exact* copy of the effective version and appears as **Defined** (**Copy**). If changes were made to the **Defined** (**Copy**) zone configuration but have not yet been activated, then the configuration appears as **Defined** (**Modified**).

You can view the differences (added, modified, or removed items) between the effective and defined (modified) configurations by using the compare function.

Figure 6 shows an effective zone configuration and a defined (copy) zone configuration (ZonecfgA).

Figure 6: Zone Configuration – ZonecfgA Effective and Defined (Copy)

Zone Configurations Zones Z	one Aliases Zone Inventory Polici	Zone Configuratio	NS (2)
			Fabric_A 🔻
Name ¢	Status 👻	Tags +	Description +
ZonecfgA	Effective	-	le l
ZonecfgA	Defined (Copy)	-	-

The individual views (zone configuration, zone, zone alias) are limited to a single fabric. The zone inventory provides clearer insights into the relations between members, aliases, and zones as shown in Figure 7.

Figure 7: Zone Inventory – ZonecfgA Effective and Defined (Copy)

Zone Co	nfigurations Zones	Zone Aliases	Zone Inventory	Policies Zone Inve	ntory (20)	
Q		zonelnv 💌	S +Add →				All 👻 All Fabric
Fabric ¢	Zone Configura 🔅	Zone 🗢	Zone Ali 🔶	Member WWN / D,P 🗢	Mem 🔅	Entity Type 🗢	Status 🗢
Fabric_A	Zone Configuration	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone Configuration	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone Configuration	Active
Fabric_A	ZonecfgA	P_Peer2_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone Configuration	Inactive
Fabric_A	ZonecfgA	P_Peer2_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone Configuration	Active
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Active
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Active

Zone

A zone contains one or more zone aliases or zone members. A zone can be part of multiple zone configurations or can exist on its own (*hanging or dangling zone*). Only zones in the effective zone configuration actively provide access between hosts and storage.

Figure 8 shows the **Zones** tab (based on the same zone configuration, ZonecfgA). Each zone is listed twice because it is part of the effective configuration and the defined (copy) configuration.

Figure 8: Zone – P_Peer1_AFA_A

Zone Configurations	Zones	Zone Alias	es Zone I	nventory	Policies		Zones (10)		
									F
Name 👚			Type 🌣	Tags 🗢		Status 🗢	Description +	Member Count \$	Zone Configura
P_Peer1_AFA_A			Peer	-		Inactive	-	3	ZonecfgA
P_Peer1_AFA_A			Peer	-		Active	-	3	ZonecfgA
P_Peer2_AFA_A			Peer	-		Active		3	ZonecfgA
P_Peer2_AFA_A			Peer	-		Inactive	-	3	ZonecfgA

Figure 9 shows the same view from the **Zone Inventory** tab (only showing zone **P_Peer1_AFA_A**) and provides more insight into the actual configuration and relation between items. As shown in the **Status** column, you can clearly see that the zone configuration entity type can be inactive or active.

Figure 9: Zone Inventory – P_Peer1_AFA_A (Active/Inactive)

Zone Con	figurations Zones	Zone Aliases	Zone Inventory	Policies Zone Inve	entory	(9)	
Q		zonelnv 🔻	⊗ +Add ~				All 👻 All Fabric
Fabric 🗢	Zone Configura 💠	Zone ≑	Zone Ali 🔺	Member WWN / D,P 💠	Mem 💠	Entity Type 🗢	Status 🗢
Fabric_A	-	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone Configuration	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone Configuration	Active
Fabric_A	-	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Online	Zone	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Active
Fabric_A	-	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Online	Zone	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Inactive
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Active

Figure 10 shows the same view, focusing only on active elements, and displays exactly one line per zone member/alias.

Figure 10: Zone Inventory – P_Peer1_AFA_A (Active Only)

Zone Conf	īgurations Zones	Zone Aliases	Zone Inventory	Policies Zone Inve	ntory (3)	
٩		zonelnv 🔻	⊗ +Add ~			Activ	e 👻 All Fabric
Fabric ¢	Zone Configura 💠	Zone 💠	Zone Ali 🔺	Member WWN / D,P 💠	Mem ¢	Entity Type 🗢	Status ≑
Fabric_A	ZonecfgA	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Online	Zone Configuration	Active
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Active
Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Online	Zone Configuration	Active

Zone Alias

A zone alias is a human-readable name given to a WWN or D/P index member to make it easier to identify.

Zone aliases represent one or more zone members, and they can be part of one or more zones. For example, SSD_storage can be used to identify all ports in a given storage array, or Oracle_host_1 and Oracle_host_2 can be used to identify individual HBA ports on a host. Zone aliases that are not part of any zone are called *hanging or dangling zone* aliases.

Figure 11 shows the **Zone Aliases** view for zone alias Host4A.

Figure 11: Zone Alias – Host4A

Zone Configurations	Zones	Zone Aliases	Zone Inventory	Policies	Zone A	iases (1)		(
							Fabric_A	Ŧ
Alias *		Tags 💠		Description \Rightarrow		Member 🌣	Zone 🗢	
Host4A		-		-		20:04:C4:F5:7C:4E:96:5D	Z_Host4A_AFA_A	

Figure 12 shows the **Zone Inventory** view for the same alias (Host4A). You can clearly see that Host4A is part of zone **Z_Host4A_AFA_A** in zone configuration **ZonecfgA**.

Figure 12: Zone Inventory – Host4A

Zone Configura	ations Zor	nes Zone Aliases	Zone Inventory	Policies	Zone Inventor	^с У (4)			
٩		zonelnv.	.▼ ⊗ +Add ▼					All	▼ Fabric_A ▼
Entity Type 💠	Fabric 🗢	Zone Configur 🔅	Zone *	Zone Alias 🔅	Member WWN / D,P 🔅	Member Sta 💠	Status 🗢	Host/Storag \$	Device Vend
Zone Alias	Fabric_A	-	-	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Inactive	Host4	Brocade Comn
Zone	Fabric_A	-	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Inactive	Host4	Brocade Comn
Zone Configur	Fabric_A	ZonecfgA	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Inactive	Host4	Brocade Comn
Zone Configur	Fabric_A	ZonecfgA	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Online	Active	Host4	Brocade Comn

Zone Member

Zone members represent host or storage ports logged in to the fabric or switch ports in the fabric for which no alias has been defined. Zone members are identified by either PWWN or D/I notation (domain/port index). The **Zone Inventory** view provides a clear overview of the zone configurations, zones, and aliases. You can also view zone members from the **Zone Inventory** view. Zone members do not necessarily belong to a zone; in fact best practices recommend not to use zone members directly in zones, but instead, to use zone aliases. The **Entity Type** column indicates **Zone Member** for such entries (Figure 13).

Figure 13: Zone Inventory – Zone Member

Zone Configura	ations	Zones Zone Aliases	Zone Inventory	Policies	Zone Invento	ory (4)				
Q		S zonelny.	🔻 💿 +Add 👻					Inactive	✓ Fabric_A ✓	=
Entity Type 💠	Fabric 🗢	Zone Configur 🗢	Zone 🌣	Zone Alias 🛸	Member WWN / D,P 🗢	Member Sta 🗢	Status +	Host/Storag \$	Device Vend	
Zone Member	Fabric_A	-	-	-	20:03:C4:F5:7C:93:CA:8C	Online	Inactive	HOST8	Brocade Comn	v
Zone Member	Fabric_A	-	-	-	20:05:C4:F5:7C:93:CA:8C	Online	Inactive	HOST8	Brocade Comn	\sim

Searching and Filtering

The Zone Inventory view lists zone members from all entity types (zone configuration, zone, zone alias, and zone member).

Searching (Figure 14) and filtering (Figure 15) do not yield the same results in the zone inventory.

Figure 14: Zone Inventory Searching

Zone Configurations	Zones	Zone Aliases	Zone Inventory
Q host	8) +	

Figure 15: Zone Inventory Filtering

	Create New Filter
Zone Alias - host	+Add
Save Filter	
Use to exclude from results	
Back OK Cancel	

Searching lists all items in all columns that contain the string that you are searching for (*host*, for example), whereas *filtering* displays only items from a particular column that match the entered string.

Zone Configu	Zone Configurations Zones Zone Aliases Zone Inventory Policies Zone Inventory (50)									
Q host		• +							All → Fabric_A →	Ξ
Entity Type 🍦	Fabric *	Zone Config 🗢	Zone 🌣	Zone Alias 🌣	Member WWN / D,P 🔅	Status 🌣	Alias Type 🗢	Member 🌣	Host/Stor 🌣	
Zone Member	Fabric_A	-	-	-	1,0	Inactive	-	Online	Host1	~
Zone Member	Fabric_A	-	-	-1	1,1	Inactive	-	Online	host2	~
Zone Member	Fabric_A	-	-	-	1,2	Inactive	-	Online	Host7	~
Zone Member	Fabric_A	-	-	-	1,4	Inactive	-	Online	Host4	\sim
Zone Member	Fabric_A	-	-	<u></u>	1,5	Inactive	-	Online	Host5	~
Zone	Fabric_A	-	Z_Host3A_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Inactive	WWN	Online	AFA	~
Zone Config	Fabric_A	ZonecfgA	Z_Host3A_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Inactive	WWN	Online	AFA	~
Zone Config	Fabric_A	ZonecfgA	Z_Host3A_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Active	WWN	Online	AFA	~
Zone	Fabric_A	-	Z_Host4A_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Inactive	WWN	Online	AFA	~~
Zone Config	Fabric_A	ZonecfgA	Z_Host4A_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Inactive	WWN	Online	AFA	~
Zone Config	Fabric_A	ZonecfgA	Z_Host4A_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Active	WWN	Online	AFA	~
Zone Alias	Fabric_A	-	-	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	~
Zone	Fabric_A	-	-	Host7A	20:02:C4:F5:7C:4E:96:5D	Active	WWN	Online	Host7	v
Zone	Fabric_A	-	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	~
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	~
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Active	WWN	Online	Host7	Y
Zone Config	Fabric_A	Zonecfg_new	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	~~

Figure 16:	Zone	Inventorv	Search	Results	for	"host"
rigule iv.	20116	niventory	Ocarcii	Results	101	nost

The table in Figure 16 represents a search for the word *host*. As you can see, the word *host* appears in multiple columns, not necessarily in the **Zone Alias** column.

Figure 17 and Figure 18 show the result of a filter using the word *host*. Figure 17 shows the filter setup, and Figure 18 shows the result of applying the filter to the zone inventory.

Filtering on the zone alias *host* and using *host* as the input string produces a different result because we look for only *host* in the **Zone Alias** column. In Figure 18, the **Zone Alias** column contains the word *host* in all rows.

Figure 17: Filter on Zone Alias "host"

	Create New Filter	
Zone Alias 👻 host	8	+Add
Save Filter		
☐ Use to exclude from results		
Back OK Cancel		

Figure 18: Filter Results for Zone Alias "host"

					\sim					
Zone Configurations Zones Zone Aliases Zone Inventory Policies Zone Inventory (34)										<
Q		zone	elnv 👻 💿 +Add 👻						All ▼ Fabric_A ▼	≡
Entity Type 🌣	Fabric 🔺	Zone Config 💠	Zone ¢	Zone Alias 🗢	Member WWN / D,P 🔅	Status 🗢	Alias Type 🌣	Member \$	Host/Stor \$	
Zone Alias	Fabric_A	-	-	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	\sim
Zone	Fabric_A	-	-	Host7A	20:02:C4:F5:7C:4E:96:5D	Active	WWN	Online	Host7	\sim
Zone	Fabric_A	-	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	~
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	~
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Active	WWN	Online	Host7	~
Zone Config	Fabric_A	Zonecfg_new	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	\sim
Zone Alias	Fabric_A	-	-	Host4A	20:04:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host4	~
Zone	Fabric_A	-	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host4	\sim
Zone Config	Fabric_A	ZonecfgA	Z_Host4A_AFA_A	Host4A	20:04:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host4	~
Zone Config	Fabric_A	ZonecfgA	7_Host4A_AFA_A	Host4A	20:04:C4:E5:7C:4E:96:5D	Active	WWN	Online	Host4	\sim
Zone Alias	Fabric_A	-	~	Host3A	20:04:C4:F5:7C:93:CA:8C	Inactive	WWN	Online	host3	~
Zone	Fabric_A	-	Z_Host3A_AFA_A	Host3A	20:04:C4:F5:7C:93:CA:8C	Inactive	WWN	Online	host3	\sim
Zone Config	Fabric_A	ZonecfgA	Z_Host3A_AFA_A	Host3A	20:04:C4:F5:7C:93:CA:8C	Inactive	WWN	Online	host3	\vee
Zone Config	Fabric_A	ZonecfgA	Z_Host3A_AFA_A	Host3A	20:04:C4:F5:7C:93:CA:8C	Active	WWN	Online	host3	\sim
Zone Alias	Fabric_A	-	-	Host5A	20:05:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host5	\sim
Zone	Fabric_A	_	-	Host5A	20:05:C4:F5:7C:4E:96:5D	Active	WWN	Online	Host5	~

Zoning Summary Widgets

The data from the SANnav zone summary widgets shows the number of zone entities (zone configurations, zones, zone aliases, and zone members) that match the summary widget criteria. When you invoke **Filter by this Item**, a complete tree of the entity type appears.

The classification by entity type helps to identify anomalies in the zoning database. The zoning *drawer* contains widgets that display insights into these anomalies. The widgets have a **Filter by this Item** option, which presents all matching items using the **Zone Inventory** view:

- Unaliased device ports
- Offline zone members
- Empty zones
- Device ports not part of any zones
- Zones not part of any configuration (hanging zones)
- Members with duplicate zone aliases
- Zones with mixed member types
- Fabric zone database size percentage

For example, unaliased device ports are identified by applying the following filter.

Figure 19: Filter to View Unaliased Device Ports

		Edit F	filter		
Zone Alias	-			0	
Entity Type		Zone Member	-	0	+Add

Refer to the Brocade SANnav Management Portal User Guide for additional details on the SANnav zone summary widgets.

Checking for Zoning Consistency across Fabrics

The filtering capability that is included with the **Zone Inventory** view is extremely powerful. It can be used to gain useful insights about correct or incorrect zoning of host and storage ports.

Figure 20 shows how you can check whether a host (Host1) is correctly zoned across multiple fabrics. It shows both the active and inactive configuration.

Figure 20: Host Zoned to Multiple Fabrics

Zone Configurations	s Zones	Zone Aliases Zon	e Inventory Policie	s	Zone Inventory	(13)			
٩		Host1 👻 💿	+Add 👻					All	 All Fabrics
Entity Type 🌣	Fabric +	Zone Configur 🔅	Zone 🕈	Zone Alias 🔅	Member WWN / D,P 🔅	Member State 🔅	Status 👻	Alias Type 🔅	Host/Storage
Zone Alias	Fabric_A	7 .2	# 0	Host1A	21:00:00:24:FF:7F:12:7E	Online	Inactive	WWN	Host1
Zone	Fabric_A		P_Peer2_AFA_A	Host1A	21:00:00:24:FF:7F:12:7E	Online	Inactive	WWN	Host1
Zone Configuration	Fabric_A	ZonecfgA	P_Peer2_AFA_A	Host1A	21:00:00:24:FF:7F:12:7E	Online	Inactive	WWN	Host1
Zone Alias	Fabric_B	- 1	-	Host1B	21:00:00:24:FF:7F:12:7F	Online	Inactive	WWN	Host1
Zone	Fabric_B	÷	P_Peer2_AFB	Host1B	21:00:00:24:FF:7F:12:7F	Online	Inactive	WWN	Host1
Zone Configuration	Fabric_B	ZonecfgB	P_Peer2_AFB	Host1B	21:00:00:24:FF:7F:12:7F	Online	Inactive	WWN	Host1
Zone	Fabric_A	2 11	2 0	Host1A	21:00:00:24:FF:7F:12:7E	Online	Active	WWN	Host1
Zone	Fabric_A	-	-	Host1A	21:00:00:24:FF:7F:12:7E	Online	Active	WWN	Host1
Zone Configuration	Fabric_A	ZonecfgA	P_Peer2_AFA_A	Host1A	21:00:00:24:FF:7F:12:7E	Online	Active	WWN	Host1
Zone	Fabric_B	T	50	Host1B	21:00:00:24:FF:7F:12:7F	Online	Active	WWN	Host1
Zone	Fabric_B	- 0	-	Host1B	21:00:00:24:FF:7F:12:7F	Online	Active	WWN	Host1
Zone	Fabric_B	Ð	-	Host1B	21:00:00:24:FF:7F:12:7F	Online	Active	WWN	Host1
Zone Configuration	Fabric_B	ZonecfgB	P_Peer2_AFB	Host1B	21:00:00:24:FF:7F:12:7F	Online	Active	WWN	Host1

You can see that the host is zoned across Fabric_A and Fabric_B and that it is part of a zone in both fabrics.

Viewing Zone Inventory Details

Figure 21 shows the inventory output when you filter for *zones*. In this case, only one zone (P_Peer1_AFA_A) has been selected in the filter. You can see that three aliases (AFA_A, Host7A, Host5A) are involved in this zone.

There is one row per entity type involved; in this case the zone and zone configuration entity types are involved. Therefore, there is one row for each active and inactive zone configuration for each zone alias. Consequently, there are 12 rows (3 zone aliases x 2 zone configurations x 2 active/inactive):

- ZonecfgA (effective) → status = active
- ZonecfgA (defined) \rightarrow status = inactive
- Zonecfg_new → status = inactive

Figure 21: Filtering on Zone P_Peer_AFA_A

Zone Configu	Zone Configurations Zones Zone Aliases Zone Inventory Policies Zone Inventory (41)										
Q	Q Zonelny V (Ald V										
Entity Type 🔅	Fabric ¢	Zone Config 💠	Zone *	Zone Alias 💠	Member WWN / D,P 💠	Status 🗢	Alias Type 💠	Member ¢	Host/Stor \$		
Zone	Fabric_A	-	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Inactive	WWN	Online	AFA	Ŷ	
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Inactive	WWN	Online	AFA	\sim	
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	AFA_A	20:02:00:11:0D:54:9D:00	Active	WWN	Online	AFA	~	
Zone Config	Fabric_A	Zonecfg_new	P_Peer1_AFA_A	AFA_4	20:02:00:11:0D:54:9D:00	Inactive	WWN	Online	AFA	\sim	
Zone	Fabric_A	-	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	v	
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	\vee	
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Active	WWN	Online	Host7	\vee	
Zone Config	Fabric_A	Zonecfg_new	P_Peer1_AFA_A	Host7A	20:02:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host7	v	
Zone	Fabric_A	-	P_Peer I_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host5	~	
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host5	~	
Zone Config	Fabric_A	ZonecfgA	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Active	WWN	Online	Host5	\sim	
Zone Config	Fabric_A	Zonecfg_new	P_Peer1_AFA_A	Host5A	20:05:C4:F5:7C:4E:96:5D	Inactive	WWN	Online	Host5	~	

Summary

The **Zone Inventory** view is a potent addition to SANnav zone management. It provides a visual representation of a fabric zoning tree in a flat table with rows and columns. This technical brief has shown how to correctly interpret the rows and columns of the **Zone Inventory** table in order to derive the actual tree relationships (edges) between zoning objects (nodes). The technical brief has also explained how to use the zone summary widgets to detect and manage inconsistencies in the zoning tree database. The **Zone Inventory** view provides insights into zoning use cases for hosts and storage, across multiple fabrics, and it allows you to check for consistency on many zoning items.

Revision History

SANnav-Zone-Inventory-OT100; August 11, 2022

Initial version.

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