```
state active
WWPN 100000051E0F81CC
node_logged_in_count 0
state offline
```

- **lshostvdiskmap**

  Check that all volumes are mapped to the correct hosts. If a volume is not mapped correctly, create the necessary host mapping.

- **lsfabric -host <host_id_or_name>**

  Use this command with parameter **-host <host_id_or_name>** to display Fibre Channel (FC) connectivity between nodes and hosts. Example 10-3 shows the **lsfabric -host <host_id_or_name>** command output.

Example 10-3 The lsfabric -host <host_id_or_name> command

```
IBM_2145:ITSO_DH8_B:superuser>lsfabric -host Win2K8
remote_wwpn      remote_nportid id node_name local_wwpn       local_port
local_nportid state  name   cluster_name type
100000051E0F81CD 021800       1  node1    500507680C220416 2        020400
active Win2K8              host
100000051E0F81CD 021800       2  node2    500507680C22041D 2        020000
active Win2K8              host
```

To perform troubleshooting on the host side, check the following:

- Any special software that you are using
- Any recent change in the OS, such as patching the OS, an upgrade, and so on
- Operating system version and maintenance or service pack level
- Multipathing type and driver level
- Host bus adapter model, firmware, and driver level
- Host bus adapter connectivity issues

Based on this list, the host administrator must check and correct any problems.

For more information about managing hosts on IBM Spectrum Virtualize, see Chapter 6, “Hosts” on page 279.

10.3.2 SAN events

Introducing IBM Spectrum Virtualize into your SAN environment and the use of its virtualization functions are not difficult tasks. However, before you can use IBM Spectrum Virtualize in your environment, you must follow some basic rules. These rules are not complicated, but you can make mistakes that lead to accessibility issues or a reduction in the performance experienced.

Two types of SAN zones are needed to run IBM Spectrum Virtualize in your environment: A *host zone* and a *storage zone*. In addition, you must have an IBM Spectrum Virtualize zone that contains all of the IBM Spectrum Virtualize node ports of the IBM Spectrum Virtualize cluster. This IBM Spectrum Virtualize zone enables intracluster communication. For more information and important points about setting up IBM Spectrum Virtualize in a SAN fabric environment, see Chapter 1, “Storage area network” on page 1.

Because IBM Spectrum Virtualize is in the middle of the SAN and connects the host to the storage subsystem, check and monitor the SAN fabrics.