CLAIMS

1. A method of synchronizing information between switches in a Storage Area Network (SAN), the method being applied to the switches in the SAN, and comprising:

acquiring to-be-synchronized target data;

sending Border Gateway Protocol (BGP) routes carrying the target data through BGP sessions established between the switch with one or more designated switches, so that the target data is synchronized between the switch and target switches that need to synchronize with the switch,

wherein the target data comprises at least: Internet Protocol (IP) service zone configuration information on one or more access devices, and/or device discovery information on the access devices, and/or information on whether the switch supports a default IP service zone,

wherein the IP service zone configuration information comprises at least: a BGP route identifier (Route ID) of the switch, IP Zone Names, and IP Addresses of the access devices to which the IP service zone configuration information belongs, wherein the IP Zone Names are identifiers of self-defined IP service zones, which are different from the default IP service zone.

2. The method according to claim 1, wherein the device discovery information on the access devices comprises at least: Media Access Control (MAC) Addresses of the access devices, Port Names of ports on the access devices connected to the switch, and a BGP route identifier (Route ID) of the switch.

3. The method according to claim 2, wherein the device discovery information on the access devices further comprises device attribute information on the access devices; the device attribute information on the access devices comprises at least:

IP Addresses of the access devices, the IP Addresses comprising IPv4 addresses or IPv6 addresses;

state information on the access devices, the state information comprising at least online information or offline information;

role types of the access devices, the role types comprising at least storage systems and/or hosts.

4. The method according to claim 1, wherein the information on whether the switch supports the default IP service zone comprises at least:

a BGP route identifier (Route ID) of the switch; or

a BGP route identifier (Route ID) of the switch and an enable indication value,

wherein the enable indication value is a first value, and the switch supports the default IP service zone, or

the enable indication value is a second value, and the switch does not support the default IP service zone.

5. The method according to claim 1, wherein the designated switches comprise at least one target switch; or

the designated switches comprise at least one non-target switch other than the switch and the target switches.

6. The method according to claim 1, further comprising:

in response to receiving, through the BGP sessions established between the switch with the designated switches, BGP routes from other switches, newly adding or updating corresponding route configuration information entries locally based on the received BGP routes, wherein the route configuration information entries are related to to-be-synchronized data carried in the received BGP routes.

7. The method according to claim 1, further comprising:

in response to receiving BGP routes carrying same to-be-synchronized data through different BGP sessions, determining an optimal route according to a route selection manner.

8. The method according to claim 1, further comprising:

storing the BGP routes;

in response to determining that at least one stored BGP route is to be withdrawn, deleting the at least one stored BGP route that is to be withdrawn, and sending a notification through the BGP sessions established between the switch with the designated switches to instruct the target switches to delete the at least one stored BGP route that is to be withdrawn and route configuration information entries corresponding to the at least one stored BGP route.

9. The method according to claim 1, further comprising:

in response to receiving at least one BGP route to be withdrawn through the BGP sessions established between the switch with the designated switches, deleting the at least one BGP route stored locally and route configuration information entries corresponding to the at least one BGP route.

10. The method according to claim 1, wherein the BGP sessions comprise:

internal Border Gateway Protocol (IBGP) sessions or external Border Gateway Protocol (EBGP) sessions.

11. The method according to any one of claims 1 to 7, wherein the BGP routes are carried in MP_REACH_NLRI attributes of BGP Update packets; Address Family Identifier (AFI) and Subsequent Address Family Identifier (SAFI) in the MP_REACH_NLRI attributes are pre-designated, and do not conflict with currently defined AFI and SAFI values.

12. The method according to any one of claims 8 to 9, wherein the at least one stored BGP route that is to be withdrawn is carried in MP_UNREACH_NLRI attributes of BGP Update packets; Address Family Identifier (AFI) and Subsequent Address Family Identifier (SAFI) in the MP_UNREACH_NLRI attributes are pre-designated, and do not conflict with currently defined AFI and SAFI values.

13. An electronic device, comprising: a processor and a machine readable storage medium, wherein

the machine readable storage medium stores machine executable instructions executable by the processor;

the processor is configured to execute the machine executable instructions to implement the method according to any one of claims 1 to 12.