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Wireless Interface for Out-of-band Communication with Data Center Equipment

ABSTRACT

Organizations routinely invest in costly infrastructure such as switches and cabling to provide access to infrastructure devices like servers, network devices, storage, etc. Current management access techniques leverage local area network (LAN) on motherboard (LoM) to interconnect devices. However, LoM requires investment in additional cabling and infrastructure and can be quite costly. This disclosure describes techniques to reduce or eliminate infrastructure cabling between servers, network devices, storage, etc. Per the techniques, network interfaces to a physical cable and switch from a motherboard are supplanted or augmented with wireless connectivity options, e.g., WiFi, Bluetooth, etc.

KEYWORDS

- Local area networks (LAN)
- LAN on motherboard (LoM)
- Wireless on motherboard (WoM)
- Management access
- Wireless interface
- Data center

BACKGROUND

Organizations routinely invest in costly infrastructure such as switches and cabling to provide access to infrastructure devices like servers, network devices, storage, etc. Having such out-of-band management access to these devices is important to ensure a properly running infrastructure. Current management access techniques leverage local area network (LAN) on motherboard (LoM) to interconnect devices.

LoM requires investment in additional cabling and infrastructure and can be costly. Additionally, such cabled configurations can share some points of failure from power and/or environment perspective.

DESCRIPTION

This disclosure describes a solution to reduce or eliminate infrastructure cabling between servers, network devices, storage, etc. Per the techniques, network interfaces to a physical cable and switch from a motherboard are supplanted or augmented with wireless connectivity options, e.g., WiFi, Bluetooth, etc. Collectively, the techniques can be referred to as wireless on motherboard (WoM) as they make use of at least one wireless communication technology. The wireless interface enables access to the server, network device, storage device, etc. without requiring costly investments in physical cables, switches, etc.

In this manner, additional infrastructure cabling is reduced or eliminated. A simpler solution is made possible for out-of-band management access. Additionally, for edge infrastructure or in situations where constructing an out-of-band wireless network is costly, the WoM can be based on 5G or other long-range communication technology to enable access to devices.

CONCLUSION

This disclosure describes techniques to reduce or eliminate infrastructure cabling between servers, network devices, storage, etc. Per the techniques, the current LANs on motherboard techniques are supplanted or augmented with wireless connectivity options, e.g., WiFi, Bluetooth, etc.