



Product Support Notice

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Name of problem Avaya has preferred and recommended methods of providing CM software duplication connectivity.

Products affected

Avaya Aura® Communication Manager (CM), All Releases

S8800 Server

Common Servers (HP & Dell)

Problem description

This document addresses all releases of Avaya Aura® Communication Manager (CM).

Avaya has preferred and recommended methods of providing CM software duplication connectivity. Customers utilizing CM software duplication connectivity methods other than the preferred and recommended methods are advised of potential complications if the software duplication connectivity becomes impaired or fails.

Resolution

Avaya's preferred and recommended CM software duplication connectivity methods are the following:

- For deployments on Avaya Aura® System Platform or CM releases 6.0.1 and lower, a direct physical Ethernet cable (Layer 1 Ethernet) between the active and standby servers is preferred and recommended.
- For deployments on VMware, a dedicated VLAN between the active and standby servers is required. If there is more than one duplicated CM server pair within a VMware cluster, every duplicated pair must have a separate dedicated VLAN. Configuring server pairs within the same VMware cluster and minimizing the amount of network infrastructure between the active and standby servers is preferred and recommended (e.g., use of a single Ethernet switch or Ethernet switches residing within the same physical stack). If these requirements and recommendations are adhered to, this method of CM software duplication connectivity can be as resilient as a direct physical Ethernet cable. Refer to [Duplicated Avaya Aura® Communication Manager on VMware](#) for further details.

For deployments utilizing CM software duplication connectivity methods other than the preferred and recommended methods listed above, a dedicated VLAN for the duplication link is required. Additionally, there are potential complications if the network used for software duplication connectivity becomes impaired or fails. Furthermore, the CM software duplication connectivity method must be verified to ensure it meets minimum connectivity requirements. The minimum connectivity requirements and potential complications are specified in the "Workaround or alternative remediation" section of this document.

Any issues reported to Avaya and determined to be related to CM software duplication connectivity methods other than the preferred and recommended methods will be supported to the level of recovering the system into an operational state. All other issues unrelated to alternate CM software duplication connectivity methods will be supported as per Avaya policy and customer contract.

Avaya recommends that customers review redundancy solutions including Survivable Core Server(s) (Enterprise Survivable Servers). The Survivable Core Server solution provides consistent and timely resiliency and performance on par with CM software duplication redundancy over a network. Please refer to [Administering Network Connectivity on Avaya Aura® Communication Manager](#) and [Avaya Aura® Communication Manager Survivability Options](#).

Workaround or alternative remediation

CM software duplication connectivity minimum requirements are defined as:

- 1 Gbps total capacity, or greater, with 50 Mbps of reserved bandwidth for duplication data
- 8 ms round-trip delay, or less
- 0.1% round-trip packet loss, or less
- Both servers duplication ports are on the same IP subnet
- Duplication link encryption must be disabled for busy-hour call rates that result in greater than 40% CPU occupancy ("list measurements occupancy", Static + CP occupancy)
- CPU occupancy on the active server (Static + CP) must be maintained at less than 65% to allow memory refresh from the active to standby server.

Deployments utilizing CM software duplication connectivity that does not meet the minimum requirements described above could experience the following unpredictable communication conditions:

Upon Network Segmentation

- Pre-existing calls between endpoints that end up in the same network fragment survive CM and SM server separation.
- Pre-existing calls between endpoints that end up in different network fragments DO NOT survive CM and SM server separation.
- Pre-existing trunk calls:
 - PRI trunk calls survive if the station and the trunk end up in the same fragment.
 - PRI trunk calls where station and PRI are in different fragments will fail.
 - H.323 & SIP trunk calls, depends on fragmentation and whether or not the SIG Group can communicate with Far End node. (Some will survive. Some will fail.)

Upon Recovery (Active/Active going back to Active/Standby)

- The server that becomes the Standby will be the former Active, relinquishing control to the last server to become Active; it will undergo an Interchange, a Reset 4, followed by a Reset 1.
 - PNs that were controlled by the server becoming Standby, experience a Cold 2 restart.
- Pre-existing shuffled IP and SIP calls survive
 - Connection preserving but not call preserving, i.e. could not form a conference.
- Pre-existing DCP calls in the segment controlled by Server now becoming Standby, are dropped because of the PN-reset.
- H.323 & SIP trunk calls, depends on fragmentation and whether or not the SIG Group can communicate with Far End node. Some calls will survive. Some calls will fail.
- Some IP endpoints (H.323) and some Gateways may require interventions to register with the active server.

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Avaya continues to invest in Communication Manager resiliency, and is committed to providing solutions to meet customer needs, including those in high availability data center environments. Please contact your Avaya representative for resiliency planning and product improvement suggestions.

Remarks

n/a

Patch Notes

The information in this section concerns the patch, if any, recommended in the Resolution above.

Backup before applying the patch

n/a

Download

n/a

Patch install instructions

Service-interrupting?

n/a

Yes

Verification

n/a

Failure

n/a

Patch uninstall instructions

n/a

Security Notes

The information in this section concerns the security risk, if any, represented by the topic of this PSN.

Security risks

n/a

Avaya Security Vulnerability Classification

Not Susceptible

If you require further information or assistance please contact your Authorized Service Provider, or visit support.avaya.com. There you can access more product information, chat with an Agent, or open an online Service Request. Support is provided per your warranty or service contract terms unless otherwise specified in the Avaya support [Terms of Use](#).

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