

What's New and What's Next for Red5?

Webinar | with Andy Beaveridge / Product Manager at Delta

Q: For the Red 5 VAVs with T1L being Ethernet, will we still achieve the same speeds we do typically with Ethernet cable? Do we have wire length limitations with T1L VAVs like we do with Ethernet, or do we have improved installation lengths?

A: T1L runs at 10 Mbps rather than 100 Mbps, so it is slightly slower than standard Ethernet. However, it supports longer wire lengths. Standard Ethernet is limited to about 300 feet, while T1L has been tested up to 600 meters, though recommended distances are 200–300 meters for reliability.

Q: Is the DVC formally end of life?

A: The Ethernet DVC controllers are already end of life. A last-time buy and last-time ship announcement will be issued, with full phase-out expected by Q2 2027.

Q: Do Red 5 Ethernet devices support 802.1x?

A: This is currently in development and being worked on.

Q: Do IP VAV controllers have special requirements for switches?

A: No. Delta V4 IP controllers operate at 100 Mbps max and work with standard IT switches. T1L requires a media converter such as the CON T1L.

Q: When will we get the service tool to connect to Red 5 Field controllers?

A: The service tool is complete and will be released imminently, with announcement expected shortly.

Q: Is there concern with having all the power on the Field VAV running on MSTP—will network communication suffer?

A: MSTP bandwidth limitations still apply, regardless of controller power. The controller is significantly more powerful than legacy devices, but MSTP bandwidth remains the limiting factor.

Q: Will there be an actuator-less version of the Red 5 VAV controller?

A: Yes, but not immediately. It is planned after the unitary controller platform is further developed.

Q: Does T1L support free topology like LonWorks (mixed wiring, stars, etc.)?

A: No. T1L requires point-to-point topology only. No stars, T's, or free topology are supported.

Q: From a network standpoint, are downstream T1L segments separate? Does heavy traffic impact other segments?

A: All devices remain on the same IP subnet. Heavy traffic can impact the entire network, which is why proper network design and traffic management are critical.

Q: Can Python write to AVs, BVs, MVs, or PGs?

A: Yes and no. Python can write to AVs but is not suitable for control algorithms due to speed limitations. It cannot write to external PG programs.

Q: What is the expected date for PSBG Python to come out of preview?

A: Target is summertime, pending final validation and development of supporting libraries.

Q: Any recommendations for replacing some MSTP VAVs and eventually upgrading the subnet to T1L?

A: You must separate MSTP and T1L networks. Use a controller or router to bridge remaining MSTP devices. Mixing both on the same network is not supported.

Q: Does T1L work over 18 gauge wire?

A: Yes, but results vary depending on cable quality and impedance. 22 gauge has shown the best results.

Q: Is there a device to extend beyond 64 devices on a T1L network?

A: No. 64 devices is the supported maximum.

Q: What is the recommended number of devices per T1L run?

A: While 64 is supported, conservative recommendations are around 30–50 depending on cable quality and network design.

Q: Can the CON T1L be installed mid-segment to branch multiple segments?

A: Yes, but the network must still be logically designed for maintainability and serviceability.

Q: What if switches do not support 10 Mbps anymore?

A: This does not impact T1L because the CON T1L handles conversion and supports 10/100 on the Ethernet side.

Q: How do firmware updates perform on Field devices over MSTP?

A: They are slow due to large firmware sizes and low MSTP bandwidth. Improvements such as broadcast updates and differential firmware are in development. Staged updates are recommended.

Q: Can NFC be removed for secure jobs?

A: Yes. Red 5 Secured Facilities models will remove NFC and BLE, with announcement imminent.

Q: What are future plans for DVC PoE controllers?

A: They will remain until a Red 5 PoE replacement is available, which is planned.

Q: Does T1L work on 18-2 shielded wire in small networks?

A: Yes, depending on wire quality and impedance. Site verification is recommended.

Q: How do you troubleshoot T1L or Edge networks with Wireshark under BACnet Secure Connect?

A: Wireshark is built into controllers. Work is ongoing to support encrypted traffic capture.

Q: Will there be an HOA version of Red 5 modules?

A: Yes, eventually.

Q: When will the 24VAC power supply for Red 5 modules be released?

A: Delayed due to a bug. Now expected with firmware version 4.21 this summer.

Q: Are we releasing Red 5 Plus RTR with dual Ethernet ports?

A: Product definition work has started, but release is not imminent.

Q: If the actuator fails on a Red 5 VAV, does the whole unit need replacement?

A: Yes, it must go through RMA and is not field-replaceable.

Q: Do you offer development or lab/demo kits?

A: Not currently as a packaged solution, but tools like enteliCLOUD, Canvas, and the Delta Training Device (DTD) can be used. A formal kit is under consideration.

Q: Have you tested unshielded wire with 64 devices, and is it reliable?

A: Testing has been successful in controlled environments, but real-world performance depends on cable quality and site conditions.

Q: Does T1L support ring topology?

A: No. Ring topology is not supported, though bypass relays help maintain communication if devices fail.

Q: Can you connect a CON T1L at the end of a Red 5 Plus line to run T1L VAVs?

A: Yes, if connected from the Ethernet network.