



a Wireless Logic company

A STUDY ON THE OPERATIONAL BURDEN OF
IOT CONNECTED-DEVICE SERVICE VISITS

The Truck Roll Tax

September 2026

OVERVIEW

64%

of organizations with connected devices
require at least three on-site visits per month.

60%

manage connected devices across at least **six**
separate locations.

62%

spend at least **\$250 per visit**, and **24%** spend
\$500 or more.

82%

experience at least some operational
disruption from on-site visits and **35%** report
noticeable or major disruption.

67%

cite **internet or network outages** as a
leading cause of connected-device visits.

only 3%

report that none of their on-site visits are
caused by connectivity issues.

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Abstract

Organizations managing connected devices across multiple sites face significant costs from on-site service visits: 64% require at least three per month, and 62% spend \$250 or more per visit. Connectivity issues drive at least a quarter of visits for 61% of respondents, most often due to site outages (67%), hardware failures misdiagnosed as connectivity problems (49%), and coverage or installation errors.

Respondents suggest a layered approach for reducing these visits: better monitoring and alerts, centralized remote diagnostics, and targeted failover or carrier-switching capabilities. Prioritizing remote visibility and troubleshooting can lower service costs, reduce disruption, and improve uptime.

This study was intended to answer the following questions:

- What is the typical scale of connected-device programs?
- How often are on-site visits needed, how many are connectivity-related, and what causes them?
- What time, cost, and operational disruption do on-site visits create?
- Which approaches do respondents believe are most effective for reducing on-site visits?

Methodology

To determine the cause, effect, and field-sourced solutions for the truck roll tax of IOT connectivity, Zipit Wireless surveyed 100 IOT professionals using a series of 11 questions on a survey hosted by Pollfish. The survey consisted of a combination of single selection, multiple selection, ranking, and open-ended questions.

Screening questions

Three additional screening questions were included at the start of the survey to filter respondents without the relevant experience.

SQ1. Which of the following do you personally work with as part of your job?

1. Security cameras / video surveillance
2. Asset tracking / GPS tracking devices
3. Sensors or remote monitoring devices
4. Digital signage or digital displays
5. Kiosks, Point of Sale terminals, or self-service devices
6. None of the above

SQ2. In the past 12 months, how often have you been involved in an on-site visit to install, troubleshoot, or fix a connected device or system used outside the office?

1. Never
2. 1–2 times
3. 3–5 times
4. 6–10 times
5. 11+ times

SQ3. Are you involved in any of the following for your company's connected devices?

1. Choosing vendors/providers
2. Managing wireless plans or usage
3. Reviewing IoT connectivity (non-smartphone) bills/expenses
4. Approving purchases
5. Monitoring device connectivity uptime/alerts
6. Troubleshooting connectivity issues
7. None of the above

Demographics and industries

Location

All respondents are U.S.-based and regional differences were not assessed.

Scale

Respondents manage distributed connected-device environments:

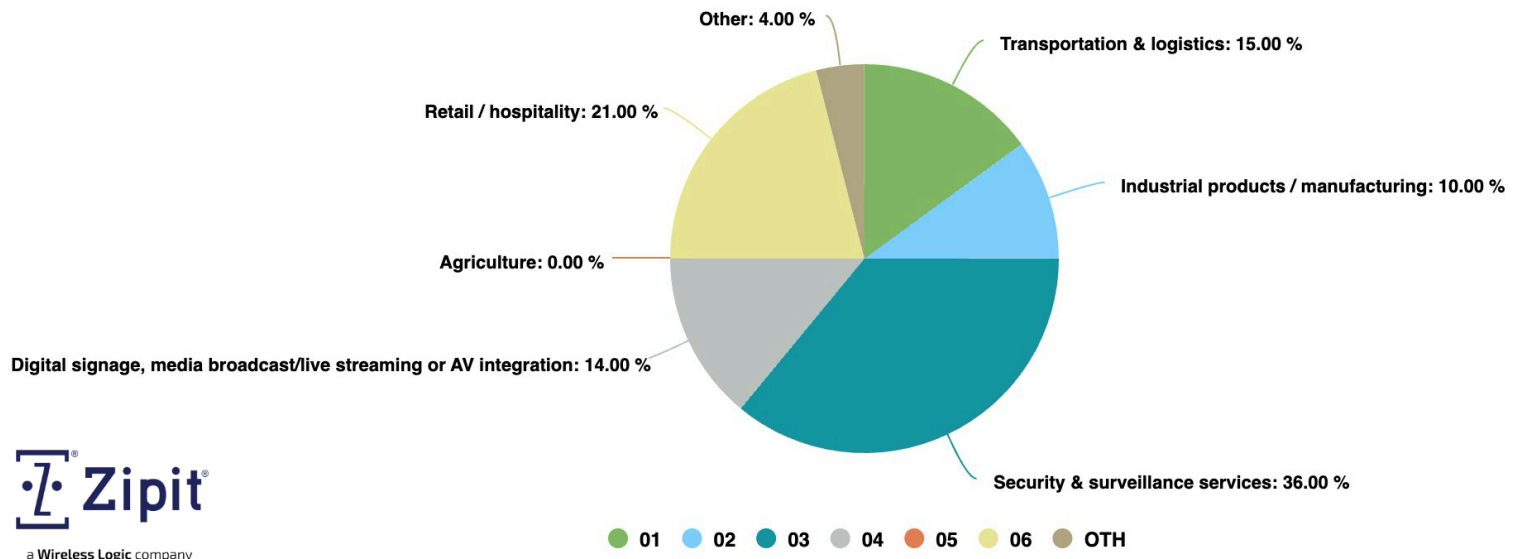
- **38%** support 6–20 locations
- **32%** support 2–5 locations
- **15%** support 21–100 locations
- **8%** support 1 location locations
- **7%** support 101 locations or more

Age

Age differences were not statistically significant across visit frequency, connectivity share, visit duration, cost, or business impact. However, age groups showed distinctions between operational mindsets for reducing on-site visits (see Observation 4).

Industry

Which best describes your organization's primary industry?



The sample spans several industries:

- **36%** security and surveillance
- **21%** retail and hospitality
- **15%** transportation and logistics
- **14%** digital signage, media, and AV
- **10%** industrial products or manufacturing
- **4%** other (construction, manufacturing, and public service)

These sectors often rely on geographically dispersed assets, customer-facing endpoints, or mission-critical monitoring and communications, meaning downtime can have visible operational or commercial consequences.

Observation 1: Most connected-device programs span multiple locations and require regular on-site service

Results show that connected-device programs are typically spread across multiple locations, involve meaningful device density at each site, and require recurring field support. The industries represented also tend to rely on distributed or operationally important connected systems, adding context to the potential impact of downtime.

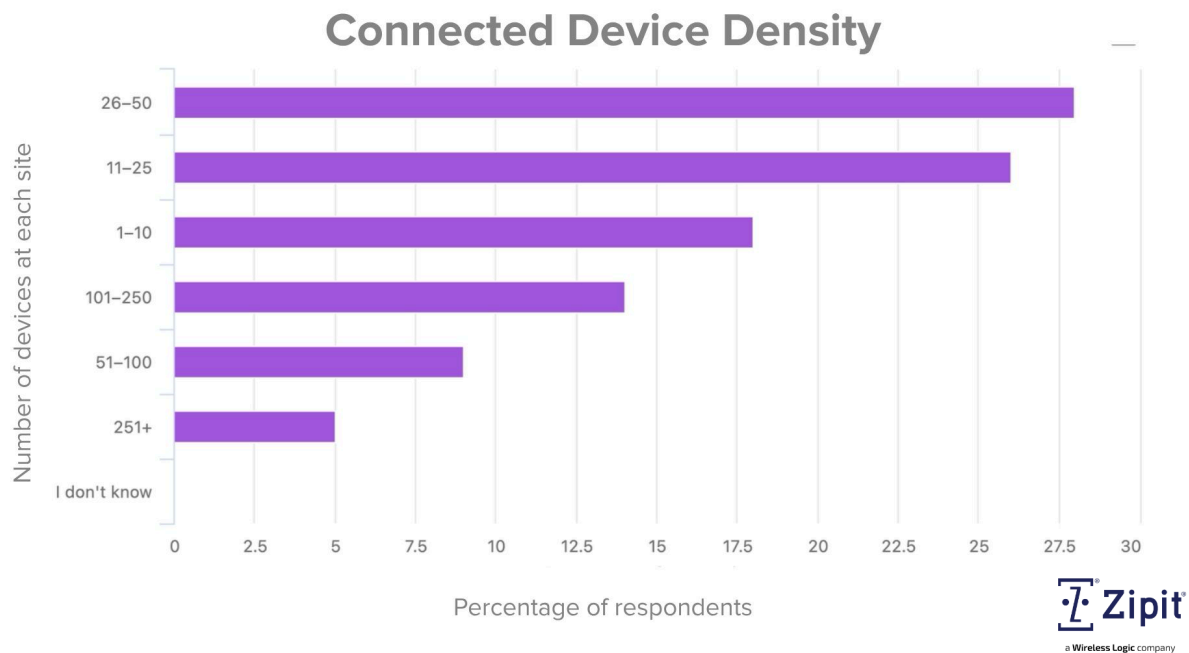
Geographic footprint

Connected-device programs are typically distributed across multiple sites:

- 38% of respondents manage devices across 6–20 locations
- 22% oversee 21 or more locations

Overall, 60% support deployments across at least six locations.

Device density



Device density is substantial at individual sites:

- 28% manage 26–50 connected devices per location
- 26% manage 11–25
- 18% manage 1–10
- 14% manage 101–250
- 9% manage 51–100
- 5% manage 251 or more

Overall, 56% manage at least 26 devices at a typical location, and 28% manage more than 50. This concentration increases the potential impact of downtime across systems and workflows within a single site.

On-site service frequency

On-site service is routine for most connected-device programs:

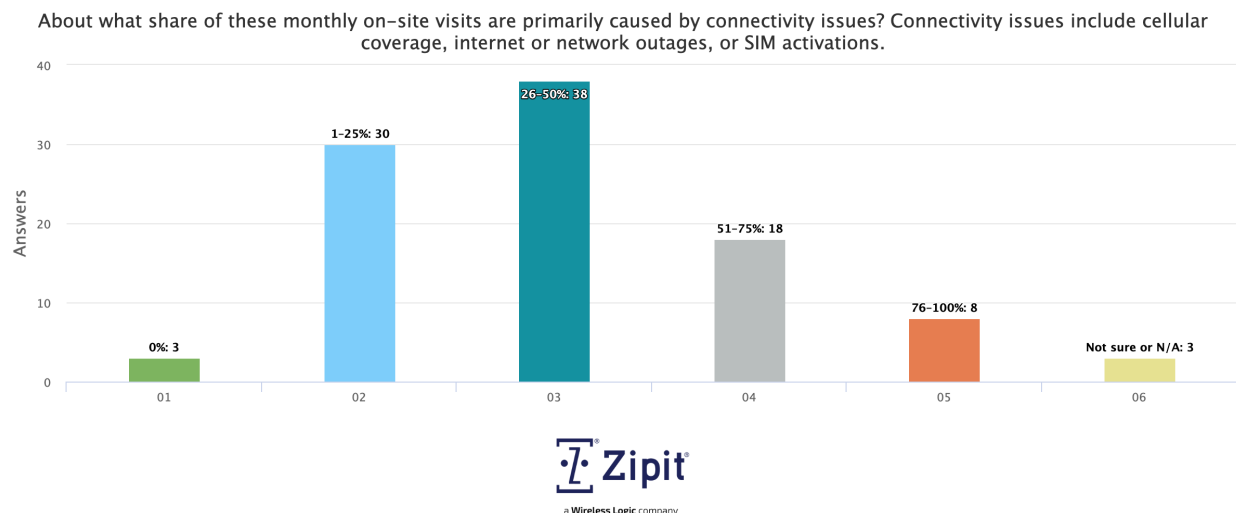
- 3% report no visits in a typical month
- 33% report 1–2 visits
- 36% report 3–5
- 16% report 6–10
- 5% report 11–20
- 7% report 21 or more

Overall, 64% require at least three on-site visits per month, and 28% require six or more. This shows that field service is an ongoing operational requirement rather than an occasional installation or maintenance need.

Observation 2: Connectivity issues drive a substantial share of on-site visits

Results show that connectivity issues are a major source of field service demand, accounting for at least a quarter of on-site visits for 64% of respondents. Site outages are the leading trigger, followed by hardware failures mistaken for connectivity problems, coverage issues, and installation errors.

Share of visits caused by connectivity issues



Connectivity problems account for a meaningful portion of field service demand:

- 38% say connectivity issues cause 26–50% of monthly on-site visits
- 18% attribute 51–75% of visits to connectivity
- 8% say connectivity is responsible for 76–100% of visits
- 3% report no connectivity-related visits

Overall, 64% estimate that at least a quarter of on-site visits are caused by connectivity issues, while 26% say connectivity drives more than half of all visits.

Leading causes of connectivity-related visits

As we saw in the previous section, connectivity problems are a major driver of field service demand. Survey results also indicated which types of connectivity issue most frequently caused on-site visits. Respondents could select multiple causes, so percentages reflect the share of respondents who selected each issue.

The most common connectivity-related triggers are:

- 67% — internet or network outages at the site
- 49% — hardware failures that appear to be connectivity problems
- 38% — coverage or signal issues in the field
- 36% — incorrect configuration during installation
- 31% — SIM activation or provisioning problems
- 22% — plan limits, overages, or throttling

Overall, the findings suggest the largest opportunities to reduce on-site visits lie in network resilience, diagnostic accuracy, and installation quality.

Observation 3: Frequent on-site visits create a recurring operating cost

Results show that on-site service is not an occasional expense for most connected-device programs. Visits occur frequently, consume significant technician time, carry direct costs, and often disrupt operations, creating a recurring burden that grows more consequential as deployments scale.

Visit frequency

On-site visits are a regular part of connected-device operations:

- 3% report no visits in a typical month
- 33% report 1–2 visits
- 36% report 3–5 visits
- 16% report 6–10 visits
- 5% report 11–20 visits
- 7% report 21 or more visits

Overall, 64% of organizations handle at least three on-site visits each month.

At that frequency, field service becomes a recurring operating cost that requires ongoing planning, staffing, and coordination rather than occasional reactive maintenance.

Time required per visit

Typical on-site visits take:

- 6% — less than 1 hour
- 47% — 1–2 hours, including travel
- 37% — 2–4 hours
- 7% — 4–8 hours
- 1% — more than 8 hours

Overall, 45% of respondents spend more than two hours on a typical visit, showing that each dispatch can consume a substantial block of technician time.

Cost per visit



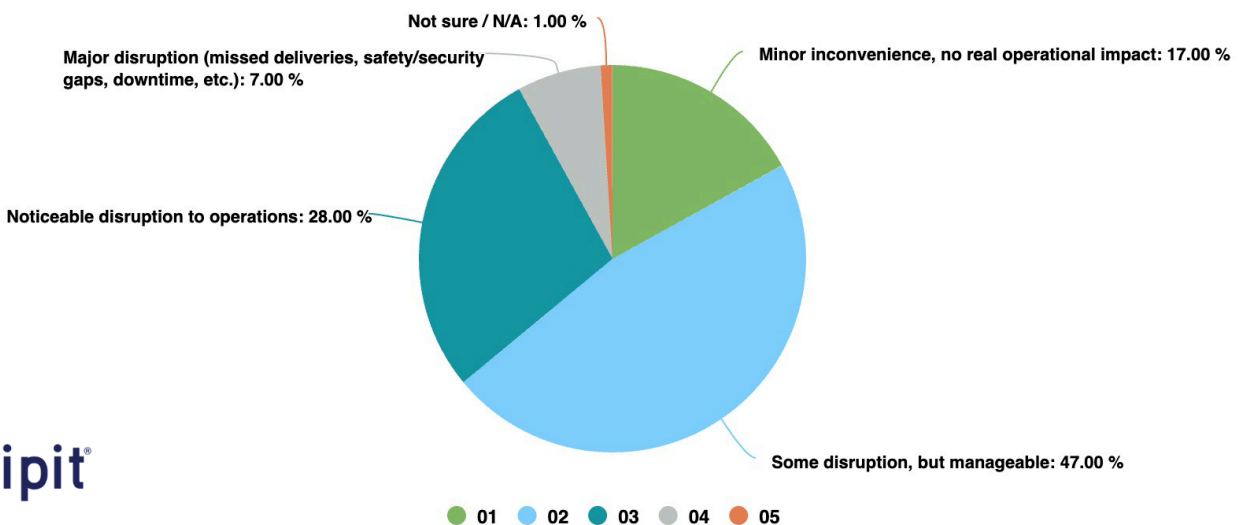
The direct cost is also significant:

- **38%** spend \$250–\$499 per visit
- **32%** spend \$100–\$249
- **18%** spend \$500–\$999
- **6%** spend \$1,000 or more
- **4%** spend under \$100

In total, **62% say a typical visit costs at least \$250, and 24% spend \$500 or more.** Longer visits also reduce technician availability and can delay resolution elsewhere.

Resulting operational disruption

When an on-site visit happens, what's the typical business impact?



The impact of direct service costs, technician time, and recovery delays required by on-site visits extends leads to broader operational disruption:

- 47% report some disruption, but manageable
- 28% report noticeable disruption
- 7% report major disruption, including downtime, missed deliveries, or safety and security gaps
- 17% report only a minor inconvenience

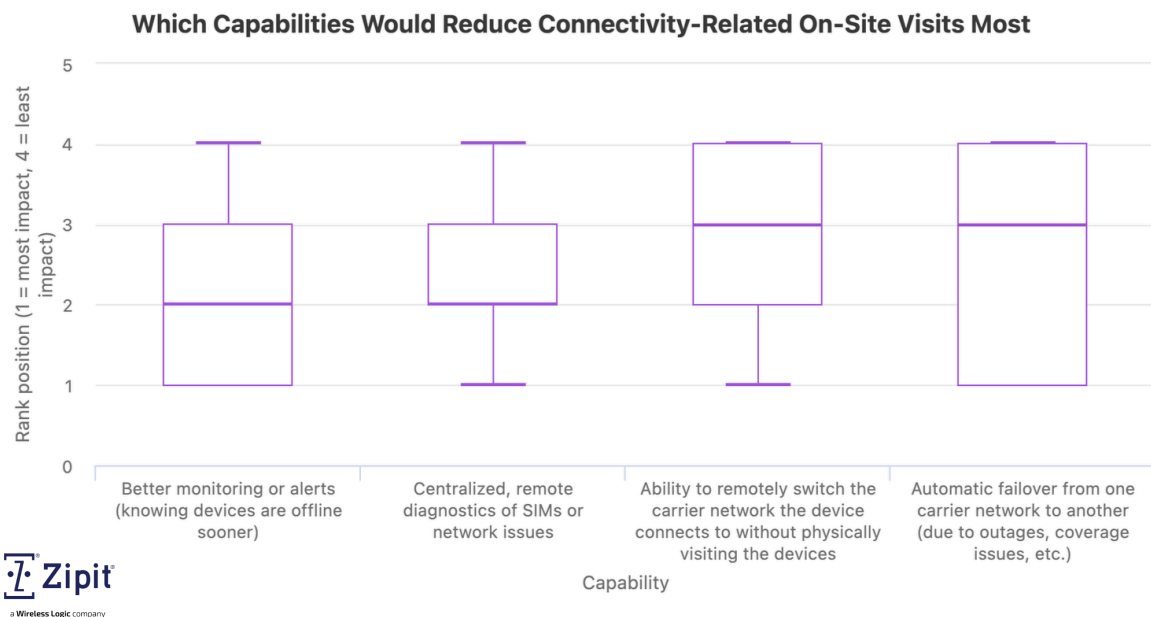
Overall, 82% experience at least some disruption, and 35% report noticeable or major disruption.

Observation 4: Respondents prioritized monitoring and remote troubleshooting to reduce on-site visits

Respondents generally favored capabilities that improve visibility and remote issue resolution, but the results also show that reducing site visits depends on broader operational factors.

Respondents ranked better monitoring and alerts as the most likely method to reduce on-site visits, with an average rank of 2.2 and a median of 2.0. Centralized remote diagnostics for SIM or network issues followed closely, with an average rank of 2.5 and the same median.

Remote carrier switching and automatic failover ranked somewhat lower, at 2.7 and 2.6 respectively, with greater variation in responses.



Open-ended responses listed the following desired improvements to reduce on-site visits:

- better network quality, reliability, and coverage
- more thorough installation and setup
- stronger remote troubleshooting tools and support
- better staff training
- clearer communication when issues arise

Overall, the results suggest organizations should place the highest value on earlier fault detection and stronger remote troubleshooting workflows before turning to advanced network-switching capabilities as the primary solution.

Differences by age group

Generational differences emerged in how respondents prioritized connectivity tools, although the overall preference remained strongest for monitoring and remote diagnostics.

Key differences included:

- **55–64:** ranked remote carrier switching highest, with an average rank of 1.4
- **35–54:** generally favored monitoring and remote diagnostics
- **18–24:** gave relatively stronger rankings to automatic failover and diagnostics
- **65+:** favored diagnostics, though this group was small

Across age groups, network outages remained the leading cause of site visits, while hardware failures mistaken for connectivity problems were also consistently important.

The results support a layered approach: monitoring and alerts for earlier visibility, remote diagnostics for faster issue identification, and failover or carrier switching where operating conditions make those capabilities useful.

Recommended priorities

The findings point to several areas organizations can evaluate when looking to reduce visits:

- improve monitoring and alerts for earlier issue detection
- expand remote diagnostics and device telemetry
- standardize installation and commissioning practices
- improve technician training and troubleshooting processes
- assess how automatic failover or remote carrier switching can reduce outage-related visits
- track service visit causes, costs, and outcomes to identify recurring issues

Conclusion

The survey shows that connected-device programs are commonly distributed across multiple locations, require recurring on-site support, and face meaningful costs when connectivity problems occur. Connectivity issues account for a substantial share of field visits, with outages, diagnostic uncertainty, coverage problems, and installation errors among the most common triggers.

At the same time, respondents consistently pointed to earlier monitoring, stronger remote diagnostics, and better setup and support practices as the most useful ways to reduce on-site visits. Together, the findings show that field service demand is shaped by both the reliability of connectivity and an organization's ability to identify and resolve problems remotely.



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ABOUT ZIPIT WIRELESS

Zipit simplifies the process of connecting IoT devices to wireless carriers and enabling subscription services – making it easier for companies to launch and monetize Internet of Things solutions anywhere in the world.

For more than 15 years, Zipit has been helping companies scale connected device deployments. Now as part of Wireless Logic, an analyst-recognized leading global IoT MVNO with millions of SIMs and eSIMs under active management, Zipit continues to provide consultative guidance on customized connectivity solutions and strategies according to each individual business's goals, backed by multinational scale and "follow the sun" support capability.

Fewer truck rolls start with a conversation.

If connectivity is behind more of your site visits than you'd like, you don't have to work through it alone. See how Zipit approaches eSIM strategy and network redundancy, and reach out whenever the timing is right.

www.zipitwireless.com →