Success story

The problem wasn't the tool. It was the terminal.

How Payhuddle's Tecto EMV L3 tool and technical team helped a leading LATAM payment processor achieve JCB ATM terminal certification by finding a non-standard terminal behavior that no one else had identified.

25000+	5	Root cause
ATMs in the partner's network	ATM terminals certified by JCB	Identified where others saw a tool issue

A leading LATAM-based payment processor needed to certify their ATM terminals for the JCB network using Payhuddle's Tecto EMV L3 testing and certification tool. When certification tests began failing, the customer suspected a defect in the tool. Payhuddle's technical team dug into the logs, identified a non-standard behavior in the terminal itself, engaged the terminal vendor and JCB to resolve it, and released a targeted Tecto update. All five ATM terminals were successfully certified by JCB.

Background

The customer is a licensed payment processor operating in the LATAM region. Their partner, whose ATM infrastructure runs through the customer's switch, operates one of the region's most extensive ATM networks: more than 25,000 ATMs and approximately 2,500 ATMO devices (compact devices that combine ATM and POS functionality), supporting dozens of card schemes, including Visa and Mastercard.

To expand JCB acceptance across this network, the customer needed to achieve JCB ATM terminal certification. They approached Payhuddle to run the certification testing using Tecto, Payhuddle's EMV L3 testing and certification tool. What followed was one of the most technically demanding engagements the Tecto team has run, and one of the most instructive.

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The challenge

Two distinct challenges defined this engagement from the outset. One was operational. One was technical. Neither was straightforward.

A language barrier that required patience before progress was possible

The customer's team worked in Portuguese. Payhuddle's team did not. Every technical conversation had to be navigated carefully across that barrier, something that sounds manageable in principle until you are six hours into a session across multiple calls, spending more than an hour on a single exchange just to establish a shared understanding of the problem. Alignment on the technical issues required deliberate, patient communication at every stage before any diagnostic work could begin in earnest.

A language barrier that required patience before progress was possible

Once communication was established, the technical picture became clear: certification tests were failing, and the customer could not identify why. Their working assumption was that Tecto was the source of the problem. It was not.

Finding the real cause required going well beyond the surface of the test results.

The investigation: Finding the real root cause

Payhuddle's technical team began a systematic analysis of every available log source: card logs, terminal logs, and terminal reader logs. The goal was to trace exactly what was happening at each step of the transaction, rather than accepting the surface-level test failure at face value.

What they found was unexpected. The terminal itself was not behaving in accordance with EMV standards. During the transaction flow, it transmitted two to three additional lines of command data that the EMV specification does not require.

The consequence of this non-standard behavior was specific to the architecture of EMV cards. EMV cards have a fixed, finite transaction log memory. Each command written to that log consumes a portion of that memory. The terminal's extra commands were filling the card's log memory prematurely, exhausting the available space before the certification test sequence could complete. The tests were not failing because of a tool defect. They were failing because the terminal was writing data it should not have been writing.

This was not a configuration error that a settings change could fix. It required escalation beyond the test environment entirely.

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The resolution: Three-party coordination and a targeted tool update

With the root cause identified and documented, Payhuddle's team engaged the terminal vendor directly. The team walked them through the full analysis: the specific commands being transmitted, the EMV standard that those commands violated, and the precise mechanism by which the extra data was causing card log memory exhaustion.

JCB was brought into the resolution process to confirm the findings and align on the correct path forward. With the network's input, it was established that the terminal's behavior, while non-standard, was a known characteristic of this ATM implementation, with performance implications due to the large number of card schemes the network supported. The resolution required updating Tecto to account for this behavior, rather than requiring the terminal vendor to rearchitect the terminal's command flow.

Payhuddle released a targeted update to Tecto that enabled it to read the JCB card log correctly in the context of this terminal's non-standard command behavior. Following the update, the certification tests ran without issue.

The outcome

All five ATM terminals were successfully certified by the JCB network. The certification covered the full scope required for JCB acceptance across the customer's terminal estate, enabling their partner's network to process JCB transactions.

The engagement also produced a broader benefit. The terminal behavior identified during this certification and the Tecto update developed to handle it directly addressed a performance consideration relevant to any large ATM network supporting a large number of card schemes simultaneously. The customer's partner adjusted their internal processes as part of the certification exercise, which strengthened the overall robustness of their implementation.

In the customer's own words

Following completion of the engagement, the customer shared the following unsolicited feedback:

> After overcoming the challenges related to the card log failures, the certification tests were carried out without any additional issues. The JCB-specific request that arose was promptly addressed by your team.
>
> We have completed the certification on all five terminals and are awaiting the official JCB certificate.
>
> We would like to highlight that our partner represents a very unique ATM operation, a network of more than 25,000 ATMs and approximately 2,500 ATMO devices, supporting dozens of card schemes, including Visa and Mastercard, both of which have already successfully completed their certifications.

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Why it worked

The team questioned the assumption, not just the evidence.

When tests fail during certification, the instinct is to look at the tool first. Payhuddle's team did not accept that framing. They went to the logs instead, tracing the transaction flow at every layer, card, terminal, and reader, until the actual source of the failure was isolated. Finding a non-standard terminal behavior as the root cause was only possible because the team was willing to go deeper than the surface of the test results.

A precise diagnosis enabled a precise fix.

Because the root cause was identified at the level of specific extra commands being transmitted by the terminal, the resolution could be surgical. The Tecto update was scoped exactly to the issue: enabling correct card log reading for JCB in the context of this terminal's behavior, without requiring broader changes to the tool or to the terminal's architecture. A less thorough diagnosis would have produced a less targeted fix, or no fix at all.

Three-party coordination was managed without losing momentum.

Resolving an issue involving the customer, the terminal vendor, and the JCB network simultaneously required someone to own communication across all three. Payhuddle's team maintained that coordination throughout, ensuring the terminal vendor understood the technical findings, that JCB was aligned on the resolution path, and that the customer was informed at every stage. The language barrier that complicated the early phase of the engagement never resurfaced as a blocker once the diagnostic work was underway.

About Payhuddle

Payhuddle is a payments solutions organization specializing in test tools, simulators, live test analyzers, certification consulting, and qualified certification services for the global payments ecosystem. Tecto is Payhuddle's EMV L3 testing and certification tool, used by payment processors, terminal vendors, and acquirers across multiple networks and markets. Learn more at payhuddle.com.

More information
Rest of the world
sales@payhuddle.com, +91 80 3119 6880
Americas
sales.americas@payhuddle.com, +1 920-371-3644

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