



HOW AN ENGINEERING FIRM ELIMINATED CALL FAILURES

and Rebuilt Client Trust with Attentus



How resolving phone system failures, network instability, and configuration issues transformed communication, productivity, and client experience.

Executive Summary

A multi-state civil and structural engineering firm attempted to modernize its phone system by migrating from legacy on-premises infrastructure to a cloud-based VoIP platform.

The migration promised to improve flexibility, reduce operational overhead, and enhance scalability. Instead, it created an operational crisis.

Within a few weeks of go-live, the firm experienced poor call quality, dropped calls, system instability, and a security breach. These technical issues quickly translated into business problems.

It meant, for instance, that teams couldn't communicate effectively internally while running projects, nor could the firm with its clients.

This new state of affairs threatened to damage relationships, collaboration, and reputation.

To address the issue, the engineering firm turned to Attentus.

First, we conducted a root-cause analysis and discovered their phone system had been misconfigured and that the underlying network infrastructure was inadequate for VoIP demands. Following the diagnosis, we reconfigured the system and upgraded their internet capability to restore stability.

Now the firm enjoys improved team productivity, stronger client communication, and reduced stress.

About the Client

This firm is a civil, structural, and land planning consulting business licensed in 12 states.

Their operations span multiple sectors, including:

- **Commercial and industrial construction.**
- **Residential and multifamily housing.**

- **Public works and infrastructure.**
- **Telecommunications (data centers, wireless installations).**

For firms like these, reliable, real-time communication with clients, contractors, and internal teams is non-negotiable.

For instance, clients expect immediate access to project teams for questions, change orders, and issue escalation. And field engineers, too, must maintain contact with office-based project managers and firm leadership.

What that means, then, is that even a slight communication failure can delay projects, damage reputation, and impact revenue.

The Problem: Communication Breakdown

The engineering firm was initially using a legacy on-premises PBX system that was increasingly difficult to maintain and limited in features, prompting a transition to modern VoIP.

Migration, however, didn't go as expected. Shortly after, the firm started experiencing:

- **Poor call quality**
- **Dropped calls**
- **System instability**

Clients and internal teams reported audio distortion, one-way audio on some calls, background noise, and echo, often having to repeat themselves during calls.

On top of that, the calls kept disconnecting without warning (sometimes just seconds after going through, other times mid-conversation). One-minute calls were working perfectly, the next minute, there was some sort of failure.

Users had to make multiple attempts to reach each other, sometimes resorting to alternative communication methods, such as email.

Gradually, client conversations became inconsistent, internal collaboration suffered, and the firm began to struggle to maintain its reputation as a reliable engineering partner.

Then came the straw that broke the camel's back: a hack on the phone system.

Nefarious actors had exploited a security loophole to disrupt communication even further, leading to downtime, confusion, and loss of trust among internal and external stakeholders.

In short, what had started as an I.T. issue had become a business risk

The Business Risk

Communication systems are directly tied to productivity, client experience, and revenue.

So when there was a breakdown, this engineering firm faced real business risks, including:

- **Missed client calls and delayed responses**
- **Misalignment between teams and stakeholders**
- **Loss of visibility into project progress**
- **Slower execution**
- **Reduced client satisfaction**
- **Reputational damage**

And that's why they turned to Attentus for help.

The Attentus Approach

Phase #1: System, Network, & Security Assessment

We started with an in-depth assessment of the firm's phone system configuration, network infrastructure, internet connectivity, and security posture.

This included:

- **An audit of system settings,** feature configurations, and integration with business processes.
- **An assessment of the LAN/WAN design,** bandwidth availability, latency, jitter, and packet loss at each office location.
- **An evaluation of the ISP Circuits.**
- And, of course, **an investigation of the hack** and current security controls.

This initial step helped us understand how the phone system was implemented, map how issues impacted daily operations, and finally surface gaps in setup and infrastructure.

Phase #2: Root Cause Diagnosis

After conducting a root-cause analysis of the problem, we discovered that the phone system was not inherently broken.

It simply was not configured properly for this specific environment, and it was running on a network foundation that could not support it.

Phase #3: System Reconfiguration

To remedy the situation, our experts first fixed the configuration errors to align the system with business needs.

This restored stability and eliminated recurring call issues.

Phase #4: Network & Internet Upgrade

Once we had properly configured the system, we simultaneously upgraded internet connections and stabilized network performance across all locations.

This ensured the phone system could operate consistently.

Phase #5: Performance Validation

Finally, Attentus conducted a thorough validation to ensure:

- **Call quality was consistent.**
- **System reliability was restored.**
- **Communication workflows were fully operational.**

Once that was done, we declared the solution complete.

The Results

Here are the key outcomes of our partnership:

#1. More Reliable Communication.

The phone system is functioning exactly as it should. Calls are clear, stable, and no longer disconnect abruptly.

#2. Improved Collaboration.

Engineers can communicate more effectively and coordinate projects without disruption.

#3. Enhanced Client Experience.

Response times have improved dramatically. Today, the engineering firm's clients experience nothing short of the consistent professional communication it set out to provide.

#4. Increased Productivity.

Because everything works perfectly, the firm's employees spend less time troubleshooting communication issues and now focus those saved hours on billable work.

#5. Reduced Workplace Stress.

Seamless communication has also reduced anxiety and confusion, allowing the team to stay updated about the projects they are involved in and deliver them on schedule.

Industry Insight: Why Communication Systems Fail

This case study reveals a common pattern in communication system failures. When issues arise, it's often not the phone system itself or the service provider at fault.

Many times, the underlying issue is poor configuration, an inadequate network infrastructure, and a lack of proper implementation expertise.

So if there's one key takeaway here, it's that technology doesn't fail in isolation. It fails when systems aren't properly designed, configured, and supported.

Attentus can help make your I.T. simple, not scary.

Here's What Sets Us Apart

Attentus is more than a technical "fixer".

When you partner with us, count on us to:

- **Identify and address root causes**, not just symptoms.
- Align your technology with business operations.
- Provide hands-on, proactive support.
- Ensure your systems work reliably long-term.

- That means zero hassle throughout our relationship.
- **Leverage the Attentus Advantage**
- Before your next system upgrade, make sure it's done right the first time.
- Start the conversation with a custom consultation with our experts.

About Us

We care about our customers and we make your business our business. As the leading provider of I.T. services in Bellevue and Seattle, we focus on making I.T. simple, not scary. We provide friendly, hands-on support 24/7.

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