



RGE Tech Tips from the Field – Client Edition

Topic: RGE's 4 Pillars of Tech Troubleshooting

RGE Troubleshooting Philosophy: The Four Pillars of Effective Technical Diagnosis

When troubleshooting technology issues, Red Glen Electronics follows four complementary principles that help avoid wasted time, unnecessary complexity, and expensive mistakes.

1. Occam's Razor — Prefer the Simplest Explanation

Definition:

When multiple explanations are possible, begin with the simplest explanation that adequately fits the facts.

RGE Application:

Before assuming hardware failure, operating system corruption, or complex software defects, first verify the basic and obvious possibilities.

Examples:

- Verify power before diagnosing hardware failure.
- Verify internet connectivity before troubleshooting applications.
- Verify settings before assuming corruption.
- Verify paths, permissions, and configuration before reinstalling software.

RGE Translation:

"Don't buy the solution until you've confirmed you have the problem."

2. Horses, Not Zebras — Check the Common Causes First

Definition:

When you hear hoofbeats, think horses, not zebras. In other words, investigate the most common causes before pursuing rare or exotic possibilities.

RGE Application:

Most technical issues arise from a small number of frequently occurring causes. Start with those before exploring unlikely scenarios.

Examples:

- Printer offline before print spooler corruption.
- Weak Wi-Fi signal before advanced network defects.
- Incorrect password before account compromise.
- Misconfigured service before operating system corruption.

• RGE Translation:

"Simple is safe. Clever is costly."



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3. In for a Penny, In for a Pound — Follow the Evidence to the End (Hanlon's Razor)

Definition:

Never attribute malice to what can be adequately explained by mistake, misunderstanding, oversight, or ordinary human error.

RGE Application:

Most technical failures are caused by accidental changes, overlooked settings, incomplete updates, forgotten passwords, or misunderstood procedures rather than intentional actions.

Examples:

- A setting was changed accidentally.
- An update failed partially.
- A cable became disconnected.
- A service was misconfigured.

RGE Translation:

"Let's rule out the obvious before chasing conspiracies."

RGE Troubleshooting Rule

The preferred troubleshooting sequence is:

1. Verify the simplest explanation.
2. Verify the most common explanation.
3. Verify human error or oversight.
4. Only then investigate complex, rare, or exotic causes.

Experience repeatedly shows that the boring explanation solves more problems than the dramatic one.

4. The Wizard of Oz Principle

Before assuming monsters, check who's behind the curtain.

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