DUXNET

Best Practice Guide to Ground Your Switch

Don't wait for a lightning strike to learn the hard way.

GROUND. YOUR. SWITCH.



WHY GROUNDING MATTERS

In South African conditions, electrical surges are a real and recurring threat - especially during summer thunderstorms, load shedding, and in areas with mixed or outdoor cabling.

If your DuxNet switch and rack are not properly grounded, the surge protection built into the device can't function.

- **Blown PoE ports**
- **Damaged chips**
- **Network outages and downtime**

WHAT CAUSES IT?

These conditions send electrical noise and spikes through your network cabling. If the switch isn't grounded, it absorbs the hit - not the surge protection.

- **Lightning strikes and power surges**
- **Outdoor network cables and poor shielding**
- **Nearby high-voltage equipment**
- **Improper grounding or no grounding at all**

BEST PRACTICE CHECKLIST

- Use the grounding screw on your DuxNet switch - every unit includes the grounding cable as standard.
- Ground both the switch and the server rack for complete protection with a grounding cable.
- Ensure your installation complies with proper surge protection protocols, especially for outdoor deployments.

PRO INSTALLER TIP

Always verify grounding continuity as part of your install process — especially when working with older buildings or DIY cabinet setups.

STEP-BY-STEP INSTRUCTIONS TO GROUND YOUR DUXNET SWITCH



1 LOCATE THE GROUNDING POINT

Each DuxNet switch features a grounding screw on the rear panel.



2 CONNECT THE GROUNDING CABLE

Use a grounding cable. Secure one end to the grounding screw on the switch using a screwdriver. Ensure it's tightly fastened.



3 GROUND THE SERVER RACK

For full protection, run the other end of the grounding cable to your grounded server rack or grounding bar. Both the switch and the rack should be grounded.



4 VERIFY GROUNDING CONTINUITY

Use a multimeter to check for continuity between the switch ground and your building's electrical ground.

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Installer Surge Protection Checklist

Best Practices for Grounding and Surge Protection in South African Conditions



PRE-INSTALLATION CHECKS

- [ ] Confirm site conditions: indoor/outdoor, cable runs, and power layout
- [ ] Identify nearby surge sources: aircons, fridges, generators, heavy equipment
- [ ] Check for existing grounding points in the cabinet/rack

GROUNDING SETUP

- [ ] Use a grounding cable to connect the switch's grounding screw to the rack
- [ ] If the rack is metal: ensure rack is also properly earthed to the building grounding system
- [ ] Use crimped ring terminals for secure connection (avoid loose or frayed ends)
- [ ] Avoid paint/insulation between grounding points – metal-to-metal contact required

SURGE PROTECTION PROTOCOL

- [ ] Install surge protection on all AC power inputs (UPS or surge plug boards)
- [ ] For outdoor cables: use shielded CAT6 and external surge protectors
- [ ] Separate power and data cabling in tight spaces
- [ ] Avoid using daisy-chained or overloaded multi-plugs
- [ ] Don't mix power sources across devices (e.g., generator + grid)

POST-INSTALLATION TEST

- [ ] Check for grounding continuity using a multimeter (resistance should be <5Ω)
- [ ] Label grounding cable connections and mark them in install documentation
- [ ] Run a basic PoE device test to verify stable port activity
- [ ] Document switch serial number, firmware version, and grounding photo for records