

Personnel Lift to Access Cable Raceways on a Server Farm

FACEBOOK / HUNT ELECTRIC

SUMMARY

Meta (Facebook at the time) needed to access the cable raceways above their server racks. Spika designed and manufactured a platform that provided safe access to the back of the racks. The platform could provide cantilevered access to the trays at the back of the racks, fit through the narrow aisles, collapse down to prevent interference with overhead pipes, and pass through standard man doors for storage.



Hunt Electric, the contractor for a new Facebook data center, needed a way to access the cable raceways above the server racks at their newly developed server farm. The cables were tucked toward the back of the racks, requiring the technicians to lean out to reach them. This challenging access situation was not fully identified until the facility was under construction.

The identified solution was a narrow personnel lift that

could easily move through the facility via manual effort by one to two people, and navigate the obstacles of beams, fire protection systems, and other infrastructure challenges better than a scissor lift or low-level manlift or picker. It also had to lower to pass through a standard man door and clear overhead obstacles like pipes all while providing ergonomic and stable access to the raceways. The traditional manlifts on the market were too large and cumbersome fit into the narrow aisles, and they could not accommodate the lean-out requirement for ergonomic access.

After a site visit to observe the challenges





faced by Hunt Electric and Facebook, Spika designed and built a custom platform to meet all the restricting requirements.

- A 45° lean-out extension supported the body weight of a technician during access to the cables to eliminate any straining or awkward balancing commonly required while using a ladder.
- A narrow 21" wide footprint allowed the platform to move safely between the racks. Outrigger jacks ensured stability of the narrow stand while in use.
- Battery-powered height adjustability ensured the system could be raised and lowered without being tethered to a wall or creating trip hazards. The system was able to raise at $\frac{3}{4}$ " per second and could operate a full 30 cycles on one charge.

- The railing lowered to accommodate overhead obstacles, such as facility pipes, and safely pass through a standard man door.
- Personnel could deploy the railing from the ground level via manual and electric adjustment, ensuring the stand provided full fall protection before being entered.
- Safety gates on either end eliminated fall risks.
- Due to the counter-balance weight required to stabilize the system, additional versions of the stand included a motorized caster to assist in moving the system.

Spika ultimately partnered with Facebook on enough systems to equip four data center sites around the US.