CONNECTED

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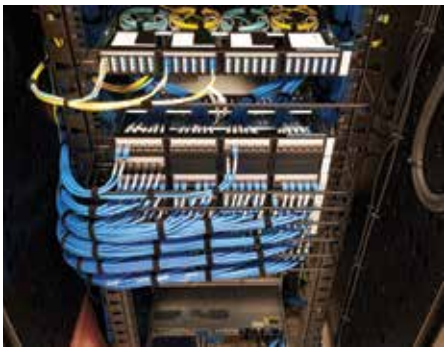
PROJECT FACT SHEET

Customer: Thales Group

Project: Early Voice Communication System (EVCS) Project

Project Profile:



Nilsen were awarded the Hardware Installation package for the EVCS Project from Thales Group in September 2017. The EVCS project will provide initial Civil Military Air Traffic Management (CMATS) voice communication system capabilities into the current Airservices Australia TAAATS (The Advanced Australian Air Traffic System). Primarily, Nilsen completed the EVCS equipment installation and cabling into Airservices Australia facilities in Brisbane, Melbourne, Sydney and Perth. This included installation of EVCS equipment into the existing consoles and existing equipment rooms at Airservices Australia sites. Nilsen were required to provide all necessary materials to complete the installation including cables, cable management and connectors. All materials were approved by the client and conformed to the clients' design specification.

Nilsen supplied the following items, which were not limited to:

- All cables for inter-rack and inter-equipment connection (Cat 6A S/FTP, individually twisted pair, pin out to 568A wiring)
- Patch cords for intra rack cabling
- Jumper wires for IDF frames
- Cat3 multi-pair cables and UTP cables
- Connectors including but not limited to keystone jacks, RJ-45/RJ-48plugs, BNC connectors and coax to twisted pair baluns
- Patch panels and patch panel blanking panels and rack RU blanking panels
- Optical fibres / OF cassettes
- Krone blocks
- Cable ties (hook and loop straps and nylon)
- Loom ties such as spiral wrap, braided cable sleeves, heat shrink
- Earthing supplies
- All labels for cables, fibre, power cables including equipment labels
- All miscellaneous hardware and sundry items required for installation including conduits/cable ducting, fixings, etc.

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Nilsen's scope across the project included, but was not limited to:

- Installed pre-built racks, A-Frames and temporary console equipment into Equipment Rooms, including connection of earthing system, bolting racks to false floor frame and bolting racks together (baying)
- Installed COTS equipment into racks and connected pre-loomed intrarack cabling within racks, including connection of equipment to earthing
- Installed end user equipment and peripherals, including PC's, keyboards, mice and KVM's
- Installed krone blocks and field cabling in to IDF racks within Equipment Rooms
- Completed inter-rack cabling and site cabling between equipment rooms and operational rooms, including:
  - Fibre optic cabling and termination
  - Structured network copper cabling
  - Power cabling and termination and installation of Power Distribution Units (PDU's)
- Cabling to physically extend extant Airservices Australia interface points to a suitable position within a location (building or facility) for connection to EVCS
- All minor facilities works required at Airservices Australia sites to support the installation of the EVCS system, including:
  - Installation of racks
  - Cable ducts
  - Cable trays
  - Changes to power routing
- Cable testing and interconnection end-to-end certification testing of EVCS cabling
- Installed console mounted equipment, including iPOS, iPIP's, connector panels, speaker and undertook any required minor modifications to the consoles and completed associated cabling
- Installed cable, equipment and rack labels (including RU labels and each port of the patch panels) in accordance with the Thales Labelling Standard
- Testing and commissioning including power-on testing, Hardware Deployment Review Checklist, "as-built" drawings including photographs and recorded equipment serial numbers against the "as-installed" location
- Provided technical support to the site integration, including connection to live interfaces as well as to the site AV&V
- Removed A-frames and associated temporary cabling post AV&V transition phase and the extant TAAATS Eurocat Air Traffic Controllers voice communications controls

This was a large, complex and nationally significant project that required the highest levels of technical excellence. Nilsen's work met all specified requirements and was completed professionally, diligently, safely, on time and was of an extremely high quality.

The Nilsen team also further developed their staging and planning techniques which were crucial in the execution of this segmented multi-site installation across the country.