



The Customer – Sydney Trains

A major new central control room (CCR) was required to enable Sydney Trains to visually monitor, minimise and manage delays. When incidents did occur on the Sydney Trains network, rail commuters will receive swift and accurate information.

ICP Global was chosen in 2018 by Sydney Trains for the design, integration and set up of a new KVM matrix desk control facilities within the new ROC : Rail Operations Centre, located within Alexandria NSW.

The solution required integrating two levels of the ROC: Level 2, two data centre rack rooms with Level 3's twenty-nine various operator desks configurations in various user system configuration scenarios. The proposed solution must operate "24x7" with emphasis on reliability and redundancy.

The Solution

The solution required the installation of two IHSE Enterprise K480-160 (160 port) multi-user multi-system KVM matrix switches within Level_2 data centre rack rooms CER_A and CER_B and extending up to CCR on Level_3 using a combination of both CATx and fibre cabling.

System CPU (transmitter) units located within rack rooms CER_A and CER_B are connected back to the IHSE Enterprise K480-160 multi-user multi-system KVM matrix switches over CATx cabling. Fibre cabling is routed from the IHSE Enterprise K480-160 KVM switch to Level_3's operator desks and into the operator desk's CON (console) units carrying keyboard, mouse and video functionality. The number of display screens per operational desk vary from a simple three screen to eight screen set up with a majority of the desks having a single keyboard and mouse set over the various screens.

The use of a single keyboard and mouse set was achieved by integrating the IHSE U-Switch 4 port keyboard mouse “free-flow” unit. The U-Switch, once integrated with the desk operators CON units, allows the desk operators mouse to automatically switch between the various target computers.

The K480-160 multi-user multi-system KVM matrix switch system has been designed to allow desk operators to access and display systems that are not within their standard desk operational mode on pre-designated desk screens.

This allows the desk operators to invoke a system within rack rooms CER_A or CER_B, or a localised system, and display and interact with that invoked system on a pre-designated screen. This also allows the invoked system to be shared across multiple operator desks. KVM switching process between computers is done instantaneously.

In order to manage effortlessly and efficiently the operator’s workflow, desk operators can access various system switching scenarios through the IHSE four button X-Key USB device or OSD (On Screen Display) menu. The X-keys allows users to work with simple buttons that are pre-programmed through the IHSE Tera Tools macros for preselected switching modes.

The IHSE flexible extenders allow a range of computers with VGA to Display Port (4K) to operate on the same platform without the use of converters.

IHSE’s modular architecture allows for reduced mean time to repair (MTTR) and its ability to monitor and provide alarms is another critical feature for Sydney Trains.

ROC Solution Overview

