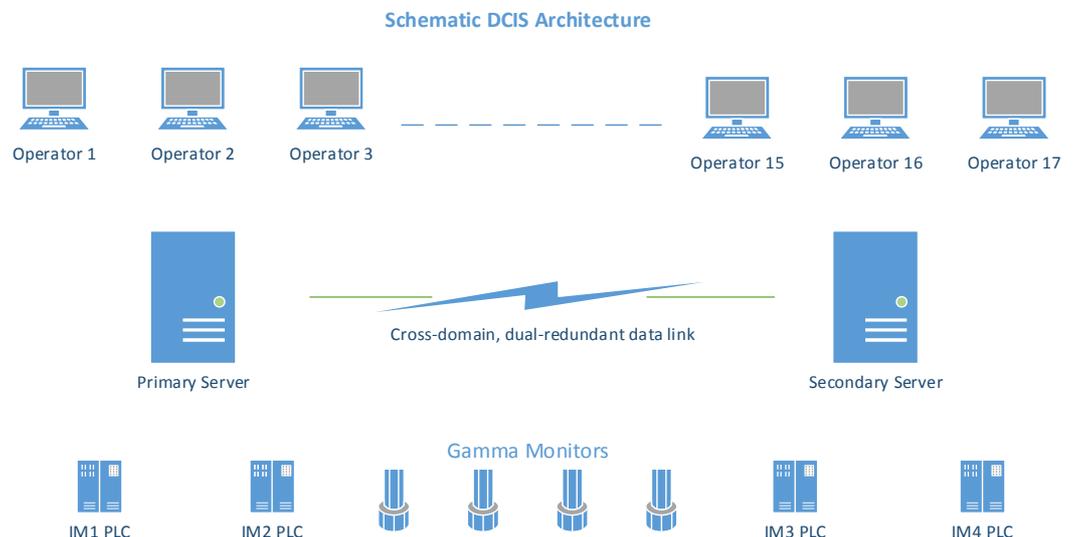


DCIS - Adroit Smart SCADA-based Deployable Communications & Information System for EDF-Energy NGL

Following the Fukushima incident in Japan, EDF-Energy NGL undertook a rigorous assessment into the resilience of its fleet of UK nuclear power stations against the highly unlikely occurrence of an extreme weather or other natural event. Through this process, they identified a requirement for the provision of mobile emergency response systems which will be deployed on the occurrence of such an event.

A £5 million contract was awarded to Thales UK who sub-contracted Servelec Controls to provide the control/monitoring sub-set of equipment and software to fulfil the DCIS requirement. Adroit Smart SCADA was chosen as the key software component along with PLC equipment from Omniflex and gamma radiation monitors from Canberra UK. A total of 5 sets of containerised Deployable Communications & Information Systems were supplied, enabling emergency response decision makers to make the right decisions, at the right time.

Each deployed system consists of a pair of Adroit Smart SCADA servers engineered in a dual-redundant, hot-standby configuration, with up to 17 thin-client Operator workstations connecting in to the servers. To facilitate enhanced resilience at the communications level the server machines exist on separate network domains – a configuration within which, unlike other SCADA products, Adroit Smart SCADA servers are able to provide a dual-redundant, hot-standby solution.



By allowing operators to access, monitor, communicate, analyse, and act upon critical data, the system provides a situational awareness solution that further enhances the UK's outstanding reputation for the safety of nuclear power plants. In so doing, it enables EDF-Energy NGL to deliver the regulatory requirement for deploying resilient communications as part of wider ranging capabilities to recover from an extreme natural event

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Part of an Operator screen showing important DCIS parameters

Dungeness B
VSA
DCIS Sign

Alarm Time	Agent Tag	Description
30/10/2014 13:35:06	IM2_UPS_85_Charge	IM2 Digital Input Module Channel 12 - UP
30/10/2014 13:35:06	IM2_UPS_Alarm	IM2 Digital Input Module Channel 11 - UP
30/10/2014 13:35:06	SCADA_IM2_COMMS_STATUS	SCADA to IM2 Comms Status

DCIS Signals

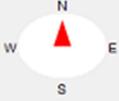
Instrument Module 1 Weather Station

Connected

Temperature °C

Air Pressure mbar

Wind Speed mph

Wind Direction 

Instrument Module 2 Weather Station

Connected

Temperature °C

Air Pressure mbar

Wind Speed mph

Wind Direction 

Instrument Module 1 Gamma Monitor

Dose Rate mSv/h

Instrument Module 2 Gamma Monitor

Dose Rate mSv/h

The *deployable* component of DCIS is particularly relevant because - although a total of 5 DCIS systems were supplied - in order to provide low through-life support needs, they must all be identical and yet must be capable of being deployed at short notice to any one of 8 different nuclear sites. Given that each of these 8 sites have differing plant equipment layout and configurations, the requirement to provide a single solution that could successfully be deployed at any one of the sites with no more than a few clicks on an initial configuration screen was vital.

In this regard, Adroit's advanced configuration capabilities, principally tag aliasing and HMI templating, along with proper product training and support, meant that this very important requirement was fully satisfied