

# Automated distance and differential protection testing with CMC



Q 2 days

**English** 

# Cprs02en

You will learn how to efficiently test distance and transformer differential relays with the OMICRON Test Universe. Become familiar with the test procedures in theoretical and hands-on sessions and get to know the benefits of reusable test templates.

### **Objectives**

- > Strengthen your testing skills with the CMC hardware and the Test Universe software
- > Refresh your technical knowledge on distance and transformer differential protection functions
- > Be able to choose the appropriate software modules for testing distance and transformer differential relays
- > Become more efficient in testing by creating and expanding reusable test plans
- > Get to know the full range of OMICRON solutions for protection testing

#### Content

- > Power system protection principles and typical substation topologies
- > Fundamentals of distance, ground fault and transformer differential protection functions
- > Working with OMICRON Control Center (OCC) test plans
- > Modelling the relay characteristics in the Test Object and configuring the CMC test set
- > Creating a reusable test plan for testing distance relays including
  - > testing the trip times
  - > verifying the zone reaches
- Creating a reusable test plan for testing transformer differential relays including
  - > testing the stability during external faults
  - > testing the tripping characteristic and times
  - > testing harmonic restraint function
- > Testing ground fault protection with RelaySimTest using realistic network simulation
- > Hands-on testing of distance and transformer differential relays as well as ground fault protection function

## **Solutions**

Test Universe: Advanced Distance, Advanced Differential OMICRON Control Center RelaySimTest ADMO, CMC-Family

#### **Audience**

Technical staff from utilities or companies working mainly in commissioning or maintenance testing

# **Prerequisites**

Training course "Power System Protection Testing 1" or equivalent knowledge

