

## Summary

- **Domain:** Oracle Communications Network Charging & Control, Software Development Kit.
- **Duration:** 5 day fixed-price block course.
- **Location:** As requested.
- **Attendees:** Up to 6 students per course.
- **Level:** Highly Technical. Includes hands-on programming exercises.
- **Pre-Requisites:** OCNCC & Telephony Basics. Solaris, Java, C/C++ and Oracle DB.

## Background

OCNCC is the Oracle real-time telecommunications control platform. The OCNCC platform is a richly featured platform which can support a wide range of telephony services.

The OCNCC SDK is a software development kit which includes interface points for third-party integrators to customise and extend the OCNCC platform to meet end-user requirements not supported by the base OCNCC product feature set. For example:

- Extensions to customer-care management screens.
- Extensions to automated provisioning (SOAP, MML) interfaces.
- Extensions to Call/Event Data Record processing.
- Extensions to run-time service logic (compiled plugins).
- Extensions to OCNCC graphical Service Creation Environment.
- Creating new services using advanced features of the OCNCC SCE.
- Creating new service applications from scratch using the OCNCC protocol stacks.

## Course Overview & Topics

This course is offered only as an intensive block course with all attendees on-site. During the course, students will remotely access a pre-installed Oracle OCNCC instance to create actual working SDK extensions based around an example service. The following topics are covered:

Service Loaders Macro Nodes Chassis Actions	<i>These are the primary plug-in points for OCNCC call processing extensions. Run-time call processing elements are added via C/C++ shared libraries. User interface extensions can be added via Java class elements.</i>
Database Access PI Commands	<i>The OCNCC Provisioning Interface provides a standard SOAP or MML interface mechanism for external agents. The SDK supports C/C++ shared libraries to add new provisioning commands.</i>
SLEE Application SLEE Interfaces	<i>The OCNCC Service Logic Execution Environment is the run-time message layer. The SDK provides access to the SLEE library. New SLEE interfaces in C/C++ add new protocols, and/or perform protocol transformation. Entirely new custom services can be coded as C/C++ SLEE applications.</i>
The Rest of the SDK	<i>Additional SDK topics include: Custom CDR processing plugins. SDK Access to MFiles. Packaging guidelines for custom elements, etc.</i>
Advanced Techniques for Control Plans	<i>The OCNCC graphical service builder provides 237 different feature nodes. This topic covers techniques for building powerful custom services without writing code – including run-time XML/SOAP interaction via DAP, OSD and BPL.</i>

## Terms

The following terms apply:

- The fee for this five-day course is USD\$15,000<sup>1</sup> in total for up to a maximum of six attendees.
- In addition, a fixed-price amount is payable for trainer's travel and expenses (depending on location).
- Six weeks notice required. Deposit of 50% is required at reservation, remainder before departure.
- Deposit is non-refundable in the case of client cancellation. Dates may be changed by agreement.

## Responsibilities

N-Squared will provide:

- Remote OCNCC servers with SMS/SLC/SDK training environments.

Client is responsible for providing:

- Suitable training location and facilities.
- One computer per attendee with necessary software as specified.
- Fast reliable internet access to the remote OCNCC servers.

### Daily Schedule

*Morning (2-3 hours)*  
Presentations and group discussions on technical elements of the NCC system.

*Afternoon (2-3 hours)*  
Trainer supports attendees as they develop software based on example requirements.

*Late Afternoon (1-2 hours)*  
Discussion of additional topics based on student feedback/requests.

## Skills Gained

After successfully completing this course, you will be able to:

- Write, compile and configure OCNCC customer-care and automated provisioning extensions.
- Write, compile and configure OCNCC service logic plugins.
- Write, compile and configure new features nodes into the OCNCC SCE.
- Create sophisticated SCE services using a wide-range of features (including DAP, OSD, and BPL).
- Use the N-Squared INAP Tester to perform validation of your custom services.

You will also become familiar with the features and techniques available for developing custom SLEE applications and interfaces, and many other OCNCC internal concepts.

## About N-Squared

N-Squared is an Oracle Gold Partner based in New Zealand. We provide Telecommunications products and services, with particular expertise in OCNCC service installation, integration and customisation.

We are one of the few Oracle Partners using the OCNCC SDK to provide custom service features to end users.

The consultants who provide our training services all have extensive software development experience with OCNCC internals and service features – including implementation and post-delivery support considerations.

N-Squared can provide training in other aspects of the OCNCC platform on request.

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<sup>1</sup> Fee in USD and subject to change. GST will be added if training is performed in New Zealand.