N-Squared Product – OCNCC Logic Node

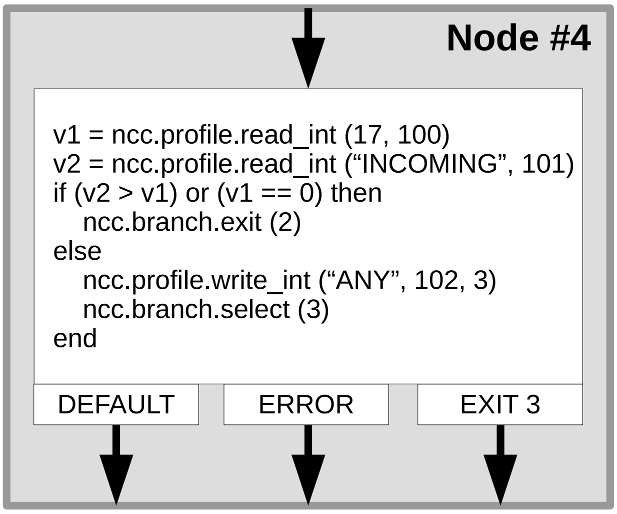
Summary

The *N-Squared OCNCC Logic Node* is the Control Plan Editor Node you've been waiting for. Drop a Logic Node into your Control Plan and write full-featured logic in the popular LUA embedded scripting language.

The Logic Node is a third-party macro node created using the official Oracle NCC SDK. It is designed specifically for expert Control Plan users needing to create complex business-logic processing which ventures beyond the bounds of the out-of-the-box NCC macro nodes.

Base Features Pack

The Base Features Pack includes everything you need to clean up your out-of-control plans.
Convert your tangled web of nodes into a single, clearly-structured logic node.



```
v1 = ncc.profile.read_int (17, 100)
v2 = ncc.profile.read_int (“INCOMING”, 101)
if (v2 > v1) or (v1 == 0) then
   ncc.branch.exit (2)
else
   ncc.profile.write_int (“ANY”, 102, 3)
   ncc.branch.select (3)
end
```

- **Numeric, String, Byte and Bitwise Manipulation**
- **Logic & Control (if/then/else/for/while/and/or/not...)**
- **Access ACS/CCS Engine Fields (Read/Write)**
- **Access Profile Tags & Prefix Trees (Read/Write)**
- **Access Service Data (Profile Tags, Customers...)**
- **Exit Branch Selection**

Maintain and refine your logic with best-practice techniques:

- **Document Code with Inline Comments**
- **Create and Re-Use Custom Function Libraries**
- **Write to slee_acs Debug Log**
- **Write slee_acs Error/Notice/Warning messages**

ACS/CCS Engine Field Accessors

The Base Features Pack includes Get and Set of ACS/CCS control plan engine fields, including:

Call Time	ACS Customer ID	Extension Digits
Call Duration	Service Number	VLR Number
Called/Caller TZ	Pending TN	MSC Address
PIN	Called/Calling Number	Location Info.
Account Code	Add. Calling Number	Location Number
CCS Account Number	Orig. Called Number	Called/Calling IMSI
CCS Account ID	Calling Party Category	Called/Calling SGSN

Feature Pack – Charging

The *N-Squared OCNCC Logic Node – Charging Feature Pack* gives you even more ways to power-up your control plans with direct access to low-level billing engine operations for your subscriber's wallet and service information.

- **Manage Wallet Info** (wallet type, product type, wallet state, last use, activation information...)
- **Manage Wallet Contents** (balances and buckets)
- **Named Event** (query and charge named events, direct or with reserve/confirm)
- **Periodic Charge Subscriptions** (query, subscribe, unsubscribe, grace state management...)
- **ID To Name Mappings** (wallet type, balance type, product, unit, currency, periodic charges...)

Frequently Asked Questions

Q. Why choose LUA?

The LUA programming language is specifically designed for embedded applications such as this. The LUA runtime has low start-up overhead, and provides a safe run-time environment for script execution. LUA is the world's most popular general-purpose embedded scripting language, with dozens of “how-to” books available.

Q. How does LUA avoid memory leaks?

Each LUA execution instance maintains all context on a single stack. The Logic Node framework will ensure the stack point is freed, and LUA guarantees that all associated memory is also cleaned-up.

Q. How does LUA guard against core dumps?

It is not possible to access invalid memory within a LUA script, since the LUA language does not include any mechanism for doing so. Any unhanded exception generated during LUA script execution will simple cause the Logic Node to exit down the “ERROR” branch, and generate an alarm to the system error log (syslog).

Feature Packs

The *N-Squared NCC Logic Node* offers licensing flexibility through extensible Feature Packs:

Feature Packs	
Base Features • LUA built-in operators and functions • Read/Write ACS/CCS Engine Context Fields • Decode/Encode NCC Prefix Trees • Exit Branch Selection (Default, Error, User-Defined) • SDK Chassis Action – Get Profile Tag • SDK Chassis Action – Write Profile Tag • ID → Name Mapping (ACS Customer) • ID → Name Mapping (Profile Tags) Also: • Formatted DEBUG output to STDOUT • Formatted SYSLOG output (compatible with NCC SMS)	**Charging Feature Pack** • SDK Chassis Action – Get Wallet • SDK Chassis Action – Wallet Info • SDK Chassis Action – Extended Wallet Info • SDK Chassis Action – Wallet Update • SDK Chassis Action – Extended Wallet Update • Periodic Charge Query and Management API • ID → Name Mapping (Wallet Type) • ID → Name Mapping (Product Type) • ID → Name Mapping (Currency) • ID → Name Mapping (Balance and Unit Type) • Available Capability Checking

Hardware & Operating System

The *N-Squared NCC Logic Node* runs under Solaris on the OCNCC SLC platform. It is available for all GA NCC releases from Intrepid onwards.

Support & Maintenance

Initial licence includes three months of warranty and phone/email support. Subsequent ongoing support is available at 20% per annum of the base list price. A continuous support agreement includes zero-cost upgrades.

More Details

Developed using the SDK Macro Node framework, the Logic Node is seamless within the Control Plan Editor.

Standard NCC Feature Node Access rules can be used to permit Logic Node usage for Administrators only.

Standard Licence Agreement includes unlimited users, unlimited control plans, and covers production, model and test.

About N-Squared

N-Squared is an Oracle Gold Partner based in New Zealand. We are specialist providers of products and services for the Telecommunications domain.

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