

RFC 4533 Implementation

Introduction

An effort to implement RFC 4533 is currently being done. We believe that it's a good basis for a MMR system, and it has been proved to work (see OpenLDAP SyncRepl implementation).

This is a description on this ongoing effort.

Data structure

RFC 4533 defines a set of data structures used for communicating to a remote server the changes done locally. Here are those data structure :

```
syncUUID ::= OCTET STRING (SIZE(16))
    -- constrained to UUID
syncCookie ::= OCTET STRING

syncRequestValue ::= SEQUENCE {
    mode ENUMERATED {
        -- 0 unused
        refreshOnly (1),
        -- 2 reserved
        refreshAndPersist (3)
    },
    cookie syncCookie OPTIONAL,
    reloadHint BOOLEAN DEFAULT FALSE
}

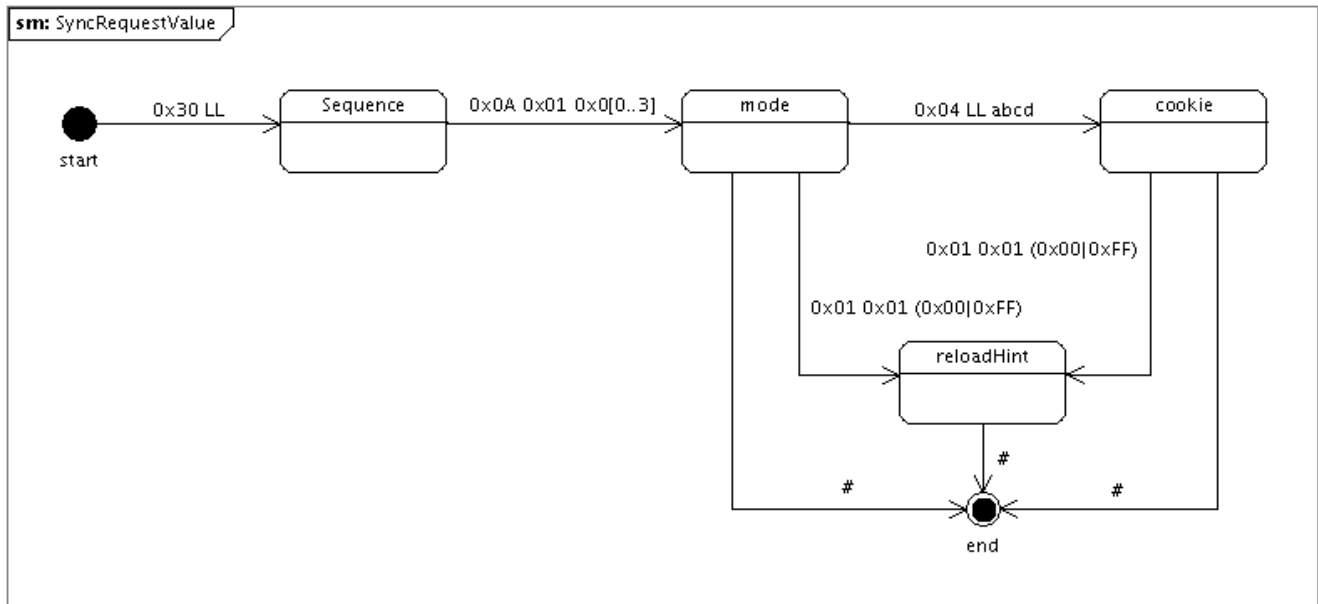
syncStateValue ::= SEQUENCE {
    state ENUMERATED {
        present (0),
        add (1),
        modify (2),
        delete (3)
    },
    entryUUID syncUUID,
    cookie syncCookie OPTIONAL
}

syncDoneValue ::= SEQUENCE {
    cookie syncCookie OPTIONAL,
    refreshDeletes BOOLEAN DEFAULT FALSE
}

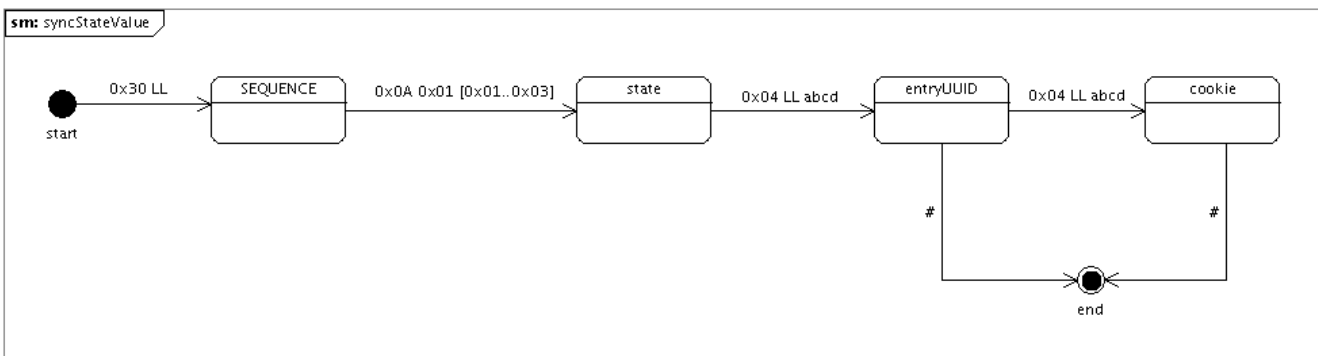
syncInfoValue ::= CHOICE {
    newcookie [0] syncCookie,
    refreshDelete [1] SEQUENCE {
        cookie syncCookie OPTIONAL,
        refreshDone BOOLEAN DEFAULT TRUE
    },
    refreshPresent [2] SEQUENCE {
        cookie syncCookie OPTIONAL,
        refreshDone BOOLEAN DEFAULT TRUE
    },
    syncIdSet [3] SEQUENCE {
        cookie syncCookie OPTIONAL,
        refreshDeletes BOOLEAN DEFAULT FALSE,
        syncUUIDs SET OF syncUUID
    }
}
```

The following graphics present the state diagram used to implement those data structure.

syncRequestValue

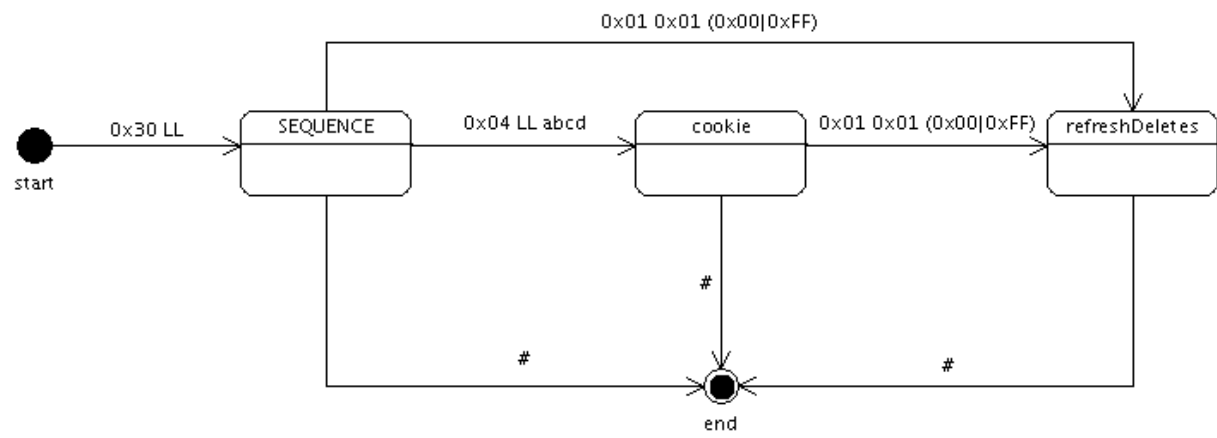


syncStateValue



syncDoneValue

sm: syncDoneControl



syncInfoValue

sm: syncInfoValue

