

NODEB-RNIB APIs

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RNIB Queries Request Overview

The purpose of this document is to describe the RNIB Queries the E2M supplies: Input and Output.

Error Handling

We defined few custom errors that implement error interface

InternalError - defined as:

```
type InternalError struct{
    err error
}

func NewInternalError(error error) error {
    return &InternalError{err:error}
}

func (e InternalError) Error() string {
    return e.err.Error()
}
```

ResourceNotFoundError - defined as:

```
type ResourceNotFoundError struct{
    message string
}

func NewResourceNotFoundError(msg string) error {
    return &ResourceNotFoundError{message:msg}
}

func NewResourceNotFoundErrorf(fmtMsg string, a ...interface{}) error {
    return &ResourceNotFoundError{message:fmt.Sprintf(fmtMsg, a...)}
}

func (e ResourceNotFoundError) Error() string {
    return e.message
}
```

ValidationError - defined as:

```
type ValidationError struct{
    message string
}

func NewValidationError(msg string) error {
    return &ValidationError{message:msg}
}

func NewValidationErrorf(fmtMsg string, a ...interface{}) error {
    return &ValidationError{message: fmt.Sprintf(fmtMsg, a...)}
}

func (e ValidationError) Error() string {
    return e.message
}
```

List RNIB Queries (Short)

#	API + Input	Output
1	GetNodeb (Inventory Name)	NodebInfo
2	GetNodebByGlobalNbld("GNB":<GlobalGNB-ID> or "ENB":<GlobalENB-ID>))	NodebInfo
3	GetListgNBIDs()	NbIdentity
4	GetListeNBIDs()	NbIdentity
5	GetCountGnbList()	Int
6	GetCellList(inventoryName) [] Cells	Cells
7	GetCell(inventoryName, pci)	Cell
8	GetCellByld(cellType, cellId)	Cell
9	GetRanLoadInformation (inventoryName)	RanLoadInformation
10	GetListNodeblds()	NbIdentity

RNIB Shared Object

#	API + Input	Output
1	getListGnblds()	GnbListJsonResponse

List of RNIB Queries (Long)**Query-1 GetNodeb(Inventory Name)**

Description	This API returns the entire data of given NodeB (eNB or gNB) by its inventory name. The inventory name is a unique key that is used by the operator's inventory systems
Supported Languages	GoLang


API Signature

Unknown macro: 'bgcolor'

Query-2 GetNodeBByGlobalNbId(“GNB”:<GlobalGNB-ID> or “ENB”:<GlobalENB-ID>))

Description	This API returns the entire data of given NodeB (eNB or gNB) by its ID.
Supported Languages	GoLang

API Signature

 Unknown macro: 'bgcolor'

Query-3 GetListgNBIDs()

Description	This API returns the list of the gNBs that are stored in the RNIB. The call returns both the inventory name and the gNB ID
Supported Languages	GoLang


API Signature

 Unknown macro: 'bgcolor'

Query-4 GetListeNBIDs()

Description	This API returns the list of the eNBs that are stored in the RNIB. The call returns both the inventory name and the eNB ID
Supported Languages	GoLang


API Signature

 Unknown macro: 'bgcolor'

Query-5 GetCountGnbList()

Description	This API returns the number of the gNBs that are stored in the RNIB.
Supported Languages	GoLang


API Signature

 Unknown macro: 'bgcolor'

Query-6 GetCellList(inventoryName)

Description	Returns the list of cells and neighbours (full data) that are associated with a given eNB or gNB by its inventory name as a key
Supported Languages	GoLang


API Signature

 Unknown macro: 'bgcolor'

Query-7 GetCell(inventoryName, pci)

Description	Returns specific Cell data by Inventory name and PCI or NR PCI as key
Supported Languages	GoLang


API Signature

 Unknown macro: 'bgcolor'

Query-8 GetCellById(cellType, cellId)

Description	This API returns the cell data from by cell type and cell Id
Supported Languages	GoLang

API Signature

 Unknown macro: 'bgcolor'

Query-9 GetRanLoadInformation (inventoryName)

Description	This API returns the RANLoadInformation by the inventory name of the RAN The inventory name is a unique key that is used by the operator's inventory systems. It returns the latest Load Information the E2M receives from this RAN, including the Timestamp.
Supported Languages	GoLang

API Signature

GetRanLoadInformation(inventoryName string) (*entities.RanLoadInformation, error)

Query-10 GetListNodeIds ()

Description	This API returns the full list of the NBs that are stored in the RNIB. The call returns both the inventory name and the gNB ID (optional)
Supported Languages	GoLang


API Signature

GetListNodeIds()([]*entities.NbIdentity, error)

Init(namespace, poolSize)RNIB Meta-functionality

Description	Initializes the infrastructure required for the RNIB Reader instance
Supported Languages	GoLang


API Signature

 Unknown macro: 'bgcolor'

GetRNIBReader(void)

Description	Returns instance from the pool
Supported Languages	GoLang


API Signature

 Unknown macro: 'bgcolor'

Close(void)

Description	Closes RNIB Reader's pool
Supported Languages	GoLang

API Signature

 Unknown macro: 'bgcolor'

RNIB quick start

DEPENDENCIES

RNIB Reader module requires the next packages (modules) to be installed

1. Redis
2. Protobuf
3. sdlgo
4. common (RNIB Reader)
5. entities (RNIB Reader)

PREREQUISITE

The environment variable DBAAS SERVICE HOST (Redis DB IP) required to be set

INSTALLATION

1. In case of **Go modules enabled** run the next command outside of GOPATH where project (go mod) is located:

R4: `$ go get gerrit.o-ran-sc.org/r/ric-plt/nodeb-mib.git/reader@v1.0.35`

R5: `$ go get gerrit.o-ran-sc.org/r/ric-plt/nodeb-mib.git/reader@v1.0.44`

`$ go build ./...`

1. In case of **Go modules disabled** run the next command inside of GOPATH:

`$ go get gerrit.o-ran-sc.org/r/ric-plt/nodeb-mib.git`

List of Output Type Protobuf

Proto message	Proto file	Last updated
NodebInfo	nodeb_info.proto	2020-04-20
NbIdentity	nb_identity.proto	2020-04-05
Enb	enb.proto	2020-07-02
Gnb	gnb.proto	2020-07-02
AdditionalCellInformation	additional_cell_information.proto	2020-07-02
RanFunction	ran_function.proto	2020-06-17
Cells	cells.proto	2020-04-05
Cell	cell.proto	2020-04-05
X2SetupFailureResponse	x2_setup_failure_response.proto	2020-04-05

RanLoadInformation	ran_load_information.proto	2020-04-05
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GnbListJsonResponse

Response	Json	Example
Success Response	<pre>{ "gnb_list": [{ "inventory_name": "", "global_nb_id": { "plmn_id": "", "nb_id": ""} }] }</pre>	<pre>{ "gnb_list": [{ "inventory_name": "test2", "global_nb_id": { "plmn_id": "42f490", "nb_id": "000004"}}] }</pre>
Success Response Empty Gnb List	<pre>{ "gnb_list": null }</pre>	<pre>{ "gnb_list": null }</pre>
Failed Response	<pre>{ "gnb_list": null, "error_msg": "" }</pre>	<pre>{ "gnb_list": null, "error_msg": "dial tcp 127.0.0.1:6379: connect: connection refused" }</pre>