

## Appendix A

# Provisioning Server IDLs

This appendix describes the Juniper Networks proprietary IDL set for the Provisioning Service. The IDLs define all of the methods for the network management system (NMS) to manage Juniper Networks devices. To get these references, the NMS must go through the `getManager(...)` of `emsSession` reference.

This appendix contains the following sections:

- `unspRXDeviceMgr.idl` on page 235
- `unspRXCustomerMgr.idl` on page 242

### **unspRXDeviceMgr.idl**

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The following IDL is the definition of `unspRXDeviceMgr.idl`:

```
#ifndef unspRXDeviceMgr_idl
#define unspRXDeviceMgr_idl

// *****
// *
// * unspRXDeviceMgr.idl      *
// *                          *
// *                          *
// *****

//Include list
#include "globaldefs.idl"
#include "common.idl"

#pragma prefix "nmcx.unspcorabridge.provisioningservice.services.redstonecom.com"

module unspRXDeviceMgr
{
    /**
     * UnspRXDeviceMgrObjectType defined all possible object types for NMC-RX to manage
     */
    enum UnspRXDeviceMgrObjectType
    {
        // Layered Objects
        EMS,
        ManagedElement,
        PTP,

        // Examples:
        // "Juniper NMC-RX"
        // "10.6.129.6"
        // "6/0" - where 6 is the slot number, and
        // 0 is the port number
        AtmInterface,
        AtmSubInterface,
        AtmPvc,
        // "ATM6/0-atm-layer",
        // "ATM6/0.1-atm1483-subif",
        // "ATM6/0.1-atm1483-subif vpi=1,vci=600"
    }
}
```

```

    PPP,                // not supported
    PPPoE,              // not supported
    PPPoESubInterface, // not supported
    BridgedIP_rfc1483, // "4/0.10"
    VirtualRouter,     // "default", "VR1"

    IpInterface,

    Customer,
    CustSite,
    BridgeInterface // "BridgeIf6/0.1"
};

/**
 * UnsprRXDeviceMgrObjectTypeList is a list UnsprRXDeviceMgrObjectType
 */
typedef sequence<UnsprRXDeviceMgrObjectType> UnsprRXDeviceMgrObjectTypeList;

/**
 * UnsprRXActionType defined all possible action types
 * for NMC-RX to manage E-series routers
 */
enum UnsprRXActionType
{
    CREATE,
    CONFIGURE,
    LIST,
    VIEW,
    DELETE
};

/**
 * UnsprRXActionTypeList is a list UnsprRXActionType
 */
typedef sequence<UnsprRXActionType>UnsprRXActionTypeList;

/**
 * UnsprRXDeviceMgr_I defines all methods to manage objects
 * under ERX. It is derived from common::Common_I, which is
 * one of the idls defined by TMF 814.
 */

interface UnsprRXDeviceMgr_I : common::Common_I
{
    /**
     * This method should be used to list all objects of a particular type relative
     * to another object.
     *
     * The retrieval mechanism follows the paradigm established in TMF 814
     * and is described below:
     *
     * objectPath: The name-value pair list of the objects you want to list relative to other
     objects.
     *
     * Example:
     * ListAll AtmSubInterfaces relative to objectPath
     *     Name="EMS",           Value="Juniper NMC-RX"
     *     Name="ManagedElement", Value="10.6.129.6"
     *     Name="PTP",           Value="6/0"
     *     Name="AtmInterface",  Value="ATM6/0-atm-layer"
     *
     * ListAll AtmPvc relative to objectPath

```

```

*         Name="EMS",           Value="Juniper NMC-RX"
*         Name="ManagedElement", Value="10.6.129.6"
*         Name="PTP",           Value="6/0"
*
* objectType:   The type of objects that you want to list
*   Example:
*     UnsprRXDeviceMgrObjectType.AtmSubInterfaces
*     UnsprRXDeviceMgrObjectType.AtmPvc
*
* howMany:      The maximum number of objects to report in the first batch in nameList
*
* nameList:     First batch of howMany objects report to NMS
*
* nameIt:       Iterator to retrieve the remaining object after the first batch
*   To allow the NMS to deal more easily with retrievals which may return a
*   very large amount of data, iterators are used. They provide a mechanism to retrieve
*   data batch by batch - the size of a batch is specified by the NMS via the
*   how_many parameter in the next_n method of the iterator reference.
*   For a more detailed explanation of the use of iterators, please refer to
*   TMF814\supportingDocumentation\iterators.html
* Raises: globaldefs::ProcessingFailureException
*   EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*   EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*   EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*   EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                   can support has been reached.
*   EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void listAll(
    in globaldefs::NVSLIST_T      objectPath,
    in UnsprRXDeviceMgrObjectType objectType,
    in long                       howMany,
    out globaldefs::NamingAttributesList_T nameList,
    out globaldefs::NamingAttributesIterator_I nameIt)
    raises(globaldefs::ProcessingFailureException);

/**
 * This list works the same as the other one except that it returns only those objects created
 * after timeStamp. Also, objects are sorted by timeStamp when they are returned.
 */
void listAllFromTime(
    in globaldefs::NVSLIST_T      objectPath,
    in UnsprRXDeviceMgrObjectType objectType,
    in string                     timeStamp,
    in long                       howMany,
    out globaldefs::NamingAttributesList_T nameList,
    out globaldefs::NamingAttributesIterator_I nameIt)
    raises(globaldefs::ProcessingFailureException);

/**
 * This method should be used to create an object of a particular type.
 *
 * objectType:   The type of objects that you want to list
 *   Example:
 *     ListAll AtmSubInterfaces relative to objectPath
 *     Name="EMS",           Value="Juniper NMC-RX"
 *     Name="ManagedElement", Value="10.6.129.6"
 *     Name="PTP",           Value="6/0"
 *     Name="AtmInterface",  Value="ATM6/0-atm-layer"
 *     Name="AtmSubInterfaces", Value="ATM6/0.1-atm1483-subif"
 *     Name="AtmPvc",        Value="ATM6/0.1-atm1483-subif vpi=1,vci=600"
 *
 * objectType:   The type of objects that you want to list

```

```

*      Example:
*      UnsprRXDeviceMgrObjectType.AtmPvc
*
*      attributesList: It will hold all attributes as a name-value pair list
*                      to pass to NMC-RX to create this object
*
*
*      objectName: The object name has just been created by this method. It is assigned
*                  by device instead of being specified by the user
*
*      Raises: globaldefs::ProcessingFailureException
*              EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*              EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*              EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*              EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                                can support has been reached.
*              EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void create(
    in globaldefs::NVSLIST_T      objectPath,
    in UnsprRXDeviceMgrObjectType objectType,
    in globaldefs::NVSLIST_T      attributesList,
    out string                     objectName )
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to configure objects
*
*      objectPath: The name-value pair list of the object you want to configure.
*      Example:
*      ListAll AtmSubInterfaces relative to objectPath
*      Name="EMS", Value="Juniper NMC-RX"
*      Name="ManagedElement", Value="10.6.129.6"
*      Name="PTP", Value="6/0"
*      Name="AtmInterface", Value="ATM6/0-atm-layer"
*      Name="AtmSubInterfaces", Value="ATM6/0.1-atm1483-subif"
*      Name="AtmPvc", Value="ATM6/0.1-atm1483-subif vpi=1,vci=600"
*
*      attributesList: It will hold all attributes as name value pair list
*                      to pass to NMC-RX to configure this object.
*      Raises: globaldefs::ProcessingFailureException
*              EXCPT_INTERNAL_ERROR - Raised in case of a nonspecific EMS internal failure
*              EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*              EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*              EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                                can support has been reached.
*              EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void config(
    in globaldefs::NVSLIST_T      objectPath,
    in globaldefs::NVSLIST_T      attributesList)
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to delete an object
*
*      objectPath: The name-value pair list of the object you want to delete.
*      Example:
*      ListAll AtmSubInterfaces relative to objectPath
*      Name="EMS", Value="Juniper NMC-RX"
*      Name="ManagedElement", Value="10.6.129.6"
*      Name="PTP", Value="6/0"
*      Name="AtmInterface", Value="ATM6/0-atm-layer"
*      Name="AtmSubInterfaces", Value="ATM6/0.1-atm1483-subif"

```

```

*      Name="AtmPvc",          Value="ATM6/0.1-atm1483-subif vpi=1,vci=600"
*  Raises: globaldefs::ProcessingFailureException
*  EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*  EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*  EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*  EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                  can support has been reached.
*  EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void delete(in globaldefs::NVSLIST_T  objectPath)
    raises(globaldefs::ProcessingFailureException);

/**
*  This method should be used to view an object
*
*  objectPath:    The name-value pair list of the object you want to view.
*  Example:
*  ListAll AtmSubInterfaces relative to objectPath
*      Name="EMS",          Value="Juniper NMC-RX"
*      Name="ManagedElement", Value="10.6.129.6"
*      Name="PTP",          Value="6/0"
*      Name="AtmInterface", Value="ATM6/0-atm-layer"
*      Name="AtmSubInterfaces",Value="ATM6/0.1-atm1483-subif"
*      Name="AtmPvc",      Value="ATM6/0.1-atm1483-subif vpi=1,vci=600"
*
*  attributesList: It will hold all attributes as the name value pair list
*                  to pass back to NMS to view this object.
*  Raises: globaldefs::ProcessingFailureException
*  EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*  EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*  EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*  EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                  can support has been reached.
*  EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void view(
    in globaldefs::NVSLIST_T  objectPath,
    out globaldefs::NVSLIST_T  attributesList)
    raises(globaldefs::ProcessingFailureException);

/**
*  This method should be used to get the attributes descriptions in order
*  to create an object
*
*  objectPath:    The name-value pair list of the object you want to view.
*  Example:
*  ListAll AtmSubInterfaces relative to objectPath
*      Name="EMS",          Value="Juniper NMC-RX"
*      Name="ManagedElement", Value="10.6.129.6"
*      Name="PTP",          Value="6/0"
*      Name="AtmInterface", Value="ATM6/0-atm-layer"
*      Name="AtmSubInterfaces",Value="ATM6/0.1-atm1483-subif"
*
*  objectType:    The type of objects that you want to create
*  Example:
*      UnsprXDeviceMgrObjectType.AtmPvc
*
*  attributesDescription: It will hold all attributes with their description
*                          as name-value pair list to pass back to NMS.
*                          The name will be the attribute name, but the value
*                          will have the attribute type and the description of
*                          this attribute, seperated by the first ":".
*  Raises: globaldefs::ProcessingFailureException

```

```

*      EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*      EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*      EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*      EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                     can support has been reached.
*      EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void getCreateAttributesDescription(
    in globaldefs::NVSLIST_T      objectPath,
    in UnspRXDeviceMgrObjectType  objectType,
    out globaldefs::NVSLIST_T     attributesDescription)
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to get the attributes description in order
* to config an object
*
* objectPath:    The name-value pair list of the object you want to view.
* Example:
* ListAll AtmSubInterfaces relative to objectPath
*     Name="EMS",           Value="Juniper NMC-RX"
*     Name="ManagedElement", Value="10.6.129.6"
*     Name="PTP",           Value="6/0"
*     Name="AtmInterface",  Value="ATM6/0-atm-layer"
*     Name="AtmSubInterfaces",Value="ATM6/0.1-atm1483-subif"
*
* attributesDescription: It will hold all attributes with their description
*                        as name-value pair list to pass back to NMS.
*                        The name will be the attribute name, but the value
*                        will have the attribute type and the description of
*                        this attribute, seperated by the first ":".
* Raises: globaldefs::ProcessingFailureException
*      EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*      EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*      EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*      EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                     can support has been reached.
*      EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void getConfigAttributesDescription(
    in globaldefs::NVSLIST_T      objectPath,
    out globaldefs::NVSLIST_T     attributesDescription)
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to get a list of object types on which you can perform a list of
* actions relative to other objects.
*
* objectPath:    The name-value pair list of the object you want to view.
* Example:
* ListAll AtmSubInterfaces relative to objectPath
*     Name="EMS",           Value="Juniper NMC-RX"
*     Name="ManagedElement", Value="10.6.129.6"
*     Name="PTP",           Value="6/0"
*     Name="AtmInterface",  Value="ATM6/0-atm-layer"
*     Name="AtmSubInterfaces",Value="ATM6/0.1-atm1483-subif"
*
* objectTypeList: To hold a list of object types
*
* Raises: globaldefs::ProcessingFailureException
*      EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*      EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*      EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object

```

```

*      EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                       can support has been reached.
*      EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void getListableObjectTypeSelections(
    in globaldefs::NVSLIST_T      objectPath,
    out UnspRXDeviceMgrObjectTypeList objectTypeList)
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to get a list of object types on which you can create
* actions relative to other objects.
*
* objectPath:    The name-value pair list of the object you want to view.
* Example:
* ListAll AtmSubInterfaces relative to objectPath
*     Name="EMS",           Value="Juniper NMC-RX"
*     Name="ManagedElement", Value="10.6.129.6"
*     Name="PTP",           Value="6/0"
*     Name="AtmInterface",  Value="ATM6/0-atm-layer"
*     Name="AtmSubInterfaces",Value="ATM6/0.1-atm1483-subif"
*
* objectTypeList: To hold a list of object types
*
* Raises: globaldefs::ProcessingFailureException
*     EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*     EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*     EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*     EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                       can support has been reached.
*     EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void getCreatableObjectTypeSelections(
    in globaldefs::NVSLIST_T      objectPath,
    out UnspRXDeviceMgrObjectTypeList objectTypeList)
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to get a list of types of actions you can perform
* relative to other objects.
*
* objectPath:    The name-value pair list of the objects you want to view.
* Example:
* ListAll AtmSubInterfaces relative to objectPath
*     Name="EMS",           Value="Juniper NMC-RX"
*     Name="ManagedElement", Value="10.6.129.6"
*     Name="PTP",           Value="6/0"
*     Name="AtmInterface",  Value="ATM6/0-atm-layer"
*     Name="AtmSubInterfaces",Value="ATM6/0.1-atm1483-subif"
*
* objectTypeList: To hold a list of action types
*
* Raises: globaldefs::ProcessingFailureException
*     EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*     EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*     EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*     EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                       can support has been reached.
*     EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/

```

```

        void getSupportedActions(
            in globaldefs::NVSLIST_T objectPath,
            outUnspRXActionTypeList actionTypeList)
            raises(globaldefs::ProcessingFailureException);
    };
};
#endif

```

## unspRXCustomerMgr.idl

The following IDL is the definition of **unspRXCustomerMgr.idl**:

```

#ifndef unspRXCustomerMgr_idl
#define unspRXCustomerMgr_idl

// *****
// *
// * unspRXCustomerMgr.idl *
// *
// *****

//Include list
#include "globaldefs.idl"
#include "common.idl"

#pragma prefix "nmcRX.unspcorbabridge.provisioningservice.services.redstonecom.com"

module unspRXCustomerMgr
{
    /**
     * UnspRXCustomerMgrObjectType defined all possible object types for NMC-RX to manage
     */
    enum UnspRXCustomerMgrObjectType
    {
        // Layered Objects          // Examples:
        EMS,                        // "Juniper NMC-RX"
        Customer,                  // "ABC Store Customer"
        CustSite                    // "Westford Customer Site"
    };

    /**
     * UnspRXCustomerMgrObjectTypeList is a list UnspRXCustomerMgrObjectType
     */
    typedef sequence<UnspRXCustomerMgrObjectType> UnspRXCustomerMgrObjectTypeList;

    /**
     * UnspRXActionType defined all possible action types
     * for NMC-RX to manage ERX/MRX
     */
    enum UnspRXCustomerActionType
    {
        LIST,
        VIEW
    };

    /**
     * UnspRXActionTypeList is a list UnspRXActionType
     */
}

```

```

typedef sequence<UnsprXCustomerActionType>UnsprXCustomerActionTypeList;

/**
 * UnsprXCustomerMgr_I defines all methods to manage objects
 * under ERX/MRX. It is derived from common::Common_I, which is
 * one of the idls defined by TMF 814.
 */

interface UnsprXCustomerMgr_I : common::Common_I
{
    /**
     * This method should be used to list all objects of a particular type relative
     * to another object.
     *
     * The retrieval mechanism follows the paradigm established in TMF 814
     * and is described below:
     *
     * objectPath:    The name-value pair list of objects you want to list relative to another
object.
     *
     * Example:
     * ListAll Customer relative to objectPath
     *     Name="EMS",           Value="Juniper NMC-RX"
     *
     * ListAll Customer Site relative to objectPath
     *     Name="EMS",           Value="Juniper NMC-RX"
     *     Name="Customer",      Value="ABC Store Customer"
     *
     * objectType:    The type of objects that you want to list
     * Example:
     *     UnsprXCustomerMgrObjectType.Customer
     *     UnsprXCustomerMgrObjectType.CustSite
     *
     * howMany:       The maximum number of objects to report in the first batch in nameList
     *
     * nameList:      First batch of howMany objects report to NMS
     *
     * nameIt:        Iterator to retrieve the remaining number of objects after the first batch
     * In order to allow the NMS to deal more easily with retrievals, which may return a
     * very large amount of data, iterators are used. They provide a mechanism to retrieve
     * data batch by batch - the size of a batch is specified by the NMS via the
     * how_many parameter in the next_n method of the iterator reference.
     * For a more detailed explanation of the use of iterators, please refer to
     * TMF814\supportingDocumentation\iterators.html
     *
     * Raises: globaldefs::ProcessingFailureException
     * EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
     * EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
     * EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
     * EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
     * can support has been reached.
     * EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
     */
    void listAll(
        in globaldefs::NVList_T          objectPath,
        in UnsprXCustomerMgrObjectType  objectType,
        in long                           howMany,
        out globaldefs::NamingAttributesList_T  nameList,
        out globaldefs::NamingAttributesIterator_I  nameIt)
        raises(globaldefs::ProcessingFailureException);

    /**
     * This method should be used to view objects
     *
     * objectPath:    The name-value pair list of the object you want to configure.

```

```

*      Example:
*      View Customer Site relative to objectPath
*          Name="EMS",           Value="Juniper NMC-RX"
*          Name="Customer",     Value="ABC Store Customer"
*          Name="CustSite",     Value="Westford Customer Site"
*
*      attributesList: It will hold all attributes as a name-value pair list
*                      to pass back to NMS to view this object.
*      Raises: globaldefs::ProcessingFailureException
*          EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*          EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*          EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*          EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                          can support has been reached.
*          EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void view(
    in globaldefs::NVSLIST_T      objectPath,
    out globaldefs::NVSLIST_T     attributesList)
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to get a list of object types on which you can perform list
* actions relative to other objects.
*
* objectPath:   The name-value pair list of the object you want to view.
* Example:
* ListAll AtmSubInterfaces relative to objectPath
*     Name="EMS",           Value="Juniper NMC-RX"
*
* objectTypeList: To hold a list of object types
*
* Raises: globaldefs::ProcessingFailureException
*     EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*     EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*     EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*     EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                     can support has been reached.
*     EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost
**/
void getListableObjectTypeSelections(
    in globaldefs::NVSLIST_T      objectPath,
    out UnspRXCustomerMgrObjectTypeList objectTypeList)
    raises(globaldefs::ProcessingFailureException);

/**
* This method should be used to get a list of types of action that you can perform
* relative to other objects.
*
* objectPath:   The name-value pair list of the object you want to view.
* Example:
* ListAll AtmSubInterfaces relative to objectPath
*     Name="EMS",           Value="Juniper NMC-RX"
*
* objectTypeList: To hold a list of action types
*
* Raises: globaldefs::ProcessingFailureException
*     EXCPT_INTERNAL_ERROR - Raised in case of nonspecific EMS internal failure
*     EXCPT_INVALID_INPUT - Raised when the invalid input is passed into this method
*     EXCPT_ENTITY_NOT_FOUND - Raised when objectPath does not reference an existing object
*     EXCPT_TOO_MANY_OPEN_ITERATORS - Raised when maximum number of iterators that the EMS
*                                     can support has been reached.
*     EXCPT_NE_COMM_LOSS - Raised when communication to managedElement is lost

```

```
    /**/  
    void getSupportedActions(  
        in globaldefs::NVSList_T    objectPath,  
        outUnspRXCustomerActionTypeList    actionTypeList)  
        raises(globaldefs::ProcessingFailureException);  
};  
};  
#endif
```

