

3GPP TR 32.812 V7.0.0 (2007-03)

Technical Report

3rd Generation Partnership Project; Technical Specification Group Service and System Aspects; Telecommunication management; Itf-N Implementation Conformance Statement (ICS) template (Release 7)



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Keywords

UMTS, management, ICS Template

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Foreword

This Technical Report (TR) has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

1 Scope

The present document provides a template for Itf-N Implementation Conformance Statement (ICS) implementation conformance test. It defines the structure and table format for the ICS on the IS and CORBA SS level.

The intention is that:

- a) For each IRP IS and CORBA SS specification version, for which an operator wishes to purchase an implementation of, a specific ICS document should be produced following the template herein (where each generic subclause number should be replaced by real numbers reflecting the structure in that IRP specification), and
- b) For each Itf-N product offered or provided to support one or more IRP specifications, the vendor should fill in each applicable field of the tables in the ICS document(s) relevant for that/those IRP specifications and provide it to the customer.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] ITU-T Recommendation X.781: "Requirements and Guidelines for Implementation Conformance Statements Proformas associated with CORBA-based systems".
- [2] 3GPP 32.150: "Telecommunication management; Integration Reference Point (IRP) Concept and definitions".
- [3] 3GPP 32.151: "Telecommunication management; Integration Reference Point (IRP) Information Service (IS) template".

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ICS	Implementation Conformance Statement
IS	Information Service
MOC	Managed Object Class
EM	Element Manager
NE	Network Element
SS	Solution Set

4 Itf-N Version

Vendor fills the version number of tested Itf-N product.

No	Item	name	Version Numbers	Additional Information
1	EM			
2	Middleware			
3	Database			
4	List of Related NEs			
5	List of Interface IRPs			
6	List of NRM IRPs			
7	List of implemented performance measurements TSs			

Definition of the column items:

- "EM" gives the version information of the Element Manager which implements the Itf-N.
- "Middleware" gives the version information of the middle ware which is used in the Itf-N implementation.
- "Database" gives the version information of the database which is used in the Itf-N implementation.
- "List of related NEs" gives the list version information of the related NE involved in the Itf-N implementation.
- "List of Interface IRPs" gives the list of the implemented IRPs" versions.
- "List of NRM IRPs" gives the list of the implemented IRPs" versions.
- "List of implemented performance measurements TS" gives the list of the implemented performance measurements.

5 IS Interface support

5.1 IS Interfaces support table

This clause lists supporting and testing information of all IS interfaces. Each element is a tuple (Index, IS Interface, Qualifier, Support (Y/N/P), Additional information, Test result). This information is provided in a table. An example of such a table is given here below:

IS Interfaces support table

Index	IS Interface	IS qualifier	To be tested (Y/N)	Support (Y/N/P)	Additional vendor information	Test comment	Test result

NOTE:

- Column "Index" field is made up of a consecutive number which is filled by the tester.
- Column "IS Interface" is the name of the tested IS interface which is filled by the tester.
- Column "IS Qualifier" presents the meaning of every notation such as mandatory(M), optional(O), conditional mandatory(CM) and conditional optional(CO) defined in TS 32.150 [2]. This field is filled by tester (operator) which reflects the IS definition.
- Column "To be tested (Y/N)" is filled by tester.
- Column "Support (Y/N/P)" is filled by vendor. Y means fully supporting the interface. N means not supporting the interface. P means partially supporting the interface.
- Column "Additional vendor information" is filled by vendor to provide additional information about the implemented interface.
- Column "Test comment" is filled by tester.
- Column "Test result" is filled by the tester. The value of "test result" is "Y" or "N".

Example of IS Interfaces support table

Index	IS Interface	IS qualifier	To be tested (Y/N)	Support (Y/N/P)	Additional vendor information	Test comment	Test result
1	AlarmIRPOperations_1	m	Y				
2	AlarmIRPOperations_2	o	Y				
3	AlarmIRPOperations_3	o	Y				
4	AlarmIRPOperations_4	o	Y				
5	AlarmIRPOperations_5	o	Y				

5.a Yyy Interface support

"a" represents a clause number in the actual ICS TR, starting at 2 and increasing by 1 with each new IS interface.

This clause identifies a list of operation support tables of Yyy IS Interface.

5.a.1 Operations support table

Yyy Interface operations support table

Index	Operation name	IS qualifier	To be tested (Y/N)	Support (Y/N)	Additional vendor information	Test comment	Test result
a.1							
a.2							

NOTE:

- The meaning of column "Index", "IS qualifier", "Support", "To be tested (Y/N)", "Additional information", "Test comment" and "Test result" see section 5.0
- Column "Operation name" gives the name of operation name defined in the IS interface which is filled by operator (tester).

Example of AlarmIRPOperations_1 Interface operations support table

Index	Operation name	IS qualifier	To be tested (Y/N)	Support (Y/N)	Additional vendor information	Test comment	Test result
1.1	acknowledgeAlarms	m	Y				
1.2	getAlarmList	m	Y				

5.a.b Zzz operation support

"b" represents a clause number in the actual ICS TR, starting at 1 and increasing by 2 with each new operation of the IS interface.

This clause identifies a list of operation support sub-tables, including input parameters support table, output parameters support table, post-condition support table and exception support table.

5.a.b.1 Input parameters support table

Input parameters support table of Zzz operation

Index	Parameter name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS Comment Reference	Additional vendor information	Test comment	Test result
a.b.1.1								
a.b.1.2								

NOTE:

- The meaning of column "Index", "IS qualifier", "To be tested (Y/N)", "Support (Y/N)", "Additional vendor information", "Test comment" and "Test result" see section 5.0

- Column "Parameter name" is the name of the input parameter which is filled by the tester.
- Column "IS comment reference" is filled by tester to provide additional constraint information of the input parameter from IS definition. The reference number of related IS should be put here..

Example of Input parameters support table of acknowledgeAlarms operation

Index	Parameter name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment reference	Additional vendor information	Test comment	Test result
1.1.1.1	alarmInformationAndSeverityReferenceList	m	Y		32.111-2 Section 6.3.1.2			
1.1.1.2	AckUserId	m	Y		32.111-2 Section 6.3.1.2			
1.1.1.3	ackSystemId	o	Y		32.111-2 Section 6.3.1.2			

5.a.b.2 Output parameters support table

Output parameters support table of Zzz operation

Index	Parameter name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment reference	Additional vendor information	Test comment	Test result
a.b.2.1								
a.b.2.2								

NOTE:

- The meaning of column "Index", "IS Qualifier", "To be tested(Y/N)", "Support(Y/N)", "Test comment" and "Test result" see section 5.0
- Column "Parameter name" is the name of the output parameter which is filled by the tester.
- Column "IS comment reference" is filled by tester to provide additional constraint information of the output parameter from IS definition. The reference number of related IS should be put here

Example of Output parameters support table of acknowledgeAlarms operation

Index	Parameter name	IS qualifier	To be tested(Y/N)	Support(Y/N)	IS Comment reference	Additional vendor information	Test comment	Test result
1.1.2.1	badAlarm Information ReferenceList	m	Y		32.111-2, Section 6.3.1.3			
1.1.2.2	Status	m	Y		32.111-2, Section 6.3.1.3			

5.a.b.3 Precondition support table

Pre-condition support table of Zzz operation

Index	Assertion name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment reference	Additional vendor information	Test comment	Test result
a.b.3								
a.b.3.1								
a.b.3.2								

NOTE:

- The meaning of column "Index", "To be tested (Y/N)", "Support (Y/N)", "Additional vendor information", "Test comment" and "Test result" see section 5.0
- Column "Assertion name" is the name of the post-condition assertion which is filled by the tester.
- Column "IS comment reference" is filled by tester to provide additional constraint information of the post-condition assertion from IS definition where IS reference information should be put there.

Example of Pre-condition support table of acknowledgeAlarms operation

Index	Assertion name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment reference	Additional vendor information	Test comment	Test result
1.1.3	atLeastOneValidId	m	y		32.111-2, Section 6.3.1.4			

5.a.b.4 Post-condition support table

Post-condition support table of Zzz operation

Index	Assertion name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment Reference	Additional vendor information	Test comment	Test result
a.b.4								
a.b.4.1								
a.b.4.2								

NOTE:

- The meaning of column "Index", "IS qualifier", "To be tested(Y/N)", "Support", "IS comment reference", "Additional vendor information", "Test comment" and "Test result" see section 5.0
- Column "Assertion name" and "Additional vendor information" is the name of the post-condition assertion which is filled by the tester.
- Column "IS comment" is filled by tester to provide additional constraint information of the post-condition assertion from IS definition where IS reference information should be put there.

Example of Post-condition support table of acknowledgeAlarms operation

Index	Assertion name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment reference	Additional vendor information	Test comment	Test result
1.1.4	someAlarmAcknowledged OR allAlarmsAcknowledged				32.111-2, Section 6.3.1.5			
1.1.4.1	someAlarmAcknowledged				32.111-2, Section 6.3.1.5			
1.1.4.2	allAlarmsAcknowledged				32.111-2, Section 6.3.1.5			

5.a.b.5 Exception support table

Exception support table of Zzz operation

Index	Exception name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment reference	Additional vendor information	Test comment	Test result
a.b.5.1								
a.b.5.2								

NOTE:

- The meaning of column "Index", "IS qualifier", "To be tested", "Support", "Additional vendor information", "Test comment" and "Test result" see section 5.0
- Column "Exception name" is the name of the exception which is filled by the tester.
- Column "IS comment reference" is filled by tester to provide additional constraint information of the exception from IS definition where IS reference information should be put there.

Example of Exception support table of acknowledgeAlarms operation

Index	Exception name	IS qualifier	To be tested (Y/N)	Support (Y/N)	IS comment reference	Additional vendor information	Test comment	Test result
1.1.5.1	operation_failed				32.111-2, Section 6.3.1.6			

5.a.b.6 Notification "notifyYyy" parameters support table

notifyYyy parameters support table

Index	OMG CORBA Structured Event attribute	Notification parameter	Notification parameter type	IS Qualifier	To be tested (Y/N)	Support (Y/N)	Additional vendor information	Test comment	Test result
N.a.1									
N.a.1.1									
N.a.2									
N.a.2.1									
...									

Example of NotifyNewAlarm

notifyNewAlarm parameters support table

Index	OMG CORBA Structured Event attribute	Notification parameter	Notification parameter type	IS Qualifier	To be tested (Y/N)	Support (Y/N)	Additional vendor information	Test comment	Test result
N.2.1	header				Y	y			
N.2.1.1	fixed_header				Y	y			
N.2.1.1.1	event_type				Y	y			
N.2.1.1.1.1	domain_name	—	string	m	Y	y	IRPVersion of AlarmIRP		
N.2.1.1.1.2	type_name	notificationType	string	m	Y	y	const string NOTIFY_FM_NEW_ALARM = "x1";		
N.2.1.1.2	event_name	alarmType	string	m	Y	y	const string COMMUNICATIONS_ALARM = "x1"; const string PROCESSING_ERROR_ALARM = "x2"; const string ENVIRONMENTAL_ALARM = "x3"; const string QUALITY_OF_SERVICE_ALARM = "x4"; const string EQUIPMENT_ALARM = "x5";		
N.2.2	filterable_data				Y	y			
N.2.2.1	name & value	objectClass, objectInstance	string	m	Y	y	const string MANAGED_OBJECT_INSTANCE = "e";		
N.2.2.2	name & value	eventTime	ManagedGenericIRPConstDefs::IRPTime	m	Y	y	const string EVENT_TIME = "b";		
N.2.2.2.1		time	TimeBase::TimeT unsigned long	m	Y	y			
N.2.2.2.2		inacclo	unsigned long	m	Y	y			
N.2.2.2.3		inacchi	unsigned short	m	Y	y			
N.2.2.2.4		tdf	TimeBase::TdfT short	m	Y	y			
N.2.2.3	name & value	systemDN	string	m	Y	y	const string SYSTEM_DN = "c";		
N.2.2.4	name & value	vendorSpecificAlarmType	string	m	Y	y	const string VENDOR_SPECIFIC_ALARM_TYPE = "j";		
N.2.2.5	name & value	probableCause	integer	m	Y	y	const string PROBABLE_CAUSE = "g";		
N.2.2.6	name & value	perceivedSeverity	AlarmIRPConstDefs::PerceivedSeverity	m	Y	y	const string PERCEIVED_SEVERITY = "h";		
N.2.3	remainder_of_body				Y	y			
N.2.3.1	name & value	notificationId	long	m	Y	y	const string NOTIFICATION_ID = "a";		
N.2.3.2	name & value	specificProblem	string	o	Y	y	const string SPECIFIC_PROBLEM = "i";		
N.2.3.3	name & value	correlatedNotifications	AlarmIRPConstDefs::CorrelatedNotificationSetType (sequence)	o	Y	n	const string CORRELATED_NOTIFICATIONS = "w";		
N.2.3.3.1			AlarmIRPConstDefs::CorelatedNotification (struct)	c:m	Y	n			
N.2.3.3.1.1		source	string	c:m	Y	n			

N.2.3.3.1.2		notif_id_set	AlarmIRPCConstDe fs::NotifIdSetType (sequence)	c:m	Y	n			
N.2.3.3.1.2.1			long	c:m	Y	n			
N.2.3.4	name & value	backedUpStatus	AlarmIRPCConstDe fs::BackedUpStatusType	o	Y	y	const string BACKED_UP_STATUS = "p";		
N.2.3.5	name & value	backUpObject	string	o	Y	y	const string BACK_UP_OBJECT = "q";		
N.2.3.6	name & value	trendIndication	AlarmIRPCConstDe fs::TrendIndicationType enum	o	Y	y	const string TREND_INDICATION = "s";		
N.2.3.7	name & value	thresholdInfo	AlarmIRPCConstDe fs::ThresholdInfoType (struct)	o	Y	y	const string THRESHOLD_INFO = "r";		
N.2.3.7.1		attributeID	string	c:m	Y	y			
N.2.3.7.2		observedValue	float	c:m	Y	y			
N.2.3.7.3		thresholdLevel	AlarmIRPCConstDe fs::ThresholdLevelIndTypeOpt (union)	c:m	Y	y			
N.2.3.7.3.1		value	AlarmIRPCConstDe fs::ThresholdLevelIndType (struct)	c:o	Y	y			
N.2.3.7.3.1.1		indication	AlarmIRPCConstDe fs::ThresholdIndicationType enum	c:m	Y	y			
N.2.3.7.3.1.2		low	AlarmIRPCConstDe fs::FloatTypeOpt (union)	c:m	Y	y			
N.2.3.7.3.1.2.1		value	float	c:o	Y	y			
N.2.3.1.3.7.3		high	float	c:m	Y	y			
N.2.3.7.4		armTime	string	c:m	Y	y			
N.2.3.8	name & value	stateChangeDefinition	AlarmIRPCConstDe fs::AttributeChangeSetType	o	Y	y	const string STATE_CHANGE_DEFINITION = "t";		
N.2.3.9	name & value	monitoredAttributes	AlarmIRPCConstDe fs::AttributeSetType (sequence)	o	Y	y	const string MONITORED_ATTRIBUTES = "u";		
N.2.3.9.1			AlarmIRPCConstDe fs::AttributeValueType (struct)	m	Y	y			
N.2.3.9.1.1		attribute_name	string	m	Y	y			
N.2.3.9.1.2		value	any	m	Y	y			
N.2.3.10	name & value	proposedRepairActions	string	o	Y	y	const string PROPOSED_REPAIR_ACTIONS = "v";		
N.2.3.11	name & value	additionalText	string	o	Y	y	const string ADDITIONAL_TEXT = "j";		
N.2.3.12	name & value	additionalInformation	vendor-specific	o	Y	n	vendor-specific		
N.2.3.13	name & value	alarmId	string	m	Y	y	const string ALARM_ID = "f";		

6 SS Interface IRP support

6.1 SS Interfaces support table

This clause lists supporting and testing information of all CORBA SS interfaces for Interface IRP. Each element is a tuple (Index, Interface identifier, Qualifier, Support (Y/N/P), Additional information, Test result). This information is provided in a table. An example of such a table is given here below:

Interfaces support table

Index	Interface identifier	SS Qualifier	To be tested (Y/N)	Support (Y/N/P)	Additional vendor information	Test comment	Test result

NOTE:

- Column "Index" field is made up of a consecutive number which is filled by the tester.
- Column "Interface identifier" is the name of the tested interface which is filled by the tester.
- Column "SS qualifier" presents the meaning of every notation such as mandatory(M), optional(O), Conditional-Mandatory(CM) and Conditional-Optional(CO) defined in 3GPP TS 32.150 [2]. This field is filled by tester (operator)
- Column "Support (Y/N/P)" is filled by vendor. Y means fully supporting the interface. N means not supporting the interface. P means partially supporting the interface.
- Column "additional vendor information" is filled by vendor to provide additional information about the implemented interface.
- Column "Test comment" is filled by tester.
- Column "Test result" is filled by the tester. The value of "test result" is "Y" or "N".

Example of interfaces support table

Index	Interface identifier	SS Qualifier	To be tested (Y/N)	Support (Y/N/P)	Additional vendor information	Test comment	Test result
1	AlarmIRPSystem::AlarmIRP	M			As Server		
2	AlarmIRPSystem::AlarmInformationIterator	O			As Server		
3	BasicCmIRPSystem::BasicCmIrpOperations	M			As Server		

6.a YyyIRPSystem::YyyIRP support

"a" represents a clause number in the actual ICS TR, starting at 2 and increasing by 1 with each new interface.

This clause identifies a list of interface YyyIRP support tables (e.g. interface attributes support, methods support, method parameters support) that have been defined in other specifications and that are imported in the present document.

6.a.1 Interface attributes support table

YyyIRP attributes support table

Index	Attribute identifier	Attribute Type	GET			SET			Additional vendor information	Test comment	Test result
			SS Qualifier	To be tested (Y/N)	Support (Y/N)	SS Qualifier	To be tested (Y/N)	Support (Y/N)			
a.1.1											
a.1.2											

NOTE:

- The meaning of column "index", "SS qualifier", "support", "additional vendor information", "Test comment" and "test result" see clause 5.0
- "Attribute identifier" gives the attribute name which is filled by tester.
- "Constraints and values" field gives the interface attribute data type which is filled by tester.
- Both "Get" and "Set" fields contain "SS Qualifier" and "Support". The "SS Qualifier" of "Get" column should always be filled with "m". If the attribute is a normal attribute, the "SS Qualifier" of "Set" should be filled with "m"; while the attribute is a "readonly" one, the "Support" and "Qualifier" should be filled by "-", meaning not applicable.

Example of PMIRP attributes support table

Index	Attribute identifier	Attribute Type	GET			SET			Additional vendor information	Test comment	Test result
			SS Qualifier	To be tested (Y/N)	Support (Y/N)	SS Qualifier	To be tested (Y/N)	Support (Y/N)			
1.1.1	iRPId	String	M			--					

6.a.2 Methods support table

YyyIRP methods support table

Index	Method identifier	SS Qualifier	To be tested (Y/N)	Support (Y/N)	Additional vendor information	Test comment	Test result
a.2.1							
a.2.2							

NOTE:

- The meaning of column "Index", "SS Qualifier", "Support", "Additional vendor information", "test comment" and "Test result" see section 5.1
- Column "method identifier" gives the name of the method name defined in CORBA solution set which is filled by operator (tester).

Example of alarmIRP methods support table

Index	Method identifier	SS Qualifier	To be tested(Y/N)	Support(Y/N)	Additional vendor information	Test comment	Test result
1.2.1	get_alarm_IRP_versions	m	Y				
1.2.2	get_alarm_IRP_operations_profile	m	Y				
1.2.3	get_alarm_IRP_notification_profile	m	Y				
1.2.4	acknowledge_alarms	m	Y				
1.2.5	unacknowledge_alarms	m	Y				
1.2.6	comment_alarms	m	Y				
1.2.7	clear_alarms	m	Y				
1.2.8	get_alarm_list	m	Y				
1.2.9	get_alarm_count	m	Y				

6.a.3 Method parameters support table

Method parameters support table

Index	Subindex	Parameter identifier	Parameter type	Parameter property	SS Qualifier	To be tested (Y/N)	Support (Y/N)	Additional vendor information	Test comment	Test result

NOTE:

- The meaning of column "SS Qualifier", "Support", "Additional vendor information", "Test comment" and "Test result" see section 5.0
- Column of "Index" is provided for the index of each method specified in the Method parameters support table above.
- Column of "Subindex" is to describe the reference of each related parameter of the method, which is formed by connecting the index of method and a consecutive number with a separator ".".

- Column of "Parameter type" field gives the method parameter data type defined in solution set which is filled by tester.
- Column of "Parameter property" gives the property of a parameter. The property of a parameter could be "in parameter", "out parameter", "inout parameter", "return result" or "exception".

Example of AlarmIRP method parameters support table

Index	Subindex	Parameter identifier	Parameter type	Parameter property	SS Qualifier	To be tested (Y/N)	Support (Y/N)	Additional vendor information	Test comment	Test result
1.2.1	1.2.1.1		ManagedGenericIRPConstDefs::VersionNumberSet (sequence)	return result	m	y				
	1.2.1.2	getAlarmIRPVersions	AlarmIRPSystem: :GetAlarmIRPVersions (exception)	exception	m	y				
1.2.2	1.2.2.1	alarm_irp_version	ManagedGenericIRPConstDefs::VersionNumber string	in parameter	m	y				
	1.2.2.2		ManagedGenericIRPConstDefs:: MethodList (sequence)	return result	m	y				
	1.2.2.3	getAlarmIRPOperationsProfile	AlarmIRPSystem: :GetAlarmIRPOperationsProfile(exception)	exception	m	y				
	1.2.2.4	operationNotSupported	ManagedGenericIRPSystem::Opera tionNotSupported (exception)	exception	m	y				
	1.2.2.5	invalidParameter	ManagedGenericIRPSystem::InvalidParameter(exception)	exception	m	y				
...										

7 NRM IRP support

7.1 MOCs support table

This clause lists supporting and testing information of all NRM MOCs of GERAN, CN, UTRAN, etc. The MOC conformance table is given here below:

MOCs support table

Index	MOC Name	Superior MOC	Qualifier	Support (Y/N)	BasicCMIRP								BulkCMIRP						
					Find		Modify		Create		Delete		Upload		Download		Activate		Fa
					Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N/P)	Qualifier

NOTE:

- All MOCs should be listed in this table except the MOCs which cannot be instantiated.
- For the definition of column "Index", "Qualifier", "Support", "additional vendor information", "Test comment" and "Test result" see above.
- Column "Moc Name" gives the tested MOC name which is filled by operator.
- Column "Superior MOC" gives parent MOC(s) name of the tested MOC in containment/naming hierarchy.
- Column "BasicCMIRP", "BulkCMIRPMOC" give the information whether the tested MOC can be managed by BasicCMIRP/BulkCMIRP or not. "Qualifier" field in BasicCMIRP and BulkCMIRP are filled by operator. "Support(Y/N/P)" for filed in BasicCMIRP and BulkCMIRP are filled by vendor.

Example of MOCs support table

Index	MOC Name	Superior MOC	Qualifier	Support (Y/N)	BasicCMIRP								BulkCMIRP				
					Find		Modify		Create		Delete		Upload		Download		Act
					Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N/P)	Qualifier	Support (Y/N/P)	Qualifier
1	IRPAgent	ManagementNode	m		m		--		m		m		m		m		m
2	ManagedElement	MeContext	o		m		m		m		m		m		m		m
		Subnetwork	m		m		m		m		m		m		m		m
3	ManagementNode	Subnetwork	m		m		m		m		m		m		m		m
...																	

7.a Yyy MOC support

"a" represents a clause number in the actual ICS TR, starting at 2 and increasing by 1 with each new MOC.

This clause identifies a list of Yyy MOC support tables (e.g. attributes support, notification support) that have been defined in other specifications and that are imported in the present document.

7.a.1 Attributes support table

Yyy MOC attributes support table

Index	Attribute identifier	Attribute type	Attribute Read/Write qualifier	BasicCMIRP								BulkCMIRP							
				Find		Modify		Create		Delete		Upload		Down		Activate		Fallback	
				Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)
a.1.1										NA	—								
a.1.2										NA	—								

Example of MSC Server attributes support table.

Index	Attribute identifier	Attribute type	Attribute RW qualifie	BasicCMIRP								Upload		Down	
				Find		Modify		Create		Delete		Qualifier	Support (Y/N)	Qualifier	Support (Y/N)
				Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)	Qualifier	Support (Y/N)				
1.1.1	objectClass	String	R	m		--		--		--		m		--	
1.1.2	userLabel	String	RW	m		m		--		--		m		m	
1.1.3	mscServerFunctionId	GenericNRMSys tem::Ob jectId Type string	R	m		--		--		--		m		--	
1.1.4	mscServerNumber	String	R	m		--		--		--		m		--	
1.1.5	maxMscServerBHCA	unsigned long	R	m		--		--		--		m		--	
1.1.6	mccList	CoreNRMSys tem::ULong SetType (sequence)	RW	m		m		m		m		m		m	
1.1.7	mncList	CoreNRMSys tem::ULong SetType (sequence)	RW	m		m		m		m		m		m	
1.1.8	lacList	CoreNRMSys tem::ULongSetType (sequence)	RW	m		m		m		m		m		m	
1.1.9	sacList	CoreNRMSys tem::ULong SetType (sequence)	RW	m		m		m		m		m		m	
1.1.10	gcaList	CoreNRMSys tem::ULong SetType (sequence)	RW	m		m		m		m		m		m	
1.1.11	mscServerId	unsigned long	RW	m		m		m		m		m		m	
1.1.12	controlledCsMgw List	GenericNRMSys tem::DN ListType (sequence)	R	m		--		--		--		m		--	
1.1.13	administrativeState	GenericNRMSys tem::AdministrativeStateType enum	RW	m		m		m		m		m		m	

7.a.2 Notifications support table

Notifications support table

Index	Notification name	Qualifier	Support (Y/N)	Additional vendor information	Test comment	Test result
a.2.1						
a.2.2						
a.2.3						

Example of MSC Server Notifications support table

Index	Notification name	Qualifier	support (Y/N)	Additional vendor information	Test comment	Test result
1.2.1	notifyObjectCreation	M		see notification supporting table-notifyObjectCreation		
1.2.2	notifyObjectDeletion	m		see notification supporting table-notifyObjectDeletion		
1.2.3	notifyAttributeValueChange	m		see notification supporting table-notifyAttributeValueChange		
1.2.4	notifyAckStateChanged	m		see notification supporting table-notifyAckStateChanged		
1.2.5	notifyChangedAlarm	m		see notification supporting table-notifyChangedAlarm		
1.2.6	notifyClearedAlarm	m		see notification supporting table-notifyClearedAlarm		
1.2.7	notifyNewAlarm	m		see notification supporting table-notifyNewAlarm		
1.2.8	notifyComments	o		see notification supporting table-notifyComments		
1.2.9	notifyAlarmListRebuilt	m		see notification supporting table-notifyAlarmListRebuilt		
1.2.10	notifyPotentialFaultyAlarmList	o		see notification supporting table-notifyPotentialFaultyAlarmList		
1.2.11	notifyStateChange	m		see notification supporting table-notifyStateChange		

8 Performance Measurement support

8.1 Performance families support table

Performance families support table

Index	PM Family	Corresponding MOC	Qualifier	Support (Y/N/P)	Additional vendor information	Test comment	Test result
	YyyMeasurement	YyyFunction					
	YyyQos	YyyFunction					

NOTE:

- Column "Support(Y/N)" and column "additional vendor information" are filled by vendor.
- Column "Test comment" and "Test result" is filled by tester(operator).

8.a Performance MeasurementType support table of Yyy family

"a" represents a clause number in the actual ICS TR, starting at 1 and increasing by 1 with each new performance family. One family measurement use one conformance table.

Performance MeasurementType support table of YyyMeasurement family

Index	PM MeasurementType Name	Qualifier	Support (Y/N)	Additional vendor information	Test comment	Test result
P.a.1						
P.a.2						

Example of rncSoftHandoverMeasurement

Performance MeasurementType support table of rncSoftHandoverMeasurement family

Index	PM MeasurementType Name	Qualifier	Support (Y/N)	Additional vendor information	Test comment	Test result
	attRIAddInSho	m				
	failRIAddInSho.Cause	m				
	attRIDelInSho	m				
P.43.4	failRIDelInSho.Cause	m				

Annex A: Change history

Change history								
Date	TSG #	TSG Doc.	CR	Rev	Subject/Comment	Cat	Old	New
Dec 2006	SA_34	SP-060757	--	--	Submitted to SA#34 for Information	--	1.0.0	
Mar 2007	SA_35	SP-070074	--	--	Submitted to SA#35 for Approval	--	2.0.0	7.0.0