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Approved (Document resp) BUCIICED [Mikael Forsberg]	Checked	Date 2016-05-27	Rev A	Reference

## Virtualized MTAS Network Impact Report from 1.0 R1A to 1.2 R2A

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## 1 Introduction

This document, the Network Impact Report (NIR), describes how the release of the MTASv 1.2 R2A with new and changed features affect the previous release of the MTASv 1.0 R1A and the operator's overall network, including all affected products and functions.

### 1.1 Purpose

The purpose of this document is to provide sufficient information at an early stage to help plan MTASv upgrades in the operator's network.

### 1.2 Scope

This document describes the characteristics and interface changes between MTASv 1.0 R1A and MTASv 1.2 R2A.

### 1.3 Revision history

Date	Rev	Description	Author
2016-05-27	A	Hard revision for MTASv 1.2 R2A	eeimshn

## 2 Overview

Changes compared to the base are listed below. For complete list of features see [10].

- Pull of selected call
- Call routing independent Number Portability lookup
- Access specific prevent announcement, Redirect number on Ro, TADS WiFi Timers, Domain selection
- Pre-paid over CAPv2 SSF for ad-hoc conf
- eCGI failure+ICBS parameter
- Error correction of non-standard URIs
- SCC Session Completion Counters for KPI
- NSS content support for charging
- Communication Diversion Loop Detection

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- NRBT, preconditions for multiple terminals
- MMTel including ANI AVP for OCT calls
- Increase accepted length for short code group name
- Release of early dialogs for failed CCNR invocation
- Long duration call Supervision
- Support of CS Location Information in Access-Network-Information AVP
- SDP change – with new codecs – during announcement on Mp and Mr interfaces
- Corrections

### 3 Licenses

There are no MTASv software feature licenses in 1.2 R2A.

## 4 Interoperable Network Elements

### 4.1 General

The table below describes the lowest interoperable releases for MTASv 1.2.

**Table 1 – Lowest Interoperable Releases**

Network Element	Supported Version*
MRS	14A
CSCF	14A
HSS	14A
OSS-RC	14A.1 (see 4.5)
EMA	7.0 CP2

\* TSP based release is specified here and in sub-chapters describing each node.

### 4.2 Media Resource System (MRS)

MTASv 1.2 R2A is compatible with the following MRS releases: 14A, 14B, 15A, 15B, 16A and 16B.

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#### 4.3 Call Session Control Function (CSCF)

MTASv 1.2 R2A is compatible with the following CSCF releases: 14A, 14B, 15A, 15B, 16A and 16B.

#### 4.4 Home Subscriber Server/Subscription Locator Function (HSS/SLF)

MTASv 1.2 R2A is compatible with the following HSS/SLF releases: 14A, 14B, 15A, 15B, 16A and 16B. If using MTAS as ST-AS, use release 14A FD2 as a minimum.

#### 4.5 OSS-RC

MTASv 1.2 R2A is compatible with the following OSS-RC releases: 14A.1, 14B, 15A, 15B, 16A and 16B.

Note: verification is still pending for MTASv compatibility with OSS-RC 14x releases

**Note:** If the MTAS SW level is upgraded, it does not mean always that the OSS-RC must also be upgraded (for example, it is dependent on the new parameters and counters used). The support level of different OSS-RC releases is as follows:

- OSS-RC O16A: MTASv 1.0 features supported
- OSS-RC O16B: MTASv 1.2 features supported

For OSS-RC impacts, see each feature impact chapter for the possible impacts because of new parameters and counters.

#### 4.6 Ericsson Multi Activation (EMA)

MTASv 1.2 R2A is compatible with the following EMA releases: 7.0 CP2, 15, 16.

### 5 Interfaces

This section lists changes to interfaces between nodes, configuration parameters, alarms, and measurements in MTASv 1.2 R2A compared to MTASv 1.0 R1A.

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## 5.1 Inter-Node Interfaces

This section lists changes to interfaces between nodes. Changes to data that is carried transparently by the underlying interface are listed in the services section, and not the interface section.

### 5.1.1 Changed Interfaces

This section lists all changed MTAS interfaces to other nodes in MTASv 1.2 R2A compared to 1.0 R1A.

Table 2 shows the impacts, the description of the changes, and the required actions. The impact 'No Impact' means that the new MTAS version can be installed without affecting other nodes using this interface. 'Minor impact' means that the interface is changed but with additional configuration, the previous behavior can be kept. 'Major impact' means that the interface is changed and is not compatible with previous release.

**Table 2 – Changed Interfaces**

Interface	Protocol	Impact	Description of Changes
ISC	SIP	Minor	MMTel AS populates a Warning header including an unique text string representing the reason for the call establishment rejection to aid in trouble shooting.
Mp	H.248	No Impact	Previously when a total codec list change happened during announcement, MTAS was unable to handle it. Now, we are initiating a new codec negotiation toward Mrfp when this happens.
Mr	NetAnn	No Impact	Previously when a total codec list change happened during announcement, MTAS was unable to handle it. Now, we are initiating a negotiation with the external Mrfc to handle this scenario.

### 5.1.2 New Interfaces

This section lists the new interfaces in MTASv 1.2 R2A compared to 1.0 R1A.

**Table 3 – New Interfaces**

Interface	Protocol	Impact	Description

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### 5.1.3 Removed Interfaces

This section lists the removed interfaces in MTASv 1.2 R2A compared to 1.0 R1A.

**Table 4 – Removed Interfaces**

Interface	Protocol	Impact	Description

### 5.1.4 Changed User Services

This section lists changes to existing user services in MTASv 1.2 R2A compared to 1.0 R1A

The impact column indicates if the change impacts the behavior of the existing user service. 'Minor' means that the new MTAS version can be installed without impact to the existing service. The new service feature must be explicitly activated prior to usage. 'Major' means that the existing service behavior will be impacted and that specific actions are required to ensure desired behavior of the service.

**Table 5 – Changed Services**

Interface	Service Name	Impact	Description of Changes
ISC	Dialed Number Mapping	Minor	When configured, DNM will play specific announcement when short-code dialed from UE on WiFi access
ISC	T-ADS	Major	Additional notReachable and noResponse timers for WiFi calls terminating on PS
ISC	MMTel	Minor	When feature tag preferences are provisioned to the served user, terminating MMTel service will add appropriate Accept-Contact header to the outgoing INVITE for applicable legs
ISC	NumNorm	Minor	When URI error correction is enabled by mtasNumNormApplyUriCorrection/mtasStNumNormApplyUriCorrection CM parameter then URI may be changed by MTAS even if Number Normalization is configured not to change URI.
ISC	Communication Completion	Minor	In case of "CCNR Indicated, Unsuccessful Invocation" scenario the CC service sends 199 Early Dialog Terminated message if CM attribute mtasMmt199Generation is set to "UNLOCKED" and "199" option-tag is present in the Supported header of initial INVITE.

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Interface	Service Name	Impact	Description of Changes
ISC	User Location Service	No impact	In case of terminating calls the PANI header containing VLR number and/or MSC number could be added to the 180/200 OK (INVITE) responses. The presence of VLR number and MSC number in SIP signaling is controlled by <code>mtasMmtNpliCSLocationInformation</code>
ISC/SIP	MMTel Service	Minor	Accept header is added, modified or removed in the outgoing initial INVITE message according to CM configuration. Configured message body contents (nss or xml type but not sdp) is removed from outgoing 18x/200 messages.
ISC/SIP	OCT Service	Minor	Add PANI header to the outgoing INVITE on the transfer call leg.
ISC/SIP	FCD Service	Major	Changed FCD behavior if targeted user is in Emergency State: <ul style="list-style-type: none"> <li>- Caller Preference is not filtered from Accept-Contact header;</li> <li>- For a short time, the same device is ringed where earlier an emergency call had been initiated from. The identity of device is known from caller preference. If that is not specified, then it is assumed to be the user's mobile device.</li> <li>- After the FCD emergency timer expires, call is distributed to all devices of the user</li> </ul>
ISC/SIP	FCD Service	Minor	Introduced explicit primary user device distribution: call will be distributed to registered primary devices only if primary keyword is defined in the rules. The new explicit mode requires ASCF license available and unlocked.
ISC/SIP	NRBT Service	Minor	Network Provided Ring Back Tone (NRBT) supports preconditions negotiation for multiple terminals due to forking or Flexible Communication Distribution
ISC/SIP	MMT Service	Minor	When the Communication Diversion Loop Detection function is enabled ( <code>mtasMmtLoopDetection</code> is set to enabled) and a loop is detected, the initial INVITE is rejected with 482 Loop Detected

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Interface	Service Name	Impact	Description of Changes
ISC/SIP	Ad-hoc conference	Major	When the CC is subscribed to conference events and has an active REFER subscription in some cases refer and conference notifications are sent at almost the same time. This gives us a risk that the notification messages will race each other and reach the originating MTAS in wrong order. With this modification when the CP is added or removed the conference focus will send the partial notification with some delay after the refer one. For more information see trouble report HU61485.
Rf	OCT Service	Minor	Offline charging, charging session for the transfer call leg: <ul style="list-style-type: none"> <li>- report ANI AVP and 3GPP-MS-TimeZone AVP for established OCT calls;</li> <li>- report ANI AVP for unsuccessful OCT calls;</li> <li>- report changed ANI AVP for established OCT calls.</li> </ul>
Ro	OCT Service	Minor	Online charging, charging session for the transfer call leg: <ul style="list-style-type: none"> <li>- report ANI AVP and 3GPP-MS-TimeZone AVP for established OCT calls;</li> <li>- report changed ANI AVP for established OCT calls.</li> </ul>
Ro	Charging	Minor	When enabled, online charging will report last redirecting number in CCR-I
Ro and Rf	Charging Service	Minor	Message body content and SIP method type is reported in Transaction-Info AVP group. Transaction-SIP-Message AVP is added to Transaction-Info group AVP.
Ro	Charging Service	No impact	The kind of roaming check for Ro suppression is selected using mtasChargingProfileRoamingCheckMode The roaming check for Ro suppression is extended, in case of lack of Cell Global ID CS Location Information could be retrieved from VLR number or MSC number.
Ro, Rf	Charging Service	No impact	In case of terminating calls the value of ANI AVP can contain VLR and/or MSC number. The presence of VLR number and MSC number in ANI AVP sent over Rf and Ro is controlled by mtasMmtNpliCSLocationInformation



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### 5.1.5 New User Services

This section lists new user services in MTASv 1.2 R2A compared to 1.0 R1A

The impact column indicates if an activation of the new service has any impact ('None' or 'Major') to other existing user services. 'Major' means that the new service impacts another existing service in a way that specific consideration is required.

All MTAS nodes must be upgraded prior to taking a new service in operation.

**Table 6 – New Services**

Interface	Service Name	Impact	Description
ISC	Long Duration Call Supervision	Major	This service, long duration call supervision is monitoring for Originating, Terminating and Diverted calls. Calls shall be disconnected at configured supervision timer expiry by generating BYE with "Long Duration Call" in reason header.

## 5.2 Operation and Maintenance Interface

This section describes changes to configuration parameters, alarms and measurements in MTASv 1.2 R2A Configuration, compared to 1.0 R1A

This section lists added, changed, and deleted configuration parameters.

### 5.2.1.1 Added Configuration Parameters

The following is an alphabetical list of configuration parameters which have been added in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 7 – Additional Configuration Parameters**

Configuration parameter name
mtasChargingProfileRoamingCheckMode
mtasChargingReportRedirectingNumber (now supported)
mtasConfDisplayName
MtasDen
mtasDenAdministrativeState
mtasDenDefaultTimer
mtasDenMaxTimer
mtasDenMediaAttributesReported
mtasDenMinTimer

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Configuration parameter name
mtasDenSAExclusiveElementReported
mtasDnmAnnPreventedAccessTypeWifi (now supported)
MtasEs
mtasEsAdminState
mtasEsCbwStartTimer
mtasEsCbwStopTimer
mtasFcdDistributeToPrimaryUserDevicesBehavior
mtasFcdEmergencyTimer (now supported)
mtasFunctionMaxNumberOfSubscriptionSessions
mtasJcFailureNotification (now supported)
mtasMmt199Method
mtasMmtChargingInterworkingSupport (now supported)
MtasMmtLongDurationCall
mtasMmtLongDurationCallAdministrativeState
MtasMmtLongDurationCallDestCat
mtasMmtLongDurationCallDestCatList
MtasMmtLongDurationCallDestCats
mtasMmtLongDurationCallDestCatTimer
MtasMmtLongDurationCallOrig
mtasMmtLongDurationCallOrigDestCat
mtasMmtLongDurationCallOrigServiceNumberTimer
mtasMmtLongDurationCallOrigTimer
MtasMmtLongDurationCallTerm
mtasMmtLongDurationCallTermTimer
mtasMmtLoopDetection (now supported)
mtasMmtNpliCSLocationInformation
mtasNpUriModification (now supported)
mtasNumNormApplyUriCorrection (now supported)
mtasSipSteppingOLineSessionVersion
mtasSrvccMediaCheckAttributes
mtasSrvccMediaCheckBandwidth
mtasSsfSuppressTerminatingServiceInHplmn
mtasStNumNormApplyUriCorrection (now supported)
MtasStodCallPullPolicy
mtasStodCallPullPolicyCcRT
mtasStodCallPullPolicyDiversion
mtasStodCallPullPolicyEmCbw

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Configuration parameter name
mtasStodCallPullPolicyEmCbwRT
mtasStodCallPullPolicyGeneralRT
mtasStodCallPullPolicyOnHold
mtasStodCallPullPolicyOnHoldRT
mtasStodPullProgressAnnName
mtasStodPullRejectionAnnName
mtasTadsWiFiNoResponseTimer (now supported)
mtasTadsWiFiNotReachableTimer (now supported)
mtasTraceDisableEhSer
mtasVoiceMailRetrievalDisplayName
vtasConfDisplayName
VtasDen
vtasDenAdministrativeState
vtasDenDefaultTimer
vtasDenDropBack
vtasDenMaxTimer
vtasDenMediaAttributesReported
vtasDenMinTimer
vtasDenSAExclusiveElementReported
VtasEs
vtasEsAdminState
vtasEsCbwStartTimer
vtasEsCbwStopTimer
vtasEsDropBack
vtasFcdDistributeToPrimaryUserDevicesBehavior
vtasFcdEmergencyTimer (now supported)
vtasMmt199Method
VtasMmtLongDurationCall
vtasMmtLongDurationCallAdministrativeState
VtasMmtLongDurationCallDestCat
vtasMmtLongDurationCallDestCatList
VtasMmtLongDurationCallDestCats
vtasMmtLongDurationCallDestCatTimer
vtasMmtLongDurationCallDropBack
VtasMmtLongDurationCallOrig
vtasMmtLongDurationCallOrigDestCat
vtasMmtLongDurationCallOrigDropBack

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Configuration parameter name
vtasMmtLongDurationCallOrigServiceNumberTimer
vtasMmtLongDurationCallOrigTimer
VtasMmtLongDurationCallTerm
vtasMmtLongDurationCallTermDropBack
vtasMmtLongDurationCallTermTimer
vtasMmtLoopDetection (now supported)
vtasNpUriModification (now supported)
VtasStodCallPullPolicy
vtasStodCallPullPolicyCcRT
vtasStodCallPullPolicyDiversion
vtasStodCallPullPolicyDropBack
vtasStodCallPullPolicyEmCbw
vtasStodCallPullPolicyEmCbwRT
vtasStodCallPullPolicyGeneralRT
vtasStodCallPullPolicyOnHold
vtasStodCallPullPolicyOnHoldRT
vtasStodPullProgressAnnName
vtasStodPullRejectionAnnName
vtasVoiceMailRetrievalDisplayName

For more information, see [2] reference.

#### 5.2.1.2 Changed Configuration Parameters

The following configuration parameters have been changed in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 8 - Changed Configuration Parameters**

Parameter	Description of Changes
mtasAnnouncementParameterRepeat	Description changed to "This attribute specifies how many times the media server should repeat the announcement named by the mtasAnnouncementParameterPlay parameter. mtasAnnouncementParameterRepeat parameter cannot be used for segmented announcements. The value "forever" means the repeat should be effectively unbounded."

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mtasChargingProfileFlexResponseEntry	In addition to SIP header field names SIP Message Body types can also be configured. If a SIP response contains any of the configured SIP Message Body, the SIP Message Body content is reported in the charging records triggered by the given SIP response.
mtasCommonDataAccNetwTypeAccInfoMap	Pattern changed to.{1,28}&[A-Za-z0-9_*.]{1,80}{,.{1,108}}*\$
MtasCommonDataGroupOfCells	Key length increased to 80 characters Pattern changed <pattern>[a-zA-Z0-9_*.]{1,80}</pattern>
MtasCommonDataGroupOfCellsAndCode	Key length changed to 105 characters Pattern changed [A-Za-z0-9_*.]{1,80}&[*#][0-9]{1,23}
mtasCrFirstDigitTimeout	max value changed from 20 to 99
mtasCrInterDigitTimeout	max value changed from 20 to 99
vtasCrFirstDigitTimeout	max value changed from 20 to 99
vtasCrInterDigitTimeout	max value changed from 20 to 99
MtasNumberTranslationProfile	Key length is increased to 26 characters. Pattern changed: [0-9sph]{1,26} DEFAULT
VtasNumberTranslationProfile	Key length changed to 26 characters Pattern changed to [0-9sph]{1,26} DEFAULT

For more information, see reference [2].

### 5.2.1.3 Deprecated Configuration Parameters

The following configuration parameters have been deprecated in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 9 - Deprecated Configuration Parameters**

Parameter	Description of changes
mtasSscStodPullOnHold	Deprecated by mtasStodCallPullPolicyOnHold
vtasSscStodPullOnHold	Deprecated by vtasStodCallPullPolicyOnHold

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#### 5.2.1.4 Deleted Configuration Parameters

The following configuration parameters have been deleted in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 10 - Deleted Configuration Parameters**

Configuration Parameter Name

### 5.2.2 Provisioning

#### 5.2.2.1 Added Provisioning Parameters

**Table 11 – Additional Provisioning Parameters**

Provisioning parameter name

For more information, see [11] and [12]

#### 5.2.2.2 Changed Provisioning Parameters

None

#### 5.2.2.3 Deprecated Provisioning Parameters

None

#### 5.2.2.4 Deleted Provisioning Parameters

None

### 5.2.3 Fault Management

This section describes added, changed, and deleted alarms. Each alarm references the supporting document.

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### 5.2.3.1 Changed Alarms

The following alarms have been changed in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 12 - Changed Alarms**

Alarm	Change

### 5.2.3.2 Deleted Alarms

The following alarms have been deleted from MTASv 1.2 R2A compared to 1.0 R1A:

**Table 13 – Deleted Alarms**

Alarm

### 5.2.3.3 New Alarms

The following alarms have been added in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 14 - New Alarms**

Alarm	Description

## 5.2.4 Measurements

This section describes measurements that have been added, changed and deleted. Measurements include PM counters and gauges.

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#### 5.2.4.1 Changed Measurements

The following measurements have been changed in MTASv 1.2 R2A compared to 1.0 R1A.

**Table 15 - Changed Measurements**

Measurement	Description of Changes
MtasSccTermUnregCsFailedAttempt	The mentioned PM is only increased if MtasSccTermUnregCsSuccAttempt has not previously been incremented for the session.
MtasSccTermPsFailedAttempt	The mentioned PM is only increased if MtasSccTermPsSuccAttempt has not previously been incremented for the session.
MtasSccTermCsFailedAttempt	The mentioned PM is only increased if MtasSccTermCsSuccAttempt has not previously been incremented for the session.
MtasSccTermUnregPsFailedAttempt	The mentioned PM is only increased if MtasSccTermUnregPsSuccAttempt has not previously been incremented for the session.

For more information, see references [3] and [4].

#### 5.2.4.2 Deleted Measurements

The following measurements have been deleted (deprecated) in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 16 Deleted Measurements**

Deleted Measurement

#### 5.2.4.3 New Measurements

The following is an alphabetical list of the measurements which have been added in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 17 New Measurements**

New Measurement
MtasMmtLongDurationCall (now supported)
MtasMmtLongDurationCallOk (now supported)
MtasStodCallPull (now supported)
MtasStodCallPullFailure (now supported)
MtasStodCallPullNOkE (now supported)
MtasStodCallPullNOkI (now supported)



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MtasStodCallPullOk (now supported)
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For more information, see reference [3] and [4].

#### 5.2.4.4 Deprecated Measurements

The following measurements have been deprecated in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 18 Deprecated Measurements**

Deprecated Measurement
MtasSSCodesStodCallPullFailure
MtasSSCodesStodCallPullNOkE
MtasSSCodesStodCallPullNOkI
MtasSSCodesStodCallPullOk

For more information, see reference [3] and [4].

### 5.3 Operation and Maintenance Interface for Common Components

The configuration parameters, alarms and performance measurements in Common Components, see references [5], [6], [7], [8] and [9].

#### 5.3.1 Configuration for Common Components

This section lists added, changed, and deleted configuration parameters.

##### 5.3.1.1 Added Common Components Configuration Parameters

The following is an alphabetical list of the configuration parameters that have been added to Common Components in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 19 - Added Common Components Configuration Parameters**

Configuration parameter name in Common Component

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#### 5.3.1.2 Changed Common Components Configuration Parameters

The following is an alphabetical list of the configuration parameters that are changed in Common Components in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 20 - Changed Common Components Configuration Parameter**

MOC/Parameters	Change

#### 5.3.1.3 Deleted Common Components Configuration Parameters

The following is an alphabetical list of the configuration parameters that have been deleted from Common Components in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 21 - Deleted Common Components Configuration Parameters**

Configuration Parameter Name in Common Component

### 5.4 IFC Triggers in HSS

This section lists added, changed, and deleted IFC triggers required in HSS.

#### 5.4.1 Added IFC Triggers

The following IFCs have been added in MTASv 1.2 R2A compared to 1.0 R1A:

**Table 22 - Added IFCs**

Reason	IFC

#### 5.4.2 Changed IFC Triggers

The following IFCs have been changed in MTASv 1.2 R2A compared to 1.0 R1A

**Table 23 - Changed IFCs**

Reason	IFC

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### 5.4.3 Deleted IFC Triggers

No IFCs have been deleted from MTASv 1.2 R2A compared to 1.0 R1A

## 6 Capacity and Performance

This section provides some key figures regarding changes or differences of characteristics between MTASv 1.0 R1A and MTASv 1.2 R2A, in case such differences exist.

The MTASv is recommended to be dimensioned for a maximum CPU load of 50%.

### 6.1 Subscriber Capacity

The number of half call establishments and releases per second determines the need of processing resources. Processing capacity is the limiting factor for MMTel, SCC, Conf and SIP Trunking AS. For more information regarding figures and the assumptions and generalizations made in the dimensioning model see reference [1].

### 6.2 Network Performance

The in-service performance is estimated to remain the same both in MTASv 1.0 R1A and in MTASv 1.2 R2A.

### 6.3 Traffic Capacity Handling

Since MTASv 1.0 R1A release, MTASv 1.2 R2A does not introduce noticeable capacity difference for traffic handling.

For details see reference [1].

## 7 Other impact

CBA components versions difference between MTASv 1.0 R1A and MTASv 1.2 R2A can be found in table below

**Table 24 - Changed CBA Components and their versions**

Component name	Version used in 1.0	Version used in 1.2
LDEwSLES	4.0 CP2	4.0.4
Core MW	4.0 CP1	4.0.3
COM	6.0 PRA	6.0.2
eVIP	3.0 PRA	3.0.2
SS7 CAF	4.3 PRA	4.3.1

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BRF	2.0 PRA	2.0.2
SEC / CRYPTO	2.0 PRA	2.0.1
LM Server / LM Cloud	5.0 PRA	5.0.1
Java O&M	2.0 PRA	2.0.1
MMAS	5.0 PRA	5.0.2
vDicosEE	4.0 CP1	4.0.3
LEM	4.0 CP1	4.0.2

## 8 Glossary

See reference [13]

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## 9 References

- [1] MTASv 16B Characteristics Spec 2/155 02-AVA 901 29/9 Uen
- [2] MTASv 1.2 Master Parameter Value List 1/190 73-AVA 901 29/9 Rev B
- [3] MTAS Performance Measurements, 1/1553 AVA 901 29/9
- [4] CPI MTASv Performance Measurement, 11/1551-APA 901 44/1
- [5] CMCO IMS Framework R5B01, 109 21-CXP 902 3164/1-33 Rev A
- [6] CMCO AAA Framework R5A01, 109 21-CXP 902 3222/1-22 Rev B
- [7] CMCO Utilities R5C01, 109 21-CXP 902 0686/1-24 Rev A
- [8] CMCO Template Library R5A01, 109 21-CXA 110 5679/1-21 Rev B
- [9] CMCO Regular Expression R5A01, 109 21-CXA 110 5678/1-16 Rev A
- [10] All features in MTAS 16, 1/221 04-FGC1012990 Rev C
- [11] Parameter Description for Provisioning MTAS MOCs 1/190 84-AVA 901 29/9
- [12] MTAS Configuration for Provisioning LDAP 118/1553-AVA 901 29/9
- [13] Glossary of Terms and Acronyms 1/0033-AVA 901 29/9