1/16/2014 - Version 11

VoIA (VoLTE IA)	(1- ((1-rrc_setup_fail) * (1-QCI5_setup_fail) * (SEER) * (1-QCI1_setup_fail))) *100	Blended Metric
VoLC (VoLTE Dropped Call)	100* ((pmErabRelAbnormalEnbQci1 + pmErabRelMmeActQci1) / ((pmErabRelAbnormalEnbQci1 + pmErabRelNormalEnbQci1) + pmErabRelMmeQci1))	QCI-1 Drop only
SEER	Network Effective Calls / Call Attempts * 100	IRISView Sourced Metric of SIP Traffic: Network Effective Calls = (# of INVITE Requests with associated 200, 480, 486, 600, or 603) Call Attempts = (Total # of INVITE Requests) - (# of INVITE Requests w/ 3XX Response)
Access Fail %	(((((EUTRANCELL_RRC:pmRrcConnEstabAtt - EUTRANCELL_RRC:pmRrcConnEstabSucc) * MME_MOBILITY_MANAGEMENT:AttServiceRequest.E) - ((EUTRANCELL_RRC:pmRrcConnEstabAtt - EUTRANCELL_RRC:pmRrcConnEstabSucc) * MME_MOBILITY_MANAGEMENT:UnsuccServiceReq.E)) + (EUTRANCELL_RRC:pmRrcConnEstabAtt * MME_MOBILITY_MANAGEMENT:UnsuccServiceReq.E)) / (EUTRANCELL_RRC:pmRrcConnEstabAtt * MME_MOBILITY_MANAGEMENT:AttServiceRequest.E)) * 100.0)	
Setup Fail %	((pmrrcConnEstabAtt + pmS1SigConEstabAtt + pmErabEstabAttAdded + ErabEstabAttInit) - (pmRrcConnEstabSucc + pmS1SigConEstabSucc + pmErabEstabSuccAdded+ pmErabEstabSuccInit)) / (pmrrcConnEstabAtt + pmS1SigConEstabAtt + pmErabEstabAttAdded + ErabEstabAttInit) * 100	Blended metric covers bearer, S1, and rrc setup.
Context Drop %	(pmUeCtxtRelAbnormalEnb + pmUeCtxtRelMmeAct) / (pmUeCtxtRelAbnormalEnb + pmUeCtxtRelMme + pmUeCtxtRelNormalEnb) * 100	11/23 - Valid
SSR UE Count	sgwNbrOfUes	Snapshot at end of collection interval - SSR Chassis
SGW UE Count	UeAttached	Snapshot at end of collection interval - Redback Chassis
SSR Downlink Volume Gb	sgwDownlinkBytes * 8 / 10^9	SSR Chassis
SGW Downlink Volume Gb	S1uDlOctetsSent * 8 / 10^9	Redback Chassis
SSR Uplink Volume Gb	sgwUplinkBytes * 8 / 10^9	SSR Chassis
SGW Uplink Volume Gb	S1uUlOctetsSent * 8 / 10^9	Redback Chassis
DL Sector Voulme	(pmPdcpVolDlDrb-pmPdcpVolDlDrbTransUm)/8/1000	Mbytes- including SRB
DL Sector Throughput kbps	(pmPdcpVolDlDrb - pmPdcpVolDlDrbTransUm) / (pmSchedActivityCellDl/1000)	units=kbps NOTE: pmPdcpVolDlDrb was incorrectly stepped if a large volume of traffic was lost in dlRlc. Interim L11B workaround is to not update counter in such circumstances when the potential update is false.

DL Average User Throughput kbps	((pmPdcpVolDlDrb - pmPdcpVolDlDrbTransUm) - pmPdcpVolDlDrbLastTTI) / (pmUeThpTimeDl/1000)	units=kbps NOTE: pmPdcpVolDlDrb was incorrectly stepped if a large volume of traffic was lost in dlRlc. Interim L11B workaround is to not update counter in such circumstances when the potential update is false.
UL Throughput kbps(do not report)	(pmZTemporary4 / (pmUeThpTimeUl/1000))	Temp formula due to TR HM51408. pmZTemporary4 matches pmPdcpVolUlDrbLastTTI which is not a valid metric
Call Delivery %	VS.MM.SuccPsPaging.E / VS.MM.AttPsPaging.E * 100	
DL Scheduler Delay (ms)	(pmPdcpLatTimeDl / pmPdcpLatPktTransDl)	
rrcSetup Failure %	(pmRrcConnEstabAtt-pmRrcConnEstabSucc) / (pmRrcConnEstabAtt) * 100	
Attach Failure %	[((VS.MM.UnsuccAttach.E – (VS.MM.EpsAttachFail.8.E + VS.MM.EpsAttachFail.11.E + VS.MM.EpsAttachFail.14.E + VS.MM.EpsAttachFail.15.E)) / (VS.MM.AttAttach.E)) * 100]	Valid with MME 2011B
Service Request Failure %	(VS.MM.UnsuccServiceReq.E) / (VS.MM.AttServiceRequest.E) * 100	
RACH Failure %	((pmRaAttCbra + pmRaAttCfra) - (pmRaSuccCbra + pmRaSuccCfra)) / (pmRaSuccCbra + pmRaSuccCfra) * 100	
MME Dedicated Bearer Setup Fail %	(VS.SM.CreateDedicatedBearerAtt.E - VS.SM.CreateDedicatedBearerSucc.E) / (VS.SM.CreateDedicatedBearerAtt.E) * 100	
SGW Dedicated Bearer Setup Fail %	(S5S8CreateBearerReqRcvd - S5S8CreateBearerRespAccSent) / S5S8CreateBearerReqRcvd * 100	
Bearer Setup Failure %	((pmErabEstabAttAdded + pmErabEstabAttInit) - (pmErabEstabSuccAdded + pmErabEstabSuccInit)) / (pmErabEstabAttAdded + pmErabEstabAttInit) * 100	
Bearer Drop %	(pmErabRelAbnormalEnb + pmErabRelMmeAct) / (pmErabRelAbnormalEnb + pmErabRelMme + pmErabRelNormalEnb) * 100	11/23 - Valid
Context Setup Failure %	(pmUeCtxtEstabAtt - pmUeCtxtEstabSucc) / pmUeCtxtEstabAtt * 100	
MME Subscriber Count	VS.MM.NbrHomeSub.E + VS.MM.NbrVisitingForeign.E + VS.MM.NbrVisitingNatSub.E	Should be > SWG Sub Count over the pool
TAU Failure %	((VS.MM.TauIntraAtt.E - VS.MM.TauIntraSucc) + VS.MM.TauInterFail.E) / (VS.MM.TauIntraAtt.E + VS.MM.TauInterAtt.E) * 100	
Handover Fail %	((VS.HO.X2Att.E-VS.HO.X2Succ.E) + (VS.HHO.AttIntraMME - VS.HHO.SuccIntraMME)) / (VS.HO.X2Att.E + VS.HHO.AttIntraMME) * 100	
SSR Sesion Setup Failure %	((sgwCreateSessionReqReceived + sgwGtpCreateMessageDrops) - sgwCreateSessionRespAccSent) / (sgwCreateSessionReqReceived + sgwGtpCreateMessageDrops) *100	SSR Chassis
SGW Session Setup Failure %	(S11CreateSessionReqRcvd - S11CreateSessionRespAccSent) / S11CreateSessionReqRcvd * 100	Redback Chassis
SSR Bearer Update Failure %	(sgwModifyBearerReqReceived + sgwUpdateBearerReqReceived) - (sgwModifyBearerRespAccSent + sgwUpdateBearerRespAccSent) / (sgwModifyBearerReqReceived + sgwUpdateBearerReqReceived) * 100	SSR Chassis
SGW Bearer Update Failure %	((S11ModifyBearerReqRcvd + S5S8UpdateBearerReqRcvd) - (S11ModifyBearerRespAccSent + S5S8UpdateBearerRespAccSent)) / (S11ModifyBearerReqRcvd + S5S8UpdateBearerReqRcvd) * 100	Redback Chassis

SSR DL Drop Packet Ratio	sgwDownlinkDroppedPackets / sgwDownlinkPackets * 100	SSR Chassis
SGW DL Drop Packet Ratio	(S1uDlPktsDropped + S5S8GtpDlPktsDiscarded) / S1uDlPktsSent + S5S8GtpDlPktsDiscarded * 100	Redback Chassis
SSR UL Drop Packet Ratio	sgwDownlinkDroppedPackets / sgwDownlinkPackets * 100	SSR Chassis
SGW UL Drop Packet Ratio	(S5S8GtpUlPktsDropped + S1uUlPktsDiscarded) / S5S8GtpUlPktsSent + S1uUlPktsDiscarded	Redback Chassis
SSR Bearer Count	sgwNbrOfBearers	Snapshot at end of collection interval - SSR Chassis
SGW Bearer Count	BearersEstableshed	Snapshot at end of collection interval - Redback Chassis
SSR Subscriber Count	sgwNbrOfConnectedUes	Active Subscriber snapshot at end of collection interval -SSR Chassis
SGW Subscriber Count	ConnectionsEstablished	Active Subscriber Snapshot at end of collection interval - Redback Chassis
SSR Dropped GTP Msg-Overload	sgwGtpMessageDrops	Direct count, not a %
Cell Availability	(pmCellDowntimeAuto + pmCellDowntimeMan) / ((EUTRANCELL_AVAILABILITY:numEutranCell * EUTRANCELL_AVAILABILITY:reportingPeriod) * 900.0)	Measures sector availability, not site availability only when the DUL is alive
Bearer Drop (QCI1)	100* ((pmErabRelAbnormalEnbQci1 + pmErabRelMmeActQci1) / ((pmErabRelAbnormalEnbQci1 + pmErabRelNormalEnbQci1) + pmErabRelMmeQci1))	
Bearer Setup Failure (QCI1)	100 * (((pmErabEstabAttAddedQci5 + pmErabEstabAttInitQci5) - (pmErabEstabSuccAddedQci5 + pmErabEstabSuccInitQci5)) / (pmErabEstabAttAddedQci5 + pmErabEstabAttInitQci5))	
Bearer Setup Failure (QCI1)	100 * (((pmErabEstabAttAddedQci1 + pmErabEstabAttInitQci1) - (pmErabEstabSuccAddedQci1 + pmErabEstabSuccInitQci1)) / (pmErabEstabAttAddedQci1 + pmErabEstabAttInitQci1))	
UE Average Downlink Latency (QCI1)	(pmPdcpLatTimeDlQci1 / pmPdcpLatPktTransDlQci1)	
Downlink Throughput (QCI1)	((pmPdcpVolDlDrbTransQci1 - pmPdcpVolDlDrbTransUm) - pmPdcpVolDlDrbLastTTIQci1) / (pmDrbThpTimeDlQci1 / 1000.0))	
VoLTE Throughput	(pmPdcpVolDlDrbTransUm) / (pmServiceTimeDrbQci1)	
Downlink Packet Error Loss Rate (QCI1)	100* ((pmPdcpPktDiscDlPelrQci1 + pmPdcpPktDiscDlHoQci1) / (pmPdcpPktDiscDlPelrQci1 + pmPdcpPktDiscDlHoQci1 + pmPdcpPktTransDlQci1))	
Uplink Packet Loss Rate (QCI1)	100 *((pmPdcpPktLostUlQci1) / (pmPdcpPktLostUlQci1 + pmPdcpPktReceivedUlQci1))	
Handover Failure Rate (QCI1)	100 * ((pmHoExeOutAttQci1 - pmHoExeOutSuccQci1) / (pmHoExeOutAttQci1))	
Max # simultaneous bearers (QCI1)	pmErabQciMaxQci1	
DL # of Active DRB (QCI1)	pmActiveDrbDlSumQci1	
DL RLC Delay (QCI1)	(pmRlcDelayTimeDlQci1 / pmRlcDelayPktTransDlQci1)	
DL ROHC Ratio (QCI1)	100 * ((pmPdcpVolDlCmpHdrQci1) / (pmPdcpVolDlHdrQci1))	
UL ROHC Ratio (QCI1)	100 * ((pmPdcpVolUlCmpHdrQci1) / (pmPdcpVolUlHdrQci1))	
UE Average Downlink Latency QCI1	(pmPdcpLatTimeDlQci1 / pmPdcpLatPktTransDlQci1)	