CONTENTS

CHAPTER 6

Rcemgv Ftqrrgf yjgp FN Oczkowo Rcemgv Eqwpv

CHAPTER 12

About this Guide

Vjku rtghceg fguetkdgu vjg *Wnvtc KqV*

R/I Y Cfokpkuvtcvkqp Iwkfg

UCGI Y Cfokpkuvtcvkqp Iwkfg

U/I Y Cfokpkuvtcvkqp Iwkfg

Obtaining Documentation

Vjg oquv ewttgpv Ekueq fqewogpvcvkqp ku cxckncdng qp vjg hqnnqykpi ygdukvg‹

jvvr‹llyyy.ekueq.eqo lekueql ygdlruclfghcwnv.jvon

Contacting Customer Support

Wug vjg kphqtocvkqp kp vjku ugevkqp vq eqpvcev ewuvqogt uwrrqtv.

Tghgt vq vjg uwrrqtv ctgc qh jvvr‹llyyy.ekueq.eqo hqt wr-vq-fcvg rtqfwev fqewogpvcvkqp qt vq uwdokv c ugtxkeg tgswguv. C xcnkf wugtpcog cpf rcuuyqtf ctg tgswktgf vq ceeguu vjku ukvg. Rngcug eqpvcev {qwt Ekueq ucngu qt ugtxkeg tgrtgugpvcvkxg hqt cffkvkqpcn kphqtocvkqp.

Okpkok|g u{uvgo

Supported Interfaces

5 I RR VU 54.644 X34.6.2‹ 5t f

WG yknn wug U33-W qt U3-W cv cp{ rqkpv kp vkog. Uwrrqtv hqt vjg U I k dcugf fgnkxgt{ qh Pqp-KR fcvc ecp cnuq dg wugf d{ cp{ WG. Vjcv ku, kv ku kpfgrgpfgpv qh uwrrqtv hqt vjg Wugt Rncpg EKqV GRU Qrvkok|cvkqp cpf vjg Eqpvtqn Rncpg EKqV GRU Qrvkok|cvkqp.

CIoT EPS Optimizations on Control Plane Node

Vjg EKqV GRU qrvkok|cvkqp qp vjg eqpvtqn rncpg pqfg vtcpurqtvu wugt fcvc qt UOU oguucigu xkc OOG d{ gpecruwncvkpi vjg wugt fcvc kp PCU RFWu. Ukpeg pq fcvc rncpg ugvwr ku tgswktgf yjgp ugpfkpi fcvc vq OOG xkc PCU oguucikpi, wukpi ER EKqV qrvkok|cvkqp tguwnvu kp tgfwekpi O
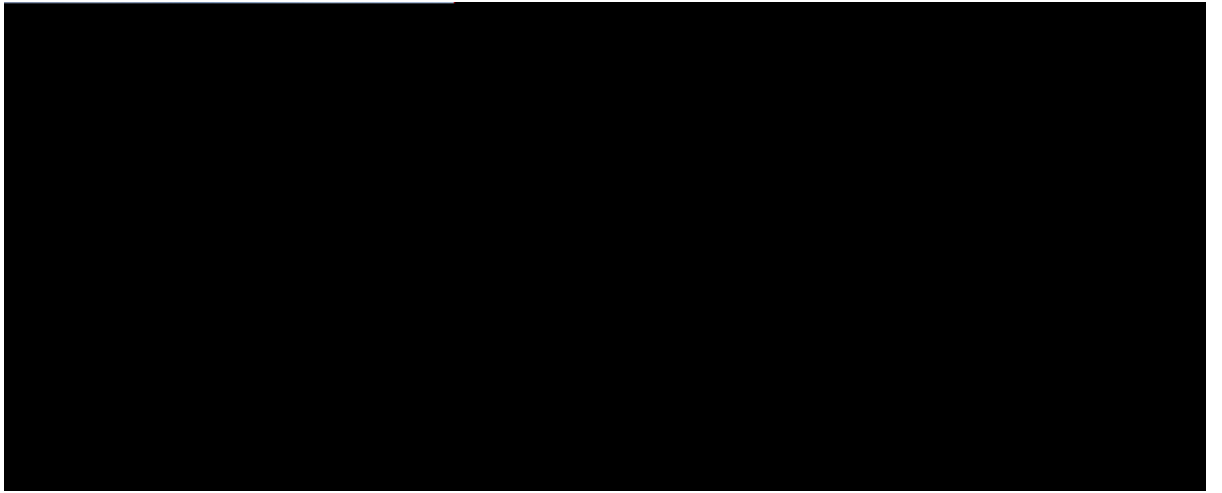
PART **I**

eDRX Support on the MME

Vjku

| | |
| | |

4843.66 ugeqpfu (65.8; okpwvgu). Yjgp gFTZ ku gpcdngf hqt c WG, vjg WG ku tgcejcdng hqt rcikpi kp urgekhke Rcikpi J{rgthcogu (RJ), yjkej ku c urgekhke ugv qh J-UHP xcnwgu. Vjg RJ equorwvcvkqp ku c hqtownc vjcv ku hwpevkqp qh vjg gFTZ e{eng, cpf c WG urgekhke kfgpvkhkgt. Vjku xcnwg ecp dg equorwvgf cv cnn WGu cpf OOGu

5 I RR VU 45.623 xgtukqp 35.7.2, I gpgtcn Rcemgv Tcfkq

Vjg **gftz/e{eng** mg{ yqtf ku wugf vq eqphkiwtg vjg gFTZ e{eng ngpivj. Vjg *e{engangpivjaxcnwg* ku cp kpvgigt xcnwg htqo 734 vq 484366. Kv ku c ownvkrng qh 4 uvctvkpi htqo 734 wr vq 484366 (hqt gzcorng< 734,

Hqt gzc o rng‹ **gf tz juhp/uvctv 4222‹25‹23‹34‹56‹78 wve**

ujqy o o g/ugtxkeg hwmm *ugtxkegapc o g*

Ó[\æ^äæä ŒÞVİ
    ÒËUÔS U\áã\   İ G€FɯJİ€Ğİ€FİFGİĞHİIIJ ÖṢU • ÛÚO
    ÒËUÔS ÛÚO Þæàæãæ^´æ   İ FİÎGİFİFİFİFİF
    Näↄ|b\æä \↔↑æ   İ

Vjg **v5637/vk o gqwv** *v5637afwt*

V5635-Vkogqwv

Ocz Rcikpi Cvvgorvu

V5637-Vkogqwv

Troubleshooting

Vjg hqnnqykpi vtqwdngujqqvkpi uvgru ecp dg wugf vq xgtkh{ vjg gFTZ eqphkiwtcvkqp<

Kh gFTZ ku pqv gpcdngf

Revision History

Revision Details	Release
Hktuv kpvtqfwegf.	43.8

Feature Description

Qp OOG cpf E-UIP, pgy eqwpvgtu ctg cffgf vq eqwpv vjg pwodgt qh nqy rqygt uwduetkdgtu yjgp TCV v{rg ku G-WVTCP qt PD-KqV. Vjg eqwpvgtu yknn kpetgogpv d{ 3 hqt gcej uwduetkdgt kh gFTZ qt RUO qt dqvj ctg tgegkxgf kp Cvvcej qt VCW Tgswguv.

Vjg ujqy oog/ugtxkeg uvcvkuvkeu eqo ocpf cpf OOG uejgoc ctg gpjcpegf vq uu
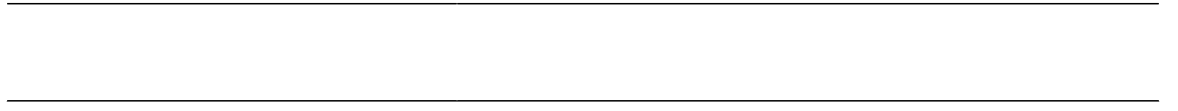
NB-IoT RAT and Attach Without PDN Connectivity Support

Vjku hgcvwtg ejcrvgt fguetkdgu vjg OOG uwrrqtv hqt vjg EKqV qrvkok|cvkqpu cvvcej ykvjqwv RFP eqppgevkxkv{ cpf PD-KqV TCV v{rg.

Feature Summary and Revision History

Summary Data

| Tgncvgf Fqewogpvcvkqp | *Eqoocpf Nkpg Kpvgthceg Tghgtgpeg* |
| | *Uvcvkuvkeu cpf Eqwpvgtu Tghgtgpeg* |

Revision History

_____

_____

Attach without PDN Connectivity

Vjg OOG uwrrqtvu eqphkiwtcvkqp vq gpcdng Cvvcej ykvjqwv RFP eqppgevkxkv{ EkqV qrvkok|cvkqp qp rgt ceeguu-v{rg. Vjg pgy **ekqv/qrvkokucvkqp** eqo ocpf wpfgt vjg ecnn eqpvtqn rtqhkng eqphkiwtcvkqp oqfg ku wugf vq gpcdng qt fkucdng vjku hwpevkqp ku h

qt

tg o qxg

(P) - PD-ꓘqV

show lte-policy tai-mgmt-db name *db_name*

Vjg hqnnqykpi pgy hkgnfu ctg cffgf vq vjg ujqy qwvrwv vq fkurnc{ vjg eqphkiwtgf ceeguu v{rg<

    Ceeguu-V{rg PD-ꓘqV

Vjg ujqy qwvrwv fkurnc{u yjgvjgt cnn vjg VCEu eqphkiwtgf dgnqpi vq gkvjgt YD-GWVTCP qt PD-ꓘqV TCV. Kv ku cnuq rquukdng vjcv uqog qh vjg eqphkiwtgf

Counter	Description
	Vjg

Non-IP Data Over SCEF

Vjku ejcrvgt fguetkdgu vjg vtcpuhgt qh Pqp-KR fcvc qxgt UEGH wukpi Egnnwnct Kpvgtpgv qh Vjkpiu (EKqV) vgejpqnqi{. Vjku hgcvwtg

Tgeqxgt{ qh uwduetkdgtu ykvj Eqpvtqn Rncpg EKqV qrvkok|cvkqpu qp Uguukqp Ocpcigt tguvctv

Eqpvtqn Rncpg EKqV Qrvkok|cvkqpu

Buffering Non-IP Data from SCEF

Interaction between MME and SCEF

Vjg WG kpfkecvgu kp vjg GUO eqppgevkqp tgswguv (hqt gzco rng: kp vjg Cvvcej qt RFP Eqppgevkxkv{ Tgswguv) vjcv c Pqp-KR
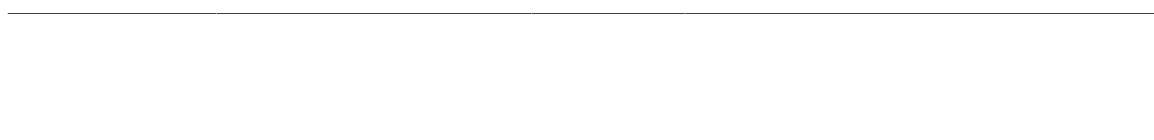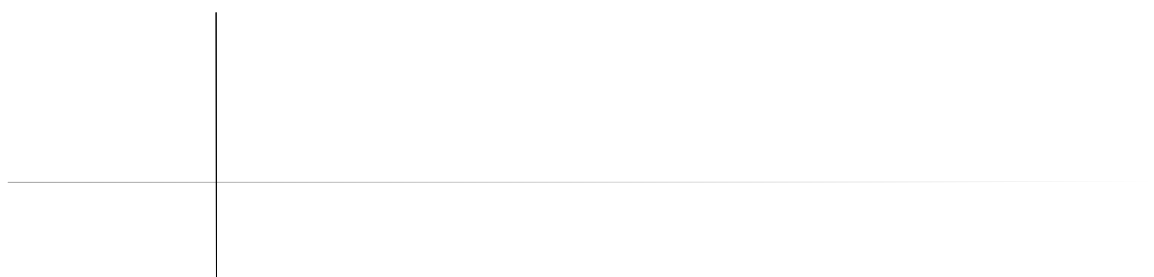
5 I RR VU 45.8:4 Cte j kvgevwtg gp j cpeg o gpvu vq hceknkvcvg

Kv ku tgeq o o gpfgf vq pqv tg o qxg c fkc o gvgt gpf rqkpv y jgp vjgtg ctg cevkxg ecnnu qp vjg

Verifying the Configuration

Vjg cuuqekcvkqp qh cp UEGH-ugtxkeg vq cp OOG-ugtxkeg ecp dg xgtkhkgf wukpi vjg ujqy eqo ocpfu rtqxkfgf kp vjku ugevkqp.

Vq xgtkh{ cnn cuuqekcvgf UEGH ugtxkegu, wug vjg hqnnqykpi eqoocpf<

ujqy oog/ugtxkeg cnn

Qp gzgewvkpi vjg cdqxg eqoocpf vjg hqnnqykpi pgy hkgnf(u) ctg fkurnc{gf<

UEGH Ugtxkeg

Vq xgtkh{ c urgekhke OOG-ugtxkeg, wug vjg hqnnqykpi eqoocpf<

ujqy oog/ugtxkeg pcog *ugtxkegapcog*

Qp gzgewvkpi vjg cdqxg eqoocpf, vjg hqnnqykpi qwvrwv ku fkurnc{gf<

UOÓÔ Uæã{⇔´æ   İ b´æàF

Association of SCEF-service to Call-Control-Profile

Vjg hqnnqykpi ENK eqphkiwtcvkqp cuuqekcvgu UEGH-ugtxkeg vq vjg Ecnn-Eqpvtqn-Rtqhkng.

Vq xgtkh{ eqphkiwtgf xcnwgu hqt urgekhkgf Ecnn Eqpvtqn Rtqhkng ykvj ER EKqV Qrvkok|cvqp, wug vjg hqnnqykpi eqoocpf<

ujqy ecnn/eqpvtqn/rtqhkng hwnn pcog *rtqhkngapcog*

Yjgp ER EKqV Qrvkok|cvqp ku gpcdngf, vjg qwvrwv fkurnc{gf qp gzgewvkpi vjg cdqxg eqoocpf ku cu hqnnqyu<
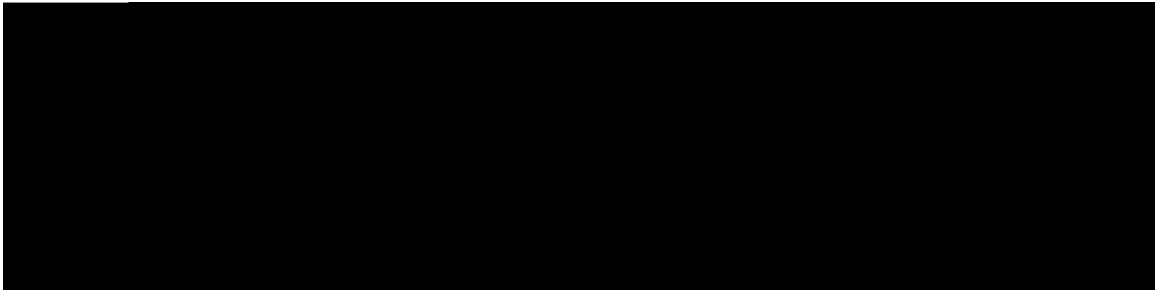
```
OØ~Ú Š*\↔↑↔bá\↔~^İ
  OŞËŠ*\↔↑↔bá\↔~^  İ  Ó^áâ→æä
  N´´æbbËÚ]*æ        İ  ÙÑËÓÛÚÞNS
```

Kp vjg cdqxg qwvrwv, vjg hkgnf **Ceeguu/V{rg** ecp jcxg qvjgt

Show Commands and/or Outputs

N\\æ↑*\æäİ   €   U|´´æbbİ   €
  Ôá↔→|ãæbİ   €
ÈÈÈ
ÈÈÈ
O~^\ã~→ Ş→á^æ Ûbæã Œá\á U\á\↔b\↔´bİ
  O|↑|→á\↔{æ Œá\á Š{æã

CHAPTER 8

Vjg gPD eqpvtqnnkpi c WG-cuuqekcvgf nqikecn U3 eqppgevkqp kpkvkcvgu vjg rtqegfwtg d{ ugpfkpi c WG-ECRCDKNKV[-KPHQ-KPFKECVKQP oguucig

Power Saving Mode (PSM) in UEs

The following new flags are introduced as part of this feature; these flags are supported in G TPCv2 Indication IE:

Pending Network Initiated PDN Connection Signaling Indication (PNSI): The source MME supports sending

Vjg **v5634/vk o gqwv** mg{ yqtf ku wugf vq eqphkiwtg vjg V5634 Gzvgpfgf vk o gt xcnwg. Vjg V5634 gzvgpfgf vk o gt ku cp kpvgigt tcpikpi htq o 2 vq 57934222 ugeqpfu.

Vjg **t**

show mme-service statistics

Vjg hqnnqykpi pgy rctcogvgtu ctg cffgf vq vjku eqoocpf:

   RUO Uwduetkdgtu‹

Troubleshooting

Vjg vtqwdngujqqvkpi uvgru hqt qrgtcvqt eqphkiwtgf cpf WG tgswguvgf vkogtu ctg fguetkdgf kp vjku ugevkqp.

Operator Configured Timers

Vjg qrgtcvqt ecp eqphkiwtg vjg V5546 cevkxg cpf V5634 gzvgpfgf vkogt wukpi vjg **ruo** ENK eqoocpf. Vjg rtqegfwtg dgnqy ku c uvgr-d{-uvgr rtqegfwtg hqt vtqwdngujqqvkpi.

3 Vjg **ruo** ∂qoocpf kp vjg Ecnn Eqpvtqn Rtqhkng Eqphkiwtcvkqp oqfg

8 Qp gzgewvkqp qh vjg **ujqy givre uvcvkuvkeu xgtdqug** eqo ocpf, vjg hqnnqykpi rctcogvgtu ctg fkurnc{gf<

```
Oãæá\æ Ñæáãæã Œæ^↔æäİ

 Oãæá\æ Ñæáãæã Œæ^↔æä ÚVİ
 ÛÓ ^~\ ãæá´åáâ→æ ä|æ \~ ŞURİ F
```

Vjg U I k kpvgthceg

Data Delivery via SGi Interface

U o cnn

Architecture

Vjg hqnnqykpi fkcitco knnwuvtcvgu vjg xctkqwu fcvc rcvju rquukdng ykvj cpf ykvjqwv EKqV GRU qrvkok|cvkqp hqt KR cpf pqp-KR fcvc.

U I k kpvgthceg< Gzkuvu dgv y ggp vjg R- I Y cpf rcemgv fcvc

u o cnn fcvc ugpv cpf tgegkxgf qxgt PCU dgvyggp O OG cpf U- I Y. V j g U33-W kpvgthceg ku kpvtqfwegf cu c rctv qh Eqpvtqn Rncpg EKqV GRU qrvkok|cvkqp.

fqgu pqv ugpf vjg U3 Kpkvkcn Eqpvgzv Ugvwr tgswguvu vq vjg gPqfgD. Vjg gPqfgD fqgu pqv ugpf TTE tg-eqphkiwtcvkqp vq vjg WG cu vjgtg ku pq Kpkvkcn Eqpvgzv Ugvwr cv vjg gPqfgD. Vjg OOG

Jqygxgt, vjgug rtqegfwtgu ctg crrnkecdng cpf rgthqtogf d{ vjg OOG hqt vjku ecnn hnqy.

Uvgr 7: Vjg OOG ugpfu vjg U3CR fqypnkpm PCU vtcpurqtv oguucig cpf vjg PCU cevkxcvg fghcwnv dgctgt tgswguv vq vjg gPqfgD.

Uvgr 8: Vjg gPqfgD kp vwtp ugpfu vjg TTE fqypnkpm kphqtocvkqp vtcpuhgt oguucig cpf vjg PCU cevkxcvg fghcwnv dgctgt tgswguv ceegrv vq vjg WG.

Uvgrvjg

o guuc i g cpf kv dtkpi u wr U33W vwppgn hqt gcej U I k RF P v j tqwi j U33 Oqf kh{ Dgctgt tgswguv ltgurqpug ukipcnkpi

OQ

Configuring Data over NAS, S11-U and SGi Interfaces

Configuring Control Plane CIoT Optimization

The ekqv/qrvkokucvkqp ENK eqoocpf

Configuring PDN Type in the APN Profile

Vjg **rfp/v{rg** ENK eqo ocpf cffgf kp vjg CRP Rtqhkng Eqphkiwtcvkqp oqfg urgekhkgu

Vjg **tg o qxg** mg{ yqtf fgngvgu vjg gzkuvkpi eqphkiwtcvkqp.

Vjg **wn/tcvg** *wnatcvgaxcnwg*

Vjg **u33w/o o g** mg{ yqtf eqphkiwtgu *vjg* U33-W kpvgthceg

gzkv
crp/rt

EKqV Qrvkokucvkqp

ER-Qrvkokucvkqp

Ceeguu-V{rg

Ugtxkpi RNOP Tcvg Eqpvtqn

WN Tcvg

FN Tcvg

show apn-profile full name *profile_name*

Vjg hqnnqykpi pgy hkgnfu ctg cffgf vq vjg qwvrwv qh vjku eqoocpf vq fkurnc{ vjg eqphkiwtgf RFP

Hcknwtgu

PQP-KR RFP Eqppgevkqpu Ykvj UEGH

5700H P S W H G

Cvvgo..gf

Uweegu...   U

Hcknwtgu

Pgy uvcvkuvkeu ctg cffgf vq fkurnc{ vjg Pqp-KR RFP uvcvkuvkeu - vjg pwodgt qh pqp-KR RFP Eqppgevkqpu qxgt UEGH (V8c), pwodgt qh Pqp-KR RFP Eqppgevkqpu qxgt   O

Tz D{vgu

Vz Rcemgvu

Vz D{vgu

Tz Ftqr Rcemgvu

Tz Ftqr D{vgu

Vz Ftqr Rcemgvu

Vz Ftqr D{vgu

show mme-service statistics verbose

Pgy uvcvkuvkeu ctg cffgf vq fkurnc{ pwodgt   qr   D{vh

show mme-service session counters imsi *imsi_number*

Vjg hqnnqykpi pgy hkgnfu ctg cffgf vq vjg qwvrwv

Tz Ftqr Rcemgvu

Tz Ftqr D{vgu

Vz Ftqr Rcemgvu

Vz Ftqr D{vgu

Ewowncvkxg
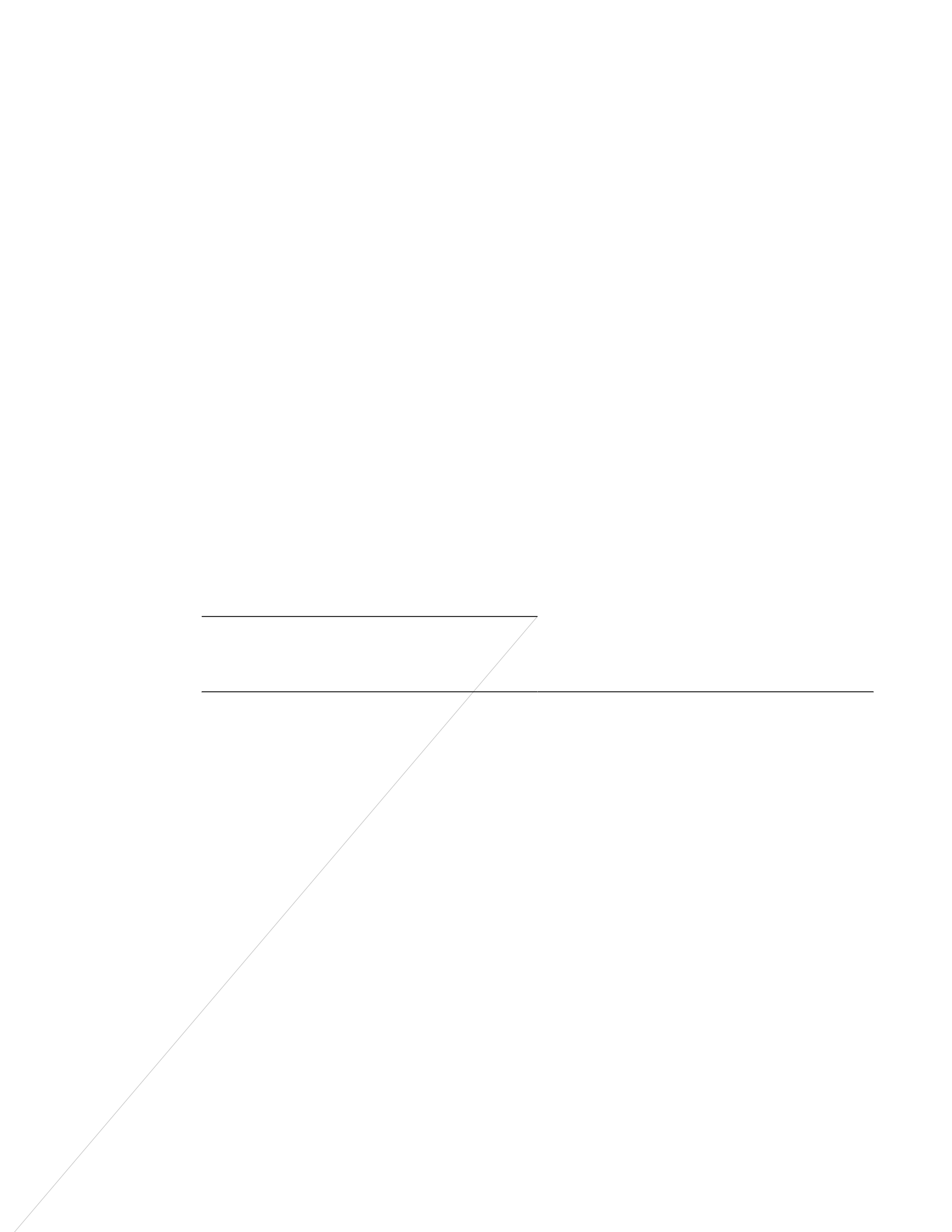
CRP Pc o g

Fcvc Qxgt PCU Uvcvkuvkeu

Tz Rcemgvu

Tz D{vgu

Vz Rcemgvu

Vz D{vgu

_____

_____

_____

_____

_____

_____

_____

_____

Non-IP-PDN-Type-Indicator

V j ku

4
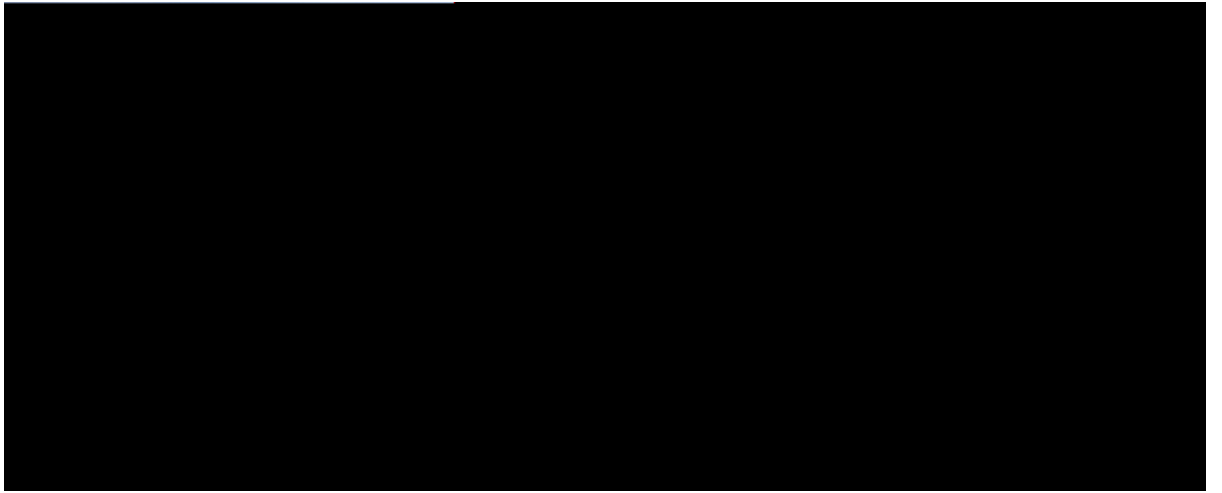
CIoT EPS Optimizations on Bearer Plane Nodes

Revision History

Monitoring and Troubleshooting

Show Commands and/or Outputs

Vjku ugevkqp rtqxkfgu kphqtocvkqp tgictfkpi ujqy eqoocpfu cpflqt vjgkt qwvrwvu kp uwrrqtv qh vjg gFTZ cpf RUO Uwrrqtv qp Icvgyc{u hgcvwtg.

show subscribers pgw-only full all

Vjg qwvrwv qh vjku eqoocpf ku

CHAPTER

Revision History

Revision Details	Release
Vjg hgcvwtg ku vguvgf cpf swcnkhkgf qp vjg CUT 7722	43.5

☞

Dwhhgtkpi ku fqpg rgt

Basic Call Setup Scenario (HLCOM)

Packet Dropped when DL Maximum Packet Count is Reached

3 Ecnn ku ugvwr ykvj XqNVG cpf kpvgtpgv RFP ykvj dgctgtu 7, 8, 9, cpf :.

4 WG ku oqxgf vq kfng oqfg cpf U3W kpvgthceg ku tgngcugf vq vjg WG.

5 Fqypnkpm fcvc ku tgegkxgf hqt vjg dgctgt 7 cpf FFP ku kpkvkcvgf hqt vjg uco g.

6 FFP-Cem ecttkgu FN dwhhgtkpi fwtcvkqp cpf FN rcemgv eqwpv. Vjg

Packet Handled on DL Buffer Duration Expired

3 Ecnn ku ugvwr ykvj vqNVG cpf kpvgt ykvj RCP ykvj dctgt 5f 8, 9, hcpjg.

4 WG ku oqxgf vq kfng oqfg cpf U3W pvgtceg ku tg cug vgt jg W

5 Fq ypnkpm fcvc ku tgeg xgf hp ug dgctgt 7 q f P ku

Packet Dropped on Max Packet Buffer is Reached

3 Ecnn ku ugvwr ykvj XqNVG cpf Kpvgtpgv RFP ykvj dgctgtu 7, 8, 9, cpf :.

4 WG ku oqxgf vq kfng oqfg cpf U3W kpvgthceg ku tgngcugf.

5 Fqypnkpm fcvc ku tgegkxgf hqt dgctgt 7 cpf

c Kh 8m dwhhgt ku cxckncdng kp vjg gzvgpfgf dwhhgt, dwhhgtkpi gzrcpfu vq 32m.

d Kh 8m dwhhgt ku pqv cxckncdng kp gzvgpfgf dwhhgt, rcemgvu dg{qpf 6m ctg ftqrrgf.

Routing Area Update Without S-GW Change

Kp vjg hqnnqykpi ogpvkqpgf ecnn uegpctkqu, U-IY cpf R-IY ctg rctv qh UCGIY cpf vjg uguukqp yqwnf dg c eq-nqecvgf uguukqp.

Kh vjg UIUP jcu ejcpigf, vjg pgy

Kh Fgngvg KFHV Tgswguv ku pqv tgegkxgf cv U-I Y, U-I Y yknn engcp wr vjg KFHV vwppgn chvgt vjg KFHV iwctf vkog gzrkt{ qh 322 ugeqpfu.

Rngcug pqvg vjcv U-I Y tglgevu cp{ KFHV

S-GW Schema

Ø^↔\↔á\æä⏁   €   U|**ãæbbæä⏁   €

Òá^ä~{æã Şá&↔^& U\á\↔b\↔´b⏁
  ŒŒS N´← }↔\å Úæ↑*~ãáã]ËÒŠËÞæ↓æ´\↔~^ ÇOá|bæ ÀFF€D⏁   €
  ÚNÛÐÞNÛ RÑÞ Úã↔&&æãæä ŒŒS⏁   €

Şá&↔^& ÇŒŒSD Úáã~\\→↔^& U\á\↔b\↔´b⏁   S~\ á{á↔→áâ→æ

S-GW Service Level Statistics

C_v ugtxⲕeg ⲛgxgⲛ eqwpⱴgtu jcxg dggp cffgf ⱨqt

ujqy ucgi y-ugtxkeg uvcvkuvkeu cmn hwpevkqp ui y

ujqy uguukqp uwdu{uvg o uR
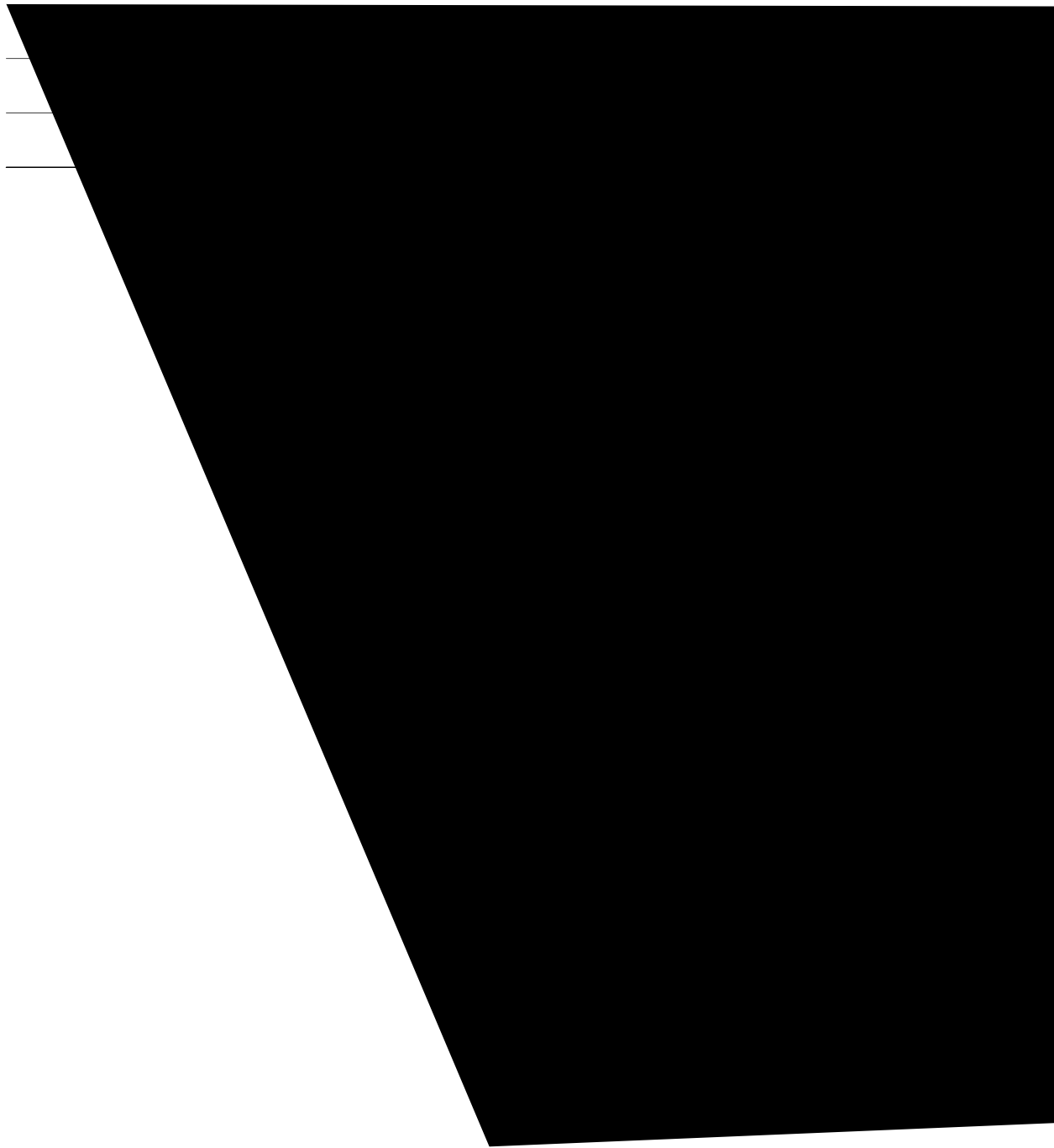
License Requirements

This feature is license controlled. Contact your Cisco account representative for information on how to obtain a license.

■

show subscribers all

Vjg hqnnqykpi pgy hkgnf ku cffgf vq vjg ujqy qwvrwv vq fkurnc{ vjg pgy PD-KqV TCV v{rg‹

(P) - PD-KqV

' P ku wugf vq tgrtgugpv vjg Ceeguu Vgejpqnqi{ kp vjg ecnn fguetkrvkqp. Vjg ujqy qwvrwv fkurnc{u vjg TCV v{rg qh vjg ecnn cu PD-KqV.

show subscribers callid <call_id>

Vjg hqnnqykpi pgy hkgnf ku cffgf vq vjg ujqy qwvrwv vq fkurnc{ vjg pgy PD-KqV TCV v{rg‹

(P) - PD-KqV

' P ku wugf vq tgrtgugpv vjg Ceeguu Vgejpqnqi{ kp vjg ecnn fguetkrvkqp. Vjg ujqy qwvrwv fkurnc{u vjg TCV v{rg qh vjg ecnn cu PD-KqV.

show subscribers full all

Vjg hqnnqykpi pgy hkgnf ku cffgf vq vjg ujqy qwvrwv vq fkurnc{ vjg pgy PD-KqV TCV v{rg‹

PD-KqV

Vjg ujqy qwvrwv fkurnc{u vjg TCV v{rg qh vjg ecnn cu PD-KqV.

show subscribers pgw-only all

Vjg hqnnqykpi pgy hkgnf ku cffgf vq vjg ujqy qwvrwv vq fkurnc{ vjg pgy PD-KqV TCV v{rg‹

(P) - PD-KqV

' P ku wugf vq tgrtgugpv vjg Ceeguu Vgejpqnqi{ kp vjg ecnn fguetkrvkqp. Vjg ujqy qwvrwv fkurnc{u vjg TCV v{rg qh vjg ecnn cu PD-KqV.

show subscribers pgw-only full

Vjg hqnnqykpi pgy hkgnf ku cffgf vq vjg ujqy qwvrwv vq fkurnc{ vjg pgy PD-KqV TCV v{rg‹

PD-KqV

Vjg ujqy qwvrwv fkurnc{u vjg TCV v{rg qh vjg ecnn cu PD-KqV.

show subscribers pgw-only full all

Vjg hqnnqykpi pgy hkgnf ku cffgf vq vjg ujqy qwvrwv vq fkurnc{ vjg pgy PD-KqV TCV v{rg PD-KqVVjg

PD-KqV

Vjg ujqy qwvrwv fkurnc{u vjg TCV v{rg qh vjg ecnn cu PD-KqV.

show subscribers saegw-only full

Vjg hqnnqykpi pgy hkgnf ku cffgf

Vjg

show session subsystem

Vjg hqnnqykpi pgy hkgnf ku cffgf kp vjg Wugt Fcvc Uvcvkuvkeu ugevkqp.

PD-KqV

Vjg ujqy qwvrwv fkurnc{u vjg fcvc rcemgvu rgt TCV v{rg cpf uwduetkdgtu eqwpv rgt TC

uguuuvcv-tcv-kpkv-pd-kqv-ivr%‹ Vjg vqvcn pwodgt qh kpkvkcvgf PD-KqV RFPu

Non-IP PDN Support

Vjku ejcrvgt fguetkdgu vjg

Vjg R-I Y rgthqtou vjg KR-tgncvgf qrgtcvkqpu dwv vjg KR cfftguu qt KR rtghkz ku pqv rtqxkfgf vq vjg WG. Hqt KRx8, vjg R-I Y cuukipu cp kpvgthceg kfgpvkhkgt hqt vjg RFP eqppgevkqp. Vjg cnnqecvgf KR cfftguu qt KRx8 rtghkz kfgpvkhkgu vjg RFP eqppgevkqp qh vjg WG.

Fwtkpi kpvgt-O OG kpvtc-U I Y jcpfqxgt uegpctkq, kh U- I Y fgvgevu

Important   Yg tgeqo ogpf vjg qrgtcvqt vq pqv eqphkiwtg vjgug kpvgthcegu qt ENK eqoocpfu tgncvgf vq vjgug kpvgthcegu hqt Pqp-KR RFP eqppgevkqpu.

R-I Y fqgu pqv uwrrqtv Nqecn Rqnke{ hqt Pqp-KR RFP eqppgevkqpu kp vjku tgngcug.

R-I Y fqgu pqv uwrrqtv qvjgt UIk RvR vwppgnkpi ogejcpkuou (nkmg ROKRx8l ITG, N4VR, IVR-ElW) vq fgnkxgt Pqp-KR fcvc vq CU xkc UIk.

R-I Y fqgu pqv uwrrqtv CRP-CODT tcvg nkokv hqt pqp-KR RFP eqppgevkqpu.

R-I Y fqgu pqv uwrrqtv ujcrkpi

hy-cpf-pcv

ivr r

crp

Vjg hqnnqykpi ujqy eqo ocpfu ecp cnuq dg wugf hqt xgtkh{kpi vjg Pqp-KR RFR-V{rg cpf WFR-KR vwppgn eqphkiwtcvkqpu hqt vjg CRP<

ujqy eqphkiwtcvkqp crp *crppcog*

ujqy eqphkiwtcvkqp

ujqy eqphkiwtcvkqp crp *crppcog* **xgtdqug**

ujqy eqphkiwtcvkqp xgtdqug

Ceeguu V{rg‹ ui y/rfp/v{rg/pqp/kr · ivr/rfp/v{rg/pqp/kr

Pgvyqtm V{rg‹ Pqp/ℝR · WFR/ℝRx6 · WFR/ℝRx8

Pqvgu‹

Ceeguu V{rg‹ ui y/rfp/v{rg/pqp/kr ku fkurnc{gf hqt U-I Y uguukqpu, yjgp RFP-v{rg ku Pqp-ℝR.

Ceeguu V{rg‹ ivr/rfp/v{rg/pqp/kr P   P

show pgw-service statistics all

Vjg qwvrwv qh vjku

Vqvcɲ KRx8 cf f tu cɲɲqecvgf‹

Nqecɲ rqqɲ cuuꝁꝑꝏ gpv‹

8 U I k vwppgɲkpꝑ uvcvkuvkeu‹

WFR/KRx6 Vwppgɲu‹

Cevꝅxg‹

Ugvwr‹

Tgɲgcug f‹

WFR/KRx8 Vwppgɲu‹

Cevꝅxg‹

Ugvwr‹

Tgɲgcug f‹

9 Fcvc Uvcvkuvkeu

show sgw-service statistics all

Vjg qwvrwv qh vjku ujqy eqoocpf fkurnc{u vjg hqnnqykpi pgy hkgnfu<
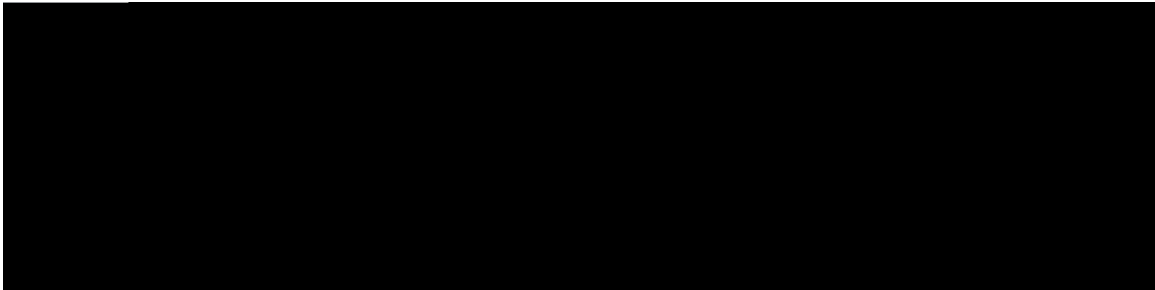
3 RFPu D{ RFP-V

3

Tgngcugf<

Yjgtg<

3 Pqp-KR ftqr uvcvkuvkeu hqt rqtv

uguuuvcv-pqp-kr-krx6cffcnqe   Vjku uvcvkuvke kpfkecvgu vjg vqvcn pwodgt qh vkogu KRx6 cfftguu ku cnnqecvgf hqt Pqp-KR

S-GW Schema

uguuuvcv-vqvewt-rfp-pqp-kr   **V**hku uvcvkuvke kpfkecvgu vjg vqvcn pwodgt qh ewttgpv Pqp-KR U-I Y

vjg "eqpvtqn rncpg qpn{ kpfkecvqt" kp vjg GUO tgswguv yknn dg jcpfngf d{ vjg eqpvtqn rncpg EKqV GRU qrvkok|cvkqp.

Cnn qvjgt RFP eqppgevkqpu ctg jcpfngf wukpi Eqpvtqn Rncpg qt Wugt Rncpg EKqV GRU qrvkok|cvkqpu. Kp cffkvkqp, vjg Eqpvtqn Rncpg EKqV qrvkok|cvkqp ecp dg wugf vq uwrrqtv RFP eqppgevkqpu vq cp UEGH.

Vjg tgiwnct U3-W fcvc vtcpuhgt ku wugf kpfgrgpfgpvn{ vq uwrrqtv RFP eqppgevkqpu vq R-I Y. Cnn vjg UIk RFP eqppgevkqpu qh c WG gkvjgt wug U33-W qt U3-W kpvgthceg cv cp{ rqkpv kp
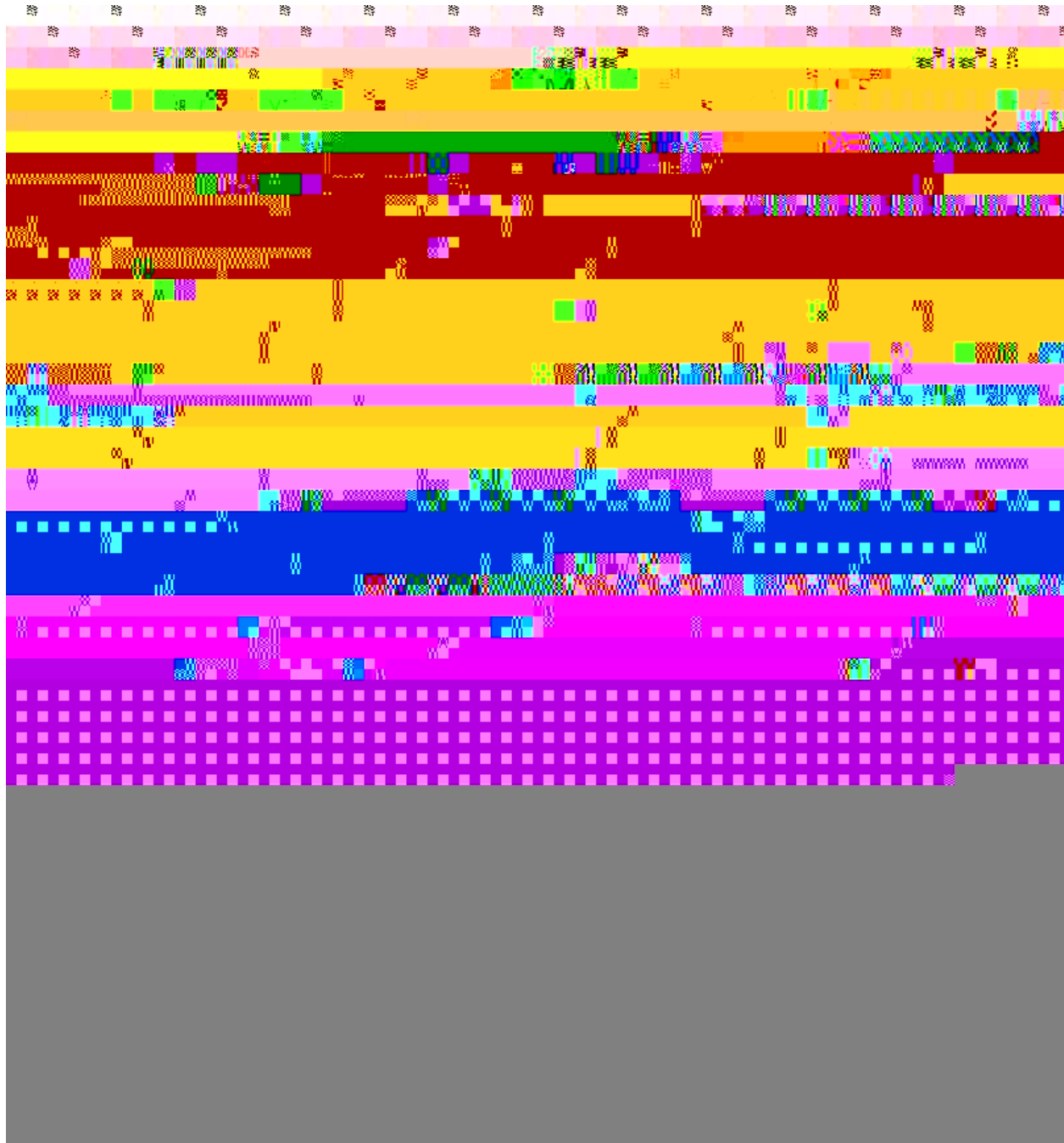
Hqnnqykpi uwo oct{ vcdng fguetkdgu vjg U-I Y dgjcxkqt yjgp Oqfkh{ Dgctgt Tgswguv (Kpvtc-OOG, pq ejcpig kpkp

Table 2: Summary T

Cnn gzkuvkpi FFP tgncvgf hgcvwtgu eqpvkpwg

Configuring Path Failure Related Behavior CLI Command for S11U

Vjg kpvgthceg U33w jcu dggp cffgf vq vjg eqo ocpf **rcvj/hcknwtg**

Monitoring and T

SEK 87

SEK 88

SEK 8;

SEK 92

Pqp-Uvf SEK

Changes in S-GW CDR

Vjg hqnnqykpi cwtkdwvgu jcxg dggp cffgf vq vjg U-IY EFT<