

# *Policy Management*

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## **Feature Notice Release 8.0**

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**Tekelec**

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## Patents

This product may be covered by one or more of the following U.S. and foreign patents:

### U.S. Patent Numbers:

7,738,440; 7,788,357; 7,805,515;

### Foreign Patent Numbers:

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# Release Content

## Introduction

The Policy Management solution for release 8.0 introduces software changes that significantly improve function, performance, manageability, and stability.

Release 8.0 incorporates features that first appeared in Policy Management release 7.6. For more information, refer to the document *Feature Notice Release 7.6*.

- *PCRF Session License Tracking and Reporting*
- *MPE Time Zone Support*
- *Time Zone AVP to be Included over Rx*
- *Unique PCC Rules Precedence*

Release 8.0 improves reliability, performance, and stability:

- *Cross-enclosure Redundancy*
- *Scalability to 4 MRAs in the Network*
- *Four-site MRA Enhancements*
- *Stateful MRA: Dynamic Routing and Load Balancing*
- *Stateful MRA for General Market*
- *MPE Geo-redundancy*
- *MRA Geo-redundancy*
- *Load Shedding Enhancements*
- *Diameter over SCTP with Multihoming Support*
- *Overload Duration Increase*

Release 8.0 introduces a number of new software features:

- Improvements to manageability:
  - *Configurability of MPE and MRA Stale Session Cleanup*
  - *CMP Online Help for Errors*
  - *CMP Online Help for Policy Wizard*
  - *Notifications - Make Errors/Failures More Visible at All Times*
  - *Trace Log Filtering by Trace Log ID(s)*
  - *Improved Policy Statistics*
  - *Push Method for Statistics*
  - *CMP Support for Symantec NetBackup*
  - *Tekelec Re-branding in Policy GUI*
- New key performance indicator (KPI) statistics:
  - *KPI Enhancement: Active Subscriber Count*
  - *KPI Enhancement: Event Triggers*
  - *KPI Enhancement: Latency Statistics*

- *KPI Enhancement: Persistent Interval Statistics*
- *KPI Enhancement: Quota Profile Statistics*
- *KPI Enhancement: Session Cleanup*
- *KPI Enhancement: Timeout Statistics*
- *KPI Enhancement: Traffic Profile Statistics*
- *KPI Enhancement: Trending Reports*
- Enhancements to policies:
  - *"OR" and "NOT" in Policy Rules*
  - *Table-driven Policies*
  - *Rollback Option for Policy Backup*
  - *Inclusion of Traffic Profiles in Policy Backup/Rollback*
- Improvements to protocol support:
  - *Third-Party AVP Support*
  - *Sd Interface*
  - *Filter-ID in Final-Unit-Indication AVP as Policy Condition*
  - *Rule Activation/Deactivation Time AVPs*
  - *Time Tariff Changes*

Release 8.0 of Policy Management operates with release 8.0 of the Tekelec Subscriber Data Management Subscriber Profile Repository (SPR). For information on the new features in SPR release 8.0, refer to the document *SDM Release 8.0 Feature Notice*. The following Policy Management improvements support the SPR:

- *Pooled Quotas*
- *Multiple Integrated LDAP Queries*
- *Email Notification from Policy Action*
- *SMS Receive Functionality*
- *SMS Send to Alternate Destination in Customer Profile*
- *Secondary SMSC in Case of Failure of Primary SMSC*
- *Improve Efficiency of MPE-SPR Sh Usage*
- *Subscriber Profile Data Retention Optimization*
- *Location-based Services Support Using the SPR*
- *MPE Subscribe for Notification of Quota and State Changes*

In the following sections, features are listed in alphabetical order for easier reference.

## CMP Online Help for Errors

You can now use online help in the CMP system to look up descriptions of alarms or trace log items.

In release 8.0, the Policy Management solution includes online help. While displaying the Active Alarm page, the Alarm History Report, or the Trace Log Viewer from within the Configuration Management Platform (CMP, formerly Camiant Management Platform) graphical user interface, you can click on an alarm or trace log item to open the help and display reference documentation for that alarm or trace log item.

The online help is implemented using the open-source Eclipse development environment.

## **CMP Online Help for Policy Wizard**

You can now use online help in the CMP system to look up descriptions of Policy Wizard conditions and actions.

In release 8.0, the Policy Management solution includes online help. While using the Policy Wizard to create, delete, or edit policy rules from within the CMP graphical user interface, you can open the help and display the documentation of available conditions and actions. For each policy condition or action, the help contains a general description, a list of applicable parameters, and an example if available.

The online help is implemented using the open-source Eclipse development environment.

## **CMP Support for Symantec NetBackup**

Policy Management systems support NetBackup for disaster recovery.

In release 8.0, Policy Management systems support Symantec NetBackup to allow retrieval and archiving of application configuration and provisioning files for use in disaster recovery. Symantec NetBackup Client version 7.0 software can be installed and operated on Policy Management servers.

## **Configurability of MPE and MRA Stale Session Cleanup**

Removal of stale subscriber sessions is now configurable.

If a subscriber session on a Multimedia Policy Engine (MPE) or Multi-Protocol Routing Agent (MRA) device has existed for longer than its configured maximum validity time without any explicit updates from the corresponding gateway, or if a more recent session exists for the same subscriber and protocol, the session is considered "stale." The CMP system can remove stale subscriber sessions. In release 8.0, you can configure this cleanup behavior.

## **Cross-enclosure Redundancy**

You can now distribute Policy Management clusters across enclosures.

In release 8.0, you can optionally distribute the active and standby clusters in a Policy Management system across enclosures, so that redundancy is maintained in the event of an enclosure failure. MPE, CMP, and MRA systems all support cross-enclosure redundancy. Mixed configurations, in which some clusters are distributed across enclosures while others are housed in the same enclosure, are also supported.

## Diameter over SCTP with Multihoming Support

MPE and MRA systems support SCTP with either unihoming or multihoming.

In release 8.0, connections to and from an MPE or MRA system can use either Transmission Control Protocol (TCP) or Stream Control Transmission Protocol (SCTP). The following Diameter applications support SCTP:

- Gx
- Gxx
- Gy
- Rx
- Sh
- Sd
- DRMA

You can configure an MPE or MRA system to use multiple streams when sending messages to avoid head-of-line blocking.

SCTP connections support unihoming and multihoming. A unihoming endpoint has a single IP address, while a multihoming endpoint has multiple IP addresses. Multihoming gives two endpoints multiple paths to transmit data, so that if one interface goes down, data can be transmitted on another path. Diameter statistics now reflect SCTP and multihoming.

## Email Notification from Policy Action

You can now create policies that can send email messages to subscribers.

In release 8.0, the Policy Management solution supports a Short Message Service relay (SMSR) function. This function implements a Simple Mail Transport Protocol (SMTP) client interface to send SMS messages to an email address. New policy actions can trigger email notifications with configurable content.

## Filter-ID in Final-Unit-Indication AVP as Policy Condition

A policy condition can now process a Filter-ID parameter in a Final-Unit-Indication AVP.

In release 8.0, you can write a policy condition that can process a Filter-ID parameter value within the Final-Unit-Indication attribute-value pair (AVP). The policy condition can handle a Final-Unit-Indication AVP containing up to ten Filter-ID values.

## Four-site MRA Enhancements

The Policy Management solution can now include up to four MRA systems.

In release 8.0, a Policy Management solution can include up to four MRA systems.



**Note:** If communication is disrupted between MRA systems, a possible consequence is multiple bindings. A background task periodically executes to clean up multiple bindings. You can now schedule the execution time of the task as well as set its maximum duration. Additional statistics are displayed pertaining to this task:

- Timestamp for cleanup
- Number of suspect bindings detected and released as duplicates
- Number of suspect bindings determined as not duplicates (and suspect status removed)
- Number of sessions terminated

## Improve Efficiency of MPE-SPR Sh Usage

MPE device usage of Sh transactions has been optimized.

An MPE device can act as an Sh client and initiate lookups, subscriptions and updates to home subscriber service (HSS) devices. In release 8.0, the number of Sh transactions required to perform these functions is optimized. This optimization improves efficiency and reduces traffic.

## Improved Policy Statistics

The CMP system displays additional statistics on policy execution.

The CMP system displays statistics on policy execution. In release 8.0, statistics are reported for each policy on each MPE device. In addition to statistics previously reported, the following new policy statistics are displayed:

- Total execution time
- Maximum execution time
- Average execution time
- Data distribution of policy execution time (within ranges)

## Inclusion of Traffic Profiles in Policy Backup/Rollback

Traffic profile data can now be backed up and rolled back.

The CMP system supports backup and rollback of policies and policy data. In release 8.0, policy data includes traffic profiles.

## KPI Enhancement: Active Subscriber Count

The KPI dashboard now displays the active subscriber count.

In release 8.0, a new counter is added to the key performance indicator (KPI) dashboard to show the number of bindings. This gives the current active subscriber count.

## KPI Enhancement: Event Triggers

The KPI dashboard now displays event trigger statistics.

In release 8.0, new counters are added to the KPI dashboard to track event triggers, including standard and proprietary events. The counters are tracked per network element and per MPE device.

## KPI Enhancement: Latency Statistics

The KPI dashboard now displays latency statistics for each MPE and MRA device.

In release 8.0, the KPI dashboard displays statistics on transaction latency for incoming and outgoing messages. Statistics are given per network element, per MPE device, and per MRA device.

Latency statistics are tracked for the following protocols:

- AF
- PCEF
- BBERF
- DRMA
- Sh

## KPI Enhancement: Persistent Interval Statistics

Statistics can now be configured to be reset at specified intervals.

In previous releases, counters for MPE and MRA devices were reset when the devices restarted or could be reset manually; thus the time interval was indeterminate. In addition, if the connection between a device and the CMP system was disrupted, data was lost.

In release 8.0, you can optionally configure the CMP system to define a collection interval. Statistics are then collected on the hour and at regular intervals in between. Also, MPE and MRA devices store interval data locally for up to 24 hours (regardless of whether or not you configure interval statistics).

This feature provides better and more reliable statistical information.

## KPI Enhancement: Quota Profile Statistics

The KPI dashboard now displays quota profile statistics.

In release 8.0, the KPI dashboard displays statistics related to quota profiles.

The following statistics are displayed:

- Number of times activated
- Number of times Volume Threshold reached
- Number of times Time Threshold reached

- Number of times Event Threshold reached

## **KPI Enhancement: Session Cleanup**

The KPI dashboard now displays session cleanup statistics.

In release 8.0, the KPI dashboard displays statistics related to session cleanup.

The following statistics are displayed:

- Ready for Cleanup
- Removed for Error
- Reauthorized
- Reauthorization Timeouts
- Removed for Expiration

## **KPI Enhancement: Timeout Statistics**

The KPI dashboard now displays timeout statistics for each protocol category.

In release 8.0, the KPI dashboard displays counts of request timeouts for outgoing messages. A timeout is recorded when an acknowledgment message is not received in a predefined amount of time.

Timeout statistics are tracked for the following protocols:

- AF
- PCEF
- BBERF
- DRMA
- Sh

## **KPI Enhancement: Traffic Profile Statistics**

The KPI dashboard now displays traffic profile statistics.

In release 8.0, the KPI dashboard displays statistics related to traffic profiles, which map to PCC rules.

The following statistics are displayed:

- Install Attempt
- Removed by PCRF
- Failed or Removed by Gateway

## **KPI Enhancement: Trending Reports**

The CMP now provides a graphical display of key statistics for selected Policy Management devices.

In release 8.0 a new top-level function is available that graphs comparative statistics for MPE and MRA devices. You can select which devices to graph or choose to view aggregated data for selected devices. You can select a start time, and a report duration of 1, 7, or 30 days, which lets you observe trends. You can also view the raw data used to generate the report in tabular form, and view a table of summary data.

The statistics you can graph include the following:

- Max Transactions Per Second
- Session Counts
- MRA Binding Counts
- PDN Connection Counts

You can export the report data as a comma-separated value (CSV) format file.

## Load Shedding Enhancements

The load shedding function is extended beyond Gx applications.

Load shedding is a method of temporarily reducing the offered load when the demand becomes greater than the ability of the process to handle it. The load shedding function was created to help control the flow of Gx traffic to MPE and MRA devices. In release 8.0, admission gate criteria can be based on any attribute-value pair (AVP) values. This extends the feature to operate with other Diameter-based applications, including Gy and Rx. The load shedding enhancements improve performance control.

## Location-based Services Support Using the SPR

Policy conditions can now compare location identifiers with Cell IDs or ECIs.

In release 8.0, a policy condition can compare the Cell Identifier or E-UTRAN cell identifier (ECI) of an incoming request against subscriber profile fields, including customer field strings retrieved during data source lookup. This lets you write policies that treat sessions differently based on the subscriber's location.

## MPE Geo-redundancy

An MPE cluster can now be set up as a three-server, geographically separated configuration.

In release 8.0, an MPE cluster can be set up as a geo-redundant configuration consisting of an active server and a standby server in one location and a third, spare server in a geographically separate location. This lets the cluster continue to operate even if an entire physical location experiences a site failure.

The KPI dashboard, Alarm History Viewer, and Trace Log Viewer now display information for all configured servers in a geo-redundant cluster.

Geo-redundancy is based on the Tekelec COMCOL release 6.0 database 2+1 high availability/replication scheme.

## MPE Sh Optimizations

MPE use of the Sh protocol is optimized, which can combine or eliminate some transactions during a session.

In release 8.0, MPE use of the Sh protocol is optimized. Caching and subscription functions allow for elimination of some quota and state data lookups, such as during updating or terminating an existing session. Combined write operations are used when both quota and state data are modified while handling a single message.

These optimizations improve efficiency by reducing the number of transactions.

## MPE Subscribe for Notification of Quota and State Changes

An MPE device can now subscribe to an SPR for notifications of quota and state changes.

In release 8.0, an MPE device can use the Sh interface to subscribe to receive notifications of changes to the quota (usage) and entity state objects for a subscriber. This supports changes made to a subscriber profile repository (SPR) by third-party systems.

## MPE Time Zone Support

The Multimedia Policy Engine (MPE) can apply policies based on each subscriber's local time in addition to the system local time.

Time zone differences between the system location and the subscriber or subscriber equipment location lead to policy executions that do not necessarily provide the best service or are inconsistent with user expectations. Through an optional 3GPP time zone Attribute-Value Pair (AVP), the MPE device receives user local time information, including time-zone offsets like Daylight Savings Time. The operator can configure the MPE device to operate in either the subscriber local time zone or the system local time zone. The users benefit from time-based procedures that are compliant with their expectations and that better accommodate their service access.

The time-zone setting is configured on the Policy Server page of the CMP Policy Server Administration page, using the **Default Local Time Mode** setting. The default setting is "system local time."

The MPE can be configured to use a single time zone for billing cycle calculations for all subscribers, regardless of the time mode. This is configured on the CMP Policy Server tab.

The CMP Policy Wizard can be used to create a policy rule that is triggered when a customer's time-zone change update is received. Previous policy rules now have a choice of time mode where appropriate.

## MRA Geo-redundancy

An MRA cluster can now be set up as a three-server, geographically separated configuration.

In release 8.0, an MRA cluster can optionally be set up as a geo-redundant configuration consisting of an active server and a standby server in one location and a third, spare server in a geographically separate location. This lets the cluster continue to operate even if an entire physical location experiences a site failure.

The KPI dashboard, Alarm History Viewer, and Trace Log Viewer now display information for all configured servers in a geo-redundant cluster.

Geo-redundancy is based on the Tekelec COMCOL release 6.0 database 2+1 high availability/replication scheme.

## Multiple Integrated LDAP Queries

You can now configure multiple LDAP servers to work together to retrieve various elements of a subscriber profile.

You can configure a Policy Management solution to use multiple Lightweight Directory Access Protocol (LDAP) data sources. In release 8.0, you can configure primary and secondary LDAP servers. The profile information retrieved from one LDAP query (a primary query) can be used in either the filter conditions or the Distinguished Name (DN) of another query (a secondary query), which could retrieve additional data.

## Notifications - Make Errors/Failures More Visible at All Times

The count of critical, major, and minor alarms is now displayed throughout the CMP system.

In release 8.0, the current count of critical, major, and minor alarms is displayed at the top of every page in the CMP system. This provides an immediately visible notification of an alarm.

## "OR" and "NOT" in Policy Rules

The Policy Wizard now includes logical OR and NOT operators.

In previous releases, the Policy Wizard let you combine conditions and actions using only an implicit AND operator. In release 8.0, the AND operator is made explicit, and you can also use OR and NOT operators, and a hierarchical grouping mechanism (displayed graphically as a folder) is added for readability and to remove ambiguity. This gives you a richer set of operators for combining policy conditions into more complex and powerful rules, while making logical relationships clearer.

As part of this feature, the previous mechanism for deleting a condition or action (the delete icon) has been removed and replaced with a Delete button that operates on both individual conditions and actions and on folders of conditions and actions. Also, the up and down arrows, used previously for reordering conditions and actions, have been removed; instead, you can drag and drop individual conditions and actions or folders of conditions and actions.

When displaying a policy, you can choose between a tree editing view and an SQL-like display.

## Overload Duration Increase

MPE and MRA devices can now process transactions for up to 15 minutes while overloaded.

MPE and MRA devices can continue to operate and successfully process a percentage of incoming transactions when the number of incoming transactions exceeds 100% (but no more than 200%) of their rated transactions-per-second (TPS) capacities. In release 8.0, MPE and MRA devices can continue to operate in this overload condition for up to 15 minutes.

## PCRF Session License Tracking and Reporting

Using the OSSI/data collection feature of the CMP, maximums can be collected for each 15-minute interval of a day over a 30-day period to determine peak usage times.

For some networks, a new Policy and Charging Rules Function (PCRF) contract requires tracking and reporting of Session Licenses, which can be defined as equivalent to Packet Data Network (PDN) connections. The PCRF Session License Tracking and Reporting feature allows the collection of specific maximum values for certain counters over a time interval of 15 minutes, reporting the peak number of PDN connections during that time interval.

The maximum values for TransactionsPerSecond, MRABindingCount, SessionCount, and PDNConnectionCount are collected every 15 minutes from the Multimedia Policy Engine (MPE) and Multi-Protocol Routing Agent (MRA). A new counter, KPI Interval, will use these statistics to report on PDN connections. This report, for a single MRA or MPE device, can be viewed through the CMP Reports tab of the Policy Server Administration page. This information is also available through the OSSI XML interface.

## Pooled Quotas

Pooled quotas let multiple subscribers share one quota.

In previous releases of Policy Management each quota could only be allocated one unique subscriber ID (such as an MSISDN, IMSI, or NAI). In release 8.0, up to 10 subscriber devices with different subscriber IDs can share one quota. This feature lets you offer new segmented services such as family plans or small business plans that allow up to 10 unique user accounts to share one pooled quota.

## Push Method for Statistics

Statistics can now be regularly collected and sent to remote repositories.

In release 8.0, a new statistics file generator scheduled task in the CMP system periodically queries the Operation Support System Interface (OSSI) XML interface for statistics and stores the results in a local repository. Additional scheduled tasks synchronize the results with up to four remote repositories, using the Rsync tool over SSH to transfer the data. This feature sends statistics collected at regular intervals from the CMP system to multiple remote repositories.

Statistics data is organized into one directory per MPE or MRA device, each with one subdirectory per statistics type, and one file per collection interval. The files are also synchronized between the active server and the rest of the servers in each cluster.

## Rollback Option for Policy Backup

In addition to import/export functions, you can now use save/restore functions for policy data.

In previous Policy Management releases, you could export and import selected policy configuration data. In release 8.0, you can also save checkpoints of the following:

- Policies
- Policy groups
- Policy templates
- Traffic profiles
- Traffic groups
- Deployment configurations

Once created, you can restore (roll back) to a previously saved checkpoint. This lets you save and, if necessary, restore a known good state.

**Note:** Checkpoints are saved to the CMP system and apply only to that system. If you want to move data from one CMP system to another, use the import/export function.

## Rule Activation/Deactivation Time AVPs

You can now write policy rules and specify during what time period they will apply.

In release 8.0, policy conditions support the Rule-Activation-Time and Rule-Deactivation-Time AVPs in the following Diameter messages:

- CCA messages sent to a GGSN in response to Diameter CCR messages
- Diameter RAR messages sent to a GGSN in response to events on an MPE device

These 3GPP standard AVPs are contained within the Charging-Rule-Install AVP. These AVPs tell an MPE device at what time a rule should become active and at what time the rule should be deactivated. This lets you create rules that can activate and deactivate at specified future points in time.

By default the previous behavior is supported; a rule is assumed to take effect immediately and never end.

## Scalability to 4 MRAs in the Network

A Policy Management network can now contain up to four MRA systems.

In release 8.0 a Policy Management network can include up to four MRA systems. The systems are organized into pairs of clusters. Binding requests and other messages can be routed between any of the systems as necessary.



If an MRA system contains a binding but communication with that system is down, another MRA system could create a duplicate binding. To minimize this possibility, if an MRA system creates a binding as the result of receiving a second request after redirecting the first request, it marks the binding as suspect. If more than one MRA system has the binding, the duplication will be resolved using the oldest binding first. New statistics will track suspect and duplicate bindings.

To support multiple MRA systems, the DRMA protocol has been enhanced, as described elsewhere in this document.

## Sd Interface

MPE devices now support the Sd protocol.

In release 8.0, the MPE device supports the Sd protocol to a traffic detection function (TDF). The Sd protocol enables solicited application reporting mode, in which an MPE device has dynamic control over traffic detection and enforcement at the TDF.

The MPE device creates an Sd session during IP-CAN (Gx) session establishment, and correlates the Sd session with the Gx session for the same user and IP address.

## Secondary SMSC in Case of Failure of Primary SMSC

A policy can now send an SMS message to a secondary SMSC server if the primary server is unavailable.

When a policy action sends a Short Message Service (SMS) message, it is directed to an SMS Center (SMSC) server. In release 8.0, you can configure connections to both a primary and a secondary SMSC server. In the event of a connection failure to the primary SMSC server, SMS notifications triggered by policies are directed to the secondary SMSC server.

The secondary SMSC server is used as a backup and not for load balancing. Once a connection is reestablished with the primary SMSC server, all SMS traffic is redirected to the primary server.

## SMS Receive Functionality

An MPE device can now log SMS message delivery receipts.

In release 8.0, when an MPE device sends a Short Message Service (SMS) notification to a subscriber, it can request and log delivery receipt information from an SMS Center (SMSC) system. This provides you with information on SMS message delivery.

## SMS Send to Alternate Destination in Customer Profile

Policy actions can now send SMS messages to multiple destinations.

In release 8.0, policy actions can send Short Message Service (SMS) messages to multiple destinations. These destinations can include a subscriber's Mobile Subscriber Integrated Services Digital Network (MSISDN) number or another destination defined in custom fields in an SPR system.

## Stateful MRA: Dynamic Routing and Load Balancing

The DRMA protocol now supports routing and load balancing between multiple MRA systems.

Tekelec developed the Distributed Routing and Management Application (DRMA) protocol for communication between MRA and MPE systems. In release 8.0 the DRMA protocol is enhanced to convey route and load information between MRA systems. This allows for routing using minimum hops and load balancing.

DRMA statistics now reflect these enhancements.

## Stateful MRA for General Market

An MRA system can now operate in stateless or stateful mode.

In previous releases, the MRA device operated in stateless mode. In release 8.0, you can configure it to operate in either stateless or stateful mode. In stateful mode the MRA retains state information, so it can consistently route requests for the same user to the same MPE device. Stateful mode is supported for the following protocols:

- Gx
- Gxx
- Rx
- Gx-Lite
- Gy

A migration mode is provided to assist the change from stateless MRA systems to stateful ones.

## Subscriber Profile Data Retention Optimization

An MPE device can now cache subscriber profile data locally.

An MPE device looks up subscriber profile data from a subscriber profile repository (SPR). In release 8.0 subscriber data is cached locally, avoiding subsequent lookups when the user has multiple sessions. This reduces lookup transactions, which improves efficiency.

Additionally, you can control activation or deactivation of this feature in the CMP system.

## Table-driven Policies

Policies can now be constructed as tables.

In release 8.0, a policy can optionally include by reference a policy table, conceptually similar to a database table, in which each row can take the place of a rule. For example, the following table replaces four rules for installing and removing PCC rules on APNs:

APN	Install PCC Rules	Remove PCC Rules
telco.g1t1	telco os sanstv gy 1	telco rulebase qos t1, modem stop qos
telco.g1t2	telco os sanstv gy 2	telco rulebase qos t2, modem stop qos
telco.g2t1, telco.g3t1	telco os sanstv gy 1	telco rulebase qos t1
telco.g2t2, telco.g3t2	telco os sanstv gy 2	telco rulebase qos t2

Policy tables are objects stored within the CMP system, like policies themselves and network objects, and can be created, edited, grouped, or deleted. The Policy Wizard is enhanced to make table inclusion the first step in creating a policy.

Policy tables can be imported and exported using the OSSI XML interface.

This feature simplifies adding, editing, and checking policies.

## Tekelec Re-branding in Policy GUI

The Camiant logo and colors are replaced in the CMP GUI by the Tekelec logo and colors.

In release 8.0, the legacy Camiant logo is replaced by the Tekelec logo in the CMP graphical user interface (GUI). In addition, the use of highlight and emphasis colors is changed to the Tekelec standard. These changes do not affect any wording or function. This unifies the look and feel of the GUI with other Tekelec products.

## Third-Party AVP Support

You can now define AVPs and use them in policies.

In release 8.0, a new policy condition can evaluate an AVP in Diameter messages. A new policy action can set or remove the AVP. Finally, a new policy condition can set an AVP using a user value in the SPR system or set a user value in the SPR using an AVP.

The Policy Wizard supports creation of rules that process AVPs. Also, AVPs are defined as objects within the CMP system, so you can create, edit, or delete AVP definitions.

This feature supports current and future third-party equipment.

## Time Tariff Changes

An MPE device can now schedule receipt of usage reports over a period of time.

When a deep packet inspection (DPI) policy and charging enforcement function (PCEF) sends a usage report back to an MPE device, the report covers all sessions with the same time tariff change. The resulting volume of data can be large enough to affect system performance. In release 8.0, an MPE device can send a Time-Tariff-Change AVP to a network element (the PCEF) that supports the function, specifying when the tariff switch (that is, the end of a billing cycle) will occur, and a Usage-Monitoring-Report-Time AVP, specifying a random time offset when to send the usage report.

This feature lets the MPE device spread usage reports out over a period of time, improving performance.

## Time Zone AVP to be Included over Rx

This feature provides support for receiving and using local time-zone information derived from the subscriber's current location, using 3GPP specifications for a method for an MPE device to receive this information from Policy and Charging Enforcement Function (PCEF)/Bearer Binding and Event Reporting Function (BBERF).

## Trace Log Filtering by Trace Log ID(s)

You can now filter trace log entries in the Trace Log Viewer.

In release 8.0, the Trace Log Viewer includes a field in which you can enter one or more trace code IDs. The output is filtered to display only the matching entries. This lets you display only specific entries.

## Unique PCC Rules Precedence

This feature prevents two rules with the same precedence value within a single Gx or Gxx Diameter session from being installed at the gateway.

Some gateway implementations reject any rule that has the same precedence value as an existing rule. This can lead to deployment issues such as a second call attempt while engaged in an active call. The Unique Policy and Charging Control (PCC) Rules Precedence feature prevents two rules with the same precedence value from being installed within a single Gx or Gxx Diameter session, by allowing the user to define precedence of Rx- or UE-triggered rules.

The CMP system has a new option on the navigation pane under the Policy Server group named **Global Configuration Settings**, used to configure the precedence ranges for Rx-triggered rules, UE-triggered rules and the Default Session Rule.

The default precedence ranges assigned for Rx-triggered rules is 400 to 899. Since the expected number of rules triggered by Rx per IP-CAN session is less than 10, this range should be sufficient for future expansion.

The default precedence ranges assigned for UE-triggered rules is 1000 to 1999.

The Default Session Rule is applied during session establishment only if no other rules are provisioned. There is only one Default Session Rule and only one precedence value. The default assigned for the Default Session Rule is 3000.

Operator-defined PCC rules can use any precedence that is currently not defined in the Rx or UE precedence range, or in the precedence value for the Default Session Rule.

# Tekelec References and Services

## Customer Care Center

The Tekelec Customer Care Center is your initial point of contact for all product support needs. A representative takes your call or email, creates a Customer Service Request (CSR) and directs your requests to the Tekelec Technical Assistance Center (TAC). Each CSR includes an individual tracking number. Together with TAC Engineers, the representative will help you resolve your request.

The Customer Care Center is available 24 hours a day, 7 days a week, 365 days a year, and is linked to TAC Engineers around the globe.

Tekelec TAC Engineers are available to provide solutions to your technical questions and issues 7 days a week, 24 hours a day. After a CSR is issued, the TAC Engineer determines the classification of the trouble. If a critical problem exists, emergency procedures are initiated. If the problem is not critical, normal support procedures apply. A primary Technical Engineer is assigned to work on the CSR and provide a solution to the problem. The CSR is closed when the problem is resolved.

Tekelec Technical Assistance Centers are located around the globe in the following locations:

### Tekelec - Global

Email (All Regions): [support@tekelec.com](mailto:support@tekelec.com)

- **USA and Canada**

Phone:

1-888-FOR-TKLC or 1-888-367-8552 (toll-free, within continental USA and Canada)

1-919-460-2150 (outside continental USA and Canada)

TAC Regional Support Office Hours:

8:00 a.m. through 5:00 p.m. (GMT minus 5 hours), Monday through Friday, excluding holidays

- **Caribbean and Latin America (CALA)**

Phone:

USA access code +1-800-658-5454, then 1-888-FOR-TKLC or 1-888-367-8552 (toll-free)

TAC Regional Support Office Hours (except Brazil):

10:00 a.m. through 7:00 p.m. (GMT minus 6 hours), Monday through Friday, excluding holidays

- **Argentina**

Phone:

0-800-555-5246 (toll-free)

- **Brazil**

Phone:

0-800-891-4341 (toll-free)

TAC Regional Support Office Hours:

8:30 a.m. through 6:30 p.m. (GMT minus 3 hours), Monday through Friday, excluding holidays

- **Chile**

Phone:

1230-020-555-5468

- **Colombia**

Phone:

01-800-912-0537

- **Dominican Republic**

Phone:

1-888-367-8552

- **Mexico**

Phone:

001-888-367-8552

- **Peru**

Phone:

0800-53-087

- **Puerto Rico**

Phone:

1-888-367-8552 (1-888-FOR-TKLC)

- **Venezuela**

Phone:

0800-176-6497

- **Europe, Middle East, and Africa**

Regional Office Hours:

8:30 a.m. through 5:00 p.m. (GMT), Monday through Friday, excluding holidays

- **Signaling**

Phone:

+44 1784 467 804 (within UK)

- **Software Solutions**

Phone:

+33 3 89 33 54 00

- **Asia**

- **India**

Phone:

+91 124 436 8552 or +91 124 436 8553

TAC Regional Support Office Hours:

10:00 a.m. through 7:00 p.m. (GMT plus 5 1/2 hours), Monday through Saturday, excluding holidays

- **Singapore**

Phone:

+65 6796 2288

TAC Regional Support Office Hours:

9:00 a.m. through 6:00 p.m. (GMT plus 8 hours), Monday through Friday, excluding holidays

## Emergency Response

If a critical service situation occurs, the Tekelec Customer Care Center offers emergency response twenty-four hours a day, seven days a week. The emergency response provides immediate coverage, automatic escalation, and other features to ensure a rapid resolution to the problem.

A critical situation is defined as a problem that severely affects service, traffic, or maintenance capabilities, and requires immediate corrective action. Critical problems affect service or system operation, resulting in:

- Failure in the system that prevents transaction processing
- Reduction in system capacity or in system traffic-handling capability
- Inability to restart the system
- Corruption of the database
- Inability to perform maintenance or recovery operations
- Inability to provide any required critical or major trouble notification
- Any other problem severely affecting service, capacity, traffic, and billing. Maintenance capabilities may be defined as critical by prior discussion and agreement with the Tekelec Customer Care Center.

## Customer Training

Tekelec offers a variety of technical training courses designed to provide the knowledge and experience required to properly provision, administer, operate, and maintain the application. To enroll in any of the courses or for schedule information, contact the Tekelec Training Center at (919) 460-3064 or E-mail [training@tekelec.com](mailto:training@tekelec.com).

A complete list and schedule of open enrollment can be found at [www.tekelec.com](http://www.tekelec.com).

## Policy Management Documentation

Policy Management documentation further integrates with Tekelec standard documentation deliverables by including Eclipse-based online help.

Policy Management release 8.0 includes these documents:

- *Feature Notice Release 8.0 (this document)*
- *Configuration Management Platform Wireless User's Guide*
- *MPE/MRA Key Performance Indicators and Operational Measurements Application Note*
- *OSSI XML Interface Definitions Guide*
- *Multi-Protocol Routing Agent User's Guide*
- *SNMP User's Guide*
- *Roadmap to Hardware Documentation*
- *PP-5100 Series Hardware Installation Guide*
- *Troubleshooting Guide*
- *Release Notice*

Beginning with this release, online help is available from the CMP user interface. Context-sensitive help is available for displayed alarms and trace log entries. Reference help is available for Policy Wizard conditions and actions.

Also beginning with this release, the *Network Impact Report* summarizes user-visible changes to the Policy Management solution resulting from new features in the release.

## Locate Product Documentation on the Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers only. This section describes how to log into the Tekelec Customer Support site and locate a document. Viewing the document requires Adobe Acrobat Reader, which can be downloaded at [www.adobe.com](http://www.adobe.com).

1. Log into the [Tekelec Customer Support](#) site.

**Note:** If you have not registered for this new site, click the **Register Here** link. Have your customer number available. The response time for registration requests is 24 to 48 hours.

2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.