

CHA Core Performance Management Function Guide

Used in containerized deployment

User Guide

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1

CHA Performance Management Introduction

CHA generates performance metrics used to measure the behavior and performance of the system. Metrics are also used to generate alarms when values go over or under a specified threshold. Recording rules are an aggregation of multiple metrics to allow for even more useful data points.



2 Charging Core Metrics

Core metrics used in containerized deployment.

Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_online_rate_charge_akka_requests_total	Number of requests received for the online rate and charge service.	Counter	operation	Possible Values: Immediate-Event, Session, Enquiry(both price and balance enquiry) and ReAuthorization
cha_core_online_rate_charge_akka_requests_error_total	Number of failure responses sent for requests to the online rate and charge service.	Counter	code	Error Code
			operation	Possible Values: Immediate-Event, Session, Enquiry(both price and balance enquiry) and ReAuthorization
cha_core_online_rate_charge_akka_request_duration_seconds	Average time taken to process a request received for the online rate and charge service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: Immediate-Event, Session, Enquiry(both price and balance enquiry) and ReAuthorization
cha_core_rating_akka_requests_total	Number of requests received or sent.	Counter	customer_type	Possible Values: Unknown, Internal, External, MassResource, NonProvisioned.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			direction	The request received IN to Charging Function or sent OUT from Charging Function. Possible Values: IN, OUT.
			operation	Possible Values: Create, Update, Release, Event, Refund, CheckBalance, Notify, Delete, PostEvent. The value Event represents Direct Debit.
cha_core_rating akka_requests_errors_total	Number of failure responses sent or Number of requests resulted in a failure.	Counter	code	Charging Internal Response Code to represent the reason of failure.
			customer_type	Possible Values: Unknown, Internal, External, MassResource, NonProvisioned.
			direction	The request received IN to Charging Function or sent OUT from Charging Function. Possible Values: IN, OUT.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			operation	Possible Values: Create, Update, Release, Event, Refund, CheckBalance, Notify, Delete, PostEvent. The value Event represents Direct Debit.
cha_core_rating_akka_request_duration_seconds	Average time taken to receive a response. The unit of measurement is milliseconds.	Summary	direction	The request received IN to Charging Function or sent OUT from Charging Function. Possible Values: IN, OUT.
cha_core_rating_session_akka_requests_total	Number of Converged Charging Service Session requests received.	Counter	customer_type	Possible Values: Unknown, Internal, External, NonProvisioned.
			operation	Possible values: Create, Update, Release, Event, Refund, CheckBalance, PostEvent.
cha_core_rating_session_akka_requests_errors_total	Number of Converged Charging Service Session requests resulted in an error.	Counter	code	Charging Internal Response Code to represent the reason of failure.
			customer_type	Possible Values: Unknown, Internal, External, NonProvisioned.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			operation	Possible values: Create, Update, Release, Event, Refund, CheckBalance, PostEvent.
			session_type	Represents the type of the Session. Possible Values: main, service.
cha_core_tollfree_rating_session_requests_total	Number of Converged Charging Service Session requests received resulted in toll-free.	Counter	customer_type	Possible Values: External.
			operation	Possible Values: Create.
cha_core_skip_external_rating_session_requests_total	Number of Converged Charging Service Session requests received resulted in skipped external rating.	Counter	code_external_extension	code external extension description.
			customer_type	Possible Values: External.
			operation	Possible Values: Create, Update, Release.
			service_context	Represents Service Context configured in the System via CHA-GUI.
cha_core_tollfree_rating_session_responses_total	Number of Converged Charging Service Session response received resulted in toll-free.	Counter	code_external	code external description.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			customer_type	Possible Values: External.
			operation	Possible Values: Create, Update, Release, Event, Refund, CheckBalance.
			service_context	Represents Service Context configured in the System via CHA-GUI.
cha_core_tollfree_service_responses_total	Number of number Converged Charging Service Session requests received which resulted in toll-free.	Counter	customer_type	Possible Values: Internal, NonProvisioned
			operation	Possible Values: Create, Update, Event
			reason	Reason for toll-free response. Possible Values: FailureRule, StartOfCall, InsufficientFundsToAllow, InsufficientFundsToContinue, NoProductsFound
			service_context	Represents Service Context configured in the System via CHA-GUI.
cha_core_failopen_rating_requests_total	Number of Converged Rate and Charge fail-open requests processed	Counter	customer_type	Possible values: External



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			direction	The request received IN to Charging Function. Possible Values: IN.
			operation	Possible values: Create, Update
cha_core_failopen_rating_request_s_rejected_total	Number of Converged Rate and Charge fail-open requests resulted in an error.	Counter	code	Represents the CHA Core internal response code.
			customer_type	Possible values: External
			direction	The request sent OUT from Charging Function. Possible Values: OUT.
			operation	Possible values: Create, Update
cha_core_online_immediate_event_akka_requests_total	Number of Immediate Charging Deduct requests received or Number of Charging Enquiry requests received.	Counter	type	Possible Values: deduct, enquiry
cha_core_online_immediate_event_akka_requests_errors_total	Number of Immediate Charging Deduct requests resulted in an error or Number of Charging Enquiry requests resulted in an error.	Counter	code	Error Code



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			type	Possible Values: deduct, enquiry
cha_core_offline_charging_akka_requests_total	The number of Offline Consumption requests received.	Counter	customer_type	Possible Values: Internal, External, MassResource, Unknown
			external_service	Possible Values: offlinerateandchargebx, offlinerateandchargejsonfile
			operation	Possible Values: ExecuteOffline
cha_core_offline_charging_akka_requests_errors_total	Number of Offline Consumption requests resulted in an error.	Counter	code	Error Code
			customer_type	Possible Values: Internal, External, MassResource, Unknown
			external_service	Possible Values: offlinerateandchargebx, offlinerateandchargejsonfile
			operation	Possible Values: ExecuteOffline
cha_core_offline_charging_akka_request_duration_seconds	Average response time of an Offline Consumption request. The unit of measurement is milliseconds.	Summary	customer_type	Possible Values: Internal, External, MassResource, Unknown
			external_service	Possible Values: offlinerateandchargebx, offlinerateandchargejsonfile
			operation	Possible Values: ExecuteOffline



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_post_event_requests_total	Number of Post Event Charging requests for Offline Charging, Offline reporting and Offline mass event charging.	Counter	type	Possible Values: OfflineCharging, OfflineReporting, OfflineMassEventCharging
cha_core_post_event_requests_errors_total	Number of Post Event Charging error responses for Offline Charging, Offline reporting and Offline mass event charging.	Counter	code	Error Code
			type	Possible Values: OfflineCharging, OfflineReporting, OfflineMassEventCharging
cha_core_balance_enquiry akka_requests_total	Number of requests received for the balance enquiry service.	Counter	operation	Possible Values: ExecuteBalanceSnapshot, ReadBucketBalance
cha_core_balance_enquiry akka_requests_errors_total	Number of failure responses sent for requests to the balance enquiry service.	Counter	code	Error Code
			operation	Possible Values: ExecuteBalanceSnapshot, ReadBucketBalance
cha_core_balance_enquiry akka_request_duration_seconds	Average time taken to process a request received for the balance enquiry service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: ExecuteBalanceSnapshot, ReadBucketBalance



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_balance_adjustment_akka_requests_total	Number of requests received for the balance adjustment service.	Counter	operation	Possible Values: UpdateBucketBalance
cha_core_balance_adjustment_akka_requests_errors_total	Number of failure responses sent for requests to the balance adjustment service.	Counter	code	Error Code
			operation	Possible Values: UpdateBucketBalance
cha_core_balance_adjustment_akka_request_duration_seconds	Average time taken to process a request received for the balance adjustment service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: UpdateBucketBalance
cha_core_balance_expiry_offset_akka_requests_total	Number of Balance Expiry Offset Trigger requests received.	Counter	operation	Possible Values: BalanceExpiryOffsetTrigger
cha_core_balance_expiry_offset_akka_requests_errors_total	Number of Balance Expiry Offset Trigger requests resulted in an error.	Counter	code	Error Code
			operation	Possible Values: BalanceExpiryOffsetTrigger
cha_core_balance_expiry_offset_akka_request_duration_seconds	Average response time of a Balance Expiry Offset Trigger request. The unit of measurement is milliseconds.	Summary	operation	Possible Values: BalanceExpiryOffsetTrigger



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_refill akka_requests_total	Number of requests received for the refill service.	Counter	operation	Possible Values: ExecuteRefill, ReadRefillFraud, UpdateRefillFraud
cha_core_refill akka_requests_errors_total	Number of failure responses sent for requests to the refill service.	Counter	code	Error Code
			operation	Possible Values: ExecuteRefill, ReadRefillFraud, UpdateRefillFraud
cha_core_refill akka_request_duration_seconds	Average time taken to process a request received for the refill service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: ExecuteRefill, ReadRefillFraud, UpdateRefillFraud
cha_core_schedule_enquiry_akka_requests_total	Number of requests received for the schedule enquiry service.	Counter	operation	Possible Value: ReadPeriodicAction
cha_core_schedule_enquiry_akka_requests_errors_total	Number of failure responses sent for requests to the schedule enquiry service.	Counter	code	Error Code
			operation	Possible Value: ReadPeriodicAction
cha_core_schedule_enquiry_akka_request_duration_seconds	Average time taken to process a request received for the schedule enquiry service. The unit of measurement is milliseconds.	Summary	operation	Possible Value: ReadPeriodicAction



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_cil_data_mgmt_java_requests_total	Number of CIL Data Management operations performed	Counter	customer_partition	Represents the Partition ID where the customer belongs.
			method	The Service operation that has been performed. Possible Values: get, put, delete.
cha_core_cil_data_mgmt_java_requests_errors_total	Number of CIL Data Management operations resulted in an error	Counter	code	Charging Internal Response Code to represent the reason of failure.
			customer_partition	Represents the Partition ID where the customer belongs.
			method	The Service operation that has been performed. Possible Values: get, put, delete.
cha_core_cil_data_mgmt_java_request_duration_seconds	Time taken to perform the requested operation via CIL Data Management Service. The unit of measurement is milliseconds	Summary	customer_partition	Represents the Partition ID where the customer belongs.
			method	The Service operation that has been performed. Possible Values: get, put, delete.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_rmca_data_enquiry_java_requests_total	Number of RMCA Data Management requests executed.	Counter	operation	Possible Values: get
cha_core_rmca_data_enquiry_java_requests_errors_total	Number of RMCA Data Management requests resulted in an error.	Counter	code	Error Code
			operation	Possible Values: get
cha_core_rmca_data_enquiry_java_request_duration_seconds	Average response time of a RMCA Data Management request. The unit of measurement is milliseconds.	Summary	operation	Possible Values: get
cha_core_cpm_data_enquiry_java_requests_total	Number of CPM Data Enquiry requests executed.	Counter	operation	Possible Values: getCustomer, getPartyRole, getEntitySpecifications, getCustomerAndContract, getPartyRoleAndContract, getPartitionId, getPartyRoleInvolvementGroup, getResolvedContract
cha_core_cpm_data_enquiry_java_requests_errors_total	Number of CPM Data Enquiry requests resulted in an error.	Counter	code	Error Code



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			operation	Possible Values: getCustomer, getPartyRole, getEntitySpecific ations, getCusto merAndContract, getPartyRole AndContract, getPartitionId, getPartyRoleInv olvementGroup, getResolvedCont ract
cha_core_cpm_d ata_enquiry_java _request_duratio n_seconds	Average response time of a CPM Data Enquiry request. The unit of measurement is milliseconds.	Summary	operation	Possible Values: getCustomer, getPartyRole, getEntitySpecific ations, getCusto merAndContract, getPartyRole AndContract, getPartitionId, getPartyRoleInv olvementGroup, getResolvedCont ract
cha_core_policy_ control_akka_req uests_total	Number of Policy Control requests received or sent.	Counter	operation	The Service operation that has been performed.
cha_core_policy_ control_akka_req uests_errors_tot al	Number of Policy Control requests failed.	Counter	code	Error Code
			operation	The Service operation that has been performed.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_policy_control akka_req uest_duration_se conds	Average time taken to process a request received for the policy control service. The unit of measurement is milliseconds.	Summary	operation	The Service operation that has been performed.
cha_core_policy_control_reevaluat ions_total	Number of Policy Control requests received or Number of Policy Status Notification requests sent.	Counter	reason	Reason for triggering the policy reevaluation. Possible values: Refer to the Table CHA Core Reevaluation Reasons with descriptions in CHA Network Policy Control Function Guide.
			triggering_servic e	Represents the service which triggered the counter.
			reevaluation_lev el	Represents the reevaluation level triggered.
			notification_sent	Represents if the reevaluation sends an SNR.
cha_core_create d_policy_sessions_total	Number of Policy sessions created.	Counter	reason	Possible Values: Traffic, Migration
			service_context	Service context associated with the session.
cha_core_cleared _policy_sessions_ total	Number of Policy sessions cleared.	Counter	service_context	Service context associated with the session.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			reason	Reason for clearing the policy session. Possible values: Expired, Client-Terminated, Old-Sessions, SNR-Errors, No-Available-Policy-Counters, Too-many-sessions, Failed-Migration.
cha_core_purchase_charge akka_requests_total	Number of requests received for the purchase charge service.	Counter	operation	Possible Values: CreateReservation, CommitReservation, CancelReservation, BasketRateAndCharge, BasketRateAndDeduct, BasketRateAndExecute, BasketRateAndAdvice, CancelBasketRateAndChargeReservation
cha_core_purchase_charge akka_requests_errors_total	Number of failure responses sent for requests to the purchase charge service.	Counter	code	Error Code
			operation	Possible Values: CreateReservation, CommitReservation, CancelReservation, BasketRateAndCharge, BasketRateAndDeduct, BasketRateAndExecute, BasketRateAndAdvice, CancelBasketRateAndChargeReservation



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_purchase_charge akka_request_duration_seconds	Average time taken to process a request received for the purchase charge service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: CreateReservation, CommitReservation, CancelReservation, BasketRateAndCharge, BasketRateAndDeduct, BasketRateAndExecute, BasketRateAndAdvice, CancelBasketRateAndChargeReservation
cha_core_event_consumption_akka_requests_total	Number of Customer Status Update requests received.	Counter	type	Possible Values: CustomerStatusUpdate, ProductStatusNotificationAcknowledge
cha_core_event_consumption_akka_requests_errors_total	Number of Customer Status Update requests resulted in an error.	Counter	code	Error Code
			type	Possible Values: CustomerStatusUpdate, ProductStatusNotificationAcknowledge
cha_core_event_consumption_akka_request_duration_seconds	Average response time of a Customer Status Update request. The unit of measurement is milliseconds.	Summary	type	Possible Values: CustomerStatusUpdate, ProductStatusNotificationAcknowledge



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_periodic_operation_java_requests_total	Number of customers evaluated in recurrence or Number of customers with recurrence configured or Number of customers with at least one due recurrence or Number of contracts evaluated in recurrence or Number of contracts with recurrence configured or Number of contracts with at least one due recurrence or Number of calendar entries evaluated in recurrence or Number of calendar entries with due recurrence or Number of calendar entries with recurrence speculation.	Counter	operation	Possible Values: Customers-Evaluated, Customers-With-Periodic-Job, Customers-With-Due-Periodic-Job, Contracts-Evaluated, Contracts-With-Periodic-Job, Contracts-With-Due-Periodic-Job, Calendar-Entries-Evaluated, Calendar-Entries-Due, Calendar-Entries-Speculation



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_periodic_operation_java_requests_errors_total	Number of customers experienced problem while executing recurrence or Number of contracts experienced problem while executing recurrence or Number of calendar entries experienced problem while executing speculation or real recurrence.	Counter	code	Error Code
			resource	Possible Values: Customer, Contract, Calendar-Entries
cha_core_voucher_server_http_requests_total	Number of requests sent to reserve a voucher or Number of requests retransmitted to reserve a voucher.	Counter	operation	Possible Values: ReserveVoucher, EndReservation
			retransmitted	Indicates whether the request is retransmitted. Possible values: Yes, No.
cha_core_voucher_server_http_requests_errors_total	Number of requests failed to reserve a voucher.	Counter	code	HTTP Response Code
			operation	Possible Values: ReserveVoucher, EndReservation



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_voucher_server_http_request_duration_seconds	Average response time of a request to reserve a voucher. The unit of measurement is milliseconds.	Summary	operation	Possible Values: ReserveVoucher, EndReservation
cha_core_cpm_business_logic_http_requests_total	Number of prolong lifecycle requests or Number of prolong lifecycle requests retransmitted.	Counter	operation	Possible Values: UpdatePrePaidRefill
			retransmitted	Indicates whether the request is retransmitted. Possible values: Yes, No.
cha_core_cpm_business_logic_http_requests_error_total	Number of requests failed to prolong lifecycle.	Counter	code	HTTP Response Code
			operation	Possible Values: UpdatePrePaidRefill
cha_core_cpm_business_logic_http_request_duration_seconds	Average response time of a request to prolong lifecycle. The unit of measurement is milliseconds.	Summary	operation	Possible Values: UpdatePrePaidRefill
cha_core_business_scheduler_http_requests_total	Number of Business Scheduler requests sent.	Counter	operation	Possible Values: CreateGenericCalendarEntry, UpdateGenericCalendarEntry, DeleteGenericCalendarEntry, ReadGenericCalendarEntry



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_business_scheduler_http_requests_error_s_total	Number of Business Scheduler requests resulted in a failure.	Counter	code	HTTP Response Code
			operation	Possible Values: CreateGenericCalendarEntry, UpdateGenericCalendarEntry, DeleteGenericCalendarEntry, ReadGenericCalendarEntry
cha_core_business_scheduler_http_request_duration_seconds	Average response time of a Business Scheduler request. The unit of measurement is milliseconds.	Summary	operation	Possible Values: CreateGenericCalendarEntry, UpdateGenericCalendarEntry, DeleteGenericCalendarEntry, ReadGenericCalendarEntry
cha_core_provider_resources_akk_a_requests_total	Number of Provider Resources Get/Update requests received.	Counter	operation	Possible Values: get, update
cha_core_provider_resources_akk_a_requests_error_s_total	Number of Provider Resources Get/Update requests resulted in an error.	Counter	code	Error Code
			operation	Possible Values: get, update
cha_core_provider_resources_akk_a_request_duration_seconds	Average response time of a Provider Resource Get/Update request. The unit of measurement is milliseconds.	Summary	operation	Possible Values: get, update



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_balance_management akka_requests_total	Number of requests received for the balance management service.	Counter	operation	Possible Values: MoveContract, CancelMoveContract, MoveCustomer, CommitMoveCustomer, CancelMoveCustomer and BillingAccountBalanceExpiryOffsetTrigger.
cha_core_balance_management akka_requests_errors_total	Number of failure responses sent for requests to the balance management service.	Counter	code	Error Code
			operation	Possible Values: MoveContract, CancelMoveContract, MoveCustomer, CommitMoveCustomer, CancelMoveCustomer and BillingAccountBalanceExpiryOffsetTrigger.
cha_core_balance_management akka_request_duration_seconds	Average time taken to process a request received for the balance management service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: MoveContract, CancelMoveContract, MoveCustomer, CommitMoveCustomer, CancelMoveCustomer and BillingAccountBalanceExpiryOffsetTrigger.
cha_core_transferrer_product_data_ akka_requests_total	Number of Transfer Product Data requests received.	Counter	operation	Possible Values: TransferProduct Data



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_transfe_r_product_data_akka_requests_er rors_total	Number of failure Transfer Product Data responses.	Counter	code	Error Code
			operation	Possible Values: TransferProduct Data
cha_core_transfe_r_product_data_akka_request_du ration_seconds	Average response time of a Transfer Product Data request. The unit of measurement is milliseconds.	Summary	operation	Possible Values: TransferProduct Data
cha_core_cpm_id _translation_java _requests_total	Number of CPM ID Translation operations performed.	Counter	method	The Service operation that has been performed. Possible Values: get.
cha_core_cpm_id _translation_java _requests_errors _total	Number of CPM ID Translation operations resulted in an error.	Counter	code	Charging Internal Response Code to represent the reason of failure.
			method	The Service operation that has been performed. Possible Values: get.
cha_core_cpm_id _translation_java _request_duratio n_seconds	Average time taken to perform the requested operation via CPM ID Translation Service. The unit of measurement is milliseconds.	Summary	method	The Service operation that has been performed. Possible Values: get.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_coba_data_mgmt_java_requests_total	Number of COBA Data Enquiry operations performed.	Counter	table	Represents the COBA table data that has been retrieved.
cha_core_coba_data_mgmt_java_requests_errors_total	Number of COBA Data Enquiry operations resulted in an error.	Counter	code	Charging Internal Response Code to represent the reason of failure.
			table	Represents the COBA table data that has been retrieved.
cha_core_coba_data_mgmt_java_request_duration_seconds	Time taken to perform the requested operation via COBA Data Enquiry Service. The unit of measurement is milliseconds.	Summary	table	Represents the COBA table data that has been retrieved.
cha_core_recurrence_akka_requests_total	Number of requests received for the recurrence management service.	Counter	operation	Possible Values: ExecuteRecurrenceJob, ReadRecurrenceJob, ScheduledRecurrenceJob, TrafficTriggeredRecurrenceJob, RecurrenceNotificationOffsetTrigger, PromotionTriggeredRecurrenceJob
			triggering_service	Possible Values: Any traffic service which contain pre traffic recurrence flow or Internal if operation is not TrafficTriggeredRecurrenceJob



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_recurrence_akka_requests_errors_total	Number of failure responses sent for requests to the recurrence management service.	Counter	code	Error Code
			operation	Possible Values: ExecuteRecurrenceJob, ReadRecurrenceJob, ScheduledRecurrenceJob, TrafficTriggeredRecurrenceJob, RecurrenceNotificationOffsetTrigger, PromotionTriggeredRecurrenceJob
			triggering_service	Possible Values: Any traffic service which contain pre traffic recurrence flow or Internal if operation is not TrafficTriggeredRecurrenceJob
cha_core_recurrence_akka_request_duration_seconds	Average time taken to process a request received for the recurrence management service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: ExecuteRecurrenceJob, ReadRecurrenceJob, ScheduledRecurrenceJob, TrafficTriggeredRecurrenceJob, RecurrenceNotificationOffsetTrigger, PromotionTriggeredRecurrenceJob



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			triggering_service	Possible Values: Any traffic service which contain pre traffic recurrence flow or Internal if operation is not TrafficTriggered RecurrenceJob
cha_core_test_management akka_requests_total	Number of requests received for the test management service.	Counter	operation	Possible Values: ExecuteEntityAdjustment
cha_core_test_management akka_requests_errors_total	Number of failure responses sent for requests to the test management service.	Counter	code	Error Code
			operation	Possible Values: ExecuteEntityAdjustment
cha_core_test_management akka_request_duration_seconds	Average time taken to process a request received for the test management service. The unit of measurement is milliseconds.	Summary	operation	Possible Values: ExecuteEntityAdjustment
cha_core_dns_lookup_http_requests_total	Number of DNS Lookup requests performed including retries.	Counter	endpoint	Endpoint for connection to application.
cha_core_dns_lookup_http_requests_errors_total	Number of DNS Lookup failure responses received or Number of requests timedout.	Counter	code	Error Code
			endpoint	Endpoint for connection to application.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_dns_lookup_http_request_duration_seconds	Average response time of a DNS Lookup. The unit of measurement is milliseconds.	Summary	endpoint	Endpoint for connection to application.
cha_core_duplicate_detection_java_total	Number of duplicate requests received per service context.	Counter	service_context	Represents Service Context configured in the System via CHA-GUI.
cha_core_create_d_rating_main_sessions_total	Number of main sessions created.	Counter	customer_type	Possible Values: Unknown, Internal, External, NonProvisioned.
			reason	Possible Values: Traffic, Migration
			service_context	Represents Service Context configured in the System via CHA-GUI.
cha_core_cleared_rating_main_sessions_total	Number of main sessions cleared.	Counter	customer_type	Possible Values: Unknown, Internal, External, NonProvisioned.
			service_context	Represents Service Context configured in the System via CHA-GUI.
			reason	Possible Values: Expired, Client-terminated, Too-many-sessions, Orig-state-id-mismatch, Reauthorization-failure, Abandoned, Migration, Failed-Migration, SingleMscc, Other



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_create_d_rating_service_sessions_total	Number of service sessions created.	Counter	customer_type	Possible Values: Unknown, Internal, External, NonProvisioned.
			reason	Possible Values: Traffic, Migration
			service_context	Represents Service Context configured in the System via CHA-GUI.
			qmi	Indicator if the supervised service session is an online or offline service session. Online when missing. Possible Values: Online, Offline
cha_core_cleared_rating_service_sessions_total	Number of service sessions cleared.	Counter	customer_type	Possible Values: Unknown, Internal, External, NonProvisioned.
			service_context	Represents Service Context configured in the System via CHA-GUI.
			reason	Possible Values: Expired, Client-terminated, Too-many-sessions, Orig-state-id-mismatch, Reauthorization-failure, Abandoned, Migration, Failed-Migration, Other



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			qmi	Indicator if the supervised service session is an online or offline service session. Online when missing. Possible Values: Online, Offline
cha_core_settlement_trigger_produced_kafka_requests_total	Number of successfully generated settlement triggers for partner settlement calculations.	Counter	party_role_involvement_group_ref	Party Role Involvement Group Ref Id
cha_core_settlement_trigger_produced_kafka_requests_error_total	Number of unsuccessfully generated settlement triggers for partner settlement calculations.	Counter	code	Error code
			party_role_involvement_group_ref	Party Role Involvement Group Ref Id
cha_core_internal_resource_statistics	Counter for Charging Internal Statistics.	Gauge	type	Possible Value: regulation
			entity	Possible Value: entity, e.g. Rf-Core-Average-Latency
cha_core_event_creation_java_total	Number of Event Records put in queue.	Counter	type	Represents the event record type that is being created. Example: BalanceAdjustmentEvent, BucketMaintenanceEvent.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_event_creation_java_errors_total	Number of Event Records failed to put in queue.	Counter	code	Charging Event Result Code to represent the reason of failure. Example: 3002.
			type	Represents the event record type that is being created. Example: BalanceAdjustmentEvent, BucketMaintenanceEvent.
cha_core_event_posting_kafka_total	Number of Event Records sent in the kafka interface.	Counter	customer_partition	Represents the Partition ID where the customer belongs.
			topic	The kafka topic the event was sent to.
			type	Represents the event record type that is being posted. Example: BalanceAdjustmentEvent, Usage ChargeEvent.
			transport_layer	Messaging mode. Possible values: CIL, MSG
cha_core_event_posting_kafka_errors_total	Number of Event Records failed to send in the kafka interface.	Counter	code	Charging Event Result Code to represent the reason of failure. Example: 3002.
			customer_partition	Represents the Partition ID where the customer belongs.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			topic	The kafka topic the event was sent to.
			type	Represents the event record type that is being posted. Example: BalanceAdjustmentEvent, UsageChargeEvent.
			transport_layer	Messaging mode. Possible values: CIL, MSG
cha_core_event_creation_java_requests_total	Number of Notification Events successfully put in queue.	Counter	type	Notification Event.
cha_core_event_creation_java_requests_errors_total	Number of Notification Events failed to put in queue.	Counter	type	Notification Event.
			code	Error Code
cha_core_event_posting_kafka_requests_total	Number of Notification Events sent successfully.	Counter	type	Notification Event.
cha_core_event_posting_kafka_requests_errors_total	Number of Notification Events not sent due to a failure.	Counter	type	Notification Event.
			code	Error Code
cha_core_mnp_lookup_http_requests_total	Number of number portability lookup requests sent including retries.	Counter	endpoint	Endpoint of an external server
			endpoint_type	Endpoint type of an external server. Possible Value: MAP



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			service_context	Represents Service Context configured in the System via CHA-GUI.
			retransmitted	Indicates whether the request is retransmitted. Possible values: Yes, No.
cha_core_mnp_lo okup_http_reque sts_errors_total	Number of number port ability lookup failures or timed out responses received.	Counter	code	HTTP Status Code received in the HTTP failure response. If failure response is not received the default value NA is used.
			endpoint	Endpoint of an external server
			endpoint_type	Endpoint type of an external server. Possible Value: MAP
			service_context	Represents Service Context configured in the System via CHA-GUI.



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
			fault_code	Fault code received in the HTTP failure response. Possible Values: 1000, 1001, 1002, 1003, 1005, 1008, 1009, 1010, 1011, 1013, 1014, 1, 34, 35, 36, 49. If failure response is not received the default value NA is used.
cha_core_mnp_lo okup_http_reque st_duration_seco nds	Average response time for a number portability lookup request. The unit of measurement is milliseconds.	Summary	endpoint	Endpoint of an external server
			endpoint_type	Endpoint type of an external server. Possible Value: MAP
cha_core_conver ged_reauthorizat ions_suppressed _total	Number of Reauthorizations suppressed	Counter	reason	Reason for suppressing the RAR. Possible values: InPBIInterval
cha_core_logstre aming_tcp_reque sts_errors_total	Number of requests that resulted in error when streaming the log events towards the log transformer.	Counter	appender_name	The name of the appender which is used for streaming the log events



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_logstreaming_tcp_queue_events_count	Number of log events present in the streaming appender's queue which are yet to be sent to the log transformer.	Gauge	appender_name	The name of the appender which is used for streaming the log events
cha_core_session_management_aakka_requests_total	Number of session migration requests received for the session management service.	Counter	operation	Possible Values: ChargingInternalSessionMigration , PolicySessionCreation
cha_core_sessions_migrations_total	Number of migrated main sessions.	Counter	type	Possible Values: ChargingInternalSessionMigration , PolicySessionCreation
cha_core_session_management_aakka_requests_errors_total	Number of failure responses sent for session migration requests to the session management service.	Counter	code	Error Code
			operation	Possible Values: ChargingInternalSessionMigration , PolicySessionCreation
cha_core_session_management_aakka_request_duration_seconds	Average time taken to process a session migration request received for the session management service. The unit of measurement is seconds.	Summary	operation	Possible Values: ChargingInternalSessionMigration , PolicySessionCreation



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_internal_routing akka_requests_total	Number of requests received from or sent to Charging Access or Charging Core.	Counter	customer_partition	Represents the customer partition used for routing. Not applicable for scenarios where customer partition is not used for routing, e.g. mass resource and partner settlement. Possible values: NA or customer partition
			direction	The request received IN to CHA Core or sent OUT to CHA Access or CHA Core. Possible Values: IN, OUT
cha_core_cha_data_cache_total	Number of times the individual cache of CHA customers is accessed.	Counter	outcome	Possible values: hit, miss or stale. Stale is used when cache exists but is marked as stale and cannot be used



Table 1 Charging Core Metrics

Metric name	Metric description	Type	Metric Labels	Metric Label Description
cha_core_cha_data_cache_eviction_total	Number of times a CHA data cache is removed.	Counter	reason	Possible values: memory, notification or noSessions. Notification is used in the replicate charging scenario when a cache is removed on passive application group due to a notification from active application group
cha_core_replicate_charging_records_total	Number of processed replicate charging records.	Counter	code	Possible values: ok, originalValue Mismatch or duplicateDetection
			customer_partition	Represents the partition ID where the customer belongs