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Web Services API Reference

List of statistics to be monitored

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Entry Format

Two modes of statistics definitions are supported, "simple" and "extended". In "simple" mode, the statistic type is defined in Configuration Manager and the `statistics.yaml` entry defines the additional statistics options and the statistic name in the API. In "extended" mode, the full definition of the statistic is provided in `statistics.yaml` entry. In this case there is no need to use Configuration Manager for statistic definition. The switch between modes is defined basing on presence of **statisticDefinitionEx** property. If the specified mode is in "extended" mode, **statisticDefinitionName** is ignored if present.

Simple Mode Entry Format

[+] Simple Mode Entry Format

Example:

```
name: test
statisticDefinitionName: TestAgentStat
objectType: QUEUE
timeProfile: OneDay
notificationMode: PERIODICAL
notificationFrequency: 10
timeRange: Range0-60
timeRange2: Range0-5
```

The properties meaning are:

- name - the name of statistic as it appears in API request
- statisticDefinitionName - the name of statistic type (definition) as it's in CME (see [Stat Server User's Guide](#))
- objectType - the type of objects statistic is applied. Possible values: AGENT|QUEUE|SKILL_Q|SKILL_AG:
 - AGENT - statistic is monitored for agents
 - QUEUE - statistic is monitored for queues
 - SKILL_AG - statistic is monitored for agentGroup, associated with skill
 - SKILL_Q - statistic is monitored for virtual queue, associated with skill
- notificationMode - PERIODICAL
- notificationFrequency - the frequency of notification (in seconds)
- timeProfile - the name of timeProfile in Configuration Manager used for statistic aggregation (see [Stat Server User's Guide](#))
- timeRange/timeRange2 - the timeranges names which are defined in Configuration Manager and are used for calculating statistic (see [Stat Server User's Guide](#))

Extended mode entry format

[+] Extended Mode Entry Format

To use this mode replace the **statisticDefinitionName** string with **statisticDefinitionEx** containing full definition of statistic type. Here is the sample format:

```
name: testServiceLevel
statisticDefinitionEx:
  category: TotalNumberInTimeRangePercentage
  mainMask: CallAnswered
  subject: DNAction
  intervalType: GrowingWindow
  dynamicTimeProfile: "0:00"
  timeRangeLeft: 0
  timeRangeRight: 60
objectType: QUEUE
notificationMode: PERIODICAL
notificationFrequency: 10
```

Fields **name**, **objectType**, **notificationMode**, **notificationFrequency** have the same meaning as for simple mode. The **statisticDefinitionEx** defines the statistic to be collected. Note the indentation here. No tabs can be used ([See YAML 1.1 Spec](#)).

The supported properties are:

| Option | Type | Mandatory | Default Value | Note |
|--------------------|--|-----------|---------------|---|
| category | String | Y | | The statistic's category |
| mainMask | comma-delimited list | Y | | The statistic's main mask |
| relativeMask | comma-delimited list | N | Empty list | The statistic's relative mask |
| subject | String | Y | | The statistic's subject |
| intervalType | GrowingWindow OR SinceLogin OR SlidingSelection OR SlidingWindow | N | | The statistic's interval type |
| dynamicTimeProfile | String | N | | The time profile (interval) value to be used |
| timeRangeLeft | Integer | N | null | The "from/left/start/lower" value of TimeRange interval |
| timeRangeRight | Integer | N | null | The "to/right/end/upper" value of TimeRange interval |

| Option | Type | Mandatory | Default Value | Note |
|---------------------|---------|-----------|---------------|--|
| timeRangeLeft2 | Integer | N | null | The "from/left/start/lower" value of TimeRange2 interval |
| timeRangeRight2 | Integer | N | null | The "to/right/end/upper" value of TimeRange2 interval |
| dynamicFilter | String | N | null | filter to be used |
| distinguishByConnId | Boolean | N | null | look for DCID in StatServerUserGuide |

Note that those properties are used for defining the statistics. Not all combinations are supported by StatServer. See [Stat Server user guide](#) for more info.

Queue Statistics

[+] Total_Answered

The number of customer interactions that entered a service type and were accepted, answered, or pulled by agent (s)/agent group (s) within the reporting time interval.

Definition in Configuration Server:

```
name: Total_Answered
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallAnswered
  subject: DNAction
```

[+] Total_Abandoned

The number of interactions that were terminated by the customer while waiting on the service type during the reporting time interval. This stat type excludes interactions that were distributed to an agent and then abandoned before the agent could answer (Call Abandoned While Ringing).

Definition in Configuration Server:

```
name: Total_Abandoned
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
```

```
mainMask: CallAbandoned
subject: DNAction
```

[+] Current_In_Queue

The number of customer interactions that are currently waiting in queue.

Definition in Configuration Server:

```
name: Current_In_Queue
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: CallWait
  subject: DNAction
```

No time profile.

[+] CurrMaxCallWaitingTime

The maximum waiting time for customer interactions currently waiting on a service Definition in Configuration Server:

```
name: CurrMaxCallWaitingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: CurrentMaxTime
  mainMask: CallWait
  relativeMask: CallWait
  subject: DNAction
```

No time profile.

[+] ServiceLevel

Ratio of call answered within given interval (specified by first time range) compared to (total number answered + total abandoned after delay specified by second time range).

```
name: ServiceLevel
statisticDefinitionEx:
  category: ServiceFactor1
  subject: DNAction
  intervalType: GrowingWindow
  dynamicTimeProfile: "0:00+1:00"
  timeRangeLeft: 0
  timeRangeRight: 120
  timeRangeLeft2: 0
  timeRangeRight2: 10
objectType: QUEUE
notificationMode: PERIODICAL
notificationFrequency: 10
```

[+] AverageWaitingTime

Average wait time for customer interactions what were entered and distributed/abandoned on a service type during reporting time interval Note: this will calculate wait time for all calls, including ones that were abandoned.

Definition in Configuration Server:

```
name: AverageWaitingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: AverageTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallWait
  relativeMask: CallWait
  subject: DNAction
```

Skills Statistics

[+] CurrentNotReadyAgents

Number of not ready agents with skill

```
name: CurrentNotReadyAgents
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: NotReadyForNextCall
  subject: AgentStatus
```

Time profile - not used.

[+] CurrentReadyAgents

Number of ready agents with skill

```
name: CurrentReadyAgents
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: WaitForNextCall
  subject: AgentStatus
```

Time profile - not used.

[+] CurrNumberInCall

Number of agents with skill in call

```
name: CurrNumberInCall
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound, CallRinging,
  CallDialing
  subject: AgentStatus
```

Time profile - not used.

[+] LongestIdleTime

The longest time an agent is currently waiting to receive a call (evaluated maximum of current idle time for all agents in group which are currently waiting to receive a call, may be 0 if no idle agents are present in group at the moment).

```
name: LongestIdleTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentMaxTime
  mainMask: WaitForNextCall
  subject: AgentStatus
```

Time profile - not used.

[+] AverageHandlingTime

The average amount of time during the reporting interval that agent/agent groups spent on customer interactions including After Call Work (ACW)/ wrap-up status.

```
name: AverageHandlingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: AverageTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound, AfterCallWork
  relativeMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound
  subject: DNStatus
```

[+] ServiceLevel

Ratio of call answered within given interval (specified by first time range) compared to (total number answered + total abandoned after delay specified by second time range).

```
name: ServiceLevel
statisticDefinitionEx:
  category: ServiceFactor1
  subject: DNAction
```

```
intervalType: GrowingWindow
dynamicTimeProfile: "0:00+1:00"
timeRangeLeft: 0
timeRangeRight: 120
timeRangeLeft2: 0
timeRangeRight2: 10
objectType: SKILL_Q
notificationMode: PERIODICAL
notificationFrequency: 10
```

Agent Statistics

[+] Other agent statistics

The definitions of other agent statistics are self-describing.

```
#agent
name: AverageHandlingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: AverageTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound, AfterCallWork
  relativeMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound
  subject: DNSStatus
---
name: Productivity
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: AverageNumberPerRelativeHour
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallInbound, CallOutbound, CallInternal, CallConsult, CallUnknown
  relativeMask: '*', ~LoggedOut, ~NotMonitored'
  subject: AgentStatus
---
name: InboundCalls
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallInbound
  subject: DNAction
---
name: InternalCalls
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
```

List of statistics to be monitored

```
    dynamicTimeProfile: "0:00"
    intervalType: GrowingWindow
    mainMask: CallInternal
    subject: DNAction
---
name: OutboundCalls
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallOutbound
  subject: DNAction
---
name: ConsultCalls
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallConsult
  subject: DNAction
---
name: ReadyDuration
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalAdjustedTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: WaitForNextCall
  subject: AgentStatus
---
name: WrapDuration
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalAdjustedTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: AfterCallWork
  relativeMask: AfterCallWork
  subject: AgentStatus
---
name: TalkDuration
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalAdjustedTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound
  subject: DNAction
---
name: HoldDuration
notificationFrequency: 10
```

List of statistics to be monitored

```
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalAdjustedTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask:
    CallOnHoldInbound,CallOnHoldOutbound,CallOnHoldInternal,CallOnHoldConsult,CallOnHoldUnknown
  subject: DNAction
```

Resources

See [Enabling Reporting](#) in the *Workspace Web Edition & Web Services Deployment Guide*.

See [Configuring Virtual Queues & Virtual Agent Groups](#) in the *Workspace Web Edition & Web Services Deployment Guide*.

This list is the minimal list - it contains only statistics which are required for current version of UI.

[+] Sample statistics.yaml file

Internal statistics used for tracing the state of agent.

```
#internal stats
name: CurrentTargetState
statisticDefinitionEx:
  category: CurrentTargetState
  mainMask: '*'
  subject: DNStatus
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
objectType: AGENT
notificationMode: IMMEDIATE
notificationFrequency: 0
---
name: CurrentAgentState
notificationFrequency: 0
notificationMode: IMMEDIATE
objectType: AGENT
statisticDefinitionEx:
  category: CurrentState
  mainMask: '*'
  subject: DNAction
---
#queue
name: Total_Answered
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallAnswered
  subject: DNAction
---
name: Total_Abandoned
```

List of statistics to be monitored

```
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallAbandoned
  subject: DNAction
---
name: Current_In_Queue
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: CallWait
  subject: DNAction
---
name: CurrMaxCallWaitingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: CurrentMaxTime
  mainMask: CallWait
  relativeMask: CallWait
  subject: DNAction
---
name: AverageWaitingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: QUEUE
statisticDefinitionEx:
  category: AverageTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallWait
  relativeMask: CallWait
  subject: DNAction
---
#Skill AG
name: CurrentNotReadyAgents
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: AfterCallWork, NotReadyForNextCall
  subject: AgentStatus
---
name: CurrentReadyAgents
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: WaitForNextCall
  subject: AgentStatus
---
name: CurrNumberInCall
notificationFrequency: 10
notificationMode: PERIODICAL
```

List of statistics to be monitored

```
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound, CallRinging,
CallDialing
  subject: AgentStatus
---
name: CurrentNumberLoggedInAgents
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentNumber
  mainMask: '*',~LoggedOut,~NotMonitored'
  subject: AgentStatus
---
name: LongestIdleTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: CurrentMaxTime
  mainMask: WaitForNextCall
  subject: AgentStatus
---
name: AverageHandlingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: SKILL_AG
statisticDefinitionEx:
  category: AverageTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound, AfterCallWork
  relativeMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound
  subject: DNStatus
---
#agent
name: AverageHandlingTime
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: AverageTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound, AfterCallWork
  relativeMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound
  subject: DNStatus
---
name: Productivity
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: AverageNumberPerRelativeHour
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallInbound,CallOutbound,CallInternal,CallConsult,CallUnknown
  relativeMask: '*',~LoggedOut,~NotMonitored'
  subject: AgentStatus
---
name: InboundCalls
```

List of statistics to be monitored

```
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallInbound
  subject: DNAction
---
name: InternalCalls
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallInternal
  subject: DNAction
---
name: OutboundCalls
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallOutbound
  subject: DNAction
---
name: ConsultCalls
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalNumber
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: CallConsult
  subject: DNAction
---
name: ReadyDuration
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalAdjustedTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: WaitForNextCall
  subject: AgentStatus
---
name: WrapDuration
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
  category: TotalAdjustedTime
  dynamicTimeProfile: "0:00"
  intervalType: GrowingWindow
  mainMask: AfterCallWork
```

List of statistics to be monitored

```
    relativeMask: AfterCallWork
    subject: AgentStatus
---
name: TalkDuration
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
    category: TotalAdjustedTime
    dynamicTimeProfile: "0:00"
    intervalType: GrowingWindow
    mainMask: CallUnknown, CallConsult, CallInternal, CallOutbound, CallInbound
    subject: DNAction
---
name: HoldDuration
notificationFrequency: 10
notificationMode: PERIODICAL
objectType: AGENT
statisticDefinitionEx:
    category: TotalAdjustedTime
    dynamicTimeProfile: "0:00"
    intervalType: GrowingWindow
    mainMask:
CallOnHoldInbound, CallOnHoldOutbound, CallOnHoldInternal, CallOnHoldConsult, CallOnHoldUnknown
    subject: DNAction
---
#service level
name: ServiceLevel
statisticDefinitionEx:
    category: ServiceFactor1
    subject: DNAction
    intervalType: GrowingWindow
    dynamicTimeProfile: "0:00+1:00"
    timeRangeLeft: 0
    timeRangeRight: 120
    timeRangeLeft2: 0
    timeRangeRight2: 10
objectType: QUEUE
notificationMode: PERIODICAL
notificationFrequency: 10
---
name: ServiceLevel
statisticDefinitionEx:
    category: ServiceFactor1
    subject: DNAction
    intervalType: GrowingWindow
    dynamicTimeProfile: "0:00+1:00"
    timeRangeLeft: 0
    timeRangeRight: 120
    timeRangeLeft2: 0
    timeRangeRight2: 10
objectType: SKILL_Q
notificationMode: PERIODICAL
notificationFrequency: 10
```