

Concurrency Quota Policy Usage Scenarios for Policy Manager

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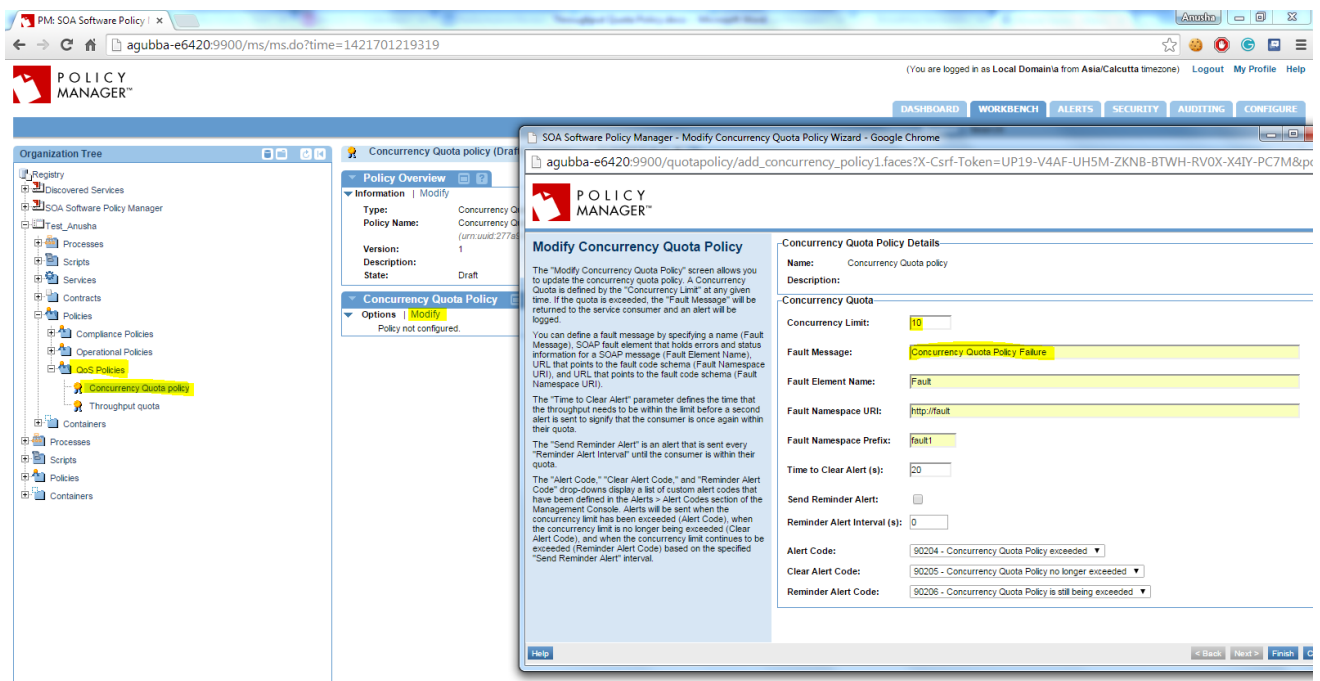
Concurrency Quota Policy Usage Scenarios (Policy Manager-specific)

This document provides a list of Policy Manager-specific usage scenarios for the *Concurrency Quota Policy*.

Scenario 1: Generate Alert When Concurrent Requests Received

Generate an alert and send an email to the administrator(s) if more than 10 concurrent requests are received by a service.

- 1 Create a physical service in *Policy Manager Management Console* using **Create Physical Service**.
- 2 Provide service details and **Finish** the wizard.
- 3 Using **Virtualize Service**, virtualize and host the physical service on Network Director (**ND1**), and assign a name (e.g., **Vs1**).
- 4 Navigate to *Organization > Policies > QOS Policies* and use **Add Policy** to create a *Concurrency Quota Policy*.
- 5 Configure the *Concurrency Quota Policy* as per the use case with 10 Concurrency Limit and a custom Fault message.



- 6 Activate the policy in the *Policy Workflow* portlet, and attach it to the **Vs1** service in the *Service Details* > *Policy Attachments* > *QoS* section.
 - a) Send 20 concurrent requests from application/client to **Vs1** service.
 - b) When the concurrency limit has exceeded, the Fault Message will be returned to the service consumer and an alert will be logged at service level.

The screenshot shows the 'Alerts' tab for the 'Rest_Service_vs1' service. The 'Alerts' section displays a table with the following data:

Del	Obs	Res	Code	Received	Severity	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	80204	01/20/2015 02:41:18	Major	Concurrency Quota Policy exceeded

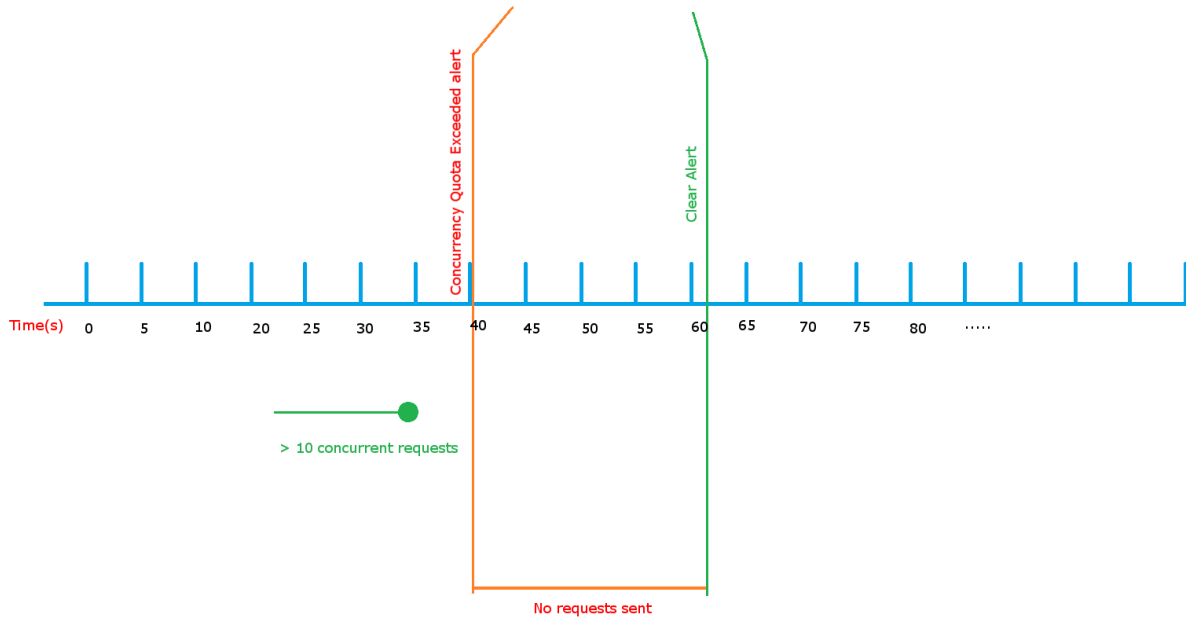
- 7 The usage logs' details show the error being displayed as configured in the policy.

The screenshot shows the 'Logs' tab for the 'Rest_Service_vs1' service. The 'Logs' section displays a table with the following data:

Request Date/Time	Operation	Response Time	Contract Name	Errors
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	643 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	640 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	622 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	615 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	592 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	578 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	564 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	566 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	555 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	560 ms	sdijn	None
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	2 ms	sdijn	Concurrency Quota Policy Failure
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	2 ms	sdijn	Concurrency Quota Policy Failure
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	1 ms	sdijn	Concurrency Quota Policy Failure
01/20/2015 02:41:18.0	GET //(domainid)/entry/(entryids)	2 ms	sdijn	Concurrency Quota Policy Failure

- 8 In the alert code, email has to be configured so as to send an email to the administrator(s) as below

Timeline



Scenario 2: Generate Reminder Alert When Concurrent Requests Received

Generate a remainder alert and run a Management Script if more than 10 concurrent requests per 10 seconds are received repeatedly by a service in the 100 seconds.

- 1 Create a physical service in *Policy Manager Management Console* using **Create Physical Service**.
- 2 Provide service details and **Finish** the wizard.
- 3 Using **Virtualize Service**, virtualize and host the physical service on Network Director (**ND1**), and assign a name (e.g., **Vs1**).
- 4 Navigate to *Organization > Policies > QOS Policies* and use **Add Policy** to create a *Concurrency Quota Policy*.
- 5 Configure the *Concurrency Quota Policy* as per the use case with 10 Concurrency Limit and a custom Fault message. Set Remainder Alert interval to 10 seconds and Clear alert time interval to 100 seconds.

The screenshot shows the SOA Software Policy Manager web interface. The browser address bar displays the URL: `agubba-e6420:9900/ms/ms.do?time=1421701219319`. The page title is "PM: SOA Software Policy | x". The interface includes a "POLICY MANAGER" logo and a "DASHBOARD" button. The main content area is divided into two panels. The left panel, titled "Organization Tree", shows a hierarchical view of the system's components, including "Registry", "Discovered Services", "SOA Software Policy Manager", "Test_Anusha", "Processes", "Scripts", "Services", "Contracts", "Policies", "Compliance Policies", "Operational Policies", "QoS Policies", "Containers", and "Throughput quota". The right panel, titled "Concurrency Quota policy v2", displays the policy's configuration. The "Policy Overview" section shows the policy's type, name, version, description, and state. The "Concurrency Quota Policy" section shows the policy's options, including the concurrency limit, fault message, fault element name, fault namespace URI, fault namespace prefix, time to clear alert, send reminder alert, reminder alert interval, alert code, clear alert code, and reminder alert code.

PM: SOA Software Policy | x

agubba-e6420:9900/ms/ms.do?time=1421701219319

POLICY MANAGER™

(You are logged in as admin)

DASHBOARD

Browse

Organization Tree

Registry

Discovered Services

SOA Software Policy Manager

Test_Anusha

Processes

Scripts

Services

Contracts

Policies

Compliance Policies

Operational Policies

QoS Policies

Containers

Throughput quota

Concurrency Quota policy v2 version: v2 - 01/20/2015 02:43:38

Policy Overview

Information

Type: Concurrency Quota Policy

Policy Name: Concurrency Quota policy

(urn:uuid:277a9840-9fff-11e4-a1c4-8f1be2374f3c)

Version: 2

Description:

State: Active

Concurrency Quota Policy

Options | View

Concurrency Limit: 10

Fault Message: Concurrency Quota Policy Failure

Fault Element Name: Fault

Fault Namespace URI: http://fault

Fault Namespace Prefix: fault1

Time to Clear Alert (s): 100

Send Reminder Alert: ☒

Reminder Alert Interval (s): 10

Alert Code: 90204 - Concurrency Quota Policy exceeded

Clear Alert Code: 90205 - Concurrency Quota Policy no longer exceeded

Reminder Alert Code: 90206 - Concurrency Quota Policy is still being exceeded

- 6 Activate the policy in the *Policy Workflow* portlet, and attach it to the **Vs1** service in the *Service Details* > *Policy Attachments* > *QoS* section.
- 7 Send 20 concurrent requests from application/client to Vs1 service
 - a) When the concurrency limit has exceeded, the Fault Message will be returned to the service consumer and an alert will be logged at service level.
 - b) The usage logs' details show the error being displayed as configured in the policy.
- 8 Keep sending 20 concurrent requests from the application/client to Vs1 service.
 - a) During the first 10 seconds no alert is shown.
 - b) If the concurrency hits are seen after 10 seconds, a remainder alert is thrown which is valid for next 10 seconds.
 - c) After the first interval of 10 seconds, if the concurrency hits are still observed, again a remainder alert is seen.

The screenshot shows the SOA Software Policy Manager console. The left-hand navigation tree includes categories like Registry, Discovered Services, SOA Software Policy Manager, Test_Anusha, Processes, Scripts, Services, Rest_Service, Rest_Service_vs1, Contracts, Policies, Compliance Policies, and Operational Policies. The main area displays filters for ID, Time Range, Severity, and State, along with a table of alerts.

Del	Obs	Res	Code	Received	Severity	Description
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	90206	01/20/2015 10:58:09	Minor	Concurrency Quota Policy is still being exceeded.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	90204	01/20/2015 10:57:43	Major	Concurrency Quota Policy exceeded.

- d) Within the clear interval, for every 10 seconds, this alert is thrown if validation crosses
- e) In the Alert code, a script can be configured to run (e.g., to store any sort of information related to the alert).

Scenario 3: Generate Alert When Using Contracts

Generate an alert if an application hits a contract when sending more than 15 concurrent requests to various services using the contract

- 1 Create two physical services in *Policy Manager Management Console* using **Create Physical Service**.
- 2 Provide service details and **Finish** the wizard.
- 3 Using **Virtualize Service**, virtualize each physical service and host on Network Director (**ND1**), and assign a name (e.g., **Vs1**, **Vs2**).
- 4 Navigate to *Organization > Policies > QOS Policies* and use **Add Policy** to create a *Concurrency Quota Policy*.
- 5 Configure the Concurrency Quota policy as per the use case with 15 Concurrency Limit and a custom Fault message.
- 6 Activate the policy in the *Policy Workflow* portlet, and attach the *Concurrency Quota Policy* to a contract which serves **Vs1** and **Vs2** services.

PM: SOA Software Policy | x

agubba-e6420:9900/ms/ms.do?time=1421731435742

(You are logged in as Local Don)

POLICY MANAGER™

DASHBOARD WORKBENCH

Browse | Search

Organization Tree

Registry

Discovered Services

SOA Software Policy Manager

Test_Anusha

Processes

Scripts

Services

Contracts

Consumed Contracts

Provided Contracts

sdjkn (Draft)

sdjkn v1.0

Policies

Containers

Processes

Scripts

Policies

Containers

sdjkn (Draft) version: v1.1 - 01/20/2015 11:22:04

Contract Overview

Name: sdjkn

Key: e009434b-9ff3-11e4-a1c4-8f1be2374f3c:1021

Description:

Version: 1.1

Contract State: Draft

Duration:

	Date	Time	
Effective Date/Time :	01/19/2015	21:27:00	Asia/Calcutta
Expiration Date/Time :	Never Expires		

Access Control Method: Allow consumer (application or organization) users that do not have a contract explicitly assigned.

Provider Organization: Test_Anusha (udd1f21fea2f-9ff1-11e4-a1c4-8f1be2374f3c)

Modify Contract

Contract Scope

Test_Anusha

Services

Manage Contract Scope

Consumer Identities

Consumer Identities are not applicable when the "Allow consumer (application or organization) users that do not have a contract explicitly assigned" is the Access Control Method selected for the current contract.

Manage Consumer Identities

QoS Policy Attachments

QoS Policies | Manage

Concurrency Quota policy

- 7 Send 25 concurrent requests from application/client to Vs1 and Vs2 services all together
 - a) When the concurrency limit has exceeded, the Fault Message will be returned to the service consumer and an alert will be logged at contract level.
 - b) The usage logs' details show the error being displayed as configured in the policy.

Scenario 4: Generate Clear Alert When Concurrency Exceeds Specified Interval

Generate a clear alert and send an email to the administrator(s) when concurrency is no more exceeded in the 100 seconds interval

- 1 Create a physical service in *Policy Manager Management Console* using **Create Physical Service**.
- 2 Provide service details and **Finish** the wizard.
- 3 Using **Virtualize Service**, virtualize and host the physical service on Network Director (**ND1**), and assign a name (e.g., **Vs1**).
- 4 Navigate to *Organization > Policies > QOS Policies* and use **Add Policy** to create a *Concurrency Quota Policy*.

- 5 Configure the *Concurrency Quota Policy* as per the use case with 10 Concurrency Limit and a custom Fault message.
- 6 Activate the policy in the *Policy Workflow* portlet, and attach it to the **Vs1** service in the *Service Details* > *Policy Attachments* > *QoS* section.
- 7 Send 20 concurrent requests from application/client to **Vs1** service.
 - a) When the concurrency limit has exceeded, the Fault Message will be returned to the service consumer and an alert will be logged at service level.
 - b) The usage logs' details show the error being displayed as configured in the policy.
 - c) In the next 100 seconds, if the policy is not violated, a clear alert is sent.

The screenshot shows the SOA Software Policy Manager interface. The left sidebar displays the Organization Tree with the following structure:

- Registry
 - Discovered Services
 - SOA Software Policy Manager
 - Test_Anusha
 - Processes
 - Scripts
 - Services
 - Rest_Service
 - Rest_Service_vs1
 - Contracts
 - Policies
 - Containers

The main content area shows the details for **Rest_Service_vs1**. The filters are as follows:

- ID Filter:** Id: , Code:
- Time Range Filter:** Start Date: 01/19/2015, Start Time: 10:54:03, End Date: 01/20/2015, End Time: 10:54:03, Period: Last hour
- Severity Filter:** ☒ Critical, ☒ Major, ☒ Minor, ☒ Normal, ☒ Clear
- State Filter:** ☐ All Unobserved, ☒ Observed By: Local Domain, ☒ Resolved By: All

The table of alerts is as follows:

Del	Obs	Res	Code	Received	Severity	Description
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	90205	01/20/2015 02:47:29	Clear	Concurrency Quota Policy no longer exceeded.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	90204	01/20/2015 02:45:47	Major	Concurrency Quota Policy exceeded.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	90205	01/20/2015 02:41:39	Clear	Concurrency Quota Policy no longer exceeded.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	90204	01/20/2015 02:41:18	Major	Concurrency Quota Policy exceeded.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	90205	01/20/2015 02:41:11	Clear	Concurrency Quota Policy no longer exceeded.
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	90204	01/20/2015 02:40:49	Major	Concurrency Quota Policy exceeded.

- d) In the clear alert code, an email must be configured that will be sent to the administrator(s) as illustrated below:

Timeline (Scenarios 2 and 4)

