Concurrency governance cheat sheet

2 governance types are in place simultaneously



User-level limit

Defines limit per user and applies for specific authentication method and specific API. Userlevel limit defines maximum but does not guarantee minimum available due to account limit (10 requests for concurrent WS user (cWSu)* are not guaranteed).



Account-level limit

This limit applies to the combined total of SOAP Web Services (WS) and RESTlet requests per given account. Maximum request count is derived from the service tier, the number of SuiteCloud Plus (SC+) licenses and account type (developer accounts have base limit = 5).

NetSuite

		Authentication Me	thod			Account Base Limit*	1 SC+ Licence	2 SC+ Licence	10 SC+ Licence
API	Request-level Credentials (RLC)	Login/Logout (L/L)	SSOLogin	Token-based (TBA)	Service Tier				
SOAP WS	1/10**	1/10	1/10	No limit per user	Shared, 3	5 concurrent requests for the entire account	5+1×10=15	5+2×10=25	5+10×10=105**
RESTlet	No limit nou usou	Not applicable	Not applicable	No limit per user	2	10	10+10	10+20	10+100**
	No limit per user				1, 1+, 0	15	15+10	15+20	15+100

^{*} One concurrent WS user (cWSu) can be defined on employee record for each SC+ license you get

Sample Scenarios – how many concurrent requests can I have?

End users/Client application(s) are querying my company account with following amount of requests

	Snapshot of all incoming requests at one time					s at one tir	ne	Account			Requests status			
t	RI user		L,	SOAP /L cWSu	SSOI	Login cWSu	ТВА	RESTlet	Requests Total	Service Tier	SC+ License	Total Account Limit	Success	Fail*
	2	n/a	-	n/a	-	n/a	2	-	4	Shared	0	5	4	0
	1	4	2	-	1	-	7	1	16	Shared	1	15	15	1
	-	n/a	-	n/a	-	n/a	6	2	8	3	0	5	5	3
	-	9	-	-	-	-	6	3	18	3	1	15	15	3
l:	-	10	-	_	-	-	12	5	27	3	2	25	25	2

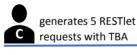
A scenario explained in detail:



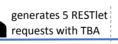








generates 12 SOAP WS requests with TBA



Account limit = Service Tier 3 + 2 SC+ licenses = 5+20 = 25

Any 2 of incoming 27 requests can* fail

generates 10 SOAP Web Services requests using RLC authentication method

User-level limits apply here

User A is concurrent WS User (company can enable it for 2 users because it has 2 SC+ licenses). User A can send max 10 concurrent requests. Without this privilege, 9 requests of user A would be rejected and all others processed.

User B is using TBA and does not have to be a concurrent WS user to be able to send more requests. TBA is recommended authentication method with even more benefits.

Account-level limit applies here

External application(s) send concurrently 27 requests in total. Any 2 requests can be rejected due to account limit 25.

Concurrent vs sequential requests: If one of above requests is being processed for 1 minute (e.g. a long search), during that 1 minute can be sent and processed MORE than 24 other requests if those requests are not reaching the server in one moment, but sequentially after response to the other request.

* Please note: Governance framework can temporarily shortly allow more concurrent requests

See Help Center for other scenario

SuiteCloud Developer Network v2.0

^{** 1/10 = 1} request/user OR max 10 requests/cWSu. You can have 1 concurrent request per user at given time OR maximum 10 concurrent requests if it is cWSu

^{*}The base limit is increased by 10 for each SC+ license. The number of SC+ licences may vary from 1 to many.

^{**} Not a standard license count for this service tier

Concurrency governance cheat sheet

Recommended Actions

- 1. Analyse the frequency and level of concurrency peaks and consider rescheduling requests to be outside of regular peak times.
- 2. Consider <u>if more SC+ licenses</u> are needed and learn on SC+ settings.
- 3. Handle the error codes in client application.
- 4. Implement retry logic.
 - a. Retry gradually increasing the delay if more attempts needed.
- 5. For non-concurrent users serialize your requests in client applications to not overlap.
- 6. Use TBA to take advantage of a more flexible concurrency.
- 7. Monitor trends in concurrency usage to prevent broken integrations (see Navigation table below).

```
Code example demonstrates basic handling of WS error codes
int i = 0;
int maxAttempts = 5; // try it 5 times, then fail for good

while (i < maxAttempts) {
    response = doWSCall();
    isSuccess = response.getIsSuccess();
    errorMsg = response.getErrorMsg();

if (isSuccess == false && (errorMsg == WS_CONCUR_SESSION_DISALLWD || errorMsg == WS_REQUEST_BLOCKED)) {
        wait();
        i++; // try again
    } else {
        break; // end the cycle
}</pre>
```

}						
Method	Error codes					
Pictriod	SOAP Fault	Error Message				
Web Services + L/L or RLC	ExceededRequestLimitFault	WS_CONCUR_SESSION_DISALLWD				
Web Services + TBA	ExceededConcurrentRequestLimitFault	WS_REQUEST_BLOCKED				
RESTlet	HTTP error code: 400 Bad Request					
KESTIEL	SuiteScript error code: SSS_REQUEST_LIMIT_EXCEEDED					

Error can occur for any of the requests that exceed the limit at that moment

NetSuite navigation

What	Where			
Account concurrency limit	Satur > Integration > Integration Management > Integration Governance			
If account concurrency limit is enabled				
Total requests (number, ratio)	Setup > Integration > Integration Management > Integration Governance			
Rejected requests				
Reports about rejected SOAP WS requests	Reports > New Search -> Web Services Operations			
Reports about rejected RESTlet requests	RESTlet script record > Log			
Details about SOAP WS requests that were rejected due to concurrency violation	Setup > Integration > Web Services Usage Log			
Web Services performance dashboard	The Application Performance Management SuiteApp (<u>link</u>)			
Concurrency Monitor dashboard, monthly/hourly overview (heatmap), charts showing concurrency usage with drill down possibility to seconds				
Scheduling of integrations				
Decision tree – considering additional license, what is appropriate account concurrency limit	Help Center article			



SuiteCloud Developer Network v2.0