

**Oracle® Communications
Subscriber Data Management**

Release Notes

Release 9.3

910-6891-001 Revision P

December 2015

Copyright © 2010, 2015 Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government. This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Table of Contents

Contents

Introduction.....	2
PR Severity Definitions.....	2
Patch Installation	2
Locate Product Documentation on the Oracle Help Center Site.....	2
Resolved PRs in SDM Release 9.3	3
Upgrade Information	3
Resolved PRs in the form of patches in Maintenance Release 9.3.1.....	4
Enhancement – THL file clean-up	7
Note 3	7
Resolved PRs in Maintenance Release 9.3.1 build 5.10.0	7
Resolved PRs in Maintenance Release 9.3.1 build 5.3.0	8
Resolved PRs in Maintenance Release 9.3.1 build 5.2.0	8
Resolved PRs in Maintenance Release 9.3.1 build 5.1.0	9
Resolved PRs in Maintenance Release 9.3.1 no build	9
Resolved PRs in SDM 9.3.....	10
Customer Known PRs in SDM Release 9.3.....	15
SDM Release 9.3 Customer Known PRs.....	15
Appendix 1	17
HssSPRConfig changes	17
Appendix 2	18
XML request handling in the SPR – behavior change in SDM release 9.3.1	18
Appendix 3 – Note regarding the NAI.....	20
Alarms added with patch 13	20
Replication Threshold Definition	22

Introduction

These Release Notes list the resolved and known PRs for SDM Release 9.3.

Release Notes are distributed to customers with a new software release at the time of General Availability (GA) or Limited Availability (LA). They are updated for each Maintenance Release.

The Release Notes are available only on the Oracle Help Center Site. For each new publication to the Oracle Help Center Site, the revision level of the part number is incremented. The Release Notes can be located under the Recent Release Notes tab by its title or part number; or by its product and release; see also [Locate Product Documentation on the Oracle Help Center Site](#).

PR Severity Definitions

The PR sections in this document refer to PR severity levels. Definitions of these levels can be found in the following publication:

- *TL 9000 Quality Management System Measurement Handbook*.

Patch Installation

All SDM patches are cumulative. Each patch is built on the previous one. In order to install patch N, patch N-1 must be installed first which also requires patch N-2 and so on. All SDM patches are applicable to all customers using the associated release unless explicitly indicated in the specific installation procedure provided with each patch.

Locate Product Documentation on the Oracle Help Center Site

Oracle Communications customer documentation is available on the web at the Oracle Help Center (OHC) site, <http://docs.oracle.com>. You do not have to register to access these documents. Viewing these files requires Adobe Acrobat Reader, which can be downloaded at <http://www.adobe.com>.

1. Access the Oracle Help Center site at <http://docs.oracle.com>.
2. Click Industries.
3. Under the Oracle Communications subheading, click the Oracle Communications documentation link.
The Communications Documentation page appears. Most products covered by these documentation sets will appear under the headings “Network Session Delivery and Control Infrastructure” or “Platforms.”
4. Click on your Product and then the Release Number.
A list of the entire documentation set for the selected product and release appears.
5. To download a file to your location, right-click the PDF link, select Save target as (or similar command based on your browser), and save to a local folder.

Resolved PRs in SDM Release 9.3

SDM Release 9.3 is a new manufacturing baseline release.

Note: Resolved PRs are sorted in ascending order by severity and then by PR number.

For a description of the new features please see the Feature Notice, document 910-6861-001, in the main 9.3 documentation set.

Caution: This statement only applies to releases prior to release 9.3.1. SDM release 9.3.1 contains the MySQL Enterprise Backup replacement.

SDM release 9.3 uses MySQL Enterprise Backup (MEB) v3.10.1 for the daily automatic backup. With this MEB the minimum size for a backup file is 20GB. Any customer which has a storage blade system, typically C-Class blade deployments, can use the MEB without issue. However, in a system without a storage blade system, typically Rack-Mount standalone servers, the intensive write operation will impact system traffic.

We recommend the following depending on which system is installed at the customer site:

Deployed SPR system	OK to upgrade to SPR 9.3	Comment
HP C-Class with sidecar disk array	Yes	No additional configuration is needed
HP G8 RMS with 8 disk array	Yes	Will work, but high latency and high CPU usages by iowait (disk reads/writes) may be observed Our recommendation is to wait for SPR 9.3 Patch 1
All other 2 disk only setups	Yes	Our recommendation is to wait for SPR 9.3 Patch 1

Upgrade Information

Source version	Type	UPGRADE PATH	Rollback method
7.0.22.25	NON GEO	YES	Fresh install
7.0.22.25	GEO	Not supported	Fresh install
8.0.0-4.11.0	NON GEO	YES	Automatic rollback
8.0.0-4.11.0	GEO	Not supported	Manual rollback
9.0.5 p4	NON GEO	YES	Manual rollback
9.0.5 p4	GEO	YES	Manual rollback

Table 1: Upgrade Information

Resolved PRs in the form of patches in Maintenance Release 9.3.1

Patch	Bug	Severity	Title	Customer Impact
1	20174546 20182537	2 2	Force Select queries to run on active backend Enhancement of Patch 2: replace telnet config by webCI config	<p>This is a combination of 2 patches – Patch 2 and Patch 7 from SDM maintenance release 9.0.5. PR240682 (bug 19118324) and 20182537.</p> <p>There were isolated incidents where updates for specific subscribers were not recorded in the SPR. The issue occurred when two profile update messages (PUR) were received in quick succession for the same subscriber. This also occurred when a profile update request (PUR) was followed quickly by a user data request (UDR) for the same subscriber. This resulted in a data response discrepancy between the active/front-end and standby/back-end server.</p> <p>Note: Patch 2 is disabled by default. This is 240682, Patch 2 in 9.0.5.</p> <p>A new configurable field has been added to the WebCI for the ForceOnReferenceType parameter. For more information see HssSPRConfig changes in Appendix 1. This is Patch 7 in SDM maintenance release 9.0.5.</p>
			AE cleanup	<p>Periodically there was a crash in the HSS when the autoenrollment cleanup took place. This is the same as 19870087, Patch 6 in 9.0.5.</p>
2	20513931	3	Database inconsistency	<p>We found that some SPR subscribers were not deleted correctly from the database and this caused an inconsistency. Errors occurred when subscribers were provisioned.</p> <p>This is bug 19113426 in 9.0.5, Patch 9.</p>
	20513995	3	HSS process crash (SPR) resulting from memory leaks that occur when the HP OC Diameter Licence limit is exceeded	<p>After a period of time, the HSS crashed when the maximum TPS license value was exceeded.</p> <p>This is bug 20318069 in 9.0.5, Patch 9.</p>

Patch	Bug	Severity	Title	Customer Impact
3	20521266	3	SOAP provisioning failures	<p>The network operator received an error when provisioning subscribers using the SOAP interface.</p> <p>This was because the operator exceeded the maximum allowed simultaneous requests the system will handle which is 45.</p> <p>When this value is exceeded an error message will be displayed.</p> <p>This bug relates to bug 19118064 in 9.2.6 (PR240491).</p>
4	20983059	3	DAS core dump due to leak in libxmlmm	<p>Database access on the problem slot was lost for a few seconds, and then recovered. Because DAS on the two slots works in load-sharing mode, there was no service interruption when DAS on 1 slot was restarted.</p> <p>This is P10 in 9.0.5 (20930658)</p>
	20957044	2	Duplicate “State field” in Database	<p>Some MSISDN profiles were responding with the error 1054 “BadFieldError” when profiles were queried or updated.</p>
5	21027912	2	Delays on REST interface	<p>When provisioning subscribers there were some delays on the provisioning interface. An optimization was applied to fix this issue.</p>
	21049520	2	Tungsten service is still running, after blade is stopped	<p>The only impact occurs when the system is being upgraded.</p>
6	21129993	3	SetGeoVIP calls clearvip.sh after setvip.sh causing GEO VIP to be removed	<p>When the georedundant link went down and was being reset there was an issue on the replica site.</p> <p>This is Patch 11 in 9.0.5.</p>
7	21163780	2	<p>9.3.1p3 SOAP-xml error 7058 too many connections</p> <p>See the Note below the table.</p>	<p>Under certain conditions, the number of allowed simultaneous requests was less than 45. This patch resolves the issue.</p> <p>This bug relates to bug 20521266 (Patch 3). Please see the Important Note below the table, and also Appendix 2.</p>
8	21366076	3	INSERT Dynamic Quota fails if 'empty' string has capital letters	<p>There was an issue with provisioning dynamic quota. This rare occurrence happened when a string in the XML data for dynamicquota in the database contained upper case letters. The SPR responded with error message “HTTP 400” or “MSR4000” to the request as it did not recognize the string.</p>

Patch	Bug	Severity	Title	Customer Impact
9	21684790	3	HssSPRProfileRepositorydata servicedata data corrupted or empty err 1054 or 7013	When the Geo Link was disrupted there were issues with certain SPR user profiles and services data. There was corruption in both profile and service data which was due to character set encoding. This is Patch 13 in 9.0.5.
	21771897	2	DAS going OOS once/twice leads to no provisioning	There was an issue with insert requests during provisioning and this happened even when the DAS was in service. It was not possible to provision the SPR until the blade or the system was restarted.
10	21777581	2	DAS restarting several times - no provisioning possible	There was an issue with update requests during provisioning and this happened even when the DAS was in service. It was not possible to provision the SPR until the blade or the system was restarted.
11	21842592	3	RAS crashes - To remove assert and replace by error log in the code	When the RAS received a get, or a delete, request with an empty context it caused a system crash.
12	21848009	2	blueHSS restarts when too many PNRs are sent	There was congestion in the HSS when it received large numbers of PNRs. The congestion caused the HSS to restart.
13 Note 3	21784132	3	Multiple PUR of voldata	When updating SPR subscriber policy data there was a data mismatch between the master database node and the slave database node. These inconsistencies occurred when there were multiple change requests for the same subscriber, within a short period of time. An enhancement was included with this patch. For more information see Enhancement – THL file clean-up . This is P15 in 9.0.5
	21876273	3	New alarms are required to notify users about tungsten replication issues	Four new framework alarms were added to notify users about tungsten replication issues. Details of these alarms are here in the appendix: Alarms added with patch 13 . Replication latency threshold must be defined. See section Replication Threshold Definition . This is P16 in 9.0.5
	21901421	3	DuplicatedKey when trying to INSERT the MSISDN and KEyNotFound when trying to DE	It was not possible to delete or replace corrupted SPR profiles in the database using SOAP, REST or the WebCI. This is P17 in 9.0.5

Table 2: Resolved PRs in the form of patches in SDM Release 9.3.1

Known Limitation

If your system is configured with SCTP Multi-Homing then we recommend that you use a 10 Gigabit network interface to the server and access switches. This is in order to support your maximum TPS rate, avoid traffic latency and prevent high network utilization.

1. Important Note

It is imperative that all patches up to and including Patch 7 must be installed in order to resolve the SOAP provisioning issue.

2. Note

The title was changed because it displayed the incorrect error number. The original title was “9.3.1p3 SOAP-xml error 7052 too many connections”.

Enhancement – THL file clean-up

With this enhancement the clean-up of THL files was improved. Now the clean-up process is triggered only when disk usage is over 70%, and THL files are removed one at a time.

This enhancement was tracked by bug 19101236 [227328].

Note 3

Patch 13 is a maintenance release and has special installation instructions. Please contact the Oracle Professional Services Architect for the relevant information.

Resolved PRs in Maintenance Release 9.3.1 build 5.10.0

Bug	PR	Severity	Title	Customer Impact
19689650	None	2	Old password can still be used by SOAP user even though it was changed WebCi	Setting the password using the WebCi did not overwrite the SPR provisioning system password.
19720561	None	4	I/O monitor script should contain more details for collected data.	When there is a glitch on the network resource data is collected. If the outage is very short, for example 2 seconds then there is little time to collect resource information.
19721582	None		Bash security update	Security update in third party package.

Table 3: Resolved PRs in build 5.10.0 SDM Maintenance Release 9.3.1

Resolved PRs in Maintenance Release 9.3.1 build 5.3.0

Bug	PR	Severity	Title	Customer Impact
19114683	237615	2	SNRAutoEnrollment: when SNR with dataindication is received on STBY blade	There was an issue with SNR auto-enrollment.
19646421	None	3	Increase SPR send buffer	This enhancement allows the system to buffer more outgoing SPR messages and so prevents congestion. There is also an enhancement to buffer level management which fixes the congestion level 1 alarm that was getting stuck.
19645583	None	3	Enhancement of AutoEnrollment cleanup on expired timer only	This enhancement enables SPR auto enrollment cleanup to take place based on inactivity time. 19645569 in 9.0 (Patch 4).
19645640	None	3	SPR subscriber count enhancement	This is a new feature that performs a daily count of the number of SPR subscribers. The count is available through the WebCI. This feature is configured in the /etc/sysconfig/blue file. The field "resolution=min/hour/day" must be added in order to select frequency of the count. The default is day. The field "time=n" is set in order to determine how often the count takes place. The default is 1. 19645628 in 9.0 (Patch 4).
19645663	None	3	io monitoring script for debugging	This enhancement monitors key system metrics at certain intervals and saves the output to a file. 19645658 in 9.0 (Patch 4).

Table 4: Resolved PRs in build 5.0.0 SDM Maintenance Release 9.3.1

Resolved PRs in Maintenance Release 9.3.1 build 5.2.0

Bug	PR	Severity	Title	Customer Impact
19116690	239392	1	New MySQL backup version causes many problems, when database backup is created	MySQL issue.
19119188	241425	2	DbxTool: same data in all output files if no DbxStartRange is configured	When the start range for the database extraction tool was not specified, multiple output files with the same data, are generated.

Bug	PR	Severity	Title	Customer Impact
19119268	241487	3	DbxTool may not extract all profiles if inconsistencies exist in DB	Problem with profile extraction when there are inconsistencies in the database.
19525935	None	3	DAS Crash	Issue with a limit in the SPR Subscriber license. When the DAS exceeded a certain number of subscribers there was a core dump. 19645727 in 9.0 (Patch 4).
19556014	None	3	Misleading between Scheduled backup and Manual Backup	A number of subscriptions databases such as poldb and spdb were not included in the backup. Clone of 19500680.
19118828	241104	3	Deleted backup files with automatic (scheduled) backup operation	Backup files were deleted based on file name and not on date last modified. This resulted in the retention of some backup files by the system as they were not deleted.
19526510	None	4	SDM disk configuration script missing setup for DL380 G8 server with 4+4 disks	Need to add information to the setup in the script.
19451530	None	4	DRM Tool does not report the inconsistencies in oamalarm and oamalarmhistory	Inconsistencies in the oamalarm and oamalarmhistory tables between the master and slave databases. These were fixed by Datasynch.

Table 5: Resolved PRs in build 5.2.0 SDM Maintenance Release 9.3.1

Resolved PRs in Maintenance Release 9.3.1 build 5.1.0

Bug	PR	Severity	Title	Customer Impact
19119670	214785	1	DRM tool causes loss of SPR traffic	Issue with DRM tool causing loss of SPR traffic. Clone of 19475452 in 9.2.6_4.14.3.
19324532	None	2	Excessive Sh traffic latency and failure observed while daily backup MEB runs	MySQL Enterprise Backup has been replaced. The caution statement no longer applies.

Table 6: Resolved PRs in build 5.1.0 SDM Maintenance Release 9.3.1

Resolved PRs in Maintenance Release 9.3.1 no build

Bug	PR	Severity	Title	Customer Impact
19119357	241568	2	SPR export script for OCUDR migration	Internal bug. No impact on customer. No build as not tested
19115491	238462	3	Remove the "test" database from MySQL on SPR	No customer impact.
19357003	None	3	libxmlmm patch2 absent in 9.3 build	Issue with third party tool. No build as not tested
19670193	None	3	NON_GEO SWU 7.0_9.3.1: "blue" service is not recognised after rollback to 7.0	No impact. Upgrade related issue.

Bug	PR	Severity	Title	Customer Impact
19664566	None	3	NON_GEO SWU 7.0_9.3.1: ugwrap.log reports "Failed to upgrade SDM DB"	No impact. Upgrade related issue.

Table 7: Resolved PRs in no build # Maintenance Release 9.3.1

Resolved PRs in SDM 9.3

PR	CSR	Severity	Component	Title
225726	-	1-Critical	Platform	rel9.0.0: Master-Master replication was not in sync due to ProcessLog took wrong StartTime.
236870	-	1-Critical	Platform	rel9.2.5: Geo-Red VIPs lost communication in multi-homing environments, after automatic switchover was performed.
239392*	-	1-Critical	Platform	New MySQL backup version causes many problems, when database backup is created.
238226	-	1-Critical	Tools	Subscriber data in SDM cannot be totally exported by using Db extraction tool
225708	-	2-Major	Platform	rel9.0.0: Database transactions are dropped.
225712	-	2-Major	Platform	rel9.0.0: Master and slave databases are not in sync on Reference site.
229543	-	2-Major	Platform	RAID disk-array not use after reinstalling blue and or special upgrade path
231335	1014952	2-Major	SPR	Hss crash due to attribute mapping
232038	-	2-Major	HSS	HSS does not handle diameter congestion on SCTP
232596	-	2-Major	SPR	result of GET state property doesn't include CDATA headers
232626	-	2-Major	SPR	REST using URI with dynamicquota or DynamicQuota returns different results
232633	-	2-Major	SPR	response of GET state should include state property tags
232639	-	2-Major	SPR	"500 Internal Server Error" should not be used when rejecting a request because of max length of characters exceeded
232721	-	2-Major	SPR	XML select / delete of a specific dynamic quota instance is rejected
232722	-	2-Major	Platform	rel9.3.0: It takes to much time to extract big sized database.
232724	-	2-Major	Platform	rel9.3.0: Empty Pools are not extracted by DBX tool.
232742	-	2-Major	SPR	XML select with an unknown field returns value of subscriptionId for this attribute
232754	1016930	2-Major	HSS	Sctp default values not good for Itehss multi-homing
232783	-	2-Major	SPR	XML insert state property with odk=yes is rejected if the property already exists
232807	-	2-Major	Platform	rel9.3.0: Invalid conversion in the data extraction script.
232829	-	2-Major	Platform	rel9.3.0: DPC is running in infinite loop, after DBX tool is stopped.
232870	-	2-Major	SPR	deleting a state property (XML) updates the entry with an empty value
232910	-	2-Major	SPR	update of a state property not already provisioned should be rejected
233005	-	2-Major	SPR	error code for GET request when dynamic quota and/or state are not provisioned

PR	CSR	Severity	Component	Title
233016	-	2-Major	SPR	"500 Internal Error" should not be used when rejecting POST state property already provisioned
233037	-	2-Major	Platform	rel9.3.0: Missing validation for enum value for some parameters in CLI.
233043	-	2-Major	SPR	XML delete of state property not existing should return an error
233088	-	2-Major	SPR	"500 Internal Server Error" should not be used when receiving DELETE instanceId not existing
233095	-	2-Major	Platform	rel9.3.0: Wrong DBX tool interaction with HA events.
233113	-	2-Major	SPR	REST adding/updating a state by blob is rejected
233252	-	2-Major	Platform	rel9.3.0: The number of extracted subscriber services does not match the number set in range.
233290	-	2-Major	SPR	Delete request of state or Dynamic quota by blob is rejected
233295	-	2-Major	Platform	rel9.3.0: Single subscriber or pool service inside the service list cannot be extracted.
233392	-	2-Major	SPR	GET of an unknown state property returns MSR4002
233415	-	2-Major	SPR	error should be returned when deleting an unknown DynamicQuota (XML request)
233425	-	2-Major	SPR	SPR profile cannot be displayed anymore in CLI/WebCI if quota/state/dynquota not provisioned
233429	-	2-Major	SPR	REST Delete - all duplicate state properties should be deleted
233436	-	2-Major	SPR	<?xml version="1.0" encoding="UTF-8"?> is missing in state response
233484	-	2-Major	SPR	SPR provisioning logging file never recreated after deletion
233511	-	2-Major	SPR	3 entries in the SPR log file after one select in webci
233519	-	2-Major	SPR	"unsupported request" is returned when receiving PUT dynamic quota with DQ name in URI
233521	-	2-Major	SPR	No UPDATE log in the csv file when removing user from pool
233547	-	2-Major	SPR	MSR4056 is returned when handling REST request Quota/State/DynQuota for an unknown profile
233560	-	2-Major	Platform	rel9.3.0: DBX tool does not properly measure overall system CPU usage.
233697	-	2-Major	Platform	rel9.3.0: Multiple keys are not supported by DBX tool.
233699	-	2-Major	SPR	DynamicQuota should only be deleted if both DQname and InstanceId match the request
233803	-	2-Major	SPR	Multiple Provisioning log files not correctly managed
233807	-	2-Major	HSS	If HSS receives CER with an ApplicationId not supported, HSS cores
233844	-	2-Major	SPR	Dynamic quota should be added without checking uniqueness of the InstanceId
233888	-	2-Major	SPR	Xml not logged when adding duplicate user
233930	-	2-Major	SPR	GET of a not provisioned quota / dynamicquota / state with name returns 4001

PR	CSR	Severity	Component	Title
233936	-	2-Major	SPR	DELETE a not provisioned state property returns http500/MSR4099 if other properties exist
233938	-	2-Major	SPR	DELETE blob level (no data provisioned) returns error 4001
233965	-	2-Major	SPR	GET should return an error if both DQ name and InstanceId don't match a provisioned DQ
233970	-	2-Major	SPR	DELETE all instances of a not provisioned DQ returns 4001 if other DQ exists
233976	-	2-Major	SPR	PUT or XML update of a state property fails if state has been provisioned by blob
233980	-	2-Major	SPR	multiple properties with same name should be returned in a separate row
234072	-	2-Major	SPR	If dynamicquota is provisioned, GET of unknown quota returns http 500 internal server error
234080	-	2-Major	SPR	Xml not correctly logged when adding quota/state/dynamic quota to pool
234201	-	2-Major	SPR	Nothing logged when Fetching subscriber pools
234202	-	2-Major	SPR	Nothing is logged when fetching Pool members
234203	-	2-Major	SPR	xml is not properly logged for Fetch pool quota/state/dynamic quota
234205	-	2-Major	SPR	Fetch sub quota/state/dynamic quota, xml is not properly logged
234206	-	2-Major	SPR	all instances of same DQ/InstanceId should be deleted when DQ/InstanceId2 exists
234207	-	2-Major	SPR	all the info is logged when requesting specific field
234564	-	2-Major	SPR	Hss cores when receiving Sh messages
234722	-	2-Major	HSS	hss out-of-service when doing SDM provision interface performance test
235060	-	2-Major	SPR	SPR does not send PNRs for data of pool service indications
235285	-	2-Major	SPR	Adding a new Quota with WebCI is rejected if no quota already exists for the profile
235299	-	2-Major	SPR	WebCI: cannot add another quota after adding one
235306	-	2-Major	SPR	WebCI: http exception when displaying an existing quota (selected from the quota table)
235346	-	2-Major	SPR	deleting quota entity of type=quota with WebCI
235650	-	2-Major	Platform	[SDM]delete pool and update user profile at the same time, no PNR send out while both user and pool are subscribed
235771	-	2-Major	SPR	When SPR profile is updated, PNR pool data is incorrectly sent if AutoEnrollRemoveFlagOnUpdate is ON
235819	-	2-Major	SPR	REST: select quota or quota field by Cid should return all matching instances
235820	-	2-Major	SPR	REST: select quota or quota field by Type should return all matching instances
235851	-	2-Major	SPR	REST: insert a quota by name should return an error if type is not quota
235962	-	2-Major	SPR	REST: response for a select a quota field with field value

PR	CSR	Severity	Component	Title
235964	-	2-Major	SPR	REST: select a quota field by name with field value should only return the instance if type=quota
235969	-	2-Major	SPR	REST: select a quota field by name or type or cid with field value (no matching with provisioned value)
235976	-	2-Major	SPR	REST: DELETE quota by cid or type with multiple instances should delete all instances
235983	-	2-Major	SPR	REST: error code when Deleting quota field by type or cid and no instance exists
236127	-	2-Major	SPR	REST: the value is not returned when selecting a quota field
236193	-	2-Major	SPR	rel9.3.0: SNR messages are rejected with DIAMETER_UNABLE_TO_COMPLY error during database catch-up.
236253	-	2-Major	SPR	WebCI: selecting a quota displays "no entity"
236259	-	2-Major	Platform	rel9.3.0: SPR volatile data is out of sync, when it is updated after Geo-Red link is re-activated.
236854	-	2-Major	SPR	REST: Insert quota by name or by type updates existing quota with same name if a cid is defined
236897	1029274 1030452	2-Major	HSS	Lte-HSS process taking CPU 95% for 5 minutes and then restarted, generate a core
236947	-	2-Major	Platform	rel9.3.0: ProcessLog script does not stop automatically in case of multiple Geo-Red link failures.
237057	-	2-Major	HSS	With a lot of entries in smmoduleoption, HSS cores 5 minutes after a peer is disconnected
237407	-	2-Major	SPR	LTEHSS sometimes cores after a DB SWO (with traffic)
237870	-	2-Major	Platform	DAS cores in CsvLoggerProv.cpp during SWO
237847	-	2-Major	HSS	SDM sends PNRs with two same entities.
238207	-	2-Major	Platform	REMEDIATION - MySQL Enterprise
238907	-	2-Major	SPR	RAS service restarting when doing load provisioning.
238957	-	2-Major	SPR	PNR is not sent when db notification is received on blade not connected with remote peer
239879	1037030	2-Major	SPR	Ras needs to restart manually every 2 days.
240145	-	2-Major	SPR	SPR 9.3 - revert error codes
240146	-	2-Major	SPR	Deadlock RAS-DAS-PROXY
241150	-	2-Major	Platform	snmp configuration changes are not applied to snmpd process
241425	-	2-Major	Platform	DbxTool: same data in all output files if no DbxStartRange is configured
236337	-	2-Minor	SPR	error code when updating cid field of an existing quota
211656	-	3-Minor	Doc	sometimes manual DRM incorrectly shows inconsistencies for subscription between sites

PR	CSR	Severity	Component	Title
218839	-	3-Minor	Platform	when receiving a request for a pool with a field not defined in this entity, RAS cores
219919	-	3-Minor	Doc	rel9.0.0: Front-end blades have to be stopped before back-end blades are stopped/restarted.
223777	-	3-Minor	Platform	SPR migration script from 7.0.22/7.0.24 to 9.0 with -W creates idmap table with wrong schema.
227595	-	3-Minor	SPR	HSS enters overloaded control mode : Congestion Level : 1
228873	-	3-Minor	SPR	RAS.
232299	-	3-Minor	HSS	if remote servers are disconnected when ltehss is in congestion, ltehss is terminated after 5 min
232383	1017682	3-Minor	HSS	Lte-HSS coredump
232389	-	3-Minor	Platform	SCTP_CANT_STR_ASSOC alarm is not cleared
233056	-	3-Minor	SPR	GET dynamic quota returns "dynamicquota name" and "Name" fields
232957	-	3-Minor	System	rel9.3.0: If remote host IP is unreachable for DB extraction, we do not return any errors.
233041	-	3-Minor	Platform	rel9.3.0: "Service List" parameter value should not be empty in DBX tool.
234019	-	3-Minor	SPR	XML update of a property not provisioned returns error 1054
234579	-	3-Minor	SPR	SDM GUI doesn't support to show the quota with duplicated quota name
235430	-	3-Minor	SPR	REST: "http 500 Internal Server Error" error type should not be returned when resetting an unknown quota
235773	-	3-Minor	SPR	REST: "http 500 Internal Server Error" error type should not be returned when updating an unknown quota
236309	-	3-Minor	HSS	[OPMD]There is no PNR and RAR for active sessions on different MPE when SOC_TYPE is U_UNLIMIT
237995	-	3-Minor	Doc	Subscriber Provisioning User Guide changes
222489	-	5-Enhancement	SPR	Provisioning Logging Mechanism for SDM
224961	-	5-Enhancement	SPR	SPR DB Extraction Tool
226877	-	5-Enhancement	Platform	SDM Remediation - Build 9.1.1 on Remediated TPD
227328	-	5-Enhancement	SPR	enhancement of tungsten replication THL log files retention configuration
228245	-	5-Enhancement	SPR	Provisioning Row and Field level data for DynamicQuota and State data
228051	-	5-Enhancement	Platform	SPR security fixes for Bouygues and TMM
232395	-	5-Enhancement	SPR	SDM DAS blocking issue at 250-300 provisioning TPS
232974	-	5-Enhancement	Platform	Delete subscribers via provisioning in geo-config with WAN is down
233299	-	5-Enhancement	Platform	rel9.3.0: XML headers and life fields should be removed from DBX tool output data file.
234710	-	5-Enhancement	System	Change visible copyright notices from Tekelec to Oracle for rebranding

PR	CSR	Severity	Component	Title
234712	-	5-Enhancement	System	Change Logo from Tekelec to Oracle
234717	-	5-Enhancement	SPR	Adding source IP address to REST Provisioning Logs
239464	-	5-Enhancement	HSS	Limit the virtual memory size occupied by LteHSS to about 3G

Table 8: Resolved PRs in SDM Release 9.3

Customer Known PRs in SDM Release 9.3

Note: Known PRs are sorted in ascending order by severity and then by PR number.

SDM Release 9.3 Customer Known PRs

PR	CSR	Severity	Component	Title	Customer impact
232871	1021252	1-Critical	Platform	rel9.3.0: The kernel blocked task causes the system's crash.	temporary lockup causing major outage to customer site.
217726	-	2-Major	SPR	DAS cores when the max nbr of users allowed by the license is reached and traffic to create new users runs	
223556	-	2-Major	Platform	DPC cores on reference site after removing active SC on replica site	
226526	1003598	2-Major	Platform	DAS cores caused by high number of templates	Provisioning is affected
232711	-	2-Major	SPR	XML insert request of a dynamic quota with "where" clause [R-228245]	
232981	-	2-Major	SPR	CLARO - SPR AutoEnrollment and AutoEnrollmentCleanup feature	
233661	-	2-Major	Platform	DAS cores on STBY blade when STBY is starting / or DataAccess restarts and provisioning traffic is running on Active blade	
235292	-	2-Major	SPR	error message when modifying an existing quota with WebCI (type is empty)	

PR	CSR	Severity	Component	Title	Customer impact
235412	-	2-Major	SPR	XML command to reset a quota with Cid returns an error	
237393	-	2-Major	SPR	PUA DIAMETER_TRANSPARENT_D ATA_OUT_OF_SYNC errors caused by SPR	
237615	-	2-Major	SPR	SNRAutoEnrollment: when SNR with dataindication is received on STBY blade, SPR returns error 5001	
237755	-	2-Major	SPR	Multiple HSS cores during the SPR sanity	
229761	-	3-Minor	Platform	Remove obsolete component	
233057	-	3-Minor	SPR	PurchaseDateTime field is returned in GET dynamic quota response	
235314	-	3-Minor	Customer Doc	Provisioning update required for addToSet / RemoveFromSet with SPR SOAP/XML	
235441	-	3-Minor	SPR	REST: field tags in response to a GET request	There is no impact if the customer use the old format.
236875	1027696	3-Minor	SPR	Database inconsistency	When running script to check for subscriber corruption (subscribers present in some table and not some tables), the output is showing lots of subscriber are corrupted. Then customer cannot delete, update re-create these subscribers.

Table 9: Customer Known PRs in SDM Release 9.3

Appendix 1

HssSPRConfig changes

The HssSPRConfig was changed. The configurable ForceOnReferenceType attribute has been added to the WebCI HssSPRConfig table.

This is an enhancement as this attribute had to be changed manually and the change was not persistent through a restart.

These values can also be configured in the CLI: HSS []> HssSPRConfig [].

Details of these changes will be added to the SDM 9.3.2 customer documents.

HssSPRConfig	
Attribute	Value
SPRRepDataCompressionLevel	Z_NO_COMPRESSION
PURAutoEnrollment	Off
SNRAutoEnrollment	Off
XMLAutoEnrollment	Off
AutoEnrollmentCleanup	Off
TimeoutOfAutoEnrolledProfile	60
PeriodicCheckStartTime	00:00:00
CheckingPeriod	0
DelayedSendRequestTimer	0
ReceiveMessageQueueSize	12000
ForceReadOnMaster	On
MNCCodeLength	2
RESTCDataSectionEscaped	Off
RESTIgnoreUnknownBody	Off
RESTIgnoreContentType	Off
RESTIgnoreOpaqueDataMismatchName	Off
RESTIgnoreAcceptHeader	Off
RESTTransactionCommitTimeout	100
RESTTransactionMaxRequest	10
HttpDisablePlus	Off
HttpDoubleEncoding	Off
HttpEscaping	On
HttpChunkedTimeout	0
AutoEnrollRemoveFlagOnUpdate	Off
ForceOnReferenceType	Force_SNR_UDR_Only

The following ForceOnReferenceType values may be selected in the drop-down:

Value	Description
Force_NONE	Default. Do not force any select requests.
Force_All	Forces an update on all types of select request. This includes PNR, PUR, SNR and UDR.
Force_PUR_Only	Forces a select on PUR messages only.
Force_SNR_UDR_Only	Forces a select on both SNR and UDR messages.
Force_PUR_SNR_UDR_Only	Forces a select on PUR, SNR and UDR messages.

Appendix 2

XML request handling in the SPR – behavior change in SDM release 9.3.1

In SDM 9.3.1 XML requests in the SPR are handled differently to the way they were in 9.0.5. This is explained below and the figures show XML request handling in 9.0.5 and 9.3.1.

SDM 9.0.5

In SDM release 9.0.5, all requests are multiplexed into one single communication session between the SOAP server and the DAS. Because of this there are no limitations with the number of supported endpoints (provisioning clients).

Provisioning is slow because there is a single communication session and queue and also because requests are processed one by one.

This results in a provisioning throughput limitation.

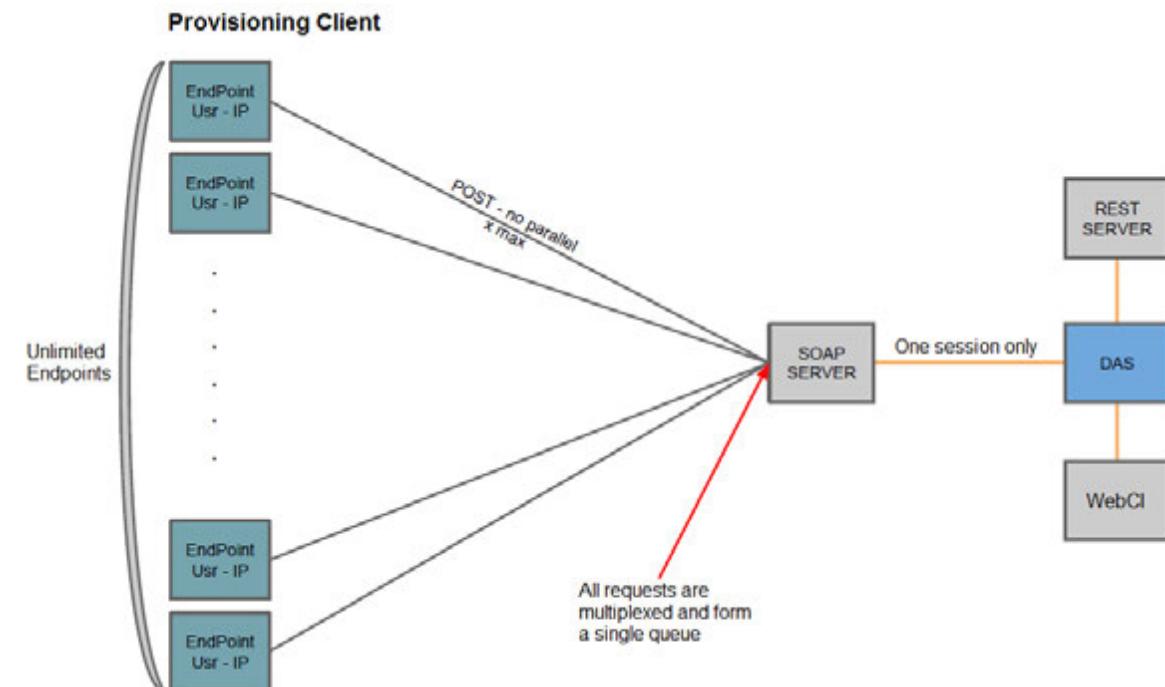


Figure 1 SDM 9.0.5

SDM 9.3.1

In SDM release 9.3.1, the source or “provisioning client”, which consists of an IP address and a user, is the key factor. The SOAP server collects all the requests into a single group. Each group is queued and processed with up to 6 requests in parallel.

This new design greatly improves the system throughput. However, it also limits the number of provisioning clients (endpoints) to 7.

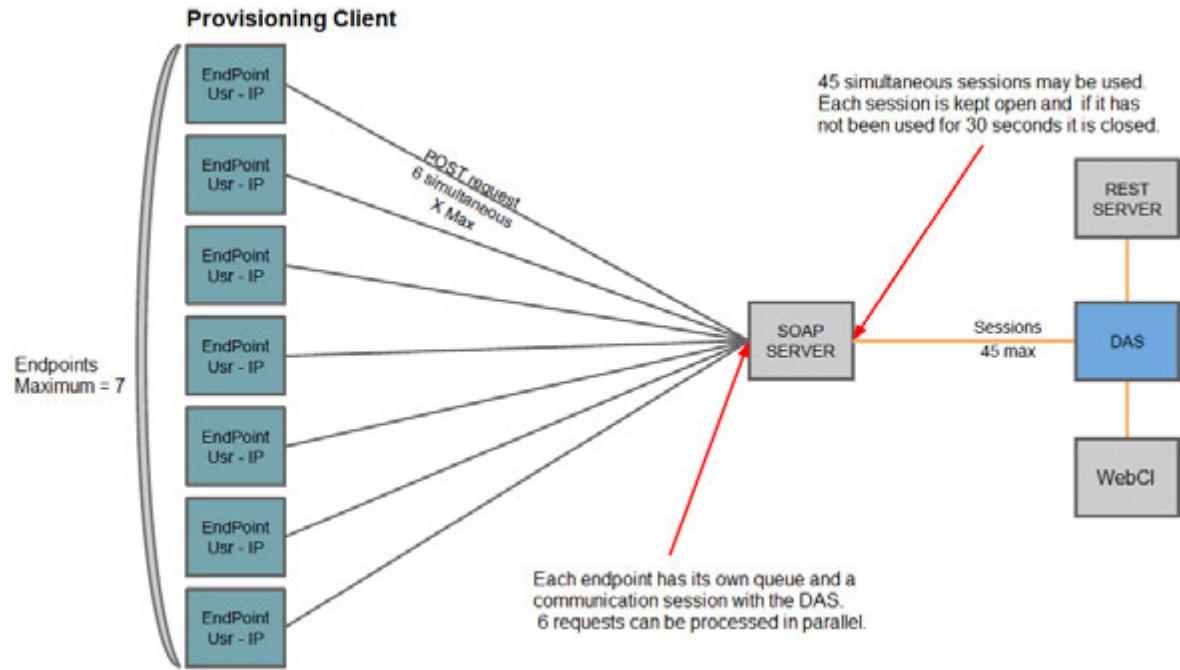


Figure 2 SDM 9.3.1

We recommend the following for SDM release 9.3.1:

- Limit the number of endpoints (provisioning clients) to 7. If there are more than 7 then error 7058 will be displayed.
- Limit the number of parallel requests in a single endpoint (provisioning client) to 20. If there are more than 20 then processing will be slow.
- In order to increase performance use multiple endpoints (provisioning clients) with different users or IP addresses.

Appendix 3 – Note regarding the NAI

In the SDM it is possible to provision subscribers using the Network Access Identifier (NAI) as a primary key. However, multiple NAIs is not supported.

The NAI must be constructed in the format `username@domain`. The following examples outline supported NAIs which align to this format:

- `joe@example.com`
- `fred@foo-9.example.com`
- `jack@3rd.depts.example.com`
- `fred.smith@example.com`
- `fred_smith@example.com`
- `nancy@eng.example.net`
- `alice@xn--tmonesimerkki-bfbb.example.net`

Alarms added with patch 13

A number of new alarms have been added to the SDM with patch 16 in order to notify network operators about tungsten replication issues. The issues were reported in tungsten logs and status but reports had to be manually generated. Now the network operator can view the alarms raised in the SDM alarm panel.

In a single shelf system the active BE node starts a master replicator to store transactions for slave (standby BE).

The standby BE starts a master replicator (even though it's not yet used, we need to start it for an eventual switch-over) and a local slave replicator (to get transactions from the active BE).

In a geo-redundant system the active BE node starts a master replicator to store transactions for the slave (standby BE and geo-site active BE) and a remote slave replicator (to get transactions from the geo-site active BE).

The standby BE starts a master replicator (even though it's not yet used, we've to start it for an eventual switch-over) and a local slave replicator (to get transactions from the active BE)

Each and every replicator service (master, local slave or remote slave) will have a separate alarm. There are a maximum of 2 replicator services per BE node: master and local/remote slave.

4051 - Master replication service is not operational**Alarm Group**

Framework

Severity

Minor

Description:

The master replication service is not operational.

Effect

This alarm is raised when the master service is not operational (offline) for longer than one minute. This alarm can be raised by all backend nodes.

Action

None, the alarm will be cleared when the master service goes online.

Clear

The system will automatically clear the alarm once the condition has been rectified.

4052 - Replication service with active backend is not operational**Alarm Group**

Framework

Severity

Minor

Description:

The replication service with the active backend is not operational.

Effect

This alarm is raised when the local slave service is not operational (offline) for longer than one minute. This alarm can be raised by all standby backend nodes.

Action

None, the alarm will be cleared when the local slave service goes online.

Clear

The system will automatically clear the alarm once the condition has been rectified.

4053 - Replication service with other georedundant site is not operational**Alarm Group**

Framework

Severity

Minor

Description:

The replication service with the active backend is not operational.

Effect

This alarm is raised when the remote slave service is not operational (offline) for longer than one minute. This alarm can be raised by all active backend nodes in the georedundant system.

Action

None, the alarm will be cleared when the remote slave service goes online.

Clear

The system will automatically clear the alarm once the condition has been rectified.

4054 - Replication latency is over predefined threshold

Alarm Group

Framework

Severity

Warning

Description:

The replication service with the active backend is not operational.

Effect

This alarm is raised when the local or remote slave latency crosses the predefined threshold for longer than one minute fifteen seconds. This alarm can be raised by all backend nodes that have a slave replicator.

Action

None, the alarm will be cleared when the local or remote slave latency drops below the predefined threshold.

Clear

The system will automatically clear the alarm once the condition has been rectified.

Replication Threshold Definition

The replication latency threshold (expressed in seconds) must be defined in the /etc/sysconfig/blue file as follows:

- LOCALREPLICATIONLATENCYTHRESHOLD = 5.0
 - Local replication latency threshold (default 5.0)
- GEOREPLICATIONLATENCYTHRESHOLD = 10.0
 - Geo replication latency threshold (10.0)

Theoretically, the local latency (between active and standby backends) should be low due to a fast data transfer via backplane. The geo replication latency depends on the network latency between the two georedundant sites. Once the threshold settings are applied, a "service blue restart" is required. The threshold value is expressed with one digit after the decimal point.

The replication latency is the highest latency value taken from 12 multi-thread queues used for bluedbvol. All other queues are filtered out (bluedb and bluealm).

If the threshold value is invalid (for example: 5.c), the DPC can not be started. The value must be corrected and the node restarted.