Agenda

- Adhoc
- Daily
- Weekly
- Monthly

SAP HANA Check using SAP HANA Studio

Adhoc Performance -> **Blocked** Transactions / Job Process / Sessions(RUNNING)

Daily Performance -> Sessions <-> Thread에서의 부하세션확인

-> Block Transactions : Blocking 세션의 식별

Landscape -> Services -> Active 확인

Week OOM Tracking & Monitoring & Analysis !

cdtrace -> cd DB_<SID> -> index*alert*.trc의 최근 에러코드 확인

일별 로그백업 사이즈 Trend을 확인

Monthy SPS/MR패치검색

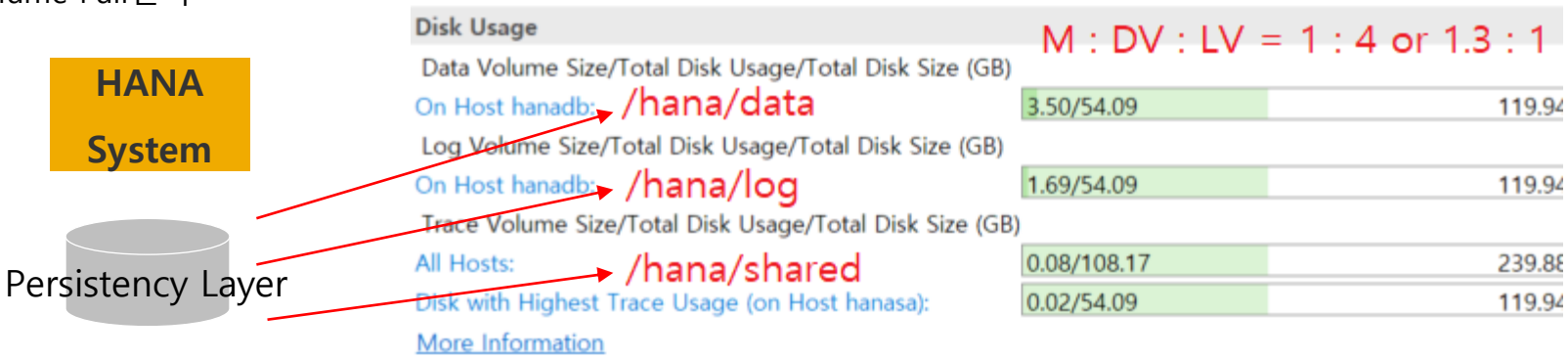
Year SPS/MR패치검색 적용검토, SR시스템일 경우 Takeover을 실행

부하세션이란? CPU or Memory을 많이 사용하는 HDB Session

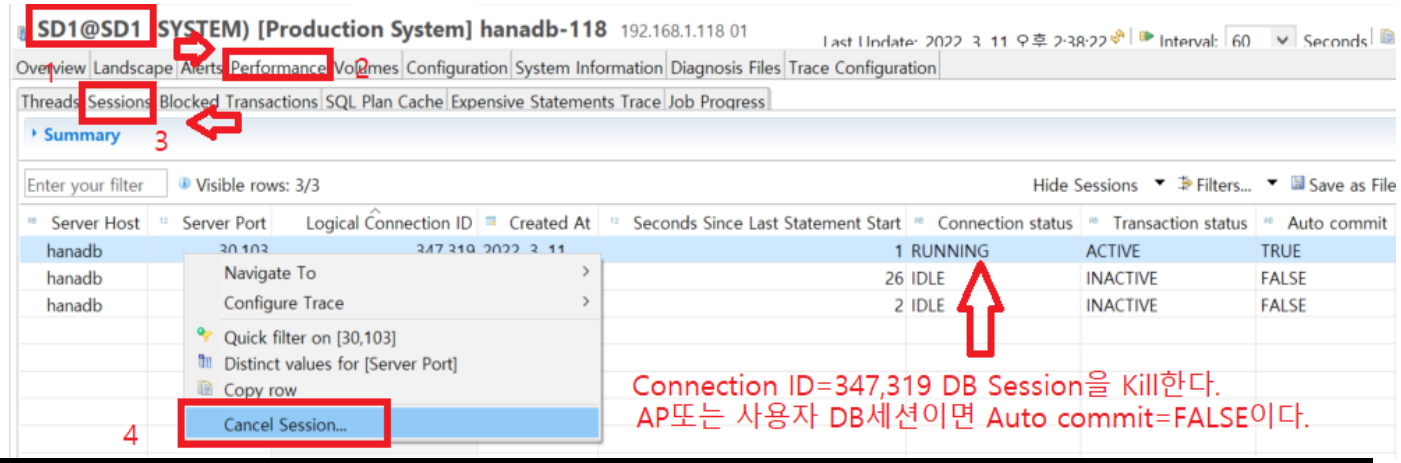
Tip!> 1969700 – SQLStatement Collection for SAP HANA의 활용

Daily - Check

- **SAP HANA File System Size Check : 보통 Log Full인경우가 가장 많음**
- Log Segments Full 인지 /hana/log 운영기는 log_mode=normal 이므로 /hana/log가 많이 사용될 수 있음.
- Data Volume Full인지

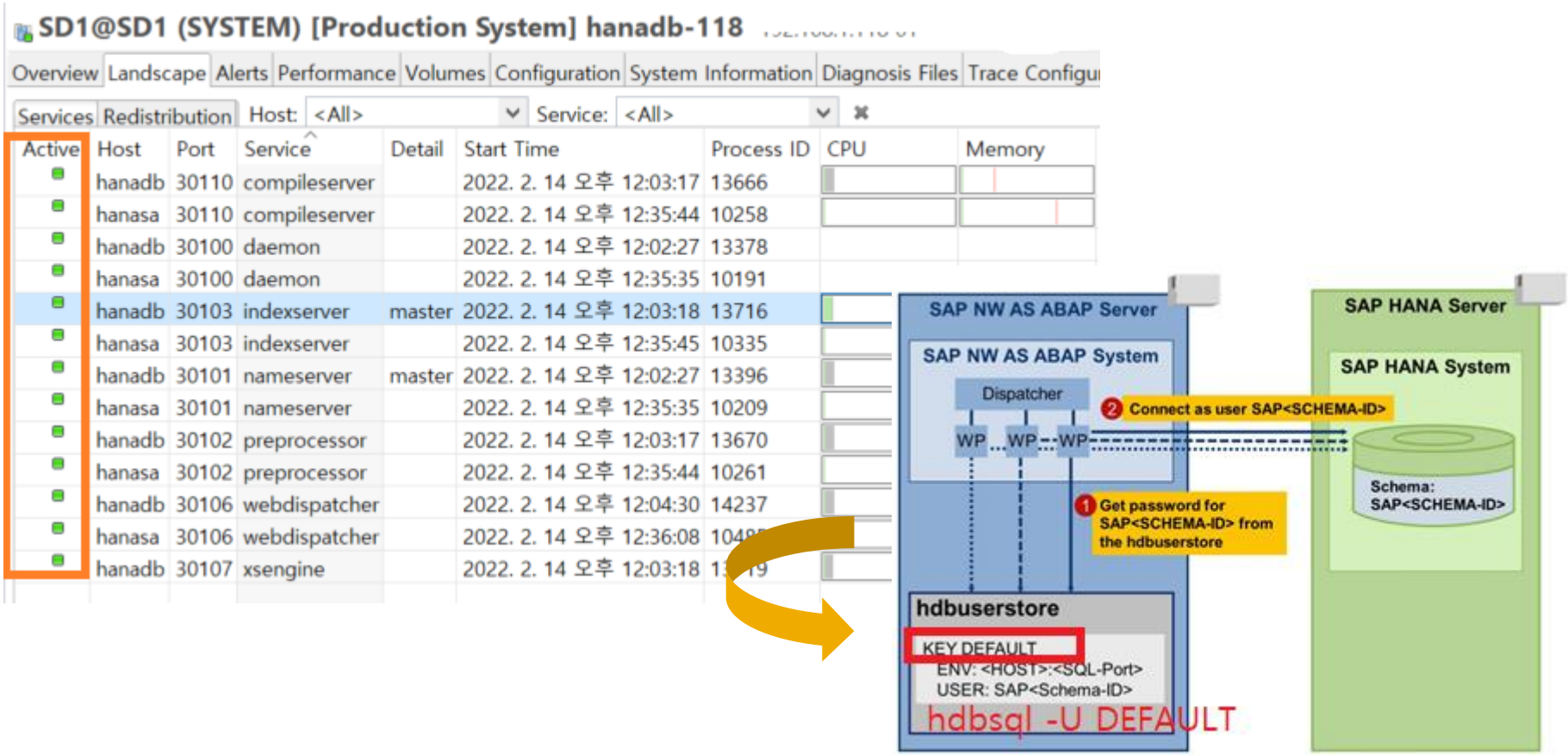


- **Tenant DB Performance Check : DB Session에서 실행되며 CPU/Memory사용이 많음.**
- Ex: SD1@SD1 Tenant의
- Administration Console
- -> Performance
- -> Sessions/BLocked



Daily - Check

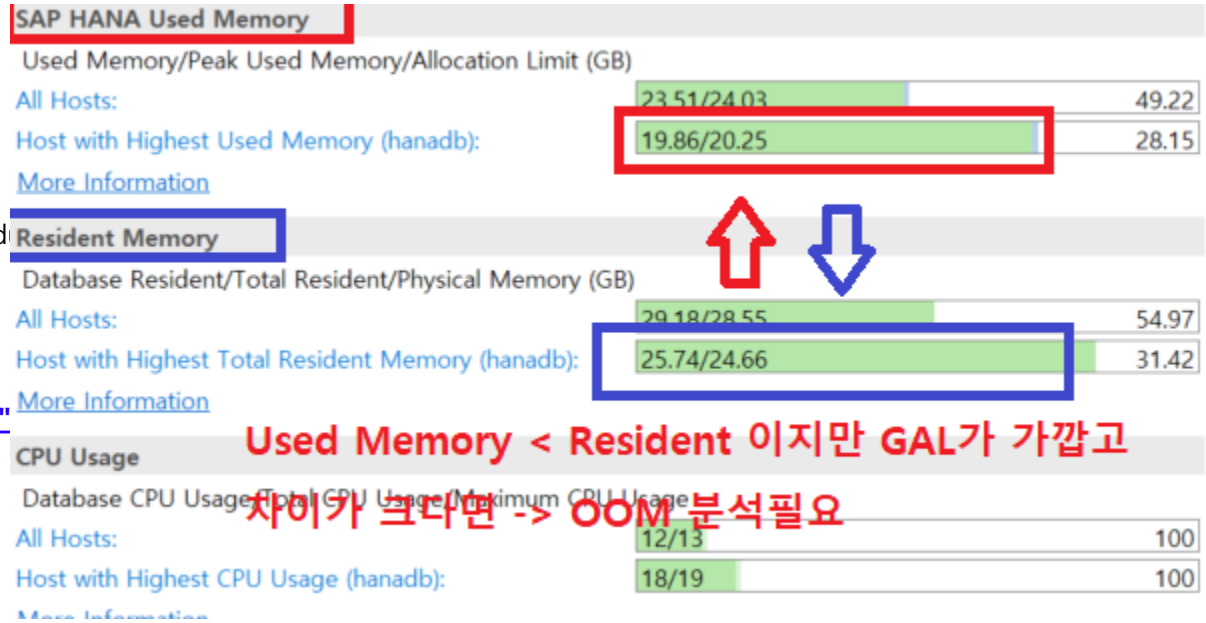
- **SAP HANA Services가 Active로 운영되고 있는지**
- Services에 문제가 없는데도 HDB 사용자 접속에 문제가 있다면
- **AP에서 hdbsql –U DEFAULT**을 실행하여 AP:ABAP Server에서 HDB로 접속이 되는지 확인한다.



Weekly - OOM HANA Check

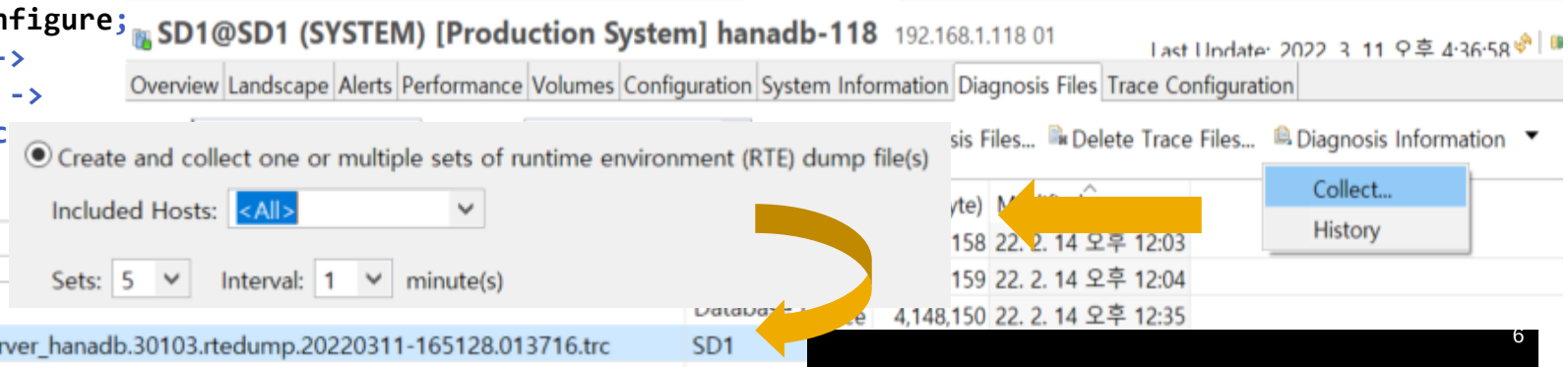
> SCN_Doc_Automatically_Analyze_HANA_Issues_with_SAP_HANA_dump_analyzer.pdf
> https://blogs.sap.com/2019/01/24/analyzing-sap-hana-runtime-dumps-with-sap-hana-dump-analyzer/

- **HANA Used Memory 분석**
  - OOM등으로 인한 GC메모리가
  - Used Memory에 점유하고 있는지
  - 참조> 1813020 - How to generate a runtime d on SAP HANA
  - 2400007 – FAQ: SAP HANA Runtime Dumps
  - SAP HANA Studio 을 이용
  - `call "SYS"."MANAGEMENT_CONSOLE_PROC" ('runtimedump dump',`
  - `'hanadb:30103',?)`



- **OOM 분석을 위한 설정과 SAP HANA dump analyzer의 사용**
  - OOM분석을 위한 tracking 설정 (ex: indexserver_wdflbmt7346.30003.rtedump.20201212-172619.0020533.oom.trc)

```
alter system alter configuration ('global.ini','SYSTEM')
  SET ('resource_tracking','enable_tracking')='on', ('resource_tracking','memory_tracking')='on'
 with reconfigure;
. cdtrace ->
  DB_<SID> ->
  *oom*.trc
```



Weekly - HANA Check (계속)

- **운영기일 경우 Log Volume의 Trend 분석**
- → Size of recent Log Backups : 일자별 시간대별 Log Backup량을 분석

```
SELECT  TOP 100 t1.BACKUP_ID,
t1.ENTRY_TYPE_NAME,  t2.service_type_name,
t2.source_type_name,
to_decimal(t2.BACKUP_SIZE/1024/1024/1024,10,4) as
Backup_Size_GB,
t1.UTC_START_TIME, t1.UTC_END_TIME
FROM SYS.M_BACKUP_CATALOG t1,
     SYS.M_BACKUP_CATALOG_FILES t2
WHERE t2.BACKUP_ID = t1.BACKUP_ID
  AND t1.state_name = 'successful’
  AND (t1.ENTRY_TYPE_NAME = 'log backup')
ORDER BY t1.UTC_START_TIME desc;
```

Month / Year - HANA Check

- **2.0 SPS050 / MR Patch 검색과 Patch 적용계획**
- **컬럼테이블 대상중 파티션대상 식별 : Alert 27, Alert 20, Alert 17**
- 1909763 - How to handle H

  ANA Alert 17:

  'Record count of non-partitioned

  column-store tables' -> 제한: 컬럼테이블은 20억을 초과하여 저장 안됨.

- **Data / Log Volume의 증가이력**

  ALTER SYSTEM RECLAIM DATAVOLUME 120 DEFRAGMENT; /* 105~120 */

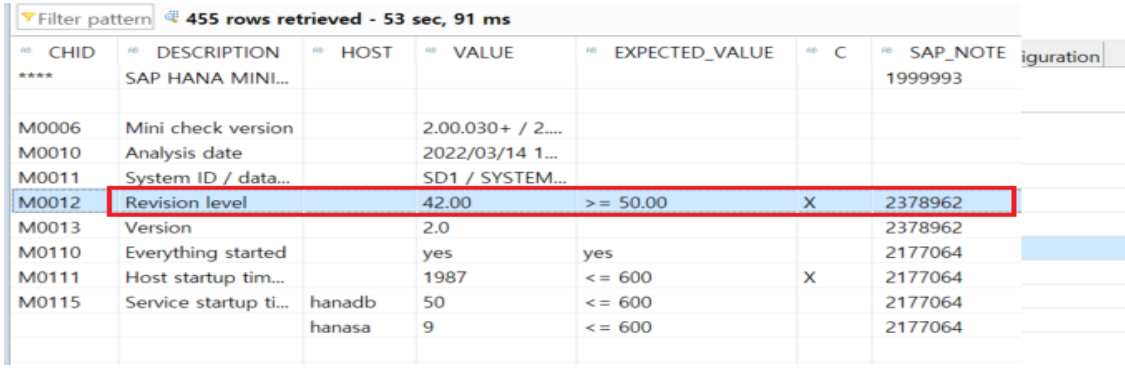
  2910857 - Increase Data Volume free space 2499913 - How to shrink SAP HANA Data volume size

  2910794 - Datavolume size started to grow

- **MiniCheck 2.00.030+ :**
- 1969700

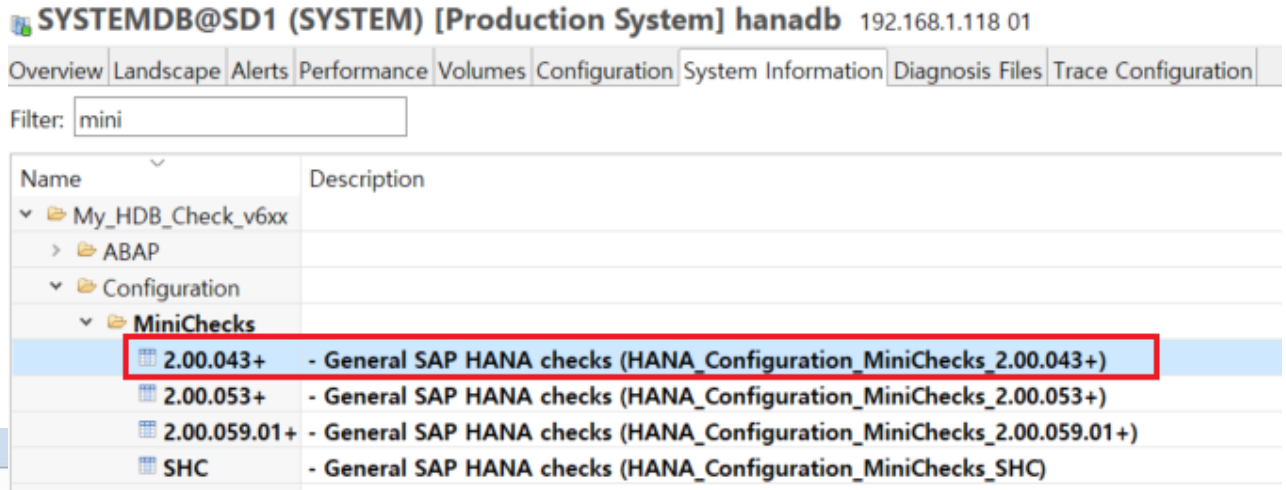
  SQL Statements에서

  SQLStatements_EarlierRevisions.zip



Month / Year - HANA Check (계속)

- **MiniCheck 2.00.043+** SQLStatements.zip



- **MiniCheck Security**

Raw Data | Distinct values

Filter pattern | 94 rows retrieved - 267 ms

CHID	DESCRIPTION	VALUE	EXPECTED_VALUE	C	SAP_NOTE
****	SAP HANA SECURITY MINI CHECKS				2159014
S0010	Analysis date	2022/03/...			
S0011	Database name	SD1			
****	USERS				
S0110	CATALOG READ privilege granted to current user	yes	yes		1640741
S0120	SYSTEM user deactivated	no	yes	X	
S0130	Non-technical users without password lifetime	none	none		
****	PRIVILEGES				

- 해당 Notes을 참조 Expected_Value가 되도록 설정하고 변경