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## **What's New in OSDI**

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Bug Diagnosis and Escalations

# OSDI “What's New” Agenda

- OSDI component overview
- OSDI version 1.2.0
- *Hidden* parameters and enhancements
- Q&A



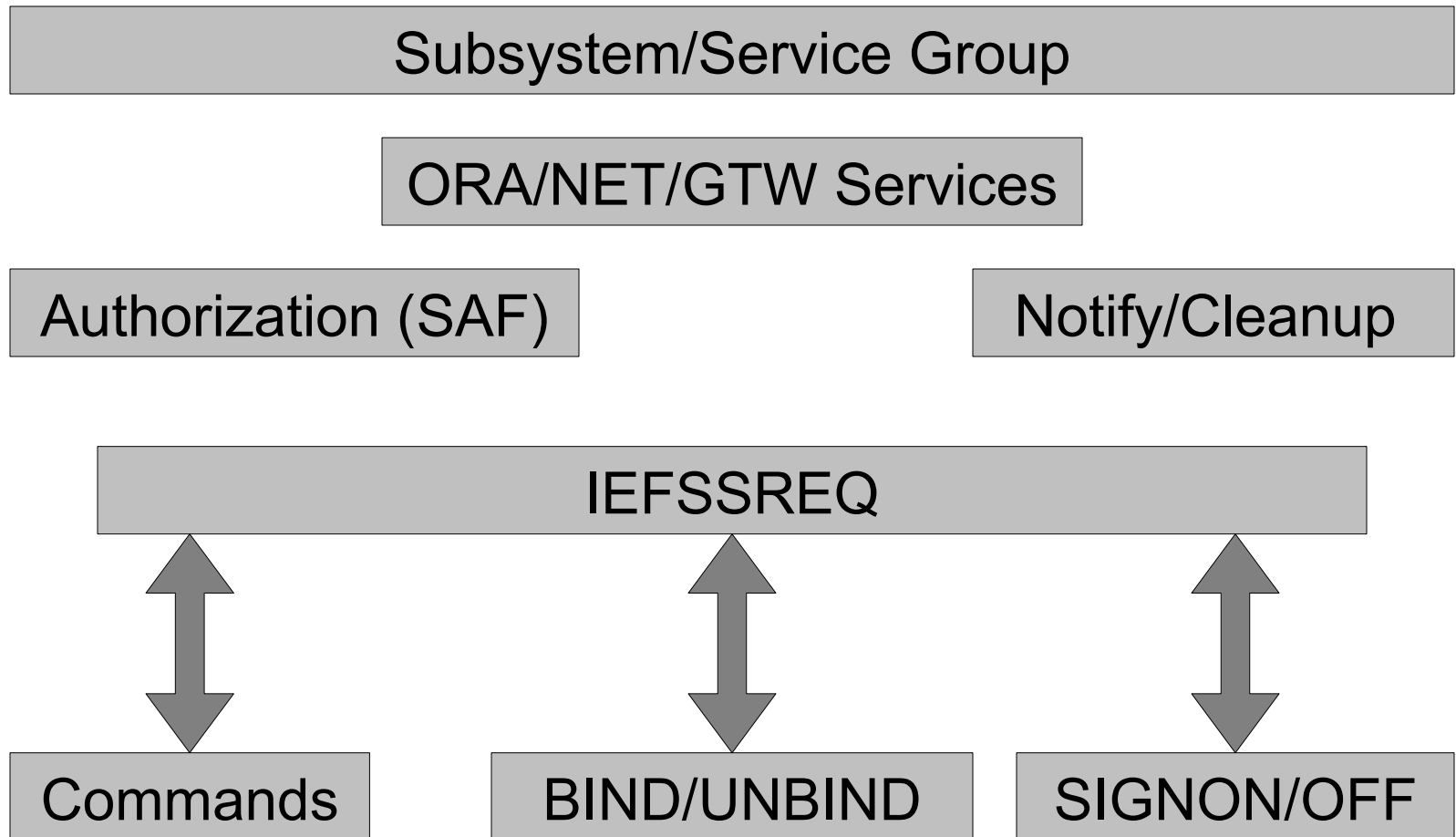
# OSDI Component Overview



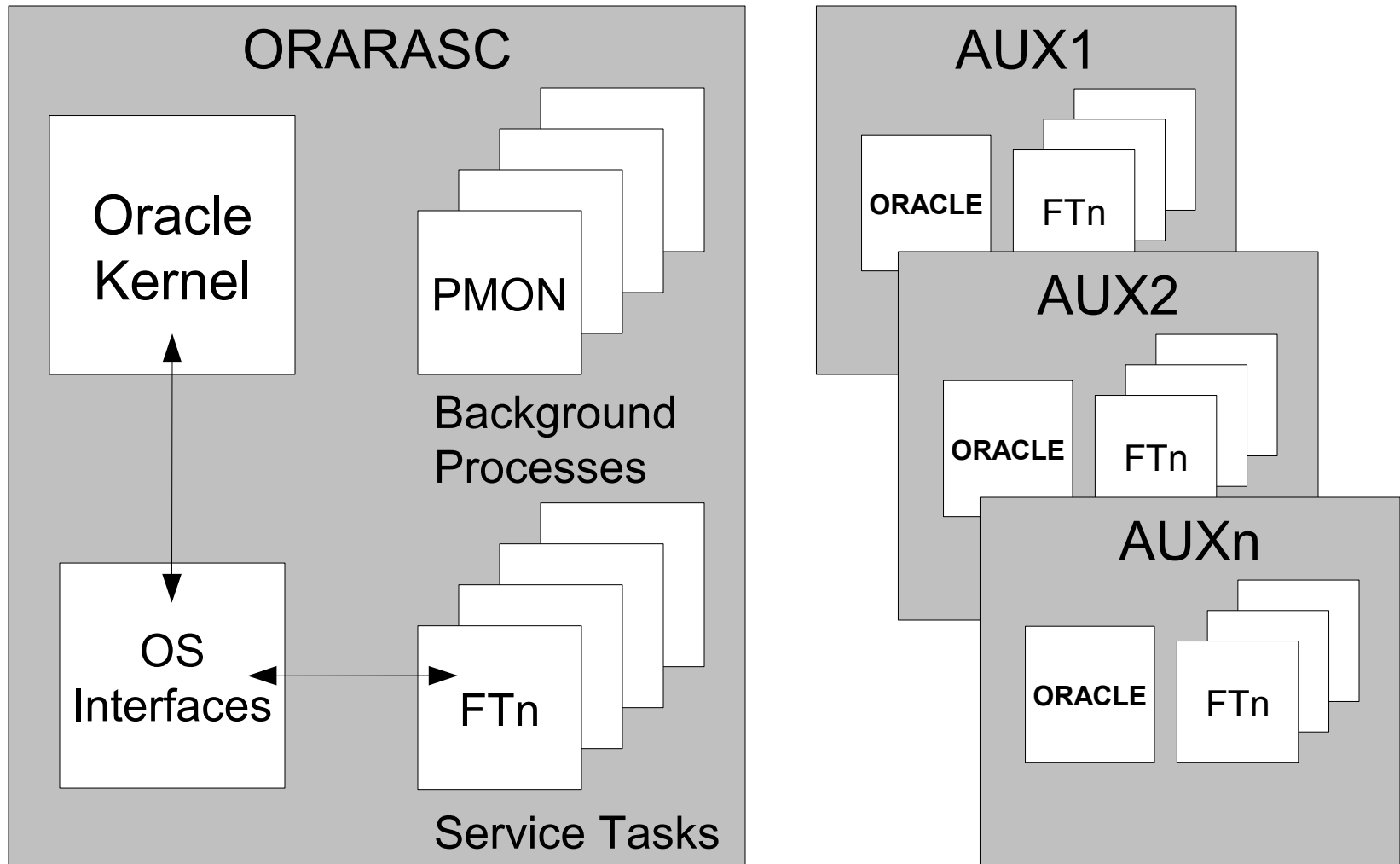
# OSDI Components

- OSDI comprises three major components
  - Subsystem (SUBSYS/MIS)
    - Common management layer
  - Server Region controller (SVRREG/MIR)
    - Provide underlying z/OS services
    - Manage RDBMS/Gateway sessions
    - Coordinate multiple address spaces
  - Network service (NET/MIN)
    - OSDI Listener
    - Interface between TCP/IP and RDBMS/Gateway
    - WLM support
    - zIIP support

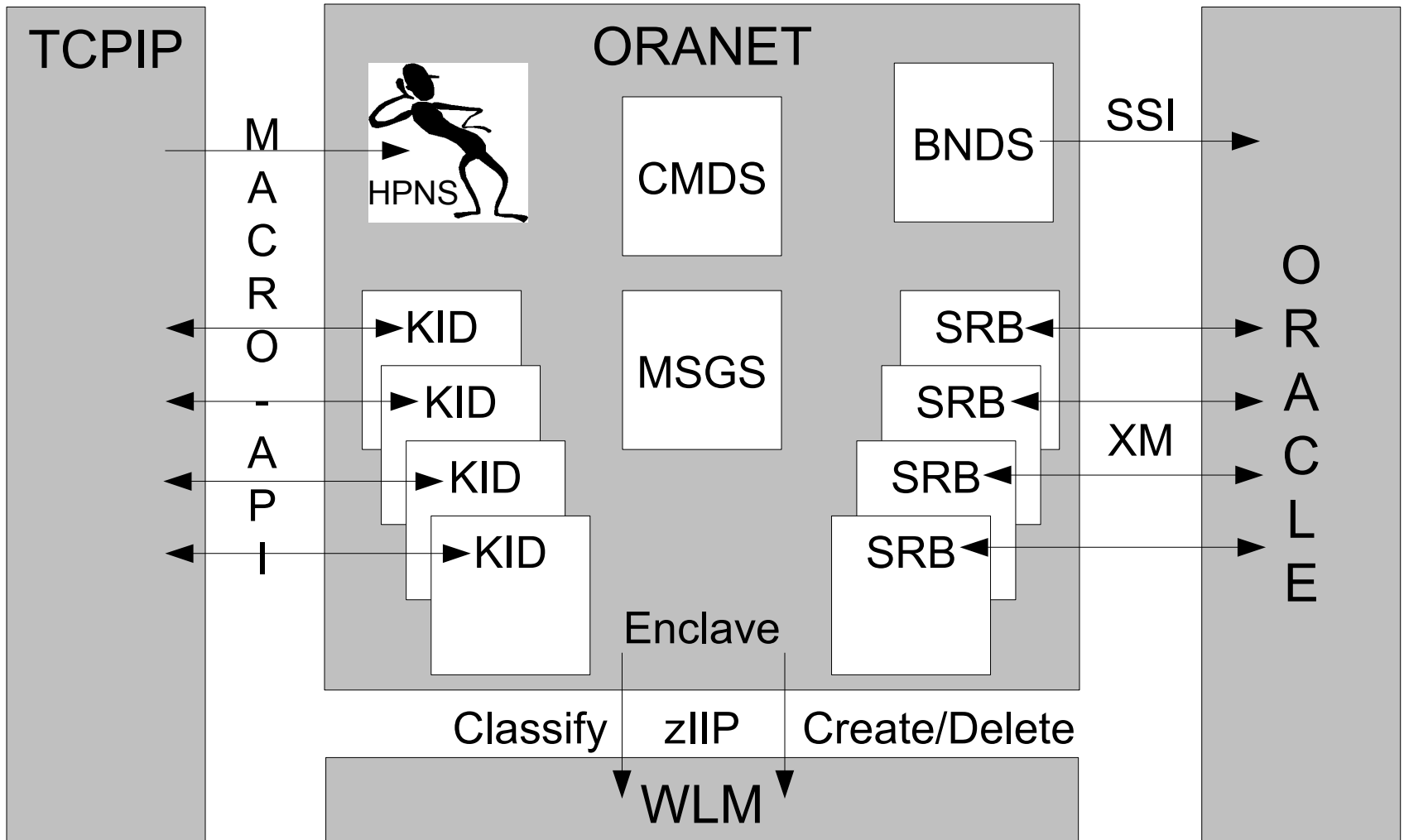
# OSDI Subsystem



# Server Region Controller



# Network Service





# OSDI 1.2.0



# OSDI 1.2.0

- Back to IDTF (TSO XMIT/RECEIVE) format
- Oracle/Gateway release independent
  - Works with Oracle 10.2.0.3, 10.1.0.5 and 9.2.0.8
  - Works with TG4DB2 10.2.0.3 and 10.1.0.5
- Separate release schedule/versioning
- Modification level (1.2.x) updated independently for each OSDI component
- Overall version reflects the highest component level
- Version, link date and most recent fixes bugs displayable
- To be released under existing OSDI place-holder patch -
  - Bug: 6138068
  - Abstract: PDS XMIT DISTRIBUTION OF LATEST OSDI MODULES

# OSDI Component Version Information

- Subsystem
  - SHOW VERSION command
  - Displays -
    - Component version
    - Link date
    - Bug fixes
  - Example -

PVS8 SH VER

MIS0310I Subsystem service version:1.2.00

MIS0311I Link Date:04/18/08 Time:11.18

MIS0312I Fixes Applied:6138068

# OSDI Component Version Information

- Server Region/Network
  - DISPLAY VERSION command
  - Displays -
    - Component version
    - Link date
    - Bug fixes
  - Example -

F ECS1,DIS VER

MIR0510I Server service version:1.2.00

MIR0511I Link Date:04/18/08 Time:11.18

MIR0512I Fixes Applied:6138068

# *Hidden Parameters and Enhancements*



# OSDI Subsystem Initialization

- INITPARM('dataset[(member)][,VOL=volser]')
- Bug: 5731985  
Abstract: ENH: ALLOW DATASET NAME AND VOLUME IN SUBSYSTEM INITIALIZATION PARAMETER STRING
- APAR: OA18992  
Abstract: USER CATALOGS MAY BE DAMAGED IF THEY ARE ACCESSED DURING THE IPL PROCESS PRIOR TO MASTER SCHEDULER INITIALIZATION COMPLETING
- APAR: PK34019  
Abstract: ALLOCATION OPTIMIZER INTERCEPTS EOV CONDITIONS IN THE CATALOG ADDRESS SPACE

# OSDI Subsystem Initialization

- INITPARM('dataset[(member)][,VOL=volser]')

- Example - SYS1.PARMLIB(IEFSSN00)

```
SUBSYS SUBNAME(OSDI)
INITRTN(ORASSINI)
INITPARM('ORACLE.PARMLIB(SUBSYS00),VOL=ORA001')
```

- Workaround - SYS1.PARMLIB(IEFSSN00)

```
SUBSYS SUBNAME(OSDI)
INITRTN(ORASSINI)
INITPARM('SYS2.ORACLE.PARMLIB(SUBSYS00)')
```

# OSDI Subsystem Commands

- DEFINE/ALTER SERVICE command
  - Bug: 2314765  
Abstract: ENH: NEED ABILITY TO SPECIFY JCL PARAMETERS IN THE SERVICE DEFINITION
  - Parameter - JCLPARM('parms')
  - Specify override parameters for a service procedure
  - Default: No JCL override parameters
  - Added to internal z/OS START command -
    - START *proc.service,parms*
    - START *proc,JOBNAME=jobname,parms*
  - Example -
    - ALTER SERVICE PVN4 JCLPARM('MSGCLASS=Z')



# OSDI Subsystem Commands

- SHOW SERVICE command
  - Bug: 6973401  
Abstract: ENH: OSDI SUBSYSTEM 'SHOW SERVICE' DISPLAY FORMATTING IMPROVEMENTS
  - Display -
    - Complete PARM value
    - Complete JOBACCT value
    - JCLPARM
  - Group related parameters
  - Change ID to SID
  - Remove MODE and SYSTEMS (planned, but never implemented)

# OSDI Subsystem Commands

Bug: 6973401

Abstract: ENH: OSDI SUBSYSTEM 'SHOW SERVICE' DISPLAY  
FORMATTING IMPROVEMENTS

Current OSDI -

PVS4 SH SVC PVN4

```
MIS0194I Service PVN4      Type NET  (PVEAL Test Net) 996
      Proc=ECN4PV1 , ID=PVN4      , Parm='HPNS PORT(1634) OSUSER ENCLA
      Jobname=ECN4      , JobAcct=(no accounting)
      MaxAS=001, Mode=LOCAL  , Systems=(none)
```

OSDI 1.2 -

PVS7 SH SVC PVN7

```
MIS0194I Service PVN7      Type NET  (PVEAL Test Net) 998
      SID=PVN7      MaxAS=001 Proc=ECN4PV1 Jobname=ECN4
      JobAcct=(no accounting)
      JCLParm=(no JCL override parameter)
      Parm='HPNS PORT(1634) OSUSER ENCLAVE(CALL)'
```

# OSDI Server Region Parameters

- `ALERT_ROUTCDE(route-code[,route-code,...])`
  - Bug: 6057342  
Abstract: ENH: NEED AN OPTION TO WRITE ALL ALERT LOG MESSAGES TO THE OPERATOR CONSOLE
  - Write alert log messages to the operator console/joblog
  - Default: Alert log only
  - *route-code*: List of WTO routing codes (1 - 29, 65 - 128)
  - Monitor Oracle using automated operations products
  - Identified via message MIR0623I
  - Includes normal archive completion messages (ENH Bug 3221759)
  - Excludes IDCAMS messages

# OSDI Server Region Parameters

- `ORACLE_SID(SVCNAME | SID)`
  - Bug: 6045300  
Abstract: NEED SUPPORT FOR EXTERNAL AND INTERNAL SIDS TO BE DIFFERENT
  - Sets environment variable `ORACLE_SID`
    - Note: Not valid in `ORA$ENV` (MIR0038W)
  - Default: OSDI service definition SID (external SID)
  - `SVCNAME`: OSDI service name
    - Only for backwards compatibility with 10.1 and 9.2
  - `SID`: Sets the internal SID (`V$INSTANCE.INSTANCE_NAME`)
    - Used in RAC fail-over environments
    - Same external (network) SID on each LPAR

# Data Pump Export

- Data Pump Export performance improvements
  - Bug: 6327764  
Abstract: ENH: IMPROVE PERFORMANCE OF DATA PUMP EXPORT TO HFS
  - Data Pump Export (expdp) file processing is performed by the Oracle database server
  - Support direct file handling by Data Pump auxiliary processes (DWnn subtasks)
  - Minimize file request queuing on the OSDI UNIX services task (MIRUXT)

# Generic Listener

- Generic listener support
  - Bug: 2640309  
Abstract: ENH: GENERIC LISTENER SUPPORT
  - Enabled via new (*hidden!*) Server Region parameters
  - Oracle 10.2.0.3 only. Release Status: *Early Install*
  - Contact Oracle Support if interested in testing. Reasons -
    - Terminate spinning network session (ENH Bug 3675452)
    - Maintain network sessions across a Listener restart/crash
    - Dynamically change instance service name(s) -
      - ALTER SYSTEM SET SERVICE\_NAMES=(*name*,...)
    - Data Guard Broker
    - SSL
    - Dedicated server

# zIIP Support

- zIIP scheduling and reporting
  - Bug: 5878590  
Abstract: ENH: SUPPORT FOR SCHEDULING WORK ENTERING FROM TCP ON A ZIIP
  - Remote sessions only (OSDI or Generic Listener)
  - Scheduling -
    - 100% enclave SRB work on a zIIP
  - Reporting -
    - SMFDTAI : Time spent on a zIIP  
TOD clock format normalized to standard processor speed
    - SMFDTAO : Time spent on a standard processor for zIIP-eligible work.
  - Previously released under bug 5949152 (minus SMF reporting)

# z/OS Certification

- Problems encountered during certification -
  - Unexpected access register contents after calling a z/OS function
    - Bug: 6034637  
Abstract: ABEND S0C4 IN MIRPOST DURING DATABASE STARTUP ON Z/OS 1.8
    - Bug: 4117300
    - ABEND S0E0-2D DURING RAC DATABASE STARTUP AFTER Z/OS-1.6 UPGRADE
    - Bug: 4050855  
Abstract: ABEND S0E0-2D DURING DATABASE STARTUP AFTER Z/OS 1.6 UPGRADE
  - Control returned from LE in Primary ASC mode
    - Bug: 5561351  
Abstract: ABEND S0C4 IN KSUPUCG AND ORA-600 [KSSRMP1]



# z/OS Certification

- Prevention of future z/OS upgrade/certification problems -
  - Run the Oracle kernel in Primary ASC mode
  - Switch to AR ASC mode only when required
  - Significant change to the Server Region controller
  - Support z/OS 1.9 and (hopefully) beyond

# Q & A





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