



# Oracle Session Monitor - Operations Monitor (Combo)

Student Guide – Volume 2

D108879GC10

**Copyright © 2021, Oracle and/or its affiliates.**

#### **Disclaimer**

This document contains proprietary information and is protected by copyright and other intellectual property laws. You may copy and print this document solely for your own use in an Oracle training course. The document may not be modified or altered in any way. Except where your use constitutes "fair use" under copyright law, you may not use, share, download, upload, copy, print, display, perform, reproduce, publish, license, post, transmit, or distribute this document in whole or in part without the express authorization of Oracle.

The information contained in this document 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.

#### **Restricted Rights Notice**

If this documentation is delivered to the United States Government or anyone using the documentation on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

#### **Trademark Notice**

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

Intel and Intel Inside 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, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

#### **Third-Party Content, Products, and Services Disclaimer**

This 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.

1007262021

# Contents

## 1 Course Introduction

- Target Audience 1-2
- Course Objectives 1-3
- Course Duration And Content 1-4
- Tools for Lab Exercises 1-5

## 2 Installation And Platform Setup

- Objectives 2-2
- Topics 2-3
- Topic: Installing OCSM 2-4
- OCSM Hardware Requirements 2-5
- OCSM Software Requirements 2-6
- Installing OCSM 2-7
- Topic: Setting Up OCSM 2-8
- OCSM Layered Architecture 2-9
- OCSM Connectivity 2-11
- Accessing the OCSM Platform Setup Application (PSA) 2-12
- Accepting License Terms 2-13
- Changing the Default Password 2-14
- Platform Setup Application Menus 2-15
- Selecting Machine Type – ME Only 2-16
- Configuring Call Capacity And Extensions – ME Only 2-17
- Configuring Disk Usage – ME Only 2-18
- ME Connection List – ME Only 2-19
- Specifying Trusted Certificate – ME Only 2-20
- Specifying Server Certificate – ME Only 2-21
- Enabling SMTP – ME Only 2-22
- Configuring Capture Settings – ME Only 2-23
- Specifying Data Retention – ME Only 2-24
- Installing the Applications – ME Only 2-25
- Selecting Machine Type – Probe Only 2-26
- Configuring Call Capacity And Extensions – Probe Only 2-27
- Specifying ME Connection List – Probe Only 2-28
- Configuring Capture Settings – Probe Only 2-29
- Selecting Machine Type – ME + Probe 2-30

- Configuring Call Capacity And Extensions – ME+Probe 2-31
- Configuring Disk Usage – ME+Probe 2-32
- Specifying ME Connection List – ME+Probe 2-33
- Configuring Capture Settings – ME+Probe 2-34
- Specifying Data Retention – ME+Probe 2-35
- Topic: Specifying Post-setup Settings 2-36
- Platform Setup Application: Post-setup Menu 2-37
- Software Version And Upgrade – Post ME or Probe Setup 2-38
- System Diagnostic Report – Post ME or Probe Setup 2-39
- Enabling Client-Side Add-ons – Post ME Setup 2-40
- Configuring Media Filters – Post Probe Setup 2-41
- Configuring Signaling Filters – Post Probe Setup 2-42
- Practice 2-44

### **3 Administration and Configuration**

- Objectives 3-2
- Topics 3-3
  - Topic: Managing General And Network Settings 3-4
  - Accessing the OM GUI 3-5
  - The OM GUI for Configuration And Administration 3-6
  - The OM GUI for Settings 3-7
  - Viewing General Settings – Status, Actions, External IP/hostname, FM 3-8
  - Enabling REST API 3-9
  - Examples of REST API Calls 3-10
  - Viewing And Editing Probes 3-11
  - Setting Probe KPIs 3-13
  - Configuring ME Authentication Token 3-14
  - Practice 3-15
  - Topic: Administrating Platform Devices And Realms 3-16
    - Administrating Platform Devices 3-17
    - Adding a Platform Device – SBC/B2BUA 3-19
    - About Device Identification 3-20
    - About Number Determination Sources 3-21
    - Example: Number Determination Sources 3-22
    - Adding a Platform Device – Trunk 3-23
    - Third-Party Call Control (3PCC) 3-24
  - Realms 3-25
    - Defining Realms 3-26
    - Defining Realm Patterns 3-27
    - Customizing Realm Assignment 3-28
    - Specifying Devices Visibility 3-29

- Specifying Device Monitoring 3-30
- Specifying IP Tags 3-31
- Specifying Prefix Tags 3-32
- Practices 3-33
- Topic: Managing Users 3-34
  - Managing Users 3-35
  - Adding a User 3-36
  - Adding a User (Continued) 3-37
  - How much access does Cindy have? 3-38
  - Adding More Rights to Cindy's Access 3-39
  - How much access does Cindy have now? 3-40
  - Configuring Password Settings 3-41
  - Adding a User Using User Roles (Enabling User Roles) 3-42
  - Adding a User Using User Roles (Creating a User Role) 3-43
  - Adding a User Using User Roles (Assigning a User Role to a User) 3-44
  - Example: User And Realm 3-45
  - Practice 3-46
- Topic: Managing External Devices 3-47
  - Configuring RADIUS Authentication 3-48
  - Configuring SNMP Options – SNMP v3 3-49
  - Configuring SNMP Options – SNMP v2c 3-50
  - Accessing Files on the ME via FTPS 3-51
  - Configuring Voice Quality Collector 3-53
  - Practice 3-55
- Topic: Managing the System 3-56
  - Setting System Parameters 3-57
  - Categories of System Settings Parameters 3-58
  - Uploading Oracle SBC Configurations 3-62
  - Creating the ME Configuration Savepoints 3-63
  - Anonymizing Chat/Custom SIP Headers 3-64
  - Practice 3-66
  - Summary 3-67

#### **4 Session Monitor Call Merging**

- Objectives 4-2
- Topics 4-3
- Topic: Call Merging And Call Merging Algorithms 4-4
  - Call Merging 4-5
  - Call Merging Algorithm 4-6
  - Call Merging Algorithm Syntax 4-7
  - Examples of Call Merging Algorithm Syntax 4-8

Default Call Merging Algorithm for SBC/B2BUA (SIP-SIP) 4-9  
Example: Call ID in the Default Call Merging Algorithm 4-13  
Example: Media IP and Port in the Default Call Merging Algorithm 4-14  
Example: Custom Header in the Default Call Merging Algorithm 4-15  
Example: User URI in the Default Call Merging Algorithm 4-16  
Example: Time Difference in the Default Call Merging Algorithm 4-17  
Default Call Merging Algorithm for SGW (SIP-ISUP) 4-18  
Call Merging for Third-Party Call Control (3PCC) 4-19  
Topic: System Settings for Call Merging 4-20  
System Settings for Merging Calls in General 4-21  
System Settings for Merging Calls with Redirection 4-22  
System Settings for Merging Calls with REFER 4-23  
System Settings for Correlating Calls with Call Transfer 4-24  
System Settings for Merging Calls with other Protocols 4-25  
Practice 4-26  
Summary 4-27

## **5 Fraud Monitor**

Objectives 5-2  
Topics 5-3  
Topic: Introduction to Fraud Monitor 5-4  
What is Fraud Monitor? 5-5  
Where is Fraud Monitor? 5-6  
How does FM detect fraud? 5-7  
Example: What happens if Fraud is detected? 5-9  
Topic: Setting Up the Fraud Monitor 5-10  
Accessing the Platform Setup Application (PSA) for FM Setup 5-11  
Selecting Machine Type 5-12  
Installing Fraud Monitor 5-13  
Accessing the FM GUI for Configuration And Administration 5-14  
FM GUI Main Page – The Overview Page 5-15  
Connecting a Mediation Engine to the Fraud Monitor 5-16  
Checking the Connections Between the FM And the MEs 5-18  
Managing the FM Administrative Users 5-19  
Managing the FM Administrative Users (Continued) 5-20  
Topic: Configuring the Fraud Monitor 5-21  
Using the Settings Page to Configure the FM 5-22  
Configuring Notifications 5-23  
Configuring the FM Rules 5-25  
Configuring the Rule – Destination-based Traffic Spikes (DBTS) 5-27  
Example: Configuring DBTS – Static Point Type 5-29

Example: Configuring DBTS – Dynamic Point Type	5-30
Notes	5-31
Configuring the Rule – Destination-based Call Volume (DBCV)	5-32
Example: Configuring DBCV – Static Point Type	5-33
Example: Configuring DBCV – Dynamic Point Type	5-34
Configuring the Rule – Source-based Traffic Spikes (SBTS)	5-35
Configuring the Rule – Source-based Call Volume (SBCV)	5-36
Configuring the FM Lists	5-37
Configuring the Automatic List	5-38
Configuring the Rule – Blacklist	5-39
Example: Configuring the Rule – Blacklist	5-40
Example: Configuring the Rule – Blacklist (Continued)	5-41
Configuring the Rule – Ratelimit List	5-42
Configuring the Rule – Redirect List	5-43
Configuring the Whitelist	5-44
Importing And Exporting Lists	5-45
Example: Imported Users in the Blacklist	5-47
Topic: Fraud Monitor in Action	5-48
Example: The Overview Page	5-49
Example: The Learning Period Page	5-50
Example: The Incidents Page	5-51
Example: The Details Page	5-52
Example: The Details Page (Continued)	5-53
Example: Score Information vs Metric Information	5-54
Example: Score Information of an Incident (Static Points)	5-55
Example: Score Information of an Incident (Dynamic Points)	5-56
Example: Metric Information on DBTS	5-57
Example: Metric Information on Call Volume (CPS)	5-58
Example: Metric Information on Call Volume (MAC)	5-59
Points That Might be Confusing	5-60
Case Study – 1 of 4	5-61
Case Study – 2 of 4	5-62
Case Study – 2 of 4 (Continued)	5-63
Case Study – 3 of 4	5-64
Case Study – 4 of 4	5-65
Practices	5-66
Summary	5-67

## **6 Mediation Engine Connector**

Objectives 6-2

Topics 6-3

Topic: Introduction to the MEC 6-4  
What is the MEC? 6-5  
Where is the MEC? 6-6  
MEC Functionality 6-7  
Topic: Setting up the MEC 6-8  
Accessing the Platform Setup Application (PSA) for MEC Setup 6-9  
Selecting Machine Type 6-10  
Installing the MEC 6-11  
Accessing the MEC GUI for Configuration And Administration 6-12  
MEC GUI Main Page And the Settings Page 6-13  
Topic: Connecting MEs to the MEC 6-14  
Connecting a Mediation Engine to the MEC 6-15  
ME GUI: Settings – System Settings and MEC 6-16  
MEC GUI: Settings – ME Connector 6-17  
MEC GUI: Settings – ME Management 6-18  
MEC GUI: Settings – Connection Test 6-19  
Once an ME is Connected to an MEC ... 6-20  
Topic: Configuring the MEC 6-21  
MEC GUI: Dashboard 6-22  
MEC GUI: Dashboard – Regional Panels 6-23  
MEC GUI: Dashboard – Node Panels 6-24  
MEC GUI: ME Selection And View 6-25  
MEC GUI: Settings – Realms And Realm Patterns 6-26  
MEC GUI: Settings – Users 6-27  
MEC GUI: Settings – Password Settings 6-28  
MEC GUI: Settings – External Authentication 6-29  
MEC GUI: Settings – Default Language 6-30  
Topic: Viewing Correlated Calls on the MEC 6-31  
How does the MEC correlate calls? 6-32  
Configuring Multiple ME Nodes for Call Correlation 6-33  
Configuring Platform Devices on Each ME (Step 2a) 6-34  
Configuring Platform Devices on Each ME (Step 2b) 6-35  
Configuring Platform Devices on Each ME (Step 2c) 6-36  
Applying Configuration Changes of Platform Devices (Step 3) 6-37  
Setting Timeouts for Node Connection And Call Searches (Step 4) 6-38  
Viewing a Correlated Call from the MEC Dashboard (Step 5a) 6-39  
Viewing Call Info of a Correlated Call from the MEC (Step 5b) 6-40  
Viewing Call Flow of a Correlated Call from the MEC (Step 5c) 6-41  
Viewing the Correlated Call from an ME (Step 5d) 6-42  
Summary 6-43