Interactive Session Recorder

Release Notes

Release 6.2
F20208-05
January 2021

ORACLE

Interactive Session Recorder Release Notes, Release 6.2

F20208-05

Contents

About This Guide

The Interactive Session Recorder (ISR) Release Notes provides the following information:

- An introduction to the full release
- An overview of the new features available
- A summary of caveats, known issues, and fixes

If any of these sections does not appear in the document, then there were no changes to summarize in that category for that specific release.

Oracle Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Related Documentation

The following table describes the documentation set for this release.

Document Name	Document Description
ISR Release Notes	Contains information about new ISR features, caveats, and known issues.
ISR Installation Guide	Provides an overview of the ISR, hardware/software requirements and recommendations, storage considerations, pre-installation information, installation procedures, post-install verification procedures, making the first call, and additional advanced topics about the ISR.
ISR User Guide	Contains information about using the ISR Dashboard for all levels of users. Provides information about viewing, playing, deleting recordings, running reports, and managing user profiles.
ISR Administrator Guide	Contains information about using the ISR Dashboard for the Administrator level user (Super User, Account Administrator, Tenant Administrator). Provides information about creating and managing accounts, routes, and users. Also provides information about configuring the ISR, running reports, viewing active calls, and securing the ISR deployment.
ISR API Reference Guide	Contains information about ISR FACE, Recording File Types/Formats Supported, Return Codes, and Troubleshooting.

Document Name	Document Description
ISR Monitoring Guide	Provides provisioning, configuration and test instructions for the NET-SNMP implementation to monitor all ISR component hosts.
ISR Security Guide	Contains information about security considerations and best practices from a network and application security perspective for the ISR product.

Revision History

Date	Description
September 2018	• Initial release of ISR 6.2 software.
November 2018	• Updated for Release 6.2.0P1.
January 2019	• Updated for Release 6.2.0P2.
May 2019	• Updated for Release 6.2.0P3.
October 2019	• Updated for Release 6.2.0P4. • Updates Oracle Linux support to Releases 7.2 - 7.6.
January 2020	• Updated for Release 6.2.0P5.
July 2020	• Updated for Release 6.2.0P6.
November 2020	• Updated for Release 6.2.0P7.
January 2021	• Updated for Release 6.2.0P8.

1

Introduction to ISR 6.2

The Oracle Communications Interactive Session Recorder 6.2 Release Notes provide the following information about this product:

- Hardware and software requirements
- An overview of the new features available in this release
- A summary of fixes and known issues

Hardware

The ISR components are distributed as applications running on Oracle Linux Releases 7.2 - 7.6, which abstracts the ISR application from the physical hardware. As such, ISR can be deployed on any hardware platforms that support Oracle Linux Releases 7.2 - 7.6. For a comprehensive list of the hardware platforms currently certified, see the Oracle Linux and Oracle VM Hardware Certification List (HCL).

ISR testing is predominantly done on Oracle Server X5-2 and Oracle Server X6-2 systems with the following resource configurations:

Hardware Description	Quantity
Intel® Xeon® E5-2630 v3 8-core 2.4 GHz processor	2
One 16 GB DDR4-2133 DIMM	8
One 1.2 TB 10000 rpm 2.5-inch SAS-3 HDD with marlin bracket in RAID 10 configuration using 12Gb SAS RAID HBA	4

> **Note:**
>
> RAID must be configured BEFORE performing the ISR component installation.

Each of the ISR components must be installed on their own server/VM instance.

Installation Prerequisites

Before beginning your ISR installation, ensure you have completed the following prerequisites:

1. Have at least three servers (physical or virtual) with Oracle Linux Releases 7.2 - 7.6 installed.
2. Have access to the ISR rpms:
   - isr-Index-<*release#*>.x86_64.rpm

- isr-Dashboard-<*release#*>.x86_64.rpm
- isr-rss-<*release#*>.x86_64.rpm
- isr-Face-<*release#*>.x86_64.rpm (optional)

> **Note:**
>
> You may access these files via https://edelivery.oracle.com..

3. Configure a Linux User named **isradm** on each of the Linux instances created in step 1 to allow you to automatically gain access to config and log files. Once you have configured the **isradm** Linux user, you must add the user to the "sudoers" group.
4. Verify that the hosts you are installing the ISR components on are connected to the internet.

> **Note:**
>
> If your ISR hosts do not have internet connectivity, see "Oracle Public Yum Repository Configuration and Offline Installation Pre-Requisites in the *Installation Guide*.

5. Oracle Linux 7 has the yum package management utility configured by default with access to the "public-yum.oracle.com" repositories in the file located at `/etc/yum.repos.d/public-yum-ol7.repo`. If, for some reason, this file needs to be created, see the Appendix, "Oracle Public Yum Repository Configuration File" in the *Oracle Communications Interactive Session Recorder Installation Guide*, which contains the specific repository entries.
6. Configure interfaces; ISR expects network configuration to include 4 interfaces, connecting to separate Administration, Local, Data, and Voice networks. Refer to the Oracle Communications Interactive Session Recorder Security Guide for more information on networking and trusted boundaries.
   For more information on configuring networking in Oracle Linux 7, see the *man nmtui* guide and http://www.unixarena.com/2015/04/rhel-7-network-management-nmcli-or-nmtui.html.
7. If access to the external yum repository is gated by a proxy, ensure the **proxy** parameter in the `/etc/yum.conf` file is set to:

   ```
   proxy=http://<your_proxy_host>
   ```

> **Note:**
>
> During the installation process, you will be asked to provide and/or verify the users, passwords and interfaces you created during the Oracle Linux installation. Ensure you have that information before you begin the installation process.

ISR Dashboard Requirements

The ISR Dashboard is a web portal that is used for recording configuration and playback. As web technologies advance, some functionality may not be available on older browser versions. The ISR has been tested with the following web browsers and versions:

- Google Chrome (Version 63.0.3239.84 64-bit)
- Mozilla Firefox (Version 52.5.2 32-bit)
- Microsoft Edge (Version 40.15063.674.0)

> **Note:**
>
> Browser playback support for recording codecs changes frequently. Refer to the *Oracle Communications Interactive Session Recorder Release Notes* for current details.

Supported Codecs

The ISR supports the following transmission codecs:

- g.711 mulaw
- g.711 alaw
- g.729
- g.722 and g.722.2 (excluding g.722.1)
- H.264

The audio transmission codecs can be mapped to the following recording formats:

Header Raw	Header WAVE	Format	Bit Rate	Sample Rate (KHz)	Channels Mono	Channels Stereo
YES	YES	ulaw	8	8	YES	YES
YES	YES	alaw	8	8	YES	YES
YES	YES	Linear PCM	8	8	YES	YES
NO	YES	Linear PCM	16	8	YES	YES
NO	YES	Linear PCM	16	1	YES	NO
NO	YES	Linear PCM	16	16	NO	YES
NO	YES	ADPCM	4	8	YES	YES

H.264 video content is stored and replayed in MP4 format.

2
New Features in ISR 6.2

This section lists and describes features developed and released new for ISR 6.2.

Recording Segmentation

The ISR now supports recording segmentation, allowing a recording to be terminated and a new one created when a call is transferred. Each new segment creates its own new recording file.

> **Note:**
>
> A call must be deemed recordable before any segmentation configuration is applied.

Segments are created in one of two ways:

- a SIPREC reINVITE that signals a transfer in the CS—When segmentation is enabled, the Recorder terminates and creates segments as needed based on received reINVITEs.
- the ISR FACE API indicates the need for a new segment—The Recorder and FACE API support new webservice method, `audioRecording/split`, and FACE is able to tell the Recorder to create a new segment of the recording.

Segments and segment metadata are available specifically with FACE requests and included in certain FACE responses such as details and successful recording controls. For more details and for examples of the new requests and response strings, see the *API Reference Guide*.

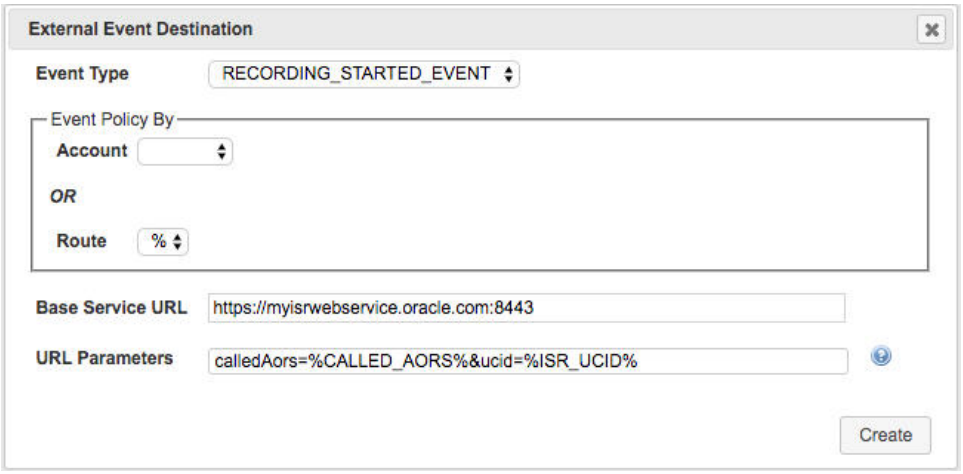
ISR Events and Notifications

The ISR Dashboard provides configuration settings for sending HTTP notifications triggered by particular events in the system. For example, a web application may receive an HTTP request containing session metadata and recording details such as start-time and duration when each recording for a specific Account is complete.

Event settings are configured via the ISR Dashboard Admin page's **External Event Destinations**. From the **Event Type** drop-down select the Account or Route to apply the settings, set the **Base Service URL** to the URL serving the site receving the HTTP request and in the URL Parameters field include any parameters to be added to the request.

The following example shows an event on the "wildcard" route each time a session recording is created. This event sends an HTTP request to the webservice at "http://myisrwebservice.oracle.com:8443" wiht the called party

AOR and the UCID values added as **calledAors** and **ucid** parameters.



For more information on parameters and events, click the **URL Parameters Help** link (next to **URL Parameters**) and see "External Event Notifications" in the *API Reference Guide* for a complete list of events, parameters, and their descriptions.

Media Packet Realignment Now Disabled by Default

An optional Recorder feature to reassemble media in the order specified in the packets has been disabled by default. You may enable this feature for reasons such as better audio quality, however, Oracle recommends speaking with your Oracle representative prior to enabling.

ReINVITE Suppression

In certain environments, the ISR may receive reINVITEs that must be ignored.

> **Note:**
>
> Contact your Oracle representative prior to enabling this feature.

The reINVITE Suppression feature is enabled via the ISR Dashboard for each configured Recorder under "Advanced Configurations". Set the **Suppress SIPREC Metadata Updates** drop-down to `Yes` and leave the **Suppress SIPREC Metadata Updates Ignore Tag** field empty to accept the default behavior.

There are some identifiers that may change and must be ignored to dismiss reINVITEs with no valuable metadata changes, for example UCID. In the case of UCID, the value of `apkt:ucid` must be entered in the **Suppress SIPREC Metadata Updates Ignore Tag** field so that the ISR ignores reINVITES with only changing UCID values.

Sonus SRC Integration

ISR functionality has been improved and tested as the Session Recording Server in Sonus SIPREC environments.

Custom Data Fields in Recordings List

The ISR Dashboard recordings list may now be configured to display Custom Data Fields as columns. In the Settings tab's Recordings List section, drag the Custom

Data Field name you wish to become a column in to the "Displayed" box. For more information on setting recordings list display columns, see "Recordings List Settings" in the *Administrator Guide*.

Recorder Maintenance Mode

Recorder Maintenance Mode takes the Recorder process "off-line", no longer indexing the recordings as entries in the database. Instead, it enables the CDR logging capability of the Recorder process to write a limited set of metadata locally to a file for each recording.

The Recorder Maintenance Mode feature is enabled via the ISR Dashboard for each configured Recorder under "Advanced Configurations".

Set the **Maintenance Mode** drop-down to `Enabled`. By default, the CDR log file is named */opt/isr/logs/recorder/cdr.log*. The following values are written as a CSV file:

- Ingress Call ID—The Session identifier
- File name—The name of the recorded file
- ANI—The called number
- DNIS—The number of the calling party
- Start Time—The beginning time of the recording
- Duration—The length of time in milliseconds
- Directory—The file location of the recording
- RSS IP—The IP address of the RSS
- Indexed—This field is unsupported and remains set to 1

The following is an example CDR.log with a single entry:

```
"1-3873@10.10.248.209","rss_g729-1-
3873@10.10.248.209.rpdd",sipp_g729,rss_g729,"2018-03-19
13:28:15",4803,"/","10.10.248.203",0
```

> **Note:**
>
> To properly import CDR entries back into the Index, you must enlist an Oracle consultant. Consult your Oracle representative if you are considering setting Recorders in Maintenance Mode.

SSO Access Using the Dashboard

The ISR Dashboard can be configured at the System level, specifically with the "System" account, for SSO login. Users logging in with SSO configured are authorized and authenticated using the configured server(s), however, a user with a failing SSO login subsequestly has their credentials checked using the ISR's local, multi-tiered accounts and permissions. For more information, see the *Administrator Guide*.

3
Caveats and Known Issues

This chapter lists the caveats, known issues, and limitations for this release. Oracle updates this Release Notes document to distribute issue status changes. Check the latest revisions of this document to stay informed about these issues.

Caveats in ISR 6.2

The following information lists and describes the caveats and limitations for this release. Oracle updates this Release Notes document to distribute issue status changes. Check the latest revisions of this document to stay informed about these issues.

Oracle Linux

- In Oracle Linux version 7.4, the default SELinux and FirewallD versions have stricter policies that impact application file handling and communications from the Linux host. The impact is very disruptive to ISR, with RSS internal API, FACE, and Archival unable to initialize with their configurations in the database and unable to write to their expected log files. Also, Recorder and converter processes cannot initialize as well, since the internal API cannot return their configurations. While the incompatibilities are expected to be addressed in a subsequent Oracle Linux release, Oracle recommends the following two workaround options:
  - Permissive access to the Tomcat process—Execute the **semanage permissive -a tomcat_t** command.

    > **Note:**
    >
    > Permissive access to the Tomcat process requires that you have an additional package installed on the system (i.e., **yum install policycoreutils-python**).

  - Downgrade certain SELinux components—Execute the following command:

    ```
    $ sudo yum downgrade selinux-policy-3.13.1-102.0.3.el7_3.16
    selinux-policytargeted-3.13.1-102.0.3.el7_3.16
    firewalld-0.4.3.2-8.1.el7_3.2 pythonfirewall-0.4.3.2-8.1.el7_3.2
    firewalld-filesystem-0.4.3.2-8.1.el7_3.2
    firewallconfig-0.4.3.2-8.1.el7_3.2
    ```

- The Oracle Linux firewalld services, enabled by default on all ISR component hosts, have demonstrated a performance impact (of as much as 25%), using Oracle hardware. When considering the balance of security vs. performance, see the Oracle Communications Interactive Session Controller Security guide for more information on the configuration options of firewalld services and their benefits.
- RTP IO port initialization fails in performance load testing when there is a port conflict between the RTP port and the Linux Ephemeral port, which is used by

Archiver/API for DB connection. As a result, RSS fails to record calls on the conflicted port. The Recorder process maintains a port pool to listen to RTP and this RTP port range depends upon configured session capacity.
The formula to calculate RTP port pool range is as follows:

```
RTP start port -> {RTP start port + (Number of sessions * max
number ports per session)}
```

For each channel (session) the Recorder process requires 8 ports (2 Audio, 2 Video; these must be on even numbers). The RTP Start port default value is 11000. For example, if Channel capacity is configured as 2500, then the RTP port pool range will be as follows:

```
11,000 -> {11,000 + (2500*8)} => 11,000 → 31,000
```

The Linux default ephemeral port range is 32768 - 60999 (this can be found at `/proc/sys/net/ipv4/ip_local_port_range`).
This issue will occur only if session capacity is configured over 2500 for a single site. If configured session capacity is more than 2500, there will be port conflict between RTP and Linux ephemeral port.

To avoid conflict, first calculate the RTP port range using the formula above and then change the Linux ephemeral range value accordingly.

Workaround:

1. Login as root and use a text editor to open `/etc/sysctl.conf`.
2. Add or change the following:

   ```
   net.ipv4.ip_local_port_range = <start_Port>  <End_port>
   ```

   Replace <start_Port> and <End_port> with the required values.
3. Restart the network using the following command:

   ```
   # /etc/rc.d/init.d/network restart
   ```

4. Verify that your changes are present using the following command:

   ```
   cat /proc/sys/net/ipv4/ip_local_port_range
   ```

ISR Dashboard

- The Dashboard fails to load in certain scenarios with an error message that complains of too many redirects. The following is an example message in the Chrome browser:

  ```
  This page isn't working
  <Dashboard host name> redirected you too many times.
  Try clearing your cookies.
  ERR_TOO_MANY_REDIRECTS
  ```

An example message in the Firefox browser:

```
The page isn't redirecting properly
Firefox has detected that the server is redirecting the request for
this address in a way that will never complete.
This problem can sometimes be caused by disabling or refusing to
accept cookies.
```

To resolve the problem, clear the browser's cookies.

- In certain scenarios with the Chrome browser, when the **Allow HTTP Cache of Recording files?** Dashboard configuration property set to **True**, the scroll bar still does not function properly for scrolling forward or back during recording playback.
- A certificate handling conflict exists with the ISR Dashboard web server that occasionally leads to latency and perceived unresponsiveness when clicking links and submit buttons. The request is properly transmitted, and the response ultimately does arrive, but much later than the expected time frames of previous versions of the Dashboard.

ISR Archival

- When multiple Archival hops are configured for a single Archival instance (i.e., Account Archival plus RSS Primary to Secondary Locations), a thread conflict may occur that leads to unresponsiveness from the Archival process.
- The Source Location's Advanced Configuration settings control the Archival decisions during the "hop", (i.e. the move of the recording from the Source to Destination Location).
- If the Archival cron schedule has been set to any other value than the default two minutes (`"0 0/2 * ? * *"`), this setting will be lost and the schedule reverted to 2 minutes. For more information on changing the Archival schedule, contact your Oracle representative.
- Deletion and renaming of historical recordings that have been archived may fail due to changes in Archival Location directory paths, SFTP servers, or client user permissions.

ISR Index

- Oracle recommends you configure the ISR Index component time zone to be set to UTC. To do this, upon installation the configIsr.sh script prompts the user for permission to configure the system time zone to UTC. You can configure all other ISR components' time zone as needed.
- To add ISR users from the primary Index to the Secondary Index, you must execute replication configuration for mysql database in `/etc/my.cnf` file in single site implementations. In double site implementations, in `/configIsr.sh` script, ensure you give all users the same password.

ISR RSS

- You can only have one MySQL user password across all RSSs for each RSS user type. For example, if multiple RSSs are configured to use the same 'israpi' MySQL user name, the password must be the same for every RSS.

Web Browsers

ISR recording playback errors have been reported for the following web browsers:

- Firefox-Firefox is not supporting playback of the 8-bit/8 kHz audio format set in the "Default Recording Format Profile" for the g711 transmission codec (historically the most popular transmission codec). Most commonly, the Dashboard's playback controls appear only briefly before becoming unavailable. To work around this issue, for routes using the "Default Recording Format Profile", change the setting to the Firefox Supported Recording Format Profile, where the g711 transmission codec is converted to the PCM 16- bit/16 kHz recording format.
- Internet Explorer—You must use the Windows Media Player plugin to play recorded wave files via Internet Explorer. Without the plugin, an "Invalid Source" error appears in the player popup. This browser support issue impacts ObserveIT Screen Recording integrations with ISR, where the Chrome or Firefox browsers must be used for playback instead of Internet Explorer.
- Chrome—Displays some inconsistent behavior with playback of long recordings in internal tests, where the browser stops playback prematurely Playback in another browser rectifies the problem.
- Video and screen capture slide playback may display recording length as NaN. Close the playback window and repeat playback.
- Subsequent video playback only plays audio. Close the playback window and repeat playback.
- Screen capture slide playback progress bar may not move or move accurately. Close the playback window and repeat playback.

> **Note:**
>
> Playback failures may also occur with the Quicktime plug-in version 7.7.7. If you encounter these issues, downgrade to version Quicktime 7.7.4.

ISR Upgrade

- An upgrade from 5.2 to 6.x likely results in conversion failures until each Location has been updated to properly reflect connections to the Converter using the Data Network. Log into the Dashboard and update each Location in the "Recording Converter" section by setting the "Converter IP Address" field to the Converter's data network IP address. You may confirm the Converter data IP in the "Converter Server Configurations" accordion of the corresponding RSS.
- After upgrading FACE, existing tokens become invalid and you must login again to proceed.

General

- The Segmentation feature, when enabled, may cause corruption to video recording. Oracle recommends disabling this feature for recording video.
- In a commitment to the more flexible design of Custom Data Fields, FACE and Dashboard no longer present the following specific fields in recording segment details:

  - agent ID
  - agent terminal
  - categories
  - completed
  - hours
  - notes
  - rating
  - transcriptions

- Double-check network settings to ensure that interfaces are enabled at boot, (ONBOOT=yes). For example, /etc/sysconfig/network-scripts/ifcfg-XXXX.
- To use NFS shares to backup ISR configurations and data, you must meet the following prerequisites:
  - Configured ISR host (with networking access to NFS share on the remote host)
  - NFS share with no_root_squash option and writable by root user on the client

  To store ISR configuration and data backups on a remote host via NFS:

  1. Set up and export the remote share. For more information, see the Oracle Communications Interactive Session Recorder Installation Guide.
  2. Configure and test the client on the ISR host.
  3. Ensure that the "isradm" user (or other configured non-root user) can connect, read, and write files from the share.
  4. Backup ISR configuration and data files using the b menu option in the configIsr.sh file and use the local path to the remote share to the location to store configuration and data backups.
  5. Verify the contents of the data and configuration backups using the **tar tzf /backup/path/<isr_component>-data.tgz** or **tar tzf /backup/path/ <isr_conponent>-configs.tgz** commands (replacing <isr_component> with the specific component data and backup filenames).

Known Issues in ISR 6.2

The following table lists the ISR System known issues:

ID	Description	Severity	Found In
28579015	When attempting to play recordings that have associated ObserveIT screens from the Dashboard, where the recording playback has been moved to the Segment tab, only the audio portion of the recording is played.	4	6.2M0P0

ID	Description	Severity	Found In
28577986	Deleting recordings via FACE successfully deletes recorded file(s), but fails to delete some files in certain scenarios.	3	6.2M0P0
28579059	FACE recording details responses have improperly segment formatting in JSON.	4	6.2M0P0
28579096	FACE requests with filename or segmentId must use the audioRecording/segment URL.	4	6.2M0P0

28578999	If a segment contains custom data, FACE cannot retrieve the details for that segment using the custom data parameter in the search request (via a query parameter). For example:
	
	`https://<face.host>:8443/Face/audioRecording/segment/details?token=<token>&<customDataName>=<customDataValue>`
	
	The response is:
	
	`{"result":`
	
	`{ "code": -1, "message": "No matching segments" } }`
		4	6.2M0P0

ID	Description	Severity	Found In
28579128	If a FACE search for a segment does not uniquely identify a single entry, an abridged list of matching segments with limited data is returned to help the user craft a more specific search. However, this list does not include any segments created for recordings prior to the upgrade to 6.2.	4	6.2M0P0
28583506	Dashboard segment details are not properly displaying DTMF	4	6.2M0P0
27234583	Dashboard web server must be reset after locale change	4	6.1M0P0
28228761	After a successful Dashboard upgrade from 5.2M1 to 6.x, you must run the "configIsr.sh" script to ensure RSS certificates are imported and provisioned successfully.	4	6.0M0P0

ID	Description	Severity	Found In

28229026	Upgrades to 6.1M0Px require an additional configuration for MySQL client application hosts.
	Add the following configuration to the RSS host:
	1. Copy the original host configuration file:
	`$ cp /etc/sysctl.d/isr.conf /opt/isr/releases/`
	2. Edit the file */etc/sysctl.d/isr.conf*, and add the following line:
	`net.ipv4.tcp_tw_reuse = 1`
	Add the following configuration to the FACE host:
	1. Create a file */etc/sysctl.d/isr.conf* and add the following line:
	`net.ipv4.tcp_tw_reuse = 1`
		4	N/A

27430649	Playback of AMR-WB encoded session recordings is distorted and even unintelligible in certain scenarios.	3	6.1 M0P0

The following table lists the ISR Archival known issues:

ID	Description	Severity	Found In
27580390	MD5 checksums are not calculated for video recordings.	4	6.0M0P0

ID	Description	Severity	Found In
27580403	Renaming video or other "supplemental" files is not possible using Archival.	4	6.1 M0P0

The following table lists the ISR FACE known issues:

ID	Description	Severity	Found In
N/A	Install and upgrade, do not explicitly set FACE recording retrieval timeouts for downloads. To edit the default setting, contact your Oracle account representative.	N/A	6.1M0P2

The following table lists the ISR Dashboard known issues:

ID	Description	Severity	Found In
27580607	Subsequent video playback attempts may not be successful and may force the user to close the player to play again. This issue is specific only to the Chrome browser.	3	6.1M0P0
32428888	Advanced Search does not work for some fields.	4	6.2M0P0
28945217	ISR Dashboard latency during service puma stop/ start/restart.	3	6.2M0P0

ID	Description	Severity	Found In
28727815	The Dashboard generates an erroneous statistical report when the user time zone is set to a time zone other than "UTC". Since the statistical reports are generated in the database on a daily basis, and because these are aggregated statistics without the correct recording time, it impacts report statistics. Oracle recommends setting the user time zone to UTC to see accurate statistics.	4	6.2M0P0
N/A	Major browsers may display an invalid recording duration during playback (for example, "NaN" in Chrome). To fix this, enable the security setting **Allow HTTP Cache of Recording files?** (disabled by default) and reload the recording playback.	N/A	6.2M0P0

Resolved Known Issues

The following table provides a list of previous Known Issues that are now resolved.

ID	Description	Severity	Found In	Fixed In
30505546	External Event Notifications forming improperly after upgrading to 6.2M0P4.	3	6.2M0P4	6.2M0P5
32100012	FACE recording control requests are unsuccessful with the ISR fresh installation.	3	6.4M0P4	6.2M0P8
N/A	FACE API pause/ resume error messages may omit details.	N/A	6.2M0P0	6.2M0P8

ID	Description	Severity	Found In	Fixed In
N/A	FACE ignoring some special parameters.	N/A	6.2M0P0	6.2M0P8
N/A	FACE API resume should log pause duration.	N/A	6.2M0P0	6.2M0P8
N/A	FACE should allow exact **end** search for segments.	N/A	6.2M0P0	6.2M0P8
N/A	Inconsistent Allow headers in FACE API.	N/A	6.2M0P0	6.2M0P8
N/A	FACE API HTTP 405 expansion.	N/A	6.2M0P0	6.2M0P8
32164415	Search by category not working.	4	6.4M0P4	6.2M0P8
N/A	Record save and search not working properly.	N/A	6.4M0P4	6.2M0P8
N/A	CSV import for users, routes, and account fails if improper column values are provided.	4	6.4M0P4	6.2M0P8
32284655	Post upgrade to 6.4M0P2 unable to fetch users in Dashboard.	3	6.4M0P4	6.2M0P8
31166448	"Unknown lvalue 'ExecStatus' in section 'Service'" displayed in `/var/log/message` of Dashboard.	4	6.3M0P0	6.2M0P8
32305756	Archiver process silently stopped on RSS.	2	6.4M0P4	6.2M0P8
27534039	Converter does not apply amr-wb concurrent sessions configuration.	3	6.1M0P0	6.2M0P8
31785463	Files not converted after being recorded.	3	6.2M0P0	6.2M0P7

ID	Description	Severity	Found In	Fixed In
31872892	The DB table, mysql/ innodb_index_stats has length mismatch in the column name table_name.	4	6.2M0P0	6.2M0P7
31888064	Issue with Download split recordings when the call is going on.	4	6.2M0P0	6.2M0P7
28727470	Cannot select **location**, **Archiver**, **Location** boxes inside a site using the keyboard.	3	6.2M0P0	6.2M0P7
N/A	Issue with Mysql upgrade to 5.7.31.	N/A	6.2M0P0	6.2M0P7
28727481	A VPAT keyboard issue. Unable to select list viIssue, with advance search download CSV with include detailsew items, in order to update them.	3	6.2M0P0	6.2M0P7
27740537	API INFO level logs for keys, DB password, and no codec updates.	4	6.2M0P0	6.2M0P7
31666480	Issue with advance search download CSV with include details.	4	6.2M0P0	6.2M0P7
31929775	Update tomcat to always latest 7.* version.	4	6.2M0P0	6.2M0P7
31613255	Ojet Dashboard issue when two different users, tenantadmin and TENANTADMIN, are created.	3	6.2M0P0	6.2M0P7
N/A	Remove LOCAL Acess type while enabling Archive by Account.	N/A	6.2M0P0	6.2M0P7
N/A	Dashboard Advanced Search time zone issue.	N/A	6.4M0P0	6.2M0P7

ID	Description	Severity	Found In	Fixed In
28787447	Dashboard needs to support user configurable SFTP port numbers.	3	6.2M0P0	6.2M0P7
27599754	Converter logs filled with INFO-level configuration updates.	4	6.2M0P0	6.2M0P7
31287703	Recordings present in the DB are unavailable in Physical location for Performance load.	3	6.0M0P0	6.2M0P6
28028799	Adding a scroll bar on the display of User Audit Entries.	4	6.1M0P0	6.2M0P6
27353471	User Audit shows invalid entries for a new user.	3	6.1M0P0	6.2M0P6
28353967	Temporary FACE tokens must be stored encrypted.	4	6.0M0P0	6.2M0P6
28829401	Account admin user cannot view RSS, Archivers, or Locations.	4	6.2M0P0	6.2M0P6
28787925	After importing accounts, deletion errors are observed.	4	6.2M0P0	6.2M0P6
28782392	Dashboard does not recognize more than 2 Terabytes of disk space.	4	6.2M0P0	6.2M0P6
28705752	Segment tab size varies for different segment duration.	4	6.2M0P0	6.2M0P6
28684340	Downloading MP4 files in the Recording tab causing issues.	3	6.2M0P0	6.2M0P6
28639321	Error dialog box when using advanced search.	4	6.2M0P0	6.2M0P6
28583506	Dashboard segment details not properly displaying DTMF.	4	6.2M0P0	6.2M0P6

ID	Description	Severity	Found In	Fixed In
28575227	Dashboard Security Settings fields are not properly reset to saved value when dialog is closed without updating	4	6.1M0P0	6.2M0P6
28131558	When lower priority messages show in Routes, you are unable to continue.	4	6.2M0P0	6.2M0P6
29222830	5.2M1 to 6.2P2 upgrade creates ifcfg artifact which prevents recorderd start.	3	6.2M0P0	6.2M0P6
28131531	Template definition update issues.	4	6.2M0P0	6.2M0P6
31286756	RTP IO initialization failed in performance load.	3	6.2M0P0	6.2M0P6
31321506	Socket timeout exception in Face.log.	3	6.2M0P0	6.2M0P6
28570556	Null pointer exceptions/500 errors in FACE audioRecording/ split.	4	6.2M0P0	6.2M0P6
31321542	Server.xml connector string got modified incorrectly upon re-run of configIsr.sh.	3	6.2M0P0	6.2M0P6
27773863	Index configIsr script has no option to re-enter password if it is initially entered wrong.	4	6.2M0P0	6.2M0P6
27876985	Dashboard "sip auth password" is shown in clear text.	4	6.2M0P0	6.2M0P6
31218157	Error on Recordings Listing page when trying to use Advanced Search.	3	6.2M0P0	6.2M0P6

ID	Description	Severity	Found In	Fixed In
30548412	Secondary database encrypted password not working.	3	6.2M0P1	6.2M0P6
30515293	FACE recordings with the '+' character in the filename are saved with an incorrect file name.	3	6.2.0M0P0	6.2.0M0P5
30399966	Issues with the Filename when using the **Start**/ **Stop** command.	2	6.2.0M0P0	6.2.0M0P5
30452640	When running Index configISR.sh, the script does not pull the temporary mysql password.	4	6.2.0M0P0	6.2.0M0P5
30616680	Disable the weak TLS1.2 ciphers.	4	6.2.0M0P0	6.2.0M0P5
29589570	Disable the weak TLS1.0 and 1.1 ciphers.	4	6.2.0M0P0	6.2.0M0P5
29435273	Error importing new certificates on certain ISR versions.	3	6.2.0M0P0	6.2.0M0P5
30452611	Error in Face Tomcat server.xml causing TLS 1.2 not to be enabled.	4	6.2.0M0P0	6.2.0M0P5
30772584	RSS restarting multiple times.	2	6.2.0M0P0	6.2.0M0P5
29327267	When executing the **start** and **stop recording** commands, the file created incorrectly retains its RPDD format instead of saving as a .wav.	2	6.2M0P0	6.2M0P3
29027285	Dashboard reports displaying wrong values when multiple routes are selected.	3	5.2	6.2M0P0

ID	Description	Severity	Found In	Fixed In
29270289	Multiple Routes with the same patterns cannot be created for different Accounts.	3	5.2	6.2M0P0

28578999	If a segment contains custom data, FACE cannot retrieve the details for that segment using the custom data parameter in the search request (via a query parameter). For example:
	
	`https://<face.host>:8443/Face/audioRecording/segment/details?token=<token>&<customDataName>=<customDataValue>`
	
	The response is:
	
	`{"result":{ "code":-1,"message":"No matching segments" }}`
		4	6.2M0P0	6.2M0P1

ID	Description	Severity	Found In	Fixed In
28579096	When searching for a recording in FACE (**audioRecording/<method>**), you cannot use unique information contained in a segment of that recording (**filename** or **segmentId**). To search with unique segment information, you must search for that segment on its own (**audioRecording/segment/<method>**). You can also search for a recording using custom data from the segment, or you can first fine the segment and then use the segment's **recordingId/tmpRecordingId** to find the whole recording.	4	6.2M0P0	6.2M0P1

ID	Description	Severity	Found In	Fixed In
28753730	FACE Event parameters are limited to the following for each Event: • RECORDING_STARTED_EVENT %ANI%, %DNIS%, %ISR_UCID%, %INGRESS_CALLID%, %EGRESS_CALLID%, %RESULT%, %FILENAME%, %CALLING_AORS%, %CALLED_AORS% • SEGMENT_STARTED_EVENT %RESULT%, %FILENAME%, %TMP_RECORDING_ID% • SEGMENT_ENDED_EVENT %RESULT%, %FILENAME%, %TMP_RECORDING_ID%, %SEGMENT_ID% • RECORDING_ENDED_EVENT %ANI%, %DNIS%, %RESULT%, %FILENAME%, %DURATION%, %PAUSE_LENGTH%, %PAUSE_SILENCE%	2	6.2M0P0	6.2M0P1

ID	Description	Severity	Found In	Fixed In
	(only if recording ended during an active pause with silence), %CALLING_AORS%, %CALLED_AORS%			
25312719	"root" user ownership of certain files has been changed to ownership by the non-root user provisioned during installation (for example, "isradm").	4	6.0M0P0	6.1M0P0
26803568	A set of upgrade script fixes include proper management of the ISR certificates created during prior installations.	4	6.0M0P0	6.1M0P0
25028023	The "procmonl.elf" process for montioring and potentially restarting RSS Converter and Recorder processes has been replaced with registration, monitoring and management by the Linux standard "systemd" init system.	4	6.0M0P0	6.1M0P0
28714766	After running "configIsr.sh", FACE ad-hoc recording controls are not working properly with the wrong **webserviceIP** value in FACE's web.xml configuration file.	3	6.2M0P0	6.2M0P1

ID	Description	Severity	Found In	Fixed In
28579128	Segments from legacy recordings do not show up in lists of possible matches.	4	6.2M0P0	6.2M0P1
28831229	External Events are not sent during Ad-hoc recording.	4	6.2M0P0	6.2M0P1
27261514	The "isr-api" key now expires after a year (instead of 3 months).	3	6.0M0P0	6.1M0P0
26739197	ObserveIT screen capture request/ response latency has been addressed.	3	6.0M0P0	6.1M0P0
27580455	FACE "audioRecording/ start" requests that fail to include the "filename" parameter result in a recorded file name of "-.wav". This means that subsequent requests omitting "filename" will overwrite previous "-.wav" files.	4	6.0M0P0	6.2M0P0
26377516	In certain scenarios where the Accept header of a FACE request is not set, the Content-Type header of the response may be incorrect.	4	6.1M0P0	6.1M0P1
26584827	Dashboard "configIsr.sh" script fails with error after selecting option 'd'.	4	6.1M0P0	6.2M0P1
27709153	FACE now shares authorization tokens for seamless load balancing across multiple FACE servers.	N/A	5.2M1P7	6.1M0P2

ID	Description	Severity	Found In	Fixed In
28157636	A slow memory leak with FACE login has been resolved.	4	6.0M0P0	6.1M0P2
24667791	Recordings Archival remarks explain renaming failure.	4	6.0M0P0	6.1M0P1
27524390	When multiple Archival instances are configured for the same RSS (for example, Account Archival and RSS primary to secondary Location Archival) the Archival process no longer stops logging and, at times functioning with "Exception in thread" ArchiverThread-X" java.lang.NullPointerException" message in /var/log/messages.	3	6.1M0P0	6.1M0P1
25218527	Archival process not properly handling database failover.	3	6.0M0P0	6.2M0P2
28837884, 28501976	An on-demand conversion and archival race condition has been addressed so recordings remain properly converted and indexed in this scenario.	3	6.1M0P0	6.2M0P2
28826769	The Archival service now addresses all recordings under high deletion load.	3	6.2M0P0	6.2M0P2

ID	Description	Severity	Found In	Fixed In
28153275	The HTTP response code to a FACE download request that cannot successfully retrieve the recording from the webserver has changed from 200 OK (with an error message) to 404 (with the same error message).	3	6.1M0Px	6.1M0P2
28807238	File extensions are not consistently ".RPDD" during G.729 sessions with multiple segments.	3	6.2M0P0	6.2M0P1
28729536	When running FACE's "configIsr.sh" script, you must accept the **Would you like to configure FACE to work with a third party service?** option to enable External Events.	3	6.2M0P0	6.2M0P1

ID	Description	Severity	Found In	Fixed In
29215924	After a fresh installation, the FACE server.xml HTTPS connector is now properly commented, and FACE API properly responds to HTTPS requests to port 8443.	3	6.2M0P0	6.2M0P2

Note: Upgrade does not inherently solve this is

ID	Description	Severity	Found In	Fixed In
		problem. Contact your account representative for the proper wor		

ID	Description	Severity	Found In	Fixed In
		karoundinyourenvironment.		
27405564	The Recorder process fails under load due to ulimit and other environmental restrictions while no longer running with "root privileges".	2	6.1M0P0	6.1M0P1
27486270	An Archival conversion query causes Index latency due to large Result Sets, impacting FACE and other ISR applications.	2	5.2M1P3	5.2M1P4, 6.1M0P1
27406860	A converter process memory leak that may impact recording indexing and archival has been addressed.	1	6.1M0P0	6.1M0P1

ID	Description	Severity	Found In	Fixed In
27772137	After upgrade from 5.2M1Px to 6.1M0P2 and Dashboard configuration of the RSSs, the Recorder process now properly initializes with primary and secondary locations set	4	6.0M0P0	6.1M0P2
26775702	Required Recording Format Conversion - For FACE All g.729 and g.722 recordings in RPDD format cannot be downloaded in FACE without prior conversion to playable format (either through Archival batch conversions or Dashboard ondemand conversion). You can now enable or disable the conversion of files requested for download using the FACE API by setting the enableConversion flag using the 'F' option in /configIsr.sh. To enable this feature, answer 'yes' to the prompt.	4	6.0M0P0	6.1M0P1

ID	Description	Severity	Found In	Fixed In

27598672	FACE "configIsr.sh" script's **F** option is not properly setting the **webserviceIP** field. To ensure FACE conversion requests do not fail, you must edit the `/var/lib/tomcat/webapps/Face/WEB-INF/web.xml` file and change the following two fields:
	• From:
	`<param-name>webserviceIP</param-name>`
	`<param-value>1.2.3.4</param-value>`
	To:
	`<param-name>webserviceIP</param-name>`
	`<param-value><your FACE data IP></param-value>`
		3	6.1M0P1	6.1M0P2

ID	Description	Severity	Found In	Fixed In

	• From:
	
	`<param-name>conversionAllowed</param-name>`
	
	`<param-value>false</param-value>`
	
	To:
	
	`<param-name>conversionAllowed</param-name>`
	
	`<param-value>true</param-value>`
	
	Then restart Tomcat:
	
	`$ systemctl restart tomcat`			

ID	Description	Severity	Found In	Fixed In
28124467	MySQL server default configurations have been adjusted for better performance.	2	5.2M1P0	6.1M0P2

Note: You must run the "configlsr.sh" script for ort

ID	Description	Severity	Found In	Fixed In
		helindexconfigchangestotakeeffect.		

ID	Description	Severity	Found In	Fixed In
27131008	ISR now accommodates multiple codec offerings in the SDP, assuming an .RPDD extension of the recorded file. The RPDD file then requires conversion to a playable format. Previously, ISR accepted and assumed the top codec in the list, and in certain configurations wrote directly to the playable WAV (*.wav) format. The functionality has now changed. When two codecs are offered, RPDD is written. This may impact ad-hoc recording with the FACE API, where the filename parameter could be incorrectly assuming the ".wav" extension (e.g. https://<face_ip>:8443/Face/audioRecording/stop?token=<token>&filename=startstoptest.wav).	3	6.0M0P1	6.1M0P2

ID	Description	Severity	Found In	Fixed In
27947568	ISR can now be configured to suppress metadata updates for extraneous reINVITEs to avoid unnecessary processing on the Index MySQL database and the RSS API. To enable suppression to ignore changing "apkt:ucid" tags, execute the following command on the RSS host: `$ curl -k https://localhost:9998/RestMethods/ConfigModify?metadataUpdateSupprEnabled=true&metadataUpdateSupprIgnoreTag=apkt:ucid` Confirm the reINVITE suppresses the UPDATEMETADATA event with an "/opt/isr/logs/recorder/recorder.log" entry.	2	5.2M1P5	6.1M0P2
26499909	The Recorder route map cache now properly updates on configurable number of seconds.	3	6.1M0P0	6.2M0P2

ID	Description	Severity	Found In	Fixed In
27614712	MySQL Server logging has been set to a more limited level.	4	5.2M1P0	6.1M0P2
28024832	SFTP location now hidden from Converter configuration.	3	6.1M0P0	6.2M0P2
28826399	Recordings tab headings are now properly in line.	3	6.2M0P0	6.2M0P2
29133098	A Dashboard fix has addressed an Internal Server Error when the tenant user tries to generate a report.	2	6.2M0P0	6.2M0P2
29169534	Recording is not deleted from DB after deleting from Dashboard.	3	6.2M0P0	6.2M0P2
28579015	ObserveIT screens fail to play back using segment details player.	4	6.2M0P0	6.2M0P1
28228761	Dashboard upgrade prompts do not state that the 'configIsr.sh' script must be run after upgrade.	4	6.2M0P0	6.2M0P1
26584827	Dashboard "configIsr.sh" script fails with error after selecting option **d**.	4	6.1M0P0	6.2M0P1
28683981	In certain scenarios External Event Destinations may not be viewed or edited.	4	6.2M0P0	6.2M0P1
27767052	Advanced search by categories, realm or request-URI now executes properly.	2	6.1M0P1	6.1M0P2
27938500	The Dashboard properly handles more than 15 route entries.	2	6.1M0P0	6.1M0P2

ID	Description	Severity	Found In	Fixed In
26759445	The slider on recording playback works properly with HTTP Caching enabled in Google Chrome.	4	6.0M0P0	6.1M0P1
27356500	ISR integration with ObserveIT retrieves slides from the upgraded, secure ObserveIT Application Server.	3	6.1M0P0	6.1M0P1
27608203	ISR Dashboard now offers the proper security token for second ObserveIT AS.	3	6.1M0P1	6.1M0P2
27396923	ISR Dashboard setting for concurrent AMR-WB sessions is not available.	3	6.1M0P0	6.2M0P1
27599703	ISR Dashboard login attempt no longer errors after browser sits idle on login page for a long time.	4	6.1M0P0	6.1M0P1
27409091	HTTPS Dashboard latency issues are addressed with webserver downgrade.	4	6.1M0P0	6.1M0P1
27432527	Dashboard now properly offers configuration settings for session capacity rejection codes.	3	6.1M0P0	6.1M0P1
27409510	An issue has been addressed where Dashboard playback of recordings requiring conversion may fail.	3	6.1M0P0	6.1M0P1

ID	Description	Severity	Found In	Fixed In
27507821	ISR Dashboard customized display of certain SIPREC metadata is now properly honored in certain scenarios (for example, customized display of extended Sonus SIPREC metadata).	3	6.1M0P0	6.1M0P1
27517060	ISR Dashboard now properly updates Archival destination Locations in certain scenarios.	2	6.1M0P0	6.1M0P1
27369699	ISR Dashboard properly views, edits, and deletes users on subsequent user listing pages.	3	6.1M0P0	6.1M0P1
27022875	Media realignment no longer causes memory leaks in suspect network environments where SSRC packet identifiers are suddenly reset. The feature has been disabled by default.	3	5.2M1P0	6.2M0P0
28993403	Dashboard now displays the proper timestamp during recording playback for major browsers.	4	6.2M0P0	6.2M0P2
30231701	ISR External Events issues.	2	6.2M0P0	6.2M0P4
30231740	"Session Metadata" and "Session Participant Metadata" missing.	2	6.1M0P0	6.2M0P4

ID	Description	Severity	Found In	Fixed In
30231754	API query for recordings receiving two records with same callID, wav and rpdd.	3	6.1M0P0	6.2M0P4
30231874	ISR certificates not updating date when regenerating.	4	6.2M0P0	6.2M0P4
N/A	Remove DTMF digits from ISR logs in Debug mode.	4	6.2M0P0	6.2M0P4