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An Oracle White Paper
May 2015

Eliminating Compliance Recording Cost and Complexity with Oracle Communications Interactive Session Recorder

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Executive Overview

From healthcare organizations to financial services firms, many enterprises are required to record certain telephone conversations and other electronic interactions between employees and customers. But conventional call recording solutions, designed for capturing contact center exchanges for training or quality assurance purposes, aren't well suited for selectively recording and archiving VoIP calls across the enterprise.

Oracle Communications Interactive Session Recorder (ISR) is specifically designed to eliminate enterprise compliance recording cost and complexity. The solution features an open, standards-based architecture that dramatically simplifies the capture and storage of real-time IP communications sessions throughout the enterprise. Ideal for a wide range of compliance applications, ISR leverages a modular design for superior scalability and economics, and offers an extensive API set for ultimate extensibility and flexibility.

Enterprise Compliance Recording Challenges

In today's increasingly regulated world, many enterprises are required by law or industry agreement to capture and preserve certain customer exchanges and employee interactions. Compliance violations can result in legal actions, financial penalties, and loss of status or stricture by trade associations. To mitigate legal risks and avoid financial exposure, enterprise IT organizations must record certain customer interactions and preserve them for extended periods of time.

Traditional call recording solutions, intended for capturing contact center calls for training or quality assurance purposes, aren't well suited for broader enterprise compliance recording applications. Enterprise compliance recording poses a variety of technical challenges for conventional recording solutions:

- **Recording calls across the enterprise**. Conventional recording solutions are usually deployed in the call center to capture conversations between contact center agents and customers. They are typically integrated with a contact center ACD (automatic call distribution) platform or with agent applications. Compliance expands the scope of recording beyond the contact center. Many businesses are required to record certain exchanges between employees (IP-PBX or UC users) and customers or business partners.

- **Capturing all forms of electronic interactions.** IT organizations are required to maintain records of all electronic interactions for compliance purposes—including interactive voice response (IVR) interactions. Most conventional recording solutions are tied to an ACD system or agent application and don't have visibility into customer interactions with IVR platforms or other automated systems.

- **Long-term archival.** Some organizations are legally required to retain recordings for seven years or longer. Legacy contact center recording solutions are intended to store recordings for a relatively short period of time – typically weeks or months. They aren't designed to optimally capture and store large volumes of data for long-term retention, and can be prohibitively expensive for compliance recording applications.

- **Cost and scale.** Conventional recording architectures often require costly third-party ACD licenses and network infrastructure, which increases ongoing operations costs. Because they are designed for analytics, they don't easily scale to the high session capacity required for compliance applications and may require purchase of additional servers.

Oracle Communications ISR Streamlines Enterprise Compliance Recording

Oracle Communications Interactive Session Recorder is the industry's most extensible and easy-to-deploy Internet Protocol (IP) communications session recording solution. The product is designed from the ground up to overcome the unique scalability and implementation challenges IT organizations typically encounter when capturing real-time IP communications sessions across the enterprise. ISR supports standards-based interfaces and APIs for ultimate flexibility and economics, and integrates with established storage and archival solutions for ease of deployment and operations (see figure 1).
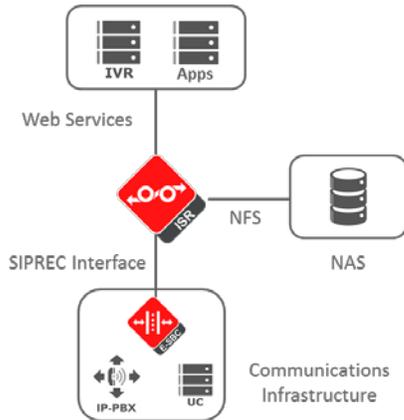
Figure 1: ISR supports standards-based interfaces and APIs

SIPREC Enables End-to-End Session Recording at Scale

Oracle supports standards-based IETF RFC 6341 Session Initiation Protocol-Based Media Recording (SIPREC) for simplicity, performance and scalability. SIPREC defines a distributed client/server model that allows IT organizations to centralize recording functions, consolidate recording infrastructure and eliminate inefficiencies. Because it's an open specification, SIPREC helps increase choice and flexibility for recording solutions, which leads to lower costs.

The Oracle Communications Enterprise Session Border Controller (E-SBC) and ISR both support SIPREC. The E-SBC acts as a SIPREC client, enabling deployment of highly efficient trunk recording architectures, which are dramatically simpler and more scalable than conventional line-side architectures. The ISR acts as a SIPREC server. Both elements interoperate with third party products that adhere to SIPREC specifications as well.
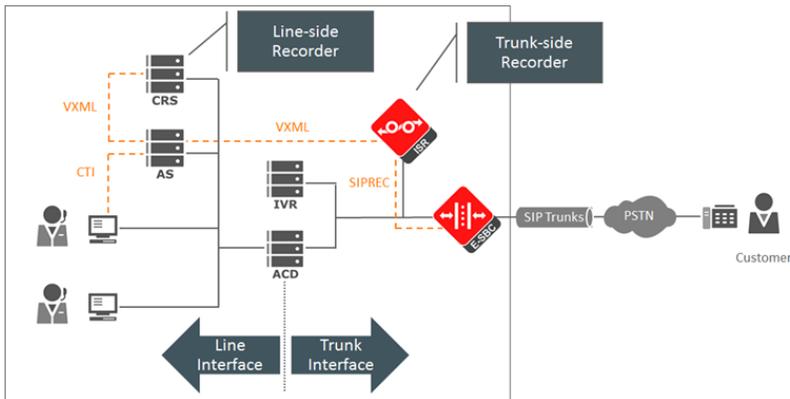
Figure 2: Trunk-side architectures capture interactions at network ingress and are more scalable than line-side architectures.

Because the E-SBC is deployed at the network edge, it has access to all communications flows and can capture an entire customer engagement—including interactions with IVR systems, speech recognition solutions or other automated systems. Because the ISR is not actively involved in the media path it can record sessions without impacting network performance or impairing voice quality.

E-SBCs and ISRs can both be deployed in redundant configurations to enable high reliability (see figure 3). In this scenario, a high availability E-SBC pair is configured to concurrently replicate SIP sessions to two active ISR servers. Should the primary E-SBC fail, the secondary E-SBC takes over in a stateful manner, forking sessions to both ISRs. Should one ISR server fail, sessions are still replicated to the other ISR server. For stringent compliance applications, the E-SBC can be configured to block sessions in the event no recording servers are reachable.
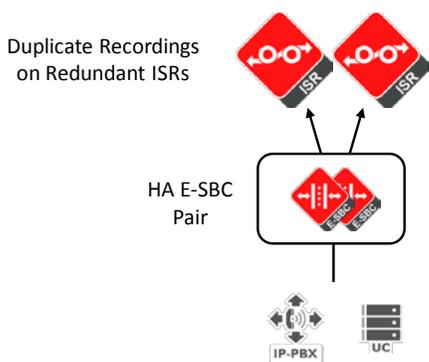

Figure 3: Redundant configurations enable high availability

E-SBCs can also be configured to distribute sessions across ISRs to balance performance (see figure 4).
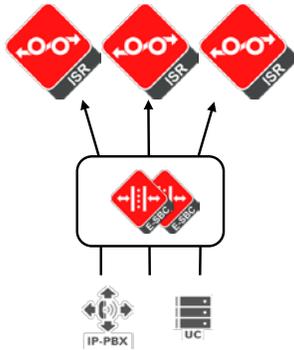

Figure 4: Load balancing configuration

Modular Product Architecture Enables Cost-Effective Scalability

Oracle Communications ISR is based on a modular product architecture that enables cost-effective scalability. An ISR instance is composed of two distinct software-based components that run on industry-standard x86 servers or virtual machines (VMs): Record and Store Servers (RSSs) and Control and Index Servers (CISs).

Record and Store Servers capture SIPREC sessions, control recording functions (select, start, and stop recordings), and manage their storage and archival. They are added to the network in an incremental fashion to support expanding capacity requirements. Control and Index servers oversee the RSSs. They maintain RSS configuration, store recording metadata and indexes, and provide browser-based administrative interfaces.
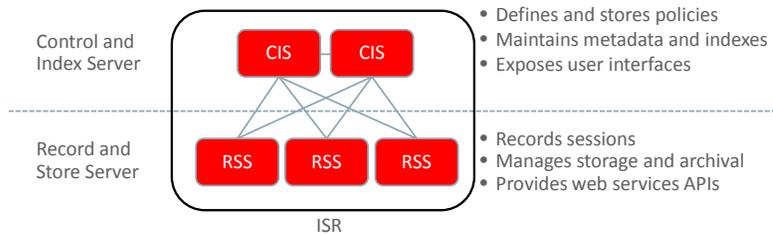

Figure 5: Cost-effective modular architecture

Comprehensive APIs Unleash Innovation

ISR provides standards-based application programming interfaces (APIs) that simplify implementation and integration tasks. The solution supports REST APIs that shield programmers from the complexity of the underlying communications infrastructure. Ordinary web developers, who aren't necessarily versed in telecommunications, can use simple web services calls to automate session recording functions (start, stop, tag, store, etc.).

The APIs can give programmers tight control over which sessions and specific session segments are captured, helping IT organizations minimize storage and archival requirements. For example, ISR can be signaled to omit capture of spoken credit card numbers for PCI compliance. This can be a significant advantage over conventional solutions, which require the information to be redacted later. Developers can easily add metadata to session recording records, so interactions can be efficiently indexed, searched and managed by external applications.

ISR also supports standard Voice XML APIs to streamline integration with IVR systems and speech recognition solutions. This enables ISR to capture customer authorizations that are delivered by IVR commands. IVR application developers can also use these APIs to attach information to the recording about dialog states traversed or out of the ordinary prompt responses for later search and retrieval. Additionally, ISR offers open APIs for exporting bulk session data and recordings to external systems like voice analytics applications.

NAS Integration Reduces Storage and Archival Costs

Oracle Communications ISR integrates seamlessly with existing network attached storage (NAS) systems and practices, helping IT teams protect and extend previous investments, and leverage established practices for securing confidential customer information. The solution supports remote storage and archival to offsite locations as well, including cloud-based storage services (see figure 6).
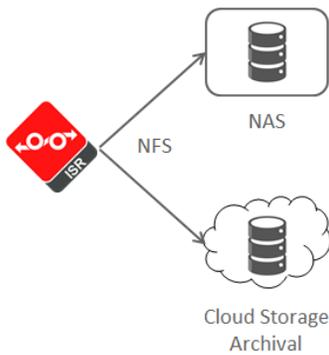
Figure 6: ISR integrates with incumbent storage and archival systems

Conclusion

Many businesses are required to record employee conversations and customer interactions for compliance purposes. Monolithic contact center call recording solutions designed to capture agent interactions for training and quality assurance are too complex and costly for enterprise compliance recording applications.

Oracle Communications Interactive Session Recorder is specifically designed to mitigate the unique scalability and implementation challenges associated with capturing and storing real-time IP communications sessions across the enterprise. The standards-based solution features a client/server model that centralizes recording functions and consolidates recording infrastructure while providing full access to all enterprise communications flows. It leverages a modular product architecture that enables cost-effective scalability. And it optimizes the way calls are collected and stored to contain disk and archival media expenses.

Ideal for a wide range of compliance applications, ISR helps enterprises avoid financial penalties and legal risks by ensuring employee interactions and customer exchanges are properly recorded and archived in a secure, reliable and cost-effective manner.

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May 2015

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