

Ribbon SBC Core Interop with Group 2000 LIMA for IMS LI : Interoperability Note



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Interoperable Vendors



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Scope / Non-Goals

This is an interoperability Note, which is not intended to be a full Configuration Guide/Interoperability Guide. This is an informational document that briefs on the interoperability achieved between Ribbon products and various third-party products.

This document focuses on the feasibility aspects in providing a Ribbon interoperability solution instead of the actual configuration involved for the Ribbon and third-party product(s). Details of the test setup used will be included, along with full details of the Ribbon and third-party products, including details of any hardware and software versions used. The document will also detail results of the interoperability and any notes or caveats related to the interworking.

Audience

This interoperability note is available for all telecom-aware professionals, which includes Ribbon customers and partners. It provides high-level information of the interop solution provided.

Product and Device Details

The sample configuration uses the following equipment and software:

Requirements

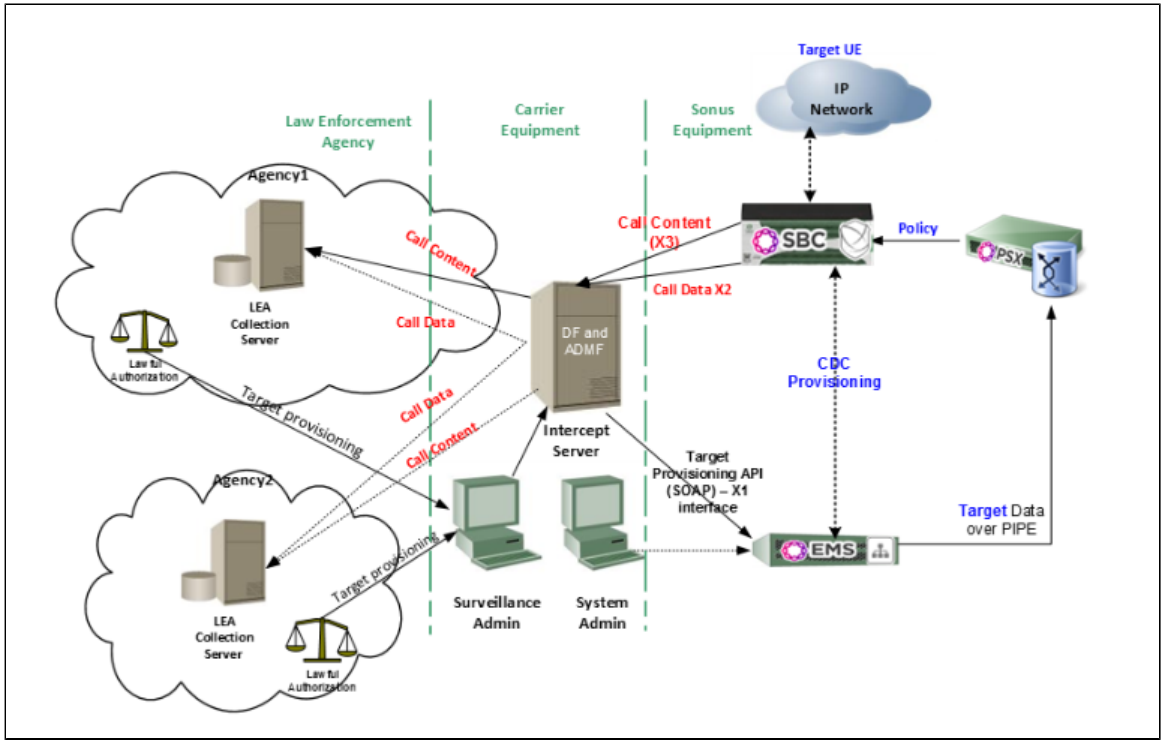
Product	Equipment	Software Version
Ribbon Communication	SBC Core	V08.01.00-R000
	PSX	V12.00.00-R000
	EMS	V12.02.00-R000
Group 2000	Group 2000	N/A

Network Topology Diagram

Interoperability Test lab Topology

The following figure illustrates the IOT high-level architecture that covers call flows and overall topology.

Test Scenario 1



Interoperability Overview

Lawful Intercept (LI) enables a Law Enforcement Agency (LEA) to perform lawfully authorized electronic surveillance of communication that involves users or subscribers against whom a warrant has been issued. This document discusses the implementation of the Lawful Intercept solution with Group 2000 and Ribbon.

Group 2000's LIMA Lawful Intercept server is connected to the Ribbon devices over an IPsec tunnel. For the provisioning of targets, LIMA connects over the X1 interface to the Ribbon EMS. For call content and call data, the Ribbon SBC is connected over the X2/X3 interface to the LIMA server. In this interop, SBC uses the IMSLI variant of the LI.

To configure the SBC using IMS LI, refer to [IMS LI Configuration](#).

Call Flow

Target Provisioning Over X1 Interface

The EMS receives and processes Lawful Intercept target provisioning data from the LIMA server via SOAP-based API. The EMS then distributes this data to all primary PSXs and generates success or failure responses to the LIMA server. The following are the operations performed: target provisioning, target removal, and target query.

Note

Modification of the existing target is not supported.

Call Content and Call Data (Over X2/X3 Interface)

When the SBC Core identifies a call to be trapped, the SBC sends Call Data messages to the LIMA server over UDP on the X2 interface at various stages of the call. In response, the LIMA LI server tells the SBC the IP address and port number(s) to send the collected call content RTP streams over the X3 interface.

The SBC also sends the call voice streams (call content) RTP copy to an IP address and port provided by the LIMA LI server.

Note

The SBC always sends call content and call data over UDP on the X2 and X3 interfaces.

Highlights

1. The EMS receives and processes Lawful Intercept target provisioning data from the LIMA LI server via SOAP-based API. The EMS then distributes this data to all primary PSXs and generates success or failure responses to the LIMA LI server.
2. The PSX maintains the database of all subscribers, including the provisioning information from the LI server as relayed by the EMS. When the call parameters in a policy request (for example, Called or Calling Number) from the SBC Core match any provisioned Lawful Intercept criteria, the PSX adds information about the matching LI criteria to its policy response to the SBC Core.
3. Once the call is initiated, the SBC sends a policy request to the PSX. When directed by the policy response from the PSX, the SBC acts as an intercept access point (IAP) and establishes a Call Data channel for messages and status over UDP/IP to the Intercept Server. The SBC also sends the call voice streams (call content) RTP copy to an IP address provided by the LIMA LI server.



Note

For information regarding SBC Core configuration, refer to the product documentation on <https://doc.rbn.com/display/SBXDOC81/SBC+Core+8.1.x+Documentation>

Supplementary Services and Features Coverage

The following checklist depicts the set of services and features covered through the configuration defined in this Interoperability Guide.

Services and Features Checklist

Serial No.	Supplementary Features/Services	Coverage
1	Basic Registration over UDP	✗
2	Basic Call Setup	✓
3	Basic Call Termination	✓
4	Call Hold/Unhold	✓
5	Call Forward Scenarios	✓
6	Call Transfer	✓
7	SMS	✓
8	Video	✓
9	DTMF Interwork	✓

Legend

✓	Supported
✗	Not Supported
N/A	Not Applicable

Support

For any support related queries about this guide, contact your local Ribbon representative or use the following details:

- Sales and Support: 1-833-742-2661
- Other Queries: 1-877-412-8867
- Website: <https://ribboncommunications.com/services/ribbon-support-portal>

References

For detailed information about Ribbon products and solutions, refer to <https://ribboncommunications.com/products>.

Conclusion

This Interoperability Note describes a successful configuration covering Group 2000's Lawful Intercept solution with Ribbon products. All the necessary features and serviceability aspects stand covered as per the details provided in this interoperability document.

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