Skype for Business

for NICE Trading Recording (NTR)
NICE Trading Recording (NTR)

• Offers the Essential Communication Compliance Needs for Trading Floors

- Largest Back Office Monitoring 40,000 Users
- Largest Trade Floor 8000 Channels
- 500,000 IPT Back Office Channels Globally
- Billions of Interactions Securely Captured and Archived with NICE

Proven Success
NTR offers Compliant Focused Total Recording Platform

**Strategic**
- Future proof
- New Business Applications
- Multi-channel
- Flexible Archiving

**Scalable**
- Front-Office
  - all Trading Systems
- Back-Office
  - all major IP PBX systems
- Mobile Phone recording
- Central Portal

**Secure**
- Secure Recordings
- Secure Access
- Secure Storage
- Secure Replay
NICE Compliance Framework

Business Solutions

Application Framework
Applications Portal, Workflows, Dashboards, Reporting, Unified Administration

Archive & Analytics
Data integration, Cross-channel analytics engines, Structured and unstructured data warehouse, Business entities and Operational data

All Communication Channels
Capture layer of Trader Voice, Cisco, Skype Voice, text, video and other communication channels

Additional Data
Transactional and other data
NTR Fusion for Central Portal

- Use one Central Portal for all NTR Recording Servers
- Centralized User Administration
- Centralized Search & Replay
- Roles Based Access Control
- Bulk Operations & Rules

Single Portal for ALL Compliant Voice Recording Operations
NTR Managed Content Lifecycle

- On Capture Servers
  - Local buffer
  - Encrypt/fingerprint
  - Push to Core

- On Data Management Servers
  - Local buffer
  - Add Retention on Content and Metadata
  - Push to Archive
  - Option to Add Litigation hold
Communication Surveillance can monitor Skype channels

- Aggregate
  - Voice
  - Chat
  - Email
  - Social Media
  - RTI
  - Document
  - CRM
  - OMS
- Analyze
  - Ingestion Linguistics
  - Universal Index
- Control
  - Supervision
  - Investigate
  - Explore
  - Observe
  - Review
  - Investigate
  - Dashboard
  - Reports

Connect to all communication vaults

Index and analyze all interactions

Review alerts and start investigations
The Skype Architecture – Example of Large Enterprise
Compliance Requirements

- Securely Record All calls
- Record Encrypted calls
- Rich Call Metadata
- Centralized Recording
- No Single Point of Failure (Redundancy)
- Recording not visible to Skype users
  - No negative user experience impact
  - No desktop client
Capturing Skype for Business Voice - Overview

1. The Front End Server sets the Recording Target (extension to be recorded)
2. The **NICE Proxy** is introduced between the Front End Server and the NICE Recording
3. The NICE Recording Satellite is selected for the recording
4. The IP address of the Recording Satellite send to the Front End Servers as the Recorder Audio Destination
5. The Audio is forked from the Proxy to the Satellite
Capturing Skype for Business Voice - Features

- Easy to deploy
- Total recording
- Secure
- Fast

- NICE trusted application deployed on S4B Front End Servers
- Enables recording of all endpoints that are selected for recording.
- Secure Audio is relayed to the NTR Recording Servers
- Recording is enriched with metadata for fast and accurate search and replay
NICE Media Proxy Server Recording - Benefits

- Media Server keeps all voice data within the internal customer network (no routing through DMZ)
- Introduce best proxy candidate in the SIP/SDP local audio route during call setup between 2 endpoints
- Broker both UDP and TCP
- Audio is duplicated and forked to best recording node
- Proxy is resilient and load balanced to guarantee highest possible uptime
Media Proxy Pooling - Design Details

One
- The NICE trusted application on the Front End Servers will be provided with "Proxy Addresses" with a value Examples: 1.1.1.1; 2.2.2.2; 3.3.3.3; 4.4.4.4

Two
- The application will treat each of the addresses that it finds as a Media Proxy server and proceed to connect and use that Media Proxy.

Four
- If a Media Proxy has failed and is not available to the Front End App it will be skipped until it has recovered and can be connected to by the FE App.

Three
- The Front End App will apply a round-robin (circular) pattern to use channels starting from the first Media Proxy up to the last and then starting with the first again.
Skype for Business – Call Flow without Recording

Phone A

Invite

Session Progress

Session Progress

RTP Audio Streams

Hang-up

BYE

Front End

Phone B

Invite

Session Progress

RTP Audio Streams

BYE

BYE
Skype for Business – Call Flow with Recording

Phone A

Invited

Front End

On Request

Set EndPoint

Front End Link Controller

Adjusted Invite

Proxy

Message with SDP

Change message

Phone B

Connect

NTR Satellite

NICE

Start Channel

BYE

Hang-up

Disconnect

Stop Channel

RTP Audio Streams

Duplicated RTP Audio Streams
**NICE Proxy - Performance**

- **Physical hardware:** 8 Core CPU (2.67GHz), 8Gb RAM, 1Gb NIC
  - 700 concurrent calls per proxy
  - 2N recording, both parties in call recorded, 440 concurrent calls per proxy

**Max. latency introduced in call by Proxy < 10 m sec**
Resilience Configuration - 2N Recording

- Duplicated NICE Front End Apps
- Duplicated Recording Servers
- Independent recording clusters ensure 1 recording lane operates if failure in other lane
- No failover time
- Fusion manages both clusters, de-duplicates etc.
Proxy Failure – Rainy Day Scenarios

1. Normal situation
   - Calls are routed via Proxy A
   - Recorder is setup via Proxy A

2. Proxy A fails
   - Call no longer recorded
   - Standing call is terminated
Proxy Failure – Rainy Day Scenarios

3. **Proxy B becomes active**
   - Next calls are routed via Proxy B
   - Recorder is setup via Proxy B

4. **Back to normal**
   - Calls are routed via Proxy A
   - Recorder is setup via Proxy A
Skype for Business Recording with NTR – Summary

- Leverage existing investments
- NICE have proven track record of delivering SIP based compliant voice recording
- S4B added into existing (turret recording, IPT) recording estate to create:
  - Compliant archive with all required functionality i.e. litigation hold
  - Trade reconstruction
  - Monitoring Tools
  - Integrated Analytics
- Unparalleled support structure and partnerships to provide global support infrastructure

- Solution features
  - Active recording (SRTP is default)
  - All S4B Codecs Supported
  - Selected target recording
  - Resiliency
    - Support of 2N Resilient Recording
    - Multiple DC Support
    - Support of Skype High Availability
    - Local Survivability
  - Security
    - SRTP

- Supported Versions
  - Lync 2013
  - Skype for Business 2015, 2016
NICE Financial Markets Compliance
fmc@nice.com
www.holisticsurveillance.com