Video

• Collab 2

Ivan Sýkora
Agenda

- Videokonferenční infrastruktura

acano
Our Mission [Hasn’t Changed]
Provide a No Compromise Collaboration Experience to:

Every Room
Every Desk
Every Pocket
Acano
Positioning & Strategy
Unified Communications and Collaboration - #1
Unified Communications and Collaboration - #1

Acano is now part of Cisco.
Cisco Collaboration

EVERY POCKET
EVERY DESK
EVERY ROOM

Teamwork Technology

Unified Communications
Customer Care
Conferencing

Collaboration Edge Architecture

Cisco Network

acano Completes the conferencing portfolio
Lead Meeting Strategy
Based upon deployment requirements

Full Cloud-Based Deployment
• Content Create and Share
• Audio/PSTN Bridging
• Client-less Join
• Persistent Business Messaging
• Rich Spark Proximity/TP Room Endpoint Integration

Spark and or WebEx

Video Centric Premises Deployment
• Content Share
• Audio/PSTN Bridging
• Client-less Join
• Meeting Controls
• Rich TP Room/SIP Video Integration
• Rich Audio/Video S4B Interop

Acano Server
Acano Solution Overview
What is the Acano Solution & Capabilities

A software based platform providing complete conferencing services in a flexible deployment model.

- Skype for Business (Lync) integration
- Browser conferencing
- Team spaces
- Video conferencing
- Audio conferencing
- Apps
Skype for Business (Lync) integration

**Key features:**

- Seamlessly connects Skype for Business with other video systems
- Dual homed conferencing
- Bidirectional content sharing (RDP)
- Scheduled conferences
- Buddy list integration
- Skype audio and video support

Native support:

- SVC/H.264UC (Skype for Business/Lync 2013)
- RTVideo (Lync 2010 & 2011)
- Direct federation to Office365
- IM and Presence
- Multi-party conferencing
- Drag and drop
- Bidirectional RDP Content Sharing
Video conferencing

Key features:
- Outstanding interoperability
- Unlimited team spaces
- Flexibility and customization
- Platform-independent licensing
- Built-in SIP NAT traversal
- Security
- Multi-tenancy

Standards:
- SVC/H.264UC (Lync 2013)
- RTVideo (Lync 2010)
- WebM/VP8 (WebRTC)
- High Profile H.264 (Polycom)
- TIP (Cisco Immersive Telepresence)
Browser Access - WebRTC

Key features

- Anyone can join
- Chrome, Firefox, Opera – native WebRTC
- Safari, Internet Explorer – application cross launch
- Bidirectional content
- Guest access or User login
WebRTC Demo:

Meeting Room TechDay 2016

https://join.goacano.com/invited.sf?secret=Y98u1fjRV01Sdp._mtBmLg&id=144940092

https://goo.gl/uofzi6

- webový prohlížeč
- mobilní aplikace
Acano Architecture
The Acano Platform

- Management
- Future Acano Functions
- Third Party Integration
- Third Party Application

- XMPP
- CallBridge
- TURN
- Webbridge
- Database
- Loadbalancer
- H323
- SIP Edge
- Recorder

Acano server

Virtualized
Component Enablement

**Acano Spaces**
- Call Bridge
- Web Admin
- XMPP Server

**Video | Audio | Lync GW**
- Call Bridge
- Web Admin

**WebRTC**
- Call Bridge
- Web Admin
- XMPP Server
- Web Bridge

**External Access**
- TURN Server
- Load Balancer
- Edge (Split Dep.)

**Geo-Distribution**
- Call Bridge (Clustering)
  - Database
  - Load Balancer
SINGLE Server
Acano Solution

Internal

DMZ

External

10 x Immersive Video

100 x Non-Immersive Video

UCM Cluster

VCS Control

VCS Edge

200 x Home Employee Endpoints

LEGEND

GK Registration

LYNC FE Reg.

FW Traversal

Acano SIP Trunk

Browser Access

SOLUTION

Split Deployment

Acano Core

• Call Bridge

• SIP trunk to Lync FE + VCS Control

• Unlimited Spaces

Acano Edge

• Web Bridge

• TURN Server

Enterprise Agreement

• End user licensing

MSE repurposed

• Immersive needs

Lync integrated

Audio insourced

User experience preserved

• Audio/Video dial plans mirrored
Acano Solution

**LEGEND**
- GK Registration
- LYNC FE Reg.
- FW Traversal
- Acano SIP Trunk
- Browser Access

**SOLUTION**
Split Deployment

**Acano Core**
- Call Bridge
- SIP trunk to Lync FE + VCS Control
- Unlimited Spaces

**Acano Edge**
- Web Bridge
- TURN Server

**Enterprise Agreement**
- End user licensing

**MSE repurposed**
- Immersive needs

**Lync integrated**
- Audio insourced

**Audio/Video dial plans mirrored**

**User experience preserved**
- BYOD

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Internal
- 2000 Users
- Lync FE
- UCM Cluster
- 10 x Immersive Video
- 100 x Non-Immersive Video

DMZ
- Lync Edge
- VCS Control
- VCS Edge
- UCM Cluster
- 10 x Immersive Video

External
- BYOD
- 200 x Home Employee Endpoints
Acano Solution

**LEGEND**
- GK Registration
- LYNC FE Reg.
- FW Traversal
- Acano SIP Trunk
- Browser Access

**SOLUTION**
- **Split Deployment**
  - **Acano Core**
    - Call Bridge
    - SIP trunk to Lync FE + VCS Control
    - Unlimited Spaces
  - **Acano Edge**
    - Web Bridge
    - TURN Server
  - **Enterprise Agreement**
    - End user licensing
  - **MSE repurposed**
    - Immersive needs
  - **Lync integrated**
  - Audio insourced
  - User experience preserved
  - Audio/Video dial plans mirrored

**Network Diagram**

- **2000 Users**
- **Lync FE**
- **Acano Core**
- **VCS Control**
- **UCM Cluster**
- **10 x Immersive Video**
- **DMZ**
  - **Lync Edge**
  - **Acano Edge**
  - **VCS Edge**
- **External**
  - **BYOD**
  - **200 x Home Employee Endpoints**
  - **100 x Non-Immersive Video**
Acano Deployment
The Acano Collaboration Platform
Deployment Freedom

Acano Server

Virtualized
Scale a specialized HW

The energy-efficient 2U Acano server has a high call capacity with unparalleled Switching and Transcoding:

Supports:

- 250 HD calls
- 500 480p calls
- 600 Skype for Business video calls
- 1,500 web calls (audio & content)
- 10,000 audio calls
The Acano solution runs on a broad range of standard Cisco servers as a VM deployment, and also third party servers containing both Intel and AMD processors.

Host Requirements:

- Intel Xeon 2600 v2 or later
- 1G per Core
- 100GB HDD
- Hypervisor
  - VMware ESXi 5.1 Update 2, 5.5 Update 1
  - Hyper-V 2012, 2012 R2
- VM White Paper – 2.5 720p30 Ports per physical core
- 1ACU* = 720p/30

(* Acano Capacity Unit)
DISTRIBUTED ARCHITECTURE

- Capacity
- Resilience “Shared Nothing”
- Geo-distribution
Resilience | Scale | Geo-Distribution | Pooled Licensing
Resilience | Scale | Geo-Distribution | Pooled Licensing

A fresh perspective on collaboration

1.5 Mbps x 2

1.5 Mbps x 4

1.5 Mbps x 3
Resilience | Scale | Geo-Distribution | Pooled Licensing

A fresh perspective on collaboration

1.5 Mbps x 1
SVC – 5 screens

1.5 Mbps x 2

1.5 Mbps x 4

1.5 Mbps x 3

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Flow control in Acano video

- 1 stream contains multiple participants
- Far end unpacks as required
- Can scale and compose
- In distributed link the output can be used multiple times
  - In 1.8, up to 4 participants sent
- While the overall size is constrained, it is possible to adjust the sizes of the components
Additional Features
Team spaces

Key features:
- Virtual meeting rooms for audio, video and web
- Unlimited spaces for each user, project and team
- Screen sharing and persistent chat
- Always available and accessible on multiple devices
Multi-Tenant Provisioning

LDAP based mappings:
- Multiple databases
- Multiple filters

LDAP based
- Authentication
- Auto creation of Spaces
Branding

- IVR Backsplash
- IVR Voice Prompts
- WebRTC Splashscreen
- WebRTC Logo
- Customize Invites
Branding Examples
API
Extending the functionality

- Flexibility is key
  - Many similar but different feature requests
  - Avoiding hardcoded functionality
- Leads to complexity
  - Access methods
  - But what can a chair do?
  - Why limit ourselves to two

```
Call=1
PIN=1234

Call=2
PIN=5678

Call=3
PIN=5678
```
Driving the API

Scripting to extend functionality

• Listen for events of interest
• Receive API calls from users or external systems
• Make API calls to server
• Make API calls to external systems
Acano Server Short Term Roadmap
TMS Integration

- Current TMS 15.x versions can manage an Acano server as an “Unmanaged Bridge” using the Network Integration key (L-TMS-NETINT).
- This allows users to specify up to 25 URIs that can be scheduled for any future meetings.
- This supports OBTP to the endpoints for single or recurring meetings.
- There is no communication between TMS and the Acano server. TMS is simply telling endpoints to initiate a call to the booked URI.
Distributed TIP - 1.9

- Moving from sending 4 to sending 9 streams
- Now send multiple parts of loudest room
  - Far end understands this
- Single screen people still only see single segment
- Audio now sends separate L, C, R and Aux audio
  - Preserves experience over cascade

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Wrap-up
What is the Acano Solution & Capabilities

A software based platform

providing complete conferencing services

in a flexible deployment model.
Where can I see Acano?

• http://goacano.com
Následuje
Nové služby v kontaktních centrech - Omnichannel
Děkujeme za pozornost.