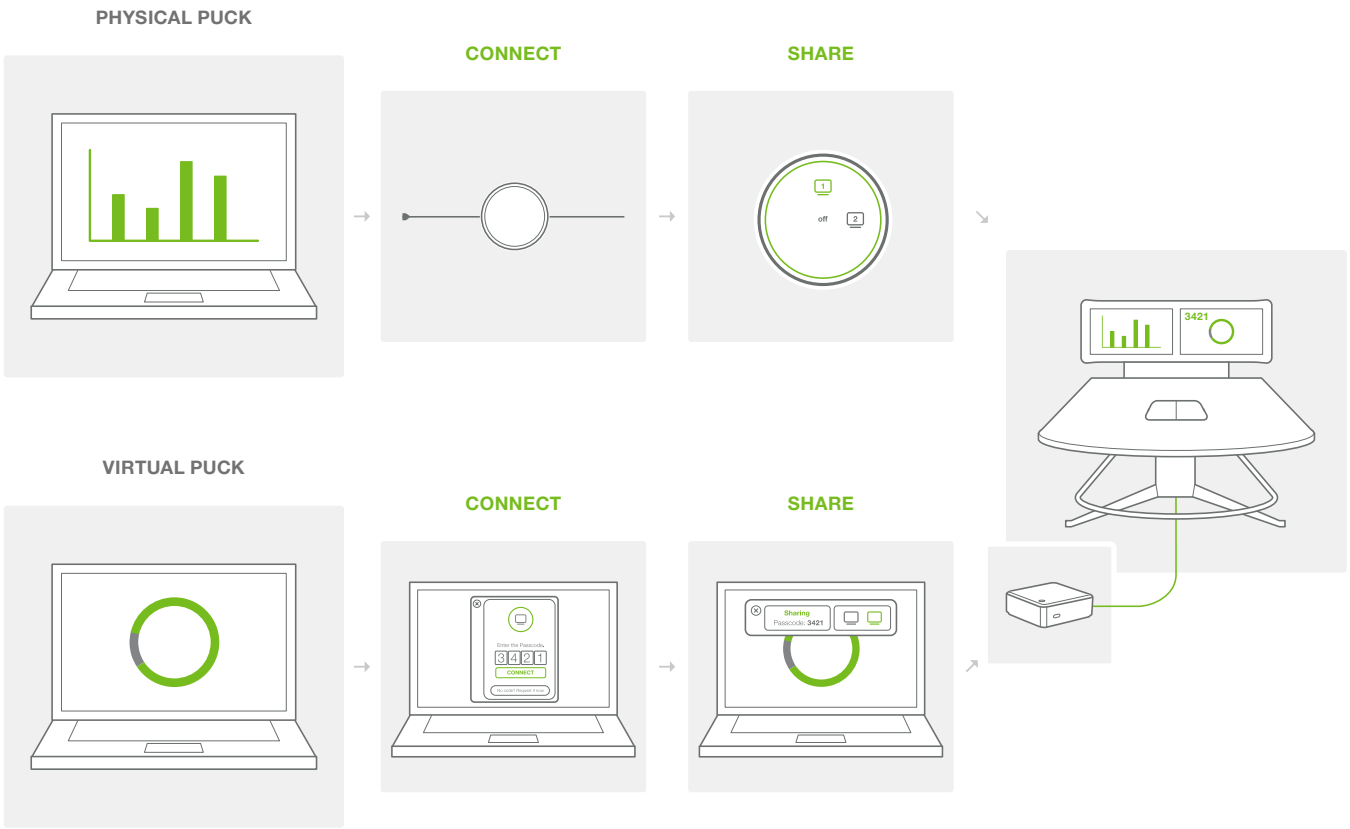
VIRTUAL PUCK INFRASTRUCTURE GUIDE

The new Virtual PUCK allows meeting participants to share content wirelessly from a laptop, maintaining the simple “Open, Connect, Share” experience of media:scape. The application seamlessly integrates with a media:scape setting, enabling information sharing from any participant, anywhere in the room, with a simple click of an icon or the touch of a physical PUCK.

The media:scape Virtual PUCK system is made up of several components:

- **Virtual PUCK Receiver:** physical appliance installed inside a media:scape setting connected to the media:scape digital switcher.
- **Steelcase Application Server:** virtual appliance installed on a host server to house the Virtual PUCK Registry.
- **Virtual PUCK Registry:** software application hosted on the Steelcase Application Server; network communication mechanism for all Virtual PUCK Receivers and media:scape settings.
- **Virtual PUCK Application:** client application installed on end users’ laptops (OS X and Windows); user interface for “Open, Connect, Share” experience.

How Content Gets to media:scape



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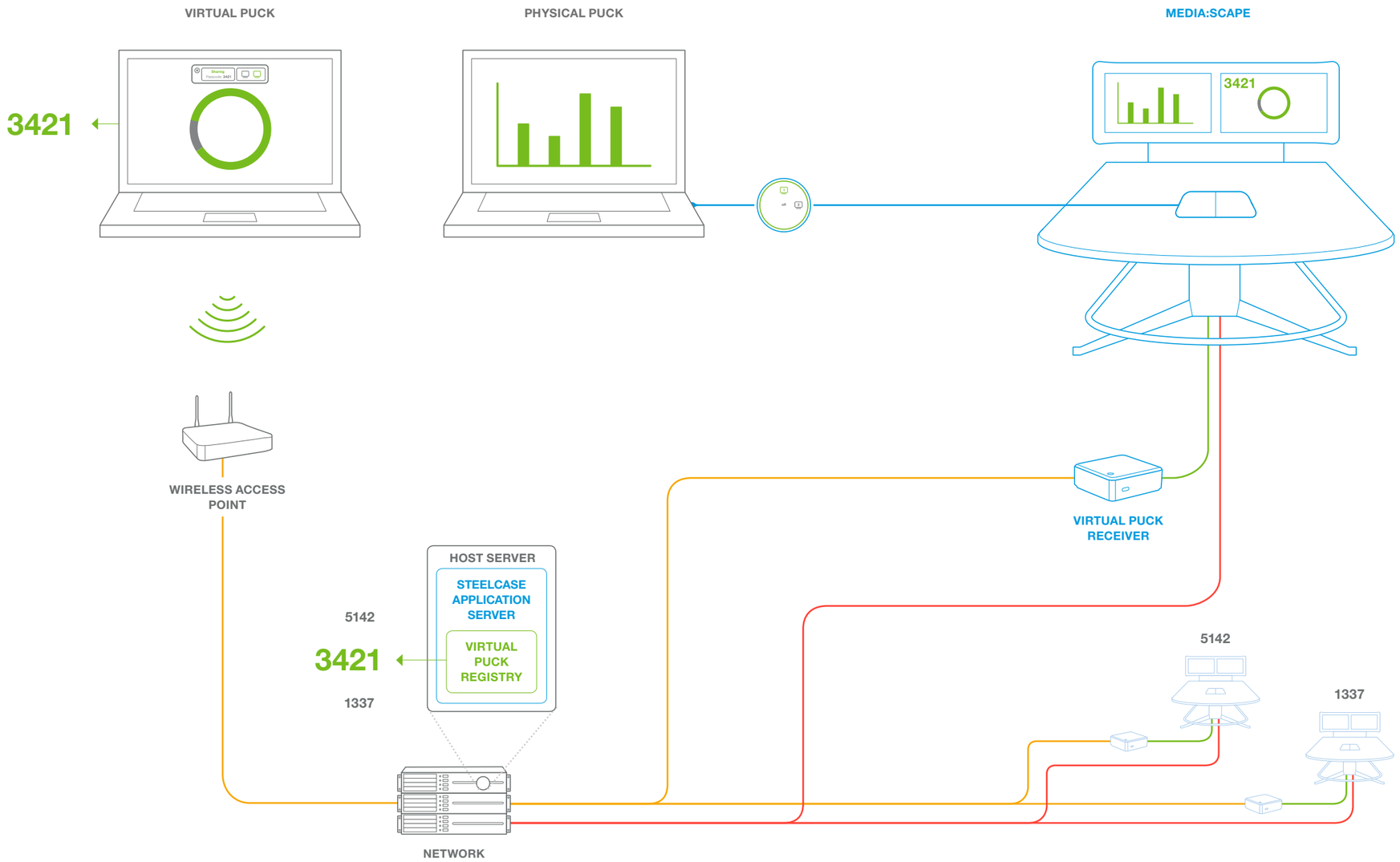
Technical Diagram

- VIDEO SIGNAL (HDMI)
- STREAMING VIDEO (NETWORK)
- SUPPLIED BY STEELCASE
- NETWORK CABLE



Implementation Journey

- COMPLETED BY CUSTOMER
- FULFILLED BY STEELCASE

Step 1: Review and understand Virtual PUCK Infrastructure Guide with IT
The Steelcase Virtual PUCK is a system of several required components: *Virtual PUCK receiver, Steelcase Application Server (SAS), Virtual PUCK registry and Virtual PUCK application.*

Step 2: Order Steelcase Application Server (software download)

Step 3: Import Steelcase Application Server and configure network environment
The Steelcase Application Server (SAS) is a virtual appliance that manages and disperses the 4-digit codes in a digital media:scape setting. The SAS requires a DNS entry (scs-virtualpuck-registry) that resolves to the IP address of SAS.

Step 4: Prepare environment for media:scape digital and Virtual PUCK installation
Both the digital media:scape switcher and Virtual PUCK receiver require a wired connection to the network.

Step 5: Order or identify digital media:scape

Step 6: Order Virtual PUCK receiver

Step 7: Install of Virtual PUCK receiver and digital media:scape in environment

Step 8: Configure, connect, test, and manage digital media:scape and Virtual PUCK using SAS

Steelcase Application Server

MINIMUM VIRTUAL SYSTEM REQUIREMENTS	
CPUs	2
RAM	4 GB
Storage	20 GB

NETWORK REQUIREMENTS	
Static IP Address	1
DNS Entry	scs-virtualpuck-registry

TECHNICAL SPECIFICATIONS	
Virtual Appliance Delivery Method	~2 GB OVA Virtual System
Web Interface	Virtual PUCK Registry
Number of Virtual PUCK Receivers	~200
Database	Internal

Virtual PUCK Receiver

MINIMUM REQUIREMENTS	
Network Connection	100/1000 Mbps (wired)
media:scape	Digital Switcher (8x4 or 4x2)
SAS Protocol	HTTP
Virtual PUCK Client Protocol	TCP & UDP

TECHNICAL SPECIFICATIONS	
Users	Up to 8 connected users
Concurrent Streams	1 or 2
Video Output	1 or 2 (single- or dual-display media:scape)
Video Output Resolution	Up to 1920x1080
Audio Output	Not supported
Web Interface	Virtual PUCK Manager
Connections	(1) 8-wire RJ45 Female (10/100/1000 Mbps); (2) 19-pin HDMI Type A; (3) USB 2.0 Type A (future use); (4) 19VDC 3.42A
Included Hardware	Virtual PUCK Receiver, Mounting Hardware Kit, Two 3' HDMI Cables, 19VDC 3.42A Power Supply, AC Power Cord

Virtual PUCK Client Software

MINIMUM REQUIREMENTS	
Additional Hardware	None required
Latency	<100 ms UDP to Virtual PUCK Receiver
Network Connectivity	802.11a/g/n or 100/1000 Mbps
SAS Protocol	HTTP
Virtual PUCK Receiver Protocol	TCP & UDP
Range	N/A (anywhere on WiFi)

TECHNICAL SPECIFICATIONS	
Resolution	All native resolutions supported
Audio	Not supported
Frame Rate	Up to 15 fps
Bandwidth	Typical 1–2 Mbps (up to 5 Mbps per stream)
OS Support	Mac OS X – versions 10.7 (Lion) through 10.10 (Yosemite); Windows Vista, 7, 8 (requires .NET 4.0)

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