

{New Product}: Tier 1 Technical Support

Facilitator Guide



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Document Information

Authorship

The {Company Name} Talent Management & Development (TM&D) group created this document and maintains sole rights and responsibilities for ownership, accuracy and knowledge viability.

Anyone wishing to update, alter, or in any way change this document should submit a request via:

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Version History

Version	Date	Author(s)	Affected Change & Pages
1.1	11/12/15	Sue Sudbeck	Published Draft
1.2	12/08/15	Sue Sudbeck	Updated {Knowledge Tool} Search information
1.3	2/9/16	Margie DeBroux	Consistent nomenclature, clarify troubleshooting steps
1.4	2/19/16	Margie DeBroux	Incorporate suggestions and questions from instructors
2.0	4/4/16	Margie DeBroux	Incorporate feedback from instructors; align content/ graphics with other audiences
2.1	5/10/16	Margie DeBroux	Mention features about remote (p. 29); Remove IP AO code info (p. 31)

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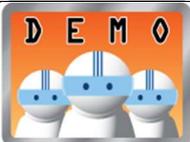
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Document Information, Continued

Throughout this document, you will notice the following icons. Each icon identifies components of the training course for the Facilitator and Participant.

Icon	Use
	The Facilitator Note icon highlights a note that has instructions for only the Facilitator to see. Facilitator Notes are shaded in grey and reflect a guideline or a tip needed to facilitate the course. Facilitator Notes are removed from the Participant Guides. Facilitators should also note that answers for Activities, Discussion Dialogues, and Knowledge Checks are shaded in grey or bolded. All answers are removed from the Participant Guides as well.
	The Objectives icon identifies the overall Objectives in both the Course Introduction and Summary.
	The Knowledge Check icon indicates an area of measurement by testing knowledge and/or behavior. Measurement usually directly follows the content to which it pertains.
	The Activity icon highlights instructions for a classroom activity.
	The Discovery Dialogue icon highlights questions that will be discussed openly in the classroom. The questions are designed to make Participants think about the application of the content that was just covered.
	The eLearning icon indicates the Participant will launch and complete the indicated eLearning course as part of their training.
	The Demonstration icon highlights a Facilitator-led demonstration of a task, process, or workflow within the training course.

Preparation

Materials

To complete this course, please ensure you have the following documents:

- Facilitator Guide
 - Participant Guides
 - PowerPoint Presentation
 - {New Product} Welcome Kit (User Guide)
 - {New Product} {Knowledge Tool} articles
-

Hardware Requirements

Listed below are the equipment requirements needed to facilitate this training:

Demonstration Equipment*

- {New Product} Host devices
- {New Product} Client devices
- {New Product} XR11 Voice-Activated Remote
- Second screen (mobile) device with supported operating system

Lab Station Supplies

- HDTV (with HDMI inputs)
- HDMI cables
- Coax jumpers
- MoCA filters
- Active cable outlets
- Active accounts with {New Product} service

If equipment is not available, use images and details presented in Lesson 2 and {Knowledge Tool}. Remote access may be available via Sling box and simulations in {Knowledge Tool}.

System Requirements

Listed below are the systems used to facilitate this training:

System	User Name	Password
{Knowledge Tool}	Your {Company Name} User Name	Your {Company Name} Password
{Customer Care System}	Your {Company Name} User Name	Your {Company Name} Password

Continued on next page

Preparation, Continued

Set up prior to class

The following should be set up using {New Product} for demonstration in class.

Action	Material
Record Shows	Record at least two shows to the DVR. You will need this to showcase some DVR features.
Favorite Channels	Mark some channels as Favorites.
Scheduled Series	Set up a few series for future recordings.
On Demand History	Search for some On Demand content to establish a search history.
Apps	Be sure to review and set up some Apps with preferences if required.
Parental Controls	Review parental control options. Be prepared to toggle these on and off during your demonstration.
Restart	When identifying a program to demo the Restart function, look in the Guide for any programming that has a Restart symbol on it that is airing during the time of the demo. The symbol looks like a play button surrounded by a broken circle with an arrow head.

Role Play Preparation

For the role play activity in Lesson 5: Troubleshooting, the Participant playing the part of the Customer will have information that the Agent discovers during their conversation.

Prior to class:

- For the number of pairs in the class, print out the **Role Play Instructions for the “Customer”** page located at the end of the Facilitator Guide.
- Cut the pages so that only one scenario is on the paper.

During the class:

- Give the Participant playing the role of the Customer the information for the scenario being role played.
- Alternate the Participants playing each role.

Agenda

Agenda and Timelines

Follow this timeline:

Content	Time
Course Overview	5 minutes
Lesson 1 Product Overview	25 minutes
Lesson 2 Equipment	30 minutes
Lesson 3 User Functionality	30 minutes
Lesson 4 {Customer Care System}	30 minutes
Lesson 5 Troubleshooting	50 minutes
Course Summary & Assessment	10 minutes
Total Time	3 hours

{New Product} – Tier 1 Technical Support

Course Overview



Present the Course Introduction to the Participants.

Discuss the terminology for {New Product}.

- **The New {Old Product}** – When Written to Consumers (e.g. – printed in brand and direct response ad campaigns and spoken by the CSRs).
- **The All New {Old Product}** – When Spoken to Consumers (e.g. - as heard in radio and television copy).
- **{New Product}** – When compared with legacy {Old Product} (e.g. - externally) and when used internally (e.g. - training materials, etc.).
- **{Old Product}** – When referring to the legacy {Old Product} product.

Highlight the course time.

Review course objectives to ensure Participants are clear on what will be covered in this course.

Lesson Time: 5 minutes

Course Introduction

PPT 3

The goal of this course is to provide incumbent Tier 1 Agents with information and resources needed to support {New Product} Customers. This course includes product information and installation, activation, diagnosis, and troubleshooting activities.

This course is also designed to work in conjunction with:

- {New Product} Product Overview eLearning (ccivdprd0096)
 - {Knowledge Tool} articles for {New Product}
-

Time

3 Hours

Course Objectives

PPT 4

At the end of the course, you will be able to:

1. Describe the {New Product} product.
 2. Describe network architecture and compatible Customer Premise Equipment (CPE).
 3. Identify the new user functionalities.
 4. Identify tools and resources to support {New Product} Customers.
 5. Troubleshoot and resolve Customers' technical issues.
-

Lesson 1: Product Overview



PPT 5

Present the Lesson Introduction.

Facilitate the Discovery Dialogue.

- Listen for:
 - Guide
 - Smart Search
 - Voice Activated Remote
 - Record 6 - Ability to record 6 shows simultaneously
 - {New Product} App (Second Screen App)
 - Visual interface

Note: Participants should have completed an eLearning component *{New Product} Product Overview*.

Lesson Time: 25 minutes

Lesson Introduction

PPT 6

Your main focus is to correct your Customer's issue or escalate appropriately. It is also essential that you are able to speak to your Customer about {New Product}'s features and benefits with confidence.

This lesson will provide you with a high-level overview of the product. We will go into more detail in the following lessons.



Take a moment to answer the question below. Be prepared to discuss your answers with the class.

List features of the {New Product} product that interested you while taking the *{New Product} Product Overview* course.

1. _____
 2. _____
 3. _____
-

Continued on next page

Lesson 1: Product Overview, Continued



Cover the objectives.

Review the {New Product} product features and new generation platform with the Participants.

Lesson Objectives

At the end of this lesson, you will be able to:

PPT 7

1. List features of the {New Product} product.
 2. Describe how {New Product} differs from the {Old Product} product.
-

{New Product} Features

Let's discuss the {New Product} product, features, and benefits.

PPT 8

{New Product} is packed with state-of-the-art features, including:

Feature	Function
Internet-ready High-Definition Digital Video Recorder (HD-DVR) Host	Depending on the equipment, the DVR allows the Customer to record up to 6 shows at once. The HD Host DVR acts as a gateway host for {New Product} and its clients.
High-Definition Non-DVR Host	The Non-DVR acts as a gateway host for {New Product} and its clients.
High-Definition Client Receivers	The client receiver connects to the DVR to view shows, and frequently updates on-screen guide data. With {Old Product}, the client can stand alone. With {New Product}, the client needs the host.
Voice-activated, cross-platform Smart Search	Voice-activated advanced search functions help create a personalized experience and even provide recommendations for viewing choices. Smart Search allows searching TV, VOD, and DVR shows.
In-TV Apps	Keeps Customers constantly in touch with sports, weather, traffic, and stocks.
{New Product} App (may be called Second Screen App with employees)	Customers can watch live and Video On Demand content on a tablet, phone, or computer within their home.

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Lesson 1: Product Overview, Continued

{New Product}
Features,
continued

PPT 8

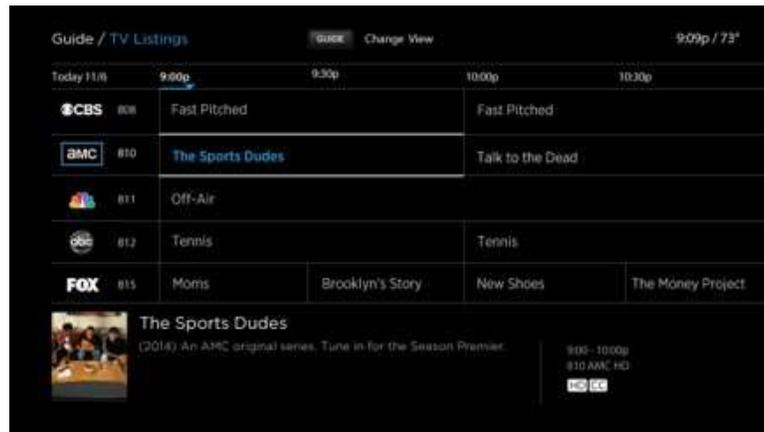
Feature	Function
Cloud Technology	<p>{Old Product} and {New Product} use similar architectures to deliver video and handle out-of-band data.</p> <p>{New Product}'s network architecture uses more IP cloud networking to deliver content as well as MoCA networking to distribute content within the home. The following are cloud-based features that can be transferred when a host is swapped:</p> <ul style="list-style-type: none">• DVR Recordings Schedule• Favorites• Watched List• Recommendations

Next
Generation
Platform

PPT 9

{New Product} is the center for the overall Customer viewing experience. The hardware setup incorporates the host, which is used as a whole home server that communicates directly with the HD client receivers.

The hosts' and the client receivers' user interface (UI) has the exact same channels and Video on Demand content that is offered today in the present {Old Product} offering, but with the new, interactive {New Product} on-screen guide.



Continued on next page

Lesson 1: Product Overview, Continued



Discuss the features available on {Old Product}, but not on {New Product}.

- TV Caller ID
- Pandora
- Individual user profiles

Note: TV Caller ID and Pandora are not currently available in {New Product}. They will be available in a release in the near future.

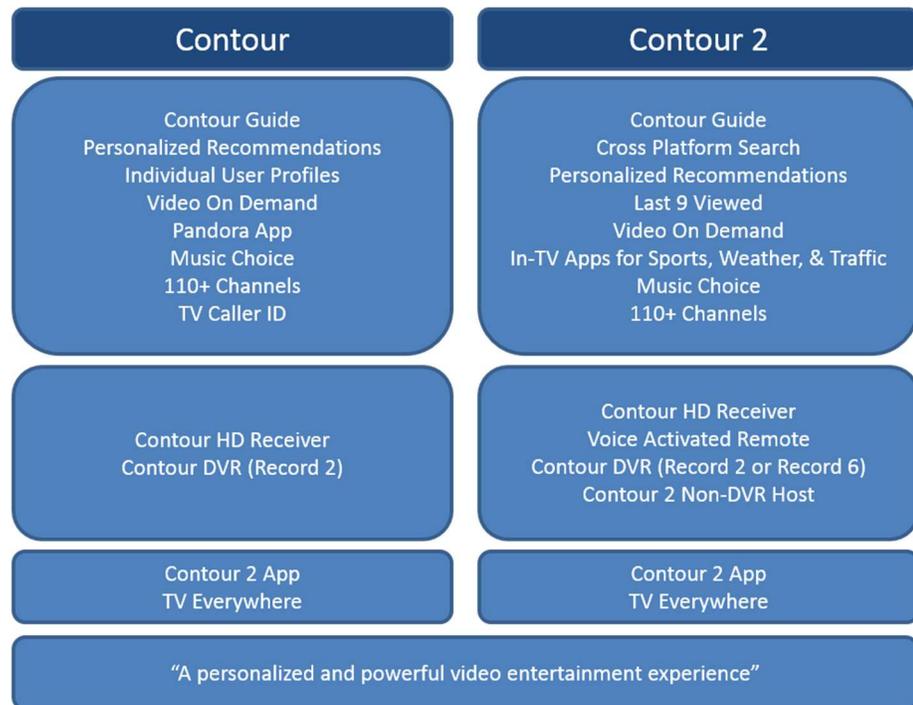
Tell Participants that the features only available on {New Product} will be discussed in greater detail later.

{Old Product}
vs. {New
Product}

PPT 10

So what has changed from the previous {Old Product} product?

Many favorite features are the same. However, there are upgrades in the delivery system and architecture. Take a look at the {Old Product} and {New Product} features listed below.



Continued on next page

Lesson 1: Product Overview, Continued

Customer and
{Company
Name} Benefits

PPT 11

Customer Benefits	{Company Name} Benefits
<ul style="list-style-type: none">• Immersive guide with rich graphics and images• Predictive search that presents content faster• Advanced voice-activated search and viewing to quickly find favorite shows and discover new content• DVR: Record favorite shows and watch them later• VOD: Find the latest releases, movies, and missed shows• Apps: For viewing at home and on-the-go on iOS and Android	<ul style="list-style-type: none">• Allows Customers to enjoy the latest video user interface innovations• More PPV purchases• A pool of software for client receivers, apps, and the web• A more competitive product

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Lesson 1: Product Overview, Continued



Instruct Participants to recall what they already know about {Old Product} and what they just learned about {New Product} to complete the activity below.



Activity: Features and Enhancements

Let's take a closer look at the features and product enhancements that improve the Customer viewing experience. Place an X in the space provided to identify the features associated with {Old Product} and {New Product}.

PPT 12

Feature	{Old Product}	{New Product}
Immersive Guide		X
HD-DVR Host	X	X
HD Non-DVR Host		X
HD Client Receivers	X	X
Music Choice	X	X
Pandora	X	
Video on Demand	X	X
Last Nine Viewed		X
In-TV Apps – Sports, Weather, Traffic, and more		X
Individual User Profiles	X	
TV Caller ID	X	

Continued on next page

Lesson 1: Product Overview, Continued



Review the Knowledge Check questions with the class.

Participants can do them individually and review with the class or if time is a factor, simply review them aloud.



PPT 13

Answer the following questions about the {New Product} product. When the class has completed the Knowledge Check, your Facilitator will review the correct answers.

Question 1

How many programs can a {New Product} HD-DVR host record at the same time?

- a. Up to 3
 - b. Up to 6
 - c. Up to 10
 - d. Up to 20
-

Question 2

Select all that apply. Which of the following features are only available on {New Product}?

- a. TV Apps (Sports, Weather, Traffic, etc.)
 - b. Pandora
 - c. Voice Search
 - d. Last 9 Viewed
-

Question 3

Which of the following statements are true about the differences between {Old Product} and {New Product}?

- a. Individual user profiles are available in both {Old Product} and {New Product}.
 - b. The ability to view the last nine shows is available in both {Old Product} and {New Product}.
 - c. With {Old Product}, all devices can stand alone. With {New Product}, HD Client Receivers must be connected to a Host.
 - d. TV Caller ID is available in both {Old Product} and {New Product}.
-

Continued on next page

Lesson 1: Product Overview, Continued



Review the Summary with the class.

Ensure Participants are clear before moving to the next lesson.

**Lesson
Summary**

PPT 14

You should now be able to:

1. List features of the {New Product} product.
 2. Describe how {New Product} differs from the {Old Product} product.
-

Lesson 2: Equipment



Transition to Lesson 2 by saying: Let's take a look at {New Product}'s equipment.

Discuss the Lesson Introduction.

PPT 15

Facilitate a Discovery Dialogue.

Listen for understanding about the {New Product} equipment including:

- How the new equipment supports {New Product} features and functions.
- How new equipment is set up and provisioned for {New Product}.

Cover the objectives.

Lesson Time: 30 minutes

Lesson Introduction

Now that you have an idea of the {New Product} product, it's time to examine the new equipment in detail.

PPT 16

You also need to know how equipment provisioning impacts equipment functionality.



Why is it important to identify compatible {New Product} equipment?

Lesson Objectives

At the end of this lesson, you will be able to:

PPT 17

1. Explain the {New Product} network architecture.
 2. Identify the Customer Premise Equipment (CPE) components that support {New Product}.
 3. Identify the requirements needed to access and use the {New Product} app.
-

Continued on next page

Lesson 2: Equipment, Continued



Refer to {New Product} equipment images and focus on:

- {New Product} HD-DVR Hosts may be referred to as a “Record 2” or “Record 6” DVR.
- Model types have been noted when there is a difference in handling the equipment.
- Note that there is legacy trial equipment that is still supported; refer to {New Product} {Knowledge Tool} articles for support information.

{New Product} Customer Premise Equipment

PPT 18

The following devices support {New Product} service. The Xi3 and XR5 are not being currently installed, but a Customer may have them.

Device Type	Model	Manufacturer
{New Product} HD-DVR Host	Cisco Record 6 9865 HD-DVR	Cisco
{New Product} HD-DVR Host	Arris Record 6 XG1 HD-DVR	Arris
{New Product} HD non-DVR Host	XG2	Pace (Current)
{New Product} HD Client Receiver	XiD	Pace
Trial Only - {New Product} HD Client Receiver	Xi3	
Voice Remote Control	XR11	UEI (current)
Trial Only - Remote Control (non-voice)	XR5	UEI (current)

Using Other Receivers in a {New Product} Home

Unlike some {Company Name} video services, a home cannot have a mix of {New Product} equipment and other advanced digital receivers. The table below lists equipment that can and cannot be used in a home with {New Product} service:

Equipment	Can Use in a {New Product} Home?
CableCARD	Yes
Mini Box (Go All Digital Markets)	Yes
Rovi DVR and Receivers	No
{Old Product} DVRs and Receivers	No

Continued on next page

Lesson 2: Equipment, Continued

CPE for DVR Customers

The {New Product} solution for DVR Customers consists of:

- HD-DVR Host (Cisco Record 6 9865 or Arris Record 6 XG1)
- Up to 3 HD Clients per host (XiD, trial: Xi3)
- One (1) remote control for each device (XR11 or XR5)

For more than 4 TVs, an additional host is required. The decision about whether the host has recording capabilities is up to the Customer. There is a price difference in the type of host they choose. The HD Non-DVR Host will act the same as a client.

The HD-DVR Hosts can be used in any {Company Name} market. However, specific devices cannot be guaranteed to the Customer.

Record 2 and Record 6 Customers use the same HD-DVR Hosts, and maximum simultaneous recordings are managed with service entitlements. **Though all HD-DVR Hosts are capable of recording 6 channels, the service codes make it possible to configure the host as a Record 2 or Record 6 device.**

CPE for Non-DVR Customers

On some occasions, a Customer may want {New Product}, but does not want the DVR functionality.

For each HD Non-DVR {New Product} Customer, {Company Name} installs:

- One (1) HD non-DVR Host (XG2)
- Up to three HD Clients per host (XiD, trial: Xi3)
- One (1) remote control for each device (XR11 or XR5)

For more than 4 TVs, additional HD non-DVR hosts (XG2) are required.

Continued on next page

Lesson 2: Equipment, Continued

**CPE for
Homes with
Both DVR
and Non-
DVR Hosts**

There may be times when a Customer wants to have one DVR host and a Non-DVR host. A time when a home may have both DVR and non-DVR hosts is when the Customer wants to have a fifth TV and does not want additional recording capabilities on the host. In that case, the non-DVR host acts as a client.

In that case, {Company Name} will install the following:

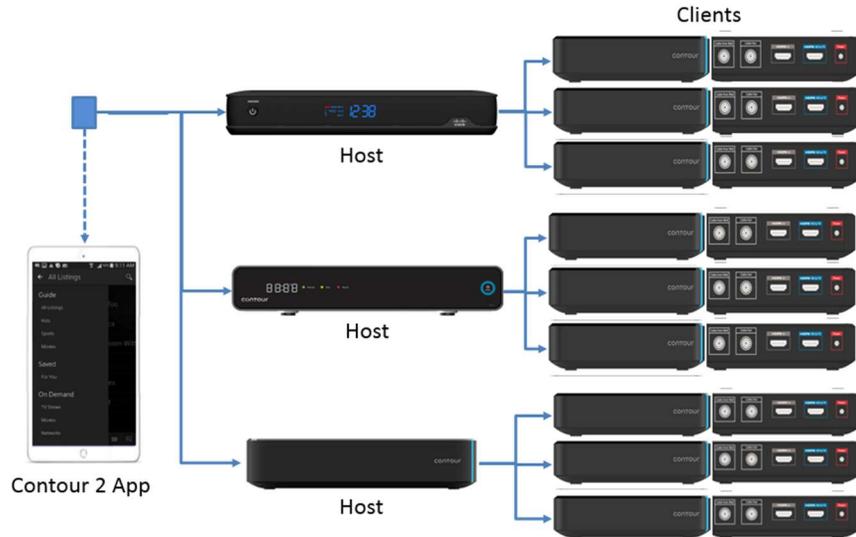
- HD-DVR Host (Cisco Record 6 9865 or Arris Record 6 XG1)
- Up to 3 HD Client Receivers for the HD-DVR Host (XiD, trial: Xi3)
- One (1) HD non-DVR Host (XG2)
- Up to three HD Clients per host (XiD, trial: Xi3)
- One (1) remote control for each device (XR11 or XR5)

Continued on next page

Lesson 2: Equipment, Continued

Network Configuration

PPT 19



- A home can have up to 3 hosts. Each host can support up to 3 clients. So, there can be 3 hosts and 9 clients, which is a total of 12 devices.
- Each of the hosts can be different. For example, a Customer can have a Record 6, a Record 2, and a non-DVR host. Remember, the Record 6 and Record 2 boxes can be the same model, but are programmed differently.
- If a Customer would like to record more than 6 shows at once, they can have additional HD-DVR hosts. They can have up to 3 HD-DVR hosts without any clients.
- Additionally, the {New Product} app allows Customers to access On Demand and live TV from PCs, laptops, tablets, or mobile devices within the home. {New Product} App uses the CHSI and does not count against the Customer's Data Plan.
- This equipment tends to run hotter than other equipment; be certain that equipment is placed in a well-ventilated location.
- For additional support information related to {New Product} equipment, see {Knowledge Tool}.

Continued on next page

Lesson 2: Equipment, Continued

Cisco Record 6 9865 HD-DVR Host

PPT 20

The Cisco Record 6 9865 HD-DVR is one of two models of {New Product} HD-DVR Hosts. Technically, the Record 6 HD-DVR Host is a legacy {Old Product} Record 6 DVR that's been converted by {Company Name} to run the {New Product} RDK (Reference Data Kit). As seen in the image below, the front of the {New Product} Record 6 DVR is identical to a legacy {Old Product} Record 6 DVR.



Front of a Cisco Record 6 9865 HD-DVR Host

{Company Name} converts legacy Record 6 DVR devices to {New Product} devices in local and regional warehouses. A {New Product} Record 6 can be identified by the green RDK sticker on the back of the device (see image below).

Important items to note about a Record 6 DVR converted to a {New Product} HD-DVR Host:

- HDMI, Component, Composite, and Digital Audio outputs stay active.
- eSATA, USB, and Ethernet ports are disabled (Note: Because these ports are disabled, we do not support them.)
- Not compatible with {Old Product} Record 2 DVR receivers
- Not compatible with the URC 8820 remote control.



Green "RDK" Sticker

Refer to the {Knowledge Tool} article [Cisco Explorer 9865 HDC High Definition DVR Receiver](#) for additional information.

Continued on next page

Lesson 2: Equipment, Continued

Arris Record 6 XG1 HD-DVR Host

PPT 21

The Arris Record 6 XG1 HD-DVR is an additional HD-DVR Host built specifically to run the {New Product} RDK.

Key features of the XG1 include:

- Record 6 DVR capability
- 2 Terabyte (2TB) hard drive
- HDMI, Composite, Coax, and Digital Audio outputs
- RF capable remote
- Multiple HDMI ports; Only the “To TV” port is active

Note: The USB, Ethernet, eSATA and HDMI Input ports on the back of the XG1 are all disabled and not supported.



Front and rear view of an XG1 HD-DVR Host

Refer to the {Knowledge Tool} article **Arris XG1 HD DVR Receiver** for additional information.

Note: There are different versions of the XG1. Though the inputs and outputs may be different locations, all versions of the XG1 will have all of the same inputs and outputs.

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Lesson 2: Equipment, Continued

XG2 HD Non-DVR Host

PPT 22

The XG2 is a model of {New Product} HD non-DVR Host. Note the following:

- Can be used as a stand-alone device or support up to three XiD HD Client Receivers
- Compatible with both models of {New Product} HD-DVR Hosts (Cisco Record 6 9865 and Arris Record 6 XG1), the XiD HD Client Receiver, and the XR11 remote control

Key features include:

- Supports up to 4 QAM tuners: one used by the Host TV and three additional for XiD HD Client Receiver
- Supports 4x1 DOCSIS 3.0 for Cloud and VOD service
- HDMI, Composite, Coax, and Digital Audio outputs
- Pre-installed SD (Secure Digital) memory card
- No front panel clock
- USB port on rear of device is disabled
- External power supply
- Multiple HDMI ports; Only the “To TV” port is active

Important items to note about the SD memory card:

- Supports up to 25 minutes of buffered content
- Allows control of buffered content (PAUSE, REW, FFWD)
- Buffered content is not included in a DVR recording initiated after the program begins
- Customers cannot use their own SD memory cards
- The SD Card is embedded and not accessible to the Customer



Front and rear view of the XG2 HD Non-DVR Host

Refer to the following {Knowledge Tool} article: **Pace XG2 HD Receiver.**

Continued on next page

Lesson 2: Equipment, Continued

XiD HD Client Receiver

PPT 23

The XiD is the only {New Product} HD Client Receiver available today. It cannot be used as a stand-alone device. It is compatible with both models of {New Product} HD-DVR Hosts and the XR11 remote.

Key features of the XiD HD client receiver include:

- Uses MoCA Technology
 - No QAM tuner
 - No DOCSIS cable modem
- HDMI output only
- Pre-installed SD (Secure Digital) memory card for live TV
- No front panel clock
- No external power supply. The XiD HD client receiver only needs its supplied A/C power cord.
- RF capable Remote
- The **HDMI HD to TV** is available. The **HDMI In** should be covered with a sticker and inaccessible.



Front and back view of the XiD HD Client Receiver

Important items to note about the XiD HD client receiver's SD memory card:

- Buffers up to 25 minutes of live TV
- Allows control of buffered content (i.e., PAUSE, REW, FFWD)
- Buffered content is not included in a DVR recording that's initiated after the program has started
- Customers cannot use their own SD memory cards
- The SD Card is embedded and not accessible to the Customer

Refer to the following {Knowledge Tool} article: **Pace XiD MoCA and IP HD-Only Receiver.**

Continued on next page

Lesson 2: Equipment, Continued

XR11 Voice Enabled IR/RF Remote Control

PPT 24

The XR11 remote control is the primary remote for all {New Product} devices. The remote has many advanced features designed specifically for the {New Product} service, including:

- RF control of {New Product} XG1 digital receiver
- Point anywhere
- Locate the digital receiver out of view
- Universal IR for TV and Audio System control
- Voice activation and control
 - Press and Hold Microphone button to speak a voice command i.e., “Watch”, “Show”, “Find”, “Record”
 - For the voice search, the Customer will not see what they are saying into the remote on the screen until after they release the voice command button. At that time, they will see what they searched (i.e., “HBO on-demand”).
 - Saying “Help” in the remote gives Customers information about the platform and troubleshooting tips.
 - The voice activation only works if the remote is paired (RF mode) to the receiver.
- {Old Product} branded menu button on top
- Embossed {Company Name} brand on bottom
- IR Setup Codes are part of the {New Product} user experience setup wizard.
- Auto-backlight feature that lights the remote by sensing motion.



Continued on next page

Lesson 2: Equipment, Continued

**XR11 Voice
Enabled IR/RF
Remote
Control,
continued**

PPT 24

The remote is paired by following the steps below:

Step	Action
1	Hold the Setup button until the light turns green
2	Press the {Old Product} button
3	Enter the 3 digit code on the TV to pair the remote. <ul style="list-style-type: none">• If 3-digit code does not display, ensure that the remote is pointed towards the box and hit the {Old Product} button again every 1-2 seconds.• Note: It may reach out to other {Old Product} receivers that are within 50 feet. The code will cycle through each receiver every time the {Old Product} button is pressed.

Note: Once the remote is paired, it will only work with the device it's paired with.

Unpairing the remote:

- When troubleshooting, the remote will need to be unpaired and then re-paired with the device.
- For information about unpairing the remote:
 1. Go to the **{New Product} XR11 Voice Remote {Knowledge Tool}** article.
 2. Scroll to the **Setting up Your Remote Control** table.
 3. Locate the **Unpair the remote** section.

Additional Resources:

- Please refer to **{Knowledge Tool}**: **{New Product} XR11 Voice Remote**.
- For support information about **{New Product}** compatible remotes, check **{Company Website}**.
- If the Customer has an XR5, refer to the **{Knowledge Tool}** article: **{New Product} XR5**.

Continued on next page

Lesson 2: Equipment, Continued

**Simultaneous
DVR
Recordings**

PPT 25

Unlike legacy {Old Product} equipment, all {New Product} devices must share a limited number of QAM tuners to watch live TV. As a result, **the more tuners in use, the fewer shows a {New Product} DVR is capable of recording at the same time.**

The table below shows how the number of simultaneous recordings goes down when multiple devices are tuned to channels that are different than the ones being recorded.

Let's consider a Record 6 host. In this example, the home has three TVs (1 HD-DVR Host and 2 HD Clients). If each TV is tuned to a different channel, the DVR can only record up to three other shows at that moment. Of course, if someone is watching a channel that is also being recorded, it's technically possible to add another recording.

Devices Watching Live TV (Host + Clients)	Simultaneous DVR Recordings
0	6
1	5
2	4
3	3
4	2

Note: Watching Video On Demand or playing back a saved DVR recording does not affect the number of simultaneous DVR recordings.

**{Billing
System} Tuner
Codes**

PPT 26

Remember, the {Billing System} tuner code configures the same host equipment as a "Record 2" or "Record 6" device.

{Billing System} Service Code	{Billing System} Receiver Service Code	Functionality/Product Description
4525	6800	{New Product} Record 2 Host DVR
4526	6800	{New Product} Record 6 Host DVR
	6802	{New Product} Non-DVR Host
	6801	{New Product} HD Client

Refer to the **Installing {New Product}** article in {Knowledge Tool} for additional service code information.

Continued on next page

Lesson 2: Equipment, Continued

**{New Product}
App
Requirements**

PPT 27

The {New Product} App requirements include:

Requirement	Description
High Speed Data subscription and equipment from {Company Name}	Essential CHSI or higher
TV Package	Essential TV (101 & 101)
WiFi	WiFi or wired network within the home
Mobile Devices/OS	<ul style="list-style-type: none">• Apple iPhone, iPad, iTouch running iOS 8.0 or later• Most Android smartphones and tablets running OS 4.4 or later• Note: Kindle Fire is not supported at this time.
{Company Name} Account	<ul style="list-style-type: none">• Any {Company Name} user ID and password on the account

Customers must have an IPSS code on the account for second screen functionality to work!

Review {Knowledge Tool} article: **About the {New Product} App.**

Continued on next page

Lesson 2: Equipment, Continued



Review the Knowledge Check questions with the class.

Participants can do them individually and review with the class or if time is a factor, simply review them aloud.



Answer the following questions about the Equipment topic. When the class has completed the Knowledge Check, your Facilitator will review the correct answers.

PPT 28

Question 1

The Cisco {Old Product} and {New Product} Host devices below are identical in appearance. In the space provided, enter how you can distinguish between the two devices.



Answer: The green RDK sticker appears on the back of the device.

Question 2

Select all that apply. To use the {New Product} app, the Customer must have:

- a. An Android tablet or phone
 - b. An Amazon Kindle
 - c. An iOS Tablet or phone
 - d. Windows
 - e. A IPSS code on their account
-

Continued on next page

Lesson 2: Equipment, Continued

- Question 3** Consider the following scenario. A home equipped with a {New Product} Record 6 DVR Host and two HD Client Receivers has one TV tuned to a local news show, one TV tuned to ESPN, and one TV playing a saved recording. How many simultaneous shows can be recorded at this time?
- a. One (1)
 - b. Two (2)
 - c. Three (3)
 - d. Four (4)
-

- Question 4** The {New Product} XG2 non-DVR host and XiD client receiver can buffer up to:
- a. 0 minutes of HD content
 - b. 25 minutes of HD content
 - c. 30 minutes of HD content
 - d. 90 minutes of HD content
-

- Question 5** Which statement is **not** true about the {New Product} Cisco Record 6 9865 HD-DVR Host?
- a. It is compatible with {Old Product} Record 2 receivers.
 - b. eSATA, USB, and Ethernet ports are disabled.
 - c. HDMI, Component, Composite, and Digital Audio outputs are active.
-

- Question 6** Select all that apply. Which of the following is true about {New Product} HD Client Receivers?
- a. Can be stand-alone.
 - b. Must be connected to the {New Product} app.
 - c. Requires a host, such as the HD-DVR host.
 - d. Requires a host, such as the HD non-DVR host.
-

Continued on next page

Lesson 2: Equipment, Continued



Review the Summary with the class.

Ensure Participants are clear before moving to the next lesson.

Summary

You should now be able to:

PPT 29

1. Explain the {New Product} network architecture.
 2. Identify the various Customer Premise Equipment (CPE) components that support the {New Product} experience.
 3. Identify the requirements needed to access and use the {New Product} app.
-

Lesson 3: User Functionality



PPT 30

Review the Lesson Introduction and Discovery Dialogue.

Listen for:

- {New Product} user enhancements compared to {Old Product}
- Interactive User Guide
- Smart Search

Cover the objectives.

Lesson Time: 30 minutes

Lesson Introduction

PPT 31

Users now have a lot of functionality built into {New Product}. You need to be able to identify and describe the new {New Product} functions in order to educate and assist your Customer.



What three features or user enhancements do you think your Customers will value most?

1. _____
 2. _____
 3. _____
-

Lesson Objectives

PPT 32

At the end of this lesson, you will be able to:

1. Identify the key elements that make the user experience unique for Customers.
 2. Differentiate the user experience among {Old Product}, {New Product}, and the {New Product} App.
-

Continued on next page

Lesson 3: User Functionality, Continued



Display the {New Product} user guide on your in-class HD client receiver.

Be prepared to provide a high-level overview of the key user functions including Smart Search, VOD, DVR, and VOD Collections.

There are simulations of the user interface, {New Product} app, and other simulations available on {Knowledge Tool}. These are linked in the **About {New Product}** resource page. Search for the **{New Product} Resource Center** in {Knowledge Tool} to access all {New Product} support content.

Note: {Knowledge Tool} search results display both {Old Product} and {New Product} articles!

Estimated lesson time: 30 minutes

User Experience Overview

PPT 33

{New Product} takes Customers to a new level in user experience that allows them to control their viewing preferences across multiple platforms. With {New Product}, {Company Name} has added more functionality to each screen in the Customer's home and transforms our video product into a complete entertainment operating system.

{New Product} provides an even easier way to find and watch content with features such as:

- Multi-screen access
- Modern, easy-to-use interface
- One-click access to recorded programs and on demand choices
- Access to content stored in different physical locations
- Multi-lingual soundtracks and captions



Continued on next page

Lesson 3: User Functionality, Continued

{New Product}
User Interface

PPT 34

The {New Product} user interface provides a modern, graphically rich cross-screen experience. With the new {New Product} Smart Search feature, browsing has gotten smarter.

All devices can take advantage of the new set of TV apps. Finally, the Record 6 DVR increases the flexibility of recording options.



Continued on next page

Lesson 3: User Functionality, Continued



Display the User Enhancements – Guide slide.

Point out the following:

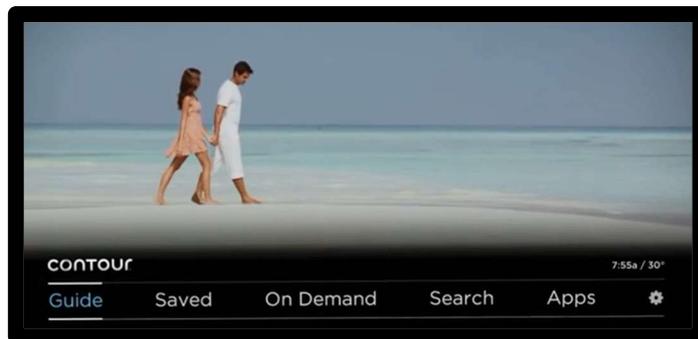
- Guide options in upper right photo.
- Restart feature in the lower right of photo with TV on table.

User Enhancements – Guide

The Guide for {New Product} has been redesigned for the user. For example, the new guide includes left-to-right scrolling. New functional enhancements include:

PPT 35

Guide Enhancement	Function/Benefit
On Demand	Return to last Video On Demand folder after leaving a movie or show.
Restart	Restart a program from the beginning, even if just tuning into the channel. Condition: program has to be available in the on-demand library.
Delete Multiple Recorded Shows	Delete an entire series' folder of episodes at once.
DVR Recordings	New Delete and Save options when playback is stopped.



Continued on next page

Lesson 3: User Functionality, Continued

**User
Enhancements
– Next Episode**

One of the most popular enhancements in {New Product} is the change in navigation after finishing an episode of a show.

PPT 36

The navigation now returns to the show’s folder in either Video On Demand or the DVR folder in use and highlights the next available episode. Clicking “Play Now” begins the next episode in a series.



Screen that appears after watching an episode.

Continued on next page

Lesson 3: User Functionality, Continued



Information about recommendations can be found at:
{Company Website}

To show how predictive search works, you may:

1. Go to {Company Website}
2. Be sure the location is San Diego, CA.
3. If you arrive on a page requesting that you sign in:
 - Click **Shop**
 - In the TV section, click {Old Product}® TV
4. Click **Tour**
5. Watch the video

Note: There are two videos in the “Search” section, but they do not have audio.

User Enhancements – Advanced Smart Search Functions

PPT 37

{New Product} Advanced Smart Search allows Customers to search by entering text and numbers. This simplifies searches and groups channel names, programs, actors, and other helpful information together in one unified list.

Smart Search is a universal search function in which Customers can **browse** across the integrated guide for VOD, Live TV, and PPV search results.

The Customer can begin typing on the key pad and the Smart Search will try to predict the Customer’s search. Results are ordered by relevance and hot trending items that may interest the Customer. Personal recommendations are based upon shows that a Customer searches for.

Continued on next page

Lesson 3: User Functionality, Continued

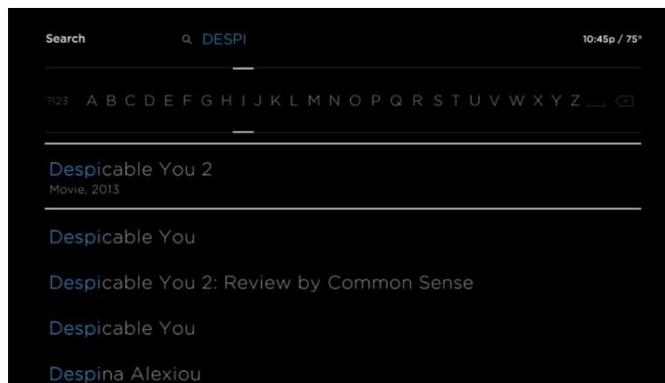
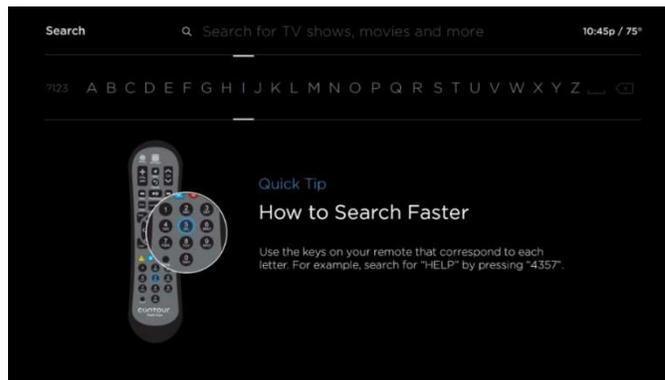
User
Enhancements
– Advanced
Smart Search
Functions,
continued

PPT 37

The search can be initiated by the remote. While watching TV, a Customer can start "typing" the name of the show on the number pad and a mini search window will appear.



The Smart Search function may also be initiated on the Main Menu.



Continued on next page

Lesson 3: User Functionality, Continued



Display the User Enhancements – Digital Video Recorder slide.

Point out the following:

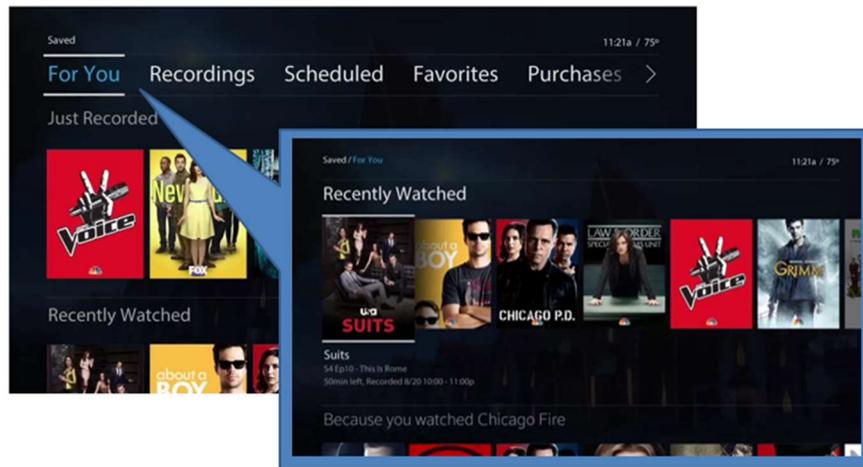
- Upper left photo: Variety of ways that the content is organized (For You, Favorite Purchases)
 - Photo on the right (in front): A submenu of previous picture (Recently Watched Shows, Recommendations)
-

User Enhancements – Digital Video Recorder

{New Product} gives your Customer easy access to their connected DVR with Video On Demand service. They can gain access to the last nine programs viewed, live or recorded broadcast from the DVR, or Video On Demand.

PPT 38

From the DVR, Customers can view recorded and scheduled programs, PPV Purchases, and personalized content, including a saved list of favorites.



Continued on next page

Lesson 3: User Functionality, Continued

**User
Enhancements
– VOD
Collections**

PPT 39

With Video on Demand (VOD), all of the featured programs or collections are organized as thumbnails for a quick view of selections.

Each collection is arranged in rows of horizontal images, with 6-12 thumbnails viewable at a time on each row, determined by the size chosen. Rows longer than 24 titles automatically receive a “View All” tile at the beginning and end of the row. Navigation elements include Shortcuts, A-Z order, by Genre, or by Networks.



Continued on next page

Lesson 3: User Functionality, Continued



Explanation for potential question:

Pandora, Photos, and My Account apps are not currently available in {New Product}. They will be available in a future release.

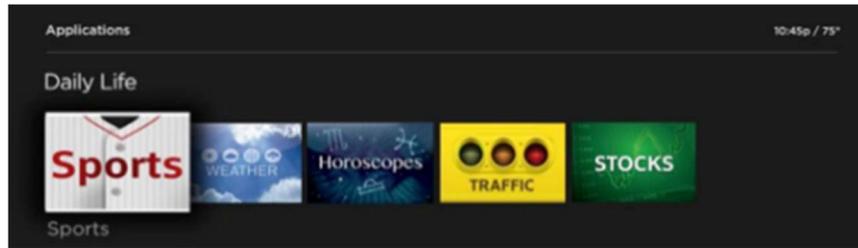
User Enhancements – In-TV Apps

PPT 40

Customers can keep up with real-time information with In-TV apps:

- Sports
- Weather
- Traffic
- Stocks
- Horoscopes

Each of the In-TV Apps draw their information from web-based sources.



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Lesson 3: User Functionality, Continued



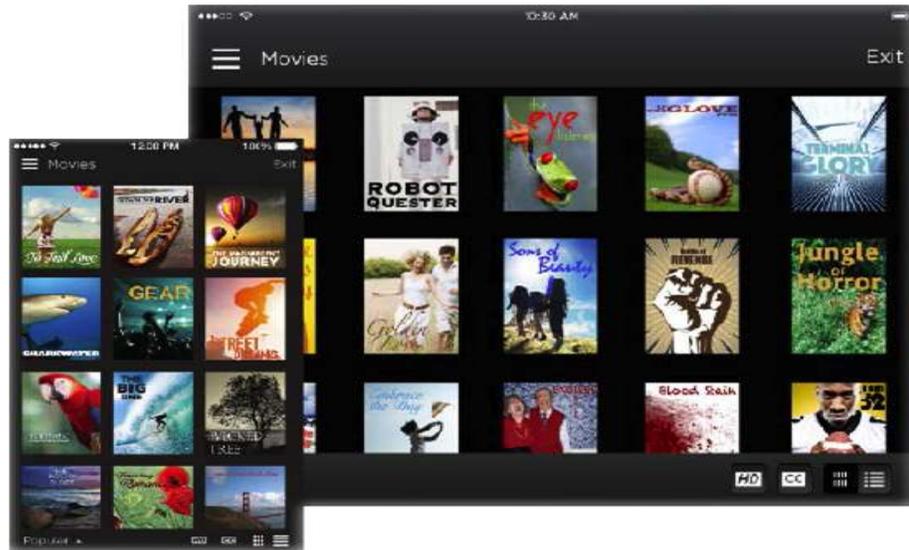
You may show the class simulations of the {New Product} app on {Knowledge Tool}:

{Intranet Sites}

User Enhancements – {New Product} App

PPT 41

With the use of the {New Product} App, the same linear TV experience and VOD content that is available on TV is available on smart phones and tablets. Second Screen Viewing is also available on computers by going to the “My Connection” section of www.{company name}.com and selecting, “Watch TV Online.”



Note: Currently, only Apple iOS and Android devices are supported. Other mobile devices will be supported in the future.

Continued on next page

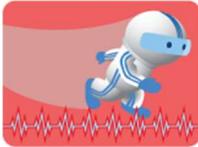
Lesson 3: User Functionality, Continued



PPT 42

Assign an equal number of Participants to each classroom set top box.

Ask each Participant to take turns performing one of the assigned “scavenger hunt” activities. If time or equipment is a factor, the activity can be modified.



PPT 42

Activity: Scavenger Hunt

In this activity, you will be assigned to a group in which each Participant takes turns using the remote control to perform at least one task on the {New Product} interface.

Scavenger Hunt Activity 1

Search for the next scheduled movie featuring your favorite actor or actress. Write down the movie title and scheduled time below.

Scavenger Hunt Activity 2

In Video on Demand, find Season 1, Episode 3 of your favorite HBO series. Write down the title of Episode 4 below.

Continued on next page

Lesson 3: User Functionality, Continued

Scavenger Hunt Activity 3 Using the VOD Collections feature, write down the first six featured movies that are trending now on {New Product}.

1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
-

Scavenger Hunt Activity 4 Using the DVR feature, check for any recorded content. List a title in the space below.

Scavenger Hunt Activity 5 Using the {New Product} app, search for the top recommended movie and list the title in the space below:

Continued on next page

Lesson 3: User Functionality, Continued



Review the Knowledge Check questions with the class.

Participants can do them individually and review with the class or if time is a factor, simply review them aloud.

PPT 43



Answer the following questions about {New Product} User Functionality. When the class has completed the Knowledge Check, your Facilitator will review the correct answers.

PPT 43

Question 1

Review the functions in the right column. In the space provided, enter the letter corresponding to the feature that allow Customers to enjoy the function.

Features	Functions
A. Advanced Smart Search features	<u> B </u> Store favorite shows for viewing later.
B. Digital Video Recorder	<u> C </u> View thumbnails of the featured movies on HBO.
C. VOD Collection	<u> D </u> View a recorded episode of a Showtime series on an iPad.
D. {New Product} App	<u> A </u> Find out when the next live broadcast of the Rolling Stones concert will be aired.

Question 2

Which of the following is **not** correct?

- Customers can view cast and story information for the episode.
 - Customers can use voice commands with the {New Product} remote.
 - Smart Search is restricted to live TV only.**
-

Continued on next page

Lesson 3: User Functionality, Continued

Question 3 Review the functions in the right column. In the space provided, enter the letter corresponding to the feature that allow Customers to enjoy the function.

Features	Functions
A. On DEMAND	<u> C </u> Enable/Disable guide animation.
B. Closed Captioning	<u> D </u> Delete the <i>Cheers</i> series folder all at once.
C. Guide Settings	<u> A </u> Return to the last VOD folder after finishing a movie.
D. Delete Multiple Recorded Shows	<u> F </u> Hide the Play banner during instant replay.
E. DVR Recordings	<u> E </u> Access Delete and Save options when playback is stopped.
F. DVR Controls	<u> B </u> Use the remote to turn off closed captioning.

Question 4 Select all that apply. Which of the following regarding the smart search feature is true?

- a. Search by letter
- b. Search by number
- c. Search by special character
- d. Search by voice

Question 5 Which of the following regarding VOD collections apply?

- a. Collection thumbnails are arranged in rows of horizontal images.
- b. The maximum number of titles that can be displayed in a row is six.
- c. VOD collections can display horizontal images in A-Z order only.

Continued on next page

Lesson 3: User Functionality, Continued



Review the Summary with the class.

Ensure Participants are clear before moving to the next lesson.



You should now be able to:

1. Identify the key elements that create a unique user experience for {New Product} Customers.
 2. Differentiate the user experience among {Old Product}, {New Product}, and the {New Product} App.
-

PPT 44

Lesson 4: {Customer Care System}



PPT 45

For this lesson you will need to access {Customer Care System}. It is best presented if you:

- Introduce {Customer Care System} functionality for {New Product} as you would go through a call.
- Have test/practice accounts available for demonstration.
- Display {Customer Care System} functionality for {New Product} on your main presentation screen(s).
- Ensure that Participants have prior experience with and access to {Customer Care System} so they can practice the exercises.

Lesson Time: 30 minutes

Lesson Introduction

PPT 46

In your role, your primary troubleshooting tool is {Customer Care System}. This tool allows you to troubleshoot and resolve many issues remotely. You can view the Customer's connection status, use action buttons to correct a Customer's problem, and gather results from information.

Another extremely important part of your role is to help us track {New Product} issues. To help, it is very important that you **disposition EVERY {New Product} call as {New Product}, not Video.**



Describe 3 advantages of using remote tools for troubleshooting with the Customer.

1. _____
 2. _____
 3. _____
-

Lesson Objectives

PPT 47

At the end of this lesson, you will be able to:

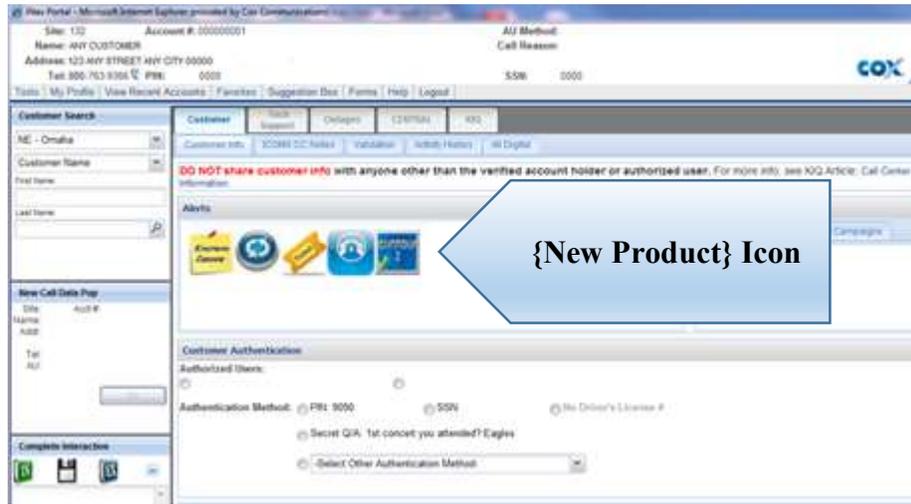
1. Describe updates to {Customer Care System} that support {New Product}.
 2. Use {Customer Care System} to view device health.
 3. Use the Corrective Action buttons to resolve an issue.
-

Continued on next page

Lesson 4: {Customer Care System}, Continued

{Customer Care System} Customer Info Page

PPT 48



{Customer Care System} Tech Support Tab

PPT 49



Continued on next page

Lesson 4: {Customer Care System}, Continued

{Customer Care System}:
Corrective
Action Buttons

PPT 50



Corrective Action Button Definitions:

Button	Description
Send Hit	Sends a signal to the device. After clicking Send Hit, select the type of signal. (No new hits for {New Product}).
Addressable Transaction History	Provides transaction history for the selected device.
Reboot	Reboots the device.
{New Product} Specific Buttons	
Button	Description
Restart XRE Connection	Restarts the connection between the device and the {New Product} Customer network.
Ping	Sends a ping test to the device.
DSG Tunnel Health	Provides detailed information about the Digital Service Gateway connection and health.

Continued on next page

Lesson 4: {Customer Care System}, Continued



Display {Customer Care System}: New {New Product} Fields slide.

Point out that the stars indicate the new {New Product} fields. The list of new fields is next to the screen capture.

PPT 45

Direct Participants to the next page of the Participant Guide for a description of each new field.

{Customer Care System}:
New {New Product} Fields

PPT 51

New fields have been added to support {New Product}.

Parameter	Value	Status
Bit Error Rate	Channel 1: 0.3431	
CM ICFR	Modular Cable/DO-downstream7	
CMTS Downstream	85500000	
CMTS Downstream Frequency	CTE/CMT/01	
CMTS Name	Channel 1: 0	
CMTS Rx Power	Cable/DO-upstream4	
CMTS Upstream	16495000	
CMTS Upstream Frequency	No information found	
Cable Card Binding Status	Channel 1: 0	
Connects	Channel 1: -8.6	★
DOCSIS Rx	Channel 1: 36.2	
DOCSIS SNR	Channel 1: 54.5	
DOCSIS Tx	No information found	
HDCP Enabled Status	No information found	
MoCA IP Password	No information found	
MoCA Node ID	No information found	
MoCA Node Rx Power	No information found	
MoCA Node TX Occ Rate	No information found	
Node	ATLB1	
PHY TX Rate	No information found	★
Post FEC	Channel 1: 0.00	
Power Status	No information found	
Pre FEC	Channel 1: 0.00	
Ripples	Channel 1: 0	
STB MAC Address	No information found	
T1	0	
T2	0	
T3	16	
T4	2	
Tune Count	No information found	
Tuner Frequency	No information found	
Tuner Rx Power	No information found	
Tuner SNR	No information found	
Tuner Count	2	
Tunnel Status	true	
Unconnectables	Channel 1: 0	
Upstream SNR	Channel 1: 34.7	
Uptime	3 Days 06:05:43:00	
Version	<<REV>>: 0-2-0-0; VENDOR: Motorola; BOOTR: 0-0-0; SW_REV: MD011AN_2_tplx1_PROD_HYBec	
XRE Connection Status	No information found	
iCM Status	RegistrationComplete	★

Continued on next page

Lesson 4: {Customer Care System}, Continued

**{Customer Care System}:
New {New Product}
Fields, continued**

PPT 51

You will notice the following new fields listed for {New Product} equipment and accounts. These fields will be referred to in the troubleshooting articles if the information applies to the problem.

Name	Definition
Tx Unicast PHY (Client)	Only measured on a client device
PHY TX Rate (Host)	Only measured on a host device
Correcteds	Number of corrected errors
Version	Current Installed Firmware
Cable Card Binding Status	Status of the cable card housed within the device
Bit Error Rate	Number of bit errors measured by the device
eCM Status	Embedded Cable Modem Status
Power Status	Is the equipment receiving power?
HDCP Enabled Status	High-bandwidth-enabled Digital Content Protection status
XRE Connection Status	Connection between {Company Name} and vendor
MoCA Node ID	MoCA Node identifier
Upstream SNR	Upstream Signal to Noise Ratio
Tune Count	Tune count

Continued on next page

Lesson 4: {Customer Care System}, Continued



Instruct Participants to search for the following items in the table.

Once complete, facilitate a class discussion about where items were found.



Activity: {Customer Care System} Locations

Use {Customer Care System} to locate the following actions. List where each is located. Work through this exercise with your class.

PPT 52

Action	Location
Access {Customer Care System}	Icon or URL acceptable
Search for an Account	{Customer Care System} Search Fields
View Customer's device(s)	Tech Support Tab
The status of the Customer's device(s)	Tech Support Tab
Details for XRE	Tech Support Tab – Highlight the MAC address on Port 2 - Informational - XRE Connection Status It should say, "Connected"
Channel lineup details	{Billing System} billing codes
General details on the Customer's network	Tech Support Tab – Equipment Status Information
Restart the Customer's device	Tech Support Tab - Corrective Action Buttons - Reboot
Send a signal to the device	Tech Support Tab – Corrective Action Buttons – Send Hit

Continued on next page

Lesson 4: {Customer Care System}, Continued



Review the Knowledge Check questions with the class.

Participants can do them individually and review with the class or if time is a factor, simply review them aloud.

PPT 53



Answer the following questions about {New Product} User Functionality. When the class has completed the Knowledge Check, your Facilitator will review the correct answers.

PPT 53

Question 1

What must you do on every {New Product} call?

- Disposition the call as {New Product}
 - Disposition the call as Video
 - Email a description of the issue to your manager.
 - Restart the Customer's device.
 - Send a ping to the device.
-

Question 2

Which of the following new {New Product} features is used to measure the connection between {Company Name} and the Customer?

- eCM Status
 - HDCP Enabled Status
 - Upstream SNR
 - XRE Connection Status
-

Question 3

Which of the following **NOT** part of the process of XRE Locating the Details for XRE?

- Go to the Tech Support Tab
 - Highlight the IP address on Port 1
 - Highlight the MAC address on Port 2
 - From "Informational", view the XRE Connection Status
-

Continued on next page

Lesson 4: {Customer Care System}, Continued



Review the Summary with the class.

Ensure Participants are clear before moving to the next lesson.

PPT 54

**Lesson
Summary**

PPT 54

You should now be able to:

1. Describe updates to {Customer Care System} that support {New Product}.
 2. Use {Customer Care System} to view device health.
 3. Use the Corrective Action buttons to resolve an issue.
-

Lesson 5: Troubleshooting



PPT 55

Similar to the previous lesson, you will need to align each set of step/action tables to the appropriate tool or resource. In particular, you will need to rely heavily on {Customer Care System} and {Billing System}. Be sure to:

- Have test/practice accounts available for demonstration and practice.
- Align troubleshooting steps to the major parts of the call flow.
- Allow plenty of time to practice specific scenarios.
- Begin by walking through some scenarios together as a class.
- Discuss the Roles and Responsibilities of each team and how they support the call flow – particularly as it relates to Tier 1.
- Have Participants complete several scenarios on their own, then discuss outcomes as a class.

Lesson Time: 50 minutes

Lesson Introduction

PPT 56

This lesson will provide you with an overview of the new {New Product} equipment and troubleshooting steps needed to resolve a Customer's technical issue.

Each resolution must be created based on the arrangement of the Customer's network and symptoms.

Support articles are available in {Knowledge Tool}. Access the troubleshooting steps by searching for the title.



Based on what you've learned so far...

How is troubleshooting {New Product} different than troubleshooting the current {Old Product} product?

Continued on next page

Lesson 5: Troubleshooting, Continued

Lesson Objectives

PPT 57

At the end of this lesson, you will be able to:

1. Perform required health checks to the Customer's account, receivers, and signals.
 2. Identify and access steps to correct device issues using {New Product} error codes.
 3. Identify and access the steps to {New Product} app issues.
 4. Describe the escalation process.
-

Roles and Responsibilities

PPT 58 – 59

There are several groups responsible for {New Product} support and our Customers. Each role is specific to a certain element of the Customer's account and experience. Major support groups include.

Role	Responsibilities
All	<ul style="list-style-type: none">• Present key features• Explain service and equipment requirements• Explain how to use the new guide and apps
Field Services	<ul style="list-style-type: none">• Set up Customer's {New Product} network• Troubleshoot any on-site installation issues for {New Product} or other {Company Name} products• Educate Customer on {New Product}
Non-{New Product} Tier 1 Technical Support and Partner Sites	<ul style="list-style-type: none">• Support {New Product} App.• All other {New Product} issues are escalated to the {New Product} via the Avaya dropdown or the partner transfer menu.
{New Product} Trained Tier 1 Technical Support	<ul style="list-style-type: none">• Receive {New Product} escalations from Tier 1 for issues that don't require Universal Home Technician (UHT) support• For app-related issues, troubleshoot. If additional support is necessary, submit form and cold transfer to {New Product} Technical Support Tier 2.• For video-related issues requiring additional support, submit form and cold transfer to {New Product} Technical Support Tier 2.

Continued on next page

Lesson 5: Troubleshooting, Continued

Roles and Responsibilities, continued

PPT 58 – 59

Role	Responsibilities
Comm Center	<ul style="list-style-type: none">• Activate service• Troubleshoot connectivity and {Company Name} Home Networking
Converged Product Operations Center (CPOC) (Hampton Roads)	<ul style="list-style-type: none">• Activate service• Troubleshoot based on error codes and messages reported by the Customer• Disposition {New Product} calls as needed• Transfer non-app related issues to Customer Advocate Group (CAG)• Refer Customer to third-party vendors for unsupported issues with hardware or virus-related issues
Hybrid Tier 2 Customer Advocate Group (CAG) Chat Social Media	<ul style="list-style-type: none">• Receive {New Product} escalations from Tier 1 for issues that don't require Universal Home Technician (UHT) support• Receive {New Product} escalations from CPOC/Data Tier 2 and troubleshoot video related issues• For app-related issues, create CUI ticket and cold transfer to CPOC/Data Tier 2• For video-related issues requiring additional support, follow appropriate ticket process for UHT- {Billing System} ticket, Provisioning (CUI), and SOC (UNO)

Continued on next page

Lesson 5: Troubleshooting, Continued

Troubleshooting Steps in {Knowledge Tool}

PPT 60

This course is not designed to go over every possible troubleshooting flow. It is difficult to summarize which scenarios require which solutions because:

- Each resolution must be created based on the arrangement of the Customer's network and symptoms.
- Different scenarios may also engage different support roles.
- There are many possible combinations.

To begin, we will cover the required steps, and then use {Knowledge Tool} as a powerful tool to locate troubleshooting steps.

Articles are available in {Knowledge Tool} for {New Product}. Access the steps to resolve each of the issues above, as well as other {New Product} issues, in the {New Product} Resource Center.

Be sure to practice finding these articles so that you may familiarize yourself on how to access troubleshooting steps quickly.

Note: Below is a list of newly updated articles. These articles are only accessible from the {New Product} Resource page and cannot be found using search tools. The only exception is, **Escalating and Tracking**.

- Troubleshooting {New Product}
 - Channel Issues (etc.)
 - DVR Playback
 - Escalating and Tracking
 - DVR Recording
 - Transferring and Escalating
-

Health Checks

PPT 61

Health checks often reveal the problems and resolutions. On every Customer interaction, you must first perform the following health checks:

- **Account Check** - Performed in {Billing & Customer Care Systems}
- **Receiver Health Check** – Performed in {Customer Care System}
- **Signal Health Check** – Performed in {Customer Care System}

See the newly updated {Knowledge Tool} article: **Troubleshooting {New Product}**.

Another health check you may perform is the **Amplifier Health Check**.

Continued on next page

Lesson 5: Troubleshooting, Continued

Required Health Checks

As mentioned, the required health checks are: Account, Receiver, and Signal.

PPT 61

Account Health Check – Issues with the account itself such as {New Product} service not added to the account, account disabled, etc.

If ...	Then ...
This fixes the issue...	Disposition and end the call.
This does not fix the issue...	Proceed to the Receiver Health Check.

Receiver Health Check – Problems with the Customer’s device(s).

If ...	Then ...
This fixes the issue...	Disposition and end the call.
This does not fix the issue...	Proceed to the Signal Health Check.

Signal Health Check – Issues with service signal into device(s). This can include signal across the coaxial cable to the Customer’s main device plus signal not received wirelessly by other devices in the Customer’s network.

If ...	Then ...
This fixes the issue...	Disposition and end the call.
This does not fix the issue...	Escalate the issue and disposition the account. Note: Proceed to the Amplifier Check if the Customer has one in his/her network. You will need to verify this check verbally with your Customer. This check is not available via {Customer Care System}.

Note: Disposition codes for common issues are best found in {Knowledge Tool} articles associated with each issue.

Refer to the **Troubleshooting {New Product} Accounts and Receivers** and **{New Product} Receiver Signal Types and Response Codes** articles.

Continued on next page

Lesson 5: Troubleshooting, Continued

Account Health Check

You will need to perform the following steps to check the health of a Customer's account:

Step	Action	System/ Who						
1	Authenticate the Customer.	{Billing & Customer Care Systems}						
2	<p>Check account info in {Customer Care System} to validate Customer standing. Is the Customer in good standing?</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Proceed to next step.</td> </tr> <tr> <td>No</td> <td>Bring account into good standing.</td> </tr> </tbody> </table>	If ...	Then ...	Yes	Proceed to next step.	No	Bring account into good standing.	{Billing & Customer Care Systems}
If ...	Then ...							
Yes	Proceed to next step.							
No	Bring account into good standing.							
3	<p>Check the Known Issues tab in {Customer Care System} for outages.</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Outage</td> <td>Ask if the Customer is getting signal. Escalate if no signal.</td> </tr> <tr> <td>No Outage</td> <td>Proceed to next step.</td> </tr> </tbody> </table>	If ...	Then ...	Outage	Ask if the Customer is getting signal. Escalate if no signal.	No Outage	Proceed to next step.	{Billing & Customer Care Systems}
If ...	Then ...							
Outage	Ask if the Customer is getting signal. Escalate if no signal.							
No Outage	Proceed to next step.							
4	<p>Check to see if the Customer has a prior relevant issue.</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Update the Customer information.</td> </tr> <tr> <td>No</td> <td>Submit form and escalate to {New Product} Technical Support Tier 2.</td> </tr> </tbody> </table>	If ...	Then ...	Yes	Update the Customer information.	No	Submit form and escalate to {New Product} Technical Support Tier 2.	{Billing & Customer Care Systems}
If ...	Then ...							
Yes	Update the Customer information.							
No	Submit form and escalate to {New Product} Technical Support Tier 2.							
5	<p>Ask if there is an error code on screen.</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td> <ul style="list-style-type: none"> Search for the error code (XRE-XXXXX, RDK-XXXXX, or 3-digit code) and resolutions steps in {Knowledge Tool}. Disposition and end the call. </td> </tr> <tr> <td>No</td> <td>Continue to the Receiver Health Check sub-process (illustrated next).</td> </tr> </tbody> </table>	If ...	Then ...	Yes	<ul style="list-style-type: none"> Search for the error code (XRE-XXXXX, RDK-XXXXX, or 3-digit code) and resolutions steps in {Knowledge Tool}. Disposition and end the call. 	No	Continue to the Receiver Health Check sub-process (illustrated next).	Customer
If ...	Then ...							
Yes	<ul style="list-style-type: none"> Search for the error code (XRE-XXXXX, RDK-XXXXX, or 3-digit code) and resolutions steps in {Knowledge Tool}. Disposition and end the call. 							
No	Continue to the Receiver Health Check sub-process (illustrated next).							

Continued on next page

Lesson 5: Troubleshooting, Continued

**Receiver Health
Check Sub-
process**

You will need to perform the following steps to check the health of a Customer's receiver if you have completed the Account Health Check:

Step	Action	System/ Who						
1	Ask your Customer to check physical connections on all devices/TVs.	Customer						
	<table border="1"><thead><tr><th>If ...</th><th>Then ...</th></tr></thead><tbody><tr><td>Issue is fixed</td><td>Disposition and end the call.</td></tr><tr><td>Issue remains</td><td>Proceed to the next step.</td></tr></tbody></table>		If ...	Then ...	Issue is fixed	Disposition and end the call.	Issue remains	Proceed to the next step.
	If ...		Then ...					
Issue is fixed	Disposition and end the call.							
Issue remains	Proceed to the next step.							
2	Identify which device is experiencing the issue.	{Customer Care System}						
3	Check {Knowledge Tool} for the article that refers to the Customer's {New Product} device.	{Knowledge Tool}						

Note: Customers can dim or turn off display lights and clocks on the receivers. Even if they manually unplug and power the equipment back up, the lights will turn off because the Customer's setting is stored.

Continued on next page

Lesson 5: Troubleshooting, Continued

**Signal Health
Check Sub-
process**

You will need to perform the following steps to check the health of a Customer’s signal if you have been through an Account Health Check and Receiver Health Check.

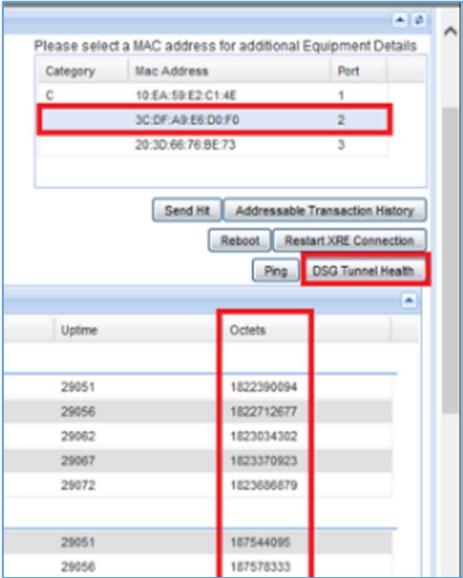
Step	Action	System/ Who												
1	<p>Check the XRE connection status.</p> <ul style="list-style-type: none"> The XRE connection will show, “Connected” if functioning properly. Also, it will show green for passing or red for failing. <p>Does the XRE Connection pass?</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Proceed to the next step.</td> </tr> <tr> <td>No</td> <td> <ul style="list-style-type: none"> Send an XRE refresh. (May need to wait 2-3 minutes before refreshing screen.) If this corrects the issue, disposition the call. </td> </tr> </tbody> </table>	If ...	Then ...	Yes	Proceed to the next step.	No	<ul style="list-style-type: none"> Send an XRE refresh. (May need to wait 2-3 minutes before refreshing screen.) If this corrects the issue, disposition the call. 	{Custo mer Care System }						
If ...	Then ...													
Yes	Proceed to the next step.													
No	<ul style="list-style-type: none"> Send an XRE refresh. (May need to wait 2-3 minutes before refreshing screen.) If this corrects the issue, disposition the call. 													
2	<p>Check the RF levels.</p> <p>Do the RF levels pass?</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Proceed to the next step.</td> </tr> <tr> <td>No</td> <td>Perform an amplifier check including power cycling the amplifier.</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>RF levels pass...</td> <td>Proceed to the next step.</td> </tr> <tr> <td>RF level do not pass...</td> <td>Submit a truck roll.</td> </tr> </tbody> </table>	If ...	Then ...	Yes	Proceed to the next step.	No	Perform an amplifier check including power cycling the amplifier.	If ...	Then ...	RF levels pass...	Proceed to the next step.	RF level do not pass...	Submit a truck roll.	{Custo mer Care System }
If ...	Then ...													
Yes	Proceed to the next step.													
No	Perform an amplifier check including power cycling the amplifier.													
If ...	Then ...													
RF levels pass...	Proceed to the next step.													
RF level do not pass...	Submit a truck roll.													
3	<p>Check the video integrity (signal levels).</p> <p>Does the video integrity pass?</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Proceed to the next step.</td> </tr> <tr> <td>No</td> <td>Schedule a trouble call.</td> </tr> </tbody> </table>	If ...	Then ...	Yes	Proceed to the next step.	No	Schedule a trouble call.	{Custo mer Care System }						
If ...	Then ...													
Yes	Proceed to the next step.													
No	Schedule a trouble call.													

Continued on next page

Lesson 5: Troubleshooting, Continued

Signal Health
Check Sub-
process,
continued

PPT 62

Step	Action	System/ Who						
4	<p>Check DSG Tunnel levels.</p> <ol style="list-style-type: none"> Click on DSG Tunnel Health corrective action button. In the Octets section, ensure that each tuner is incrementing (number gets larger). 	{Custo mer Care System }						
	 <p>Do the DSG Tunnel levels pass?</p> <table border="1"> <thead> <tr> <th>If...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Proceed to the next step.</td> </tr> <tr> <td>No</td> <td> <ul style="list-style-type: none"> Power cycle reboot the Customer's {New Product} device. Proceed to the next step if the DSG Tunnel levels pass now. If they still do not pass, complete the form and escalate the call to the {New Product} Technical Support Tier 2. </td> </tr> </tbody> </table>	If...	Then ...	Yes	Proceed to the next step.	No	<ul style="list-style-type: none"> Power cycle reboot the Customer's {New Product} device. Proceed to the next step if the DSG Tunnel levels pass now. If they still do not pass, complete the form and escalate the call to the {New Product} Technical Support Tier 2. 	
If...	Then ...							
Yes	Proceed to the next step.							
No	<ul style="list-style-type: none"> Power cycle reboot the Customer's {New Product} device. Proceed to the next step if the DSG Tunnel levels pass now. If they still do not pass, complete the form and escalate the call to the {New Product} Technical Support Tier 2. 							

Continued on next page

Lesson 5: Troubleshooting, Continued

Signal Health
Check,
continued

PPT 62

Step	Action	System/ Who													
5	<p>Check whether uncorrectable levels pass on the Tech Support tab.</p> <p>Do uncorrectable levels pass? (Under 20,000 passes. Over 20,000 does NOT pass.)</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Proceed to the next step.</td> </tr> <tr> <td rowspan="3">No</td> <td>Power cycle the device.</td> </tr> <tr> <td> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Power cycling fixes the issue...</td> <td>Disposition and end the call.</td> </tr> <tr> <td>Power cycling does not fix the issue...</td> <td>Escalate to {New Product} Technical Support Tier 2.</td> </tr> </tbody> </table> </td> </tr> </tbody> </table>	If ...	Then ...	Yes	Proceed to the next step.	No	Power cycle the device.	<table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Power cycling fixes the issue...</td> <td>Disposition and end the call.</td> </tr> <tr> <td>Power cycling does not fix the issue...</td> <td>Escalate to {New Product} Technical Support Tier 2.</td> </tr> </tbody> </table>	If ...	Then ...	Power cycling fixes the issue...	Disposition and end the call.	Power cycling does not fix the issue...	Escalate to {New Product} Technical Support Tier 2.	{Customer Care System}
If ...	Then ...														
Yes	Proceed to the next step.														
No	Power cycle the device.														
	<table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Power cycling fixes the issue...</td> <td>Disposition and end the call.</td> </tr> <tr> <td>Power cycling does not fix the issue...</td> <td>Escalate to {New Product} Technical Support Tier 2.</td> </tr> </tbody> </table>	If ...	Then ...	Power cycling fixes the issue...	Disposition and end the call.	Power cycling does not fix the issue...	Escalate to {New Product} Technical Support Tier 2.								
	If ...	Then ...													
Power cycling fixes the issue...	Disposition and end the call.														
Power cycling does not fix the issue...	Escalate to {New Product} Technical Support Tier 2.														
6	<p>Check the cable card binding.</p> <p>The cable binding status will show as “Bound”.</p> <p>Does the cable card binding pass?</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>Proceed to the appropriate Customer issue flow.</td> </tr> <tr> <td>No</td> <td>Escalate to the {New Product} Technical Support Tier 2.</td> </tr> </tbody> </table>	If ...	Then ...	Yes	Proceed to the appropriate Customer issue flow.	No	Escalate to the {New Product} Technical Support Tier 2.	{Customer Care System}							
If ...	Then ...														
Yes	Proceed to the appropriate Customer issue flow.														
No	Escalate to the {New Product} Technical Support Tier 2.														

Continued on next page

Lesson 5: Troubleshooting, Continued

Amplifier Health Check

If a Customer has an amplifier connected to his/her {New Product} network, perform the following health check:

Step	Action	System/Who	
1	Ask if the Customer has an amplifier in his/her {New Product} network.	Customer	
	If ...		Then ...
	Yes		Complete this health check.
	No		Return to the Signal Health Check, if it has not been performed.
2	Ask the Customer if he/she can access the amplifier.	Customer	
	If ...		Then ...
	Yes		<ul style="list-style-type: none"> Ask if the amplifier is plugged in/powerd on. Plug it in, if it is not. Ask if it is connected to the COAX cable. Plug it in, if it is not.
	No		Submit a truck roll.
	If plugging in the amplifier to power or the COAX cable:		
	If ...		Then ...
	Fixes the issue		Disposition and end the call.
Does not fix the issue	<ul style="list-style-type: none"> Return to the Signal Health Check, if it has not been performed. If the Signal Health Check has been performed, submit a truck roll. 		

Continued on next page

Lesson 5: Troubleshooting, Continued

Common Issues {New Product} is a very stable product for our Customers. However, there are always common issues seen when troubleshooting a product.
PPT 63 For {New Product}, the common issues are:

Issue	Description
Missing Channels	Customer is not receiving all the channels they are subscribed to.
Remote Control	Remote is not responding.
DVR Stops Recording Prior to Program End	DVR stops recording before the program is over.
Equipment Issues - Heat	These devices operate hotter than other equipment.
Not Authorized	Service has not been authorized or is not properly set up.
{New Product} App	RDK 403 Does not have {New Product} Service
RDK Errors	The receiver appears to be capable of handling a signal, but there is no signal coming in from the cabling.
No Signal	The Customer will see, "No Signal" on the TV. This may be because it is connected to the incorrect HDMI port on XG1, XG2, or XiD.

Note: Check {Knowledge Tool} for {New Product} articles and access the steps to resolve each of the issues above.

It is important that you practice finding these articles so you can access troubleshooting steps quickly. Remember, search results include {Old Product} and {New Product} articles.

We work to ensure that {Knowledge Tool} articles are up-to-date. For example, newly updated articles about common issues are:

- DVR Playback
- DVR Recording
- Channel Issues

Continued on next page

Lesson 5: Troubleshooting, Continued

Common Issues, continued

Be sure to fill out a form with detailed notes. Describe the issue and populate each field.

PPT 63

Refer to **Escalating {New Product}** article in {Knowledge Tool}. You may also want to refer to the newly updated articles:

- Escalating and Tracking
- Transferring and Escalating

Along the lines of getting into the habit of using {Knowledge Tool} articles and writing detailed notes, it is very important that you **disposition EVERY {New Product} call as {New Product}, NOT Video.**

{Old Product} Device Error Codes

There are error codes that may appear on the Customer's home device(s). The codes fall into the categories in the table below. Refer to this {Knowledge Tool} article for instructions on resolving these error codes: **{New Product} and {New Product} App Known Issues and Error Messages.**

This article references three categories of error codes and messages related to {New Product} including:

- {New Product} Known Issues
- {New Product} Error Codes and Messages
- {New Product} App Known Issues and Errors

Code Category	Description
Install/Startup	Common Error codes and troubleshooting relating to install and startup
Guide	Error codes and messages relating to the {New Product} guide
Whole Home DVR	Error codes for the Whole Home DVR networked and non-networked equipment Note: If a program fails to play on the client receiver, always try it on the host. If only one program fails on all receivers, it can be a recording error and not a receiver error.
Outage	Troubleshooting outages relating to {New Product}
Channel	Channel tuning error codes and messages
On Demand	Error codes and messaging for On Demand issues

Continued on next page

Lesson 5: Troubleshooting, Continued

{New Product} App Troubleshooting

If Customer reports a {New Product} app error message, use the following resources to troubleshoot the error.

- To begin troubleshooting {New Product} app, go to the {Knowledge Tool} article: **Troubleshooting the {New Product} App.**
- For a list of {New Product} app errors, see the **{New Product} and {New Product} App Known Issues and Errors** article.
- For a full list of TV apps available to Customers, see: {Company site}
- Check the IPSS code in {Customer Care System} on the Customer Services screen or in {Billing System} on the CS screen.
- For a list of requirements, see the {Knowledge Tool} article: **About the {New Product} App.**

Continued on next page

Lesson 5: Troubleshooting, Continued

Escalation to the Field – {New Product} Codes

If you cannot resolve a Customer’s issue, you may need to escalate the ticket through {Billing System}, not {Customer Care System}. You cannot use {Customer Care System}, because it does not have the Work Order Type, "70 {Old Product}2".

- You will need to enter certain codes designed for {New Product}.
- The **Work Order Type** field should be "70 {New Product}".
- These codes will place the trouble call in a special queue in Care.
- The Customer’s ticket will then be handed off to the appropriate team.
- Work order comments need to include:
 - CBR Number
 - Issue Description
 - Bad Levels

These are the primary Trouble Call (TC) problem codes that are used to schedule a TC to the field:

Code	Reason	Short Description	Full Description
C1	{Old Product} 1 Rcvr	{OLD PRODUCT}1	Customer with 1 {Old Product} Receiver installed
C2	{New Product}-3 Rcvr	{OLD PRODUCT}2-3	Customer with 2-3 Networked {Old Product} Receivers installed
C4	{Old Product} 4-5 Rcvr	{OLD PRODUCT}4-5	Customer with 4-5 Networked {Old Product} Receivers installed
C6	{Old Product} 6-7 Rcvr	{OLD PRODUCT}6-7	Customer with 6-7 Networked {Old Product} Receivers installed
C8	{Old Product} 8+ Rcvr	{OLD PRODUCT} 8+	Customer with 8 or more Networked {Old Product} Receivers installed

Escalating to {New Product} Technical Support Tier 2 (CAG/Tier 2) - Process

When a problem can’t be resolved, you will need to escalate issues through the correct channels. Refer to the **Escalating {New Product}** article in {Knowledge Tool}.

Note: When you escalate a problem, be sure that you include very detailed notes on the form.

Continued on next page

Lesson 5: Troubleshooting, Continued



PPT 64

Transition to the practice troubleshooting.

**Practice
Trouble-
shooting**

Next, you will practice troubleshooting some scenarios.

PPT 64



Specific scenarios cannot be set up for practice in {Customer Care System} during the training period. Thus:

- The following scenarios are designed to help Agents mentally “connect the dots” between Customer issues and resolutions.
- {Customer Care System} screens may be brought up for reference.

Practice scenarios can be presented in one of the following ways to best suit your class.

- Team Challenge:
 - Break Participants into two groups.
 - Present a scenario, then have teams start together. (“Go!”)
 - Teams may use:
 - {Knowledge Tool} Articles (primary resource)
 - Discussion
 - {Customer Care System} Tech Support screen
 - Participant’s Guide
 - The first team to reach the correct answer wins a point.
 - The opposite team may challenge the correctness or completeness of responses to steal the point!

Continued on next page

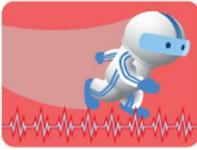
Lesson 5: Troubleshooting, Continued



- Role Play:
 - Pair up sets of Participants in twos.
 - Distribute the role play cards to the Participant who will play the Customer in the role play.
 - One Participant serves as the Agent, the other the Customer.
 - Customers will “call” with a specific issue.
 - Agents will walk the Customer through troubleshooting steps.
 - Teams may use:
 - {Knowledge Tool} Articles (primary resource)
 - Discussion
 - {Customer Care System} screens
 - Participant’s Guide
 - Once a resolution has been reached, Participants should swap roles.
 - If there is enough time, have each Participant practice both roles.
 - If time is limited, have Participants swap and move on to the next scenario.
 - Discuss results as a group when complete.
- Individual Practice (for Virtual Delivery):
 - Have Participants practice troubleshooting each scenario.
 - Participants may use:
 - {Knowledge Tool} Articles (primary resource)
 - Discussion
 - {Customer Care System} screens
 - Participant’s Guide
 - Discuss results as a group when complete.

Continued on next page

Lesson 5: Troubleshooting, Continued



PPT 64

Activity: Practice Troubleshooting – Team Challenge

Let's have a little fun and practice what we have learned. For this exercise:

- Your instructor will divide you into two teams.
- You will be presented with a scenario.
- Your goal is to come up with the proper troubleshooting steps for the scenario.
- You may use:
 - {Knowledge Tool} articles
 - Discussion with your teammates
 - {Customer Care System} screens
 - Participant's Guide
- The first team to reach the correct answer wins a point.
 - The opposite team may challenge the correctness or completeness of responses to steal the point!

Take notes, if needed:

Continued on next page

Lesson 5: Troubleshooting, Continued



**Scenario
Practice –
Team
Challenge**

Read the scenario.

Tell teams to “Go!”

Teams should more than likely reach the following resolution:

- Unpair and repair the remote.
 - Power cycle the Customer’s device.
-

**Team
Challenge 1 –
Remote Control**

A Customer calls in and says: “My remote doesn’t seem to be responding!”

After asking required questions and performing health checks, you discover:

- The remote requires pairing.
-



**Scenario
Practice –
Team
Challenge**

Read the scenario.

Tell teams to “Go!”

Teams should more than likely reach the following resolution:

- Customer does not have {New Product} service; he/she has {Old Product}.

Also listen for these details:

- Customer should be upgraded.
- Customer should be directed to where he/she can find the correct app for their device or services.

{Knowledge Tool} – **Troubleshooting the {New Product} App**

**Team
Challenge 2 –
{New Product}
App**

A Customer calls in and says, “When I try to access the {New Product} app, I get an error that says RDK 403.”

After asking required questions and performing health checks, you discover:

- The Customer does not have {New Product} service.
 - All else seems to be working properly.
-

Continued on next page

Lesson 5: Troubleshooting, Continued



Scenario Practice – Team Challenge

Read the scenario.

Tell teams to “Go!”

Teams should more than likely reach the following resolution:

- In most cases, an RDK error is resolved by a power cycle and sending a hit-signal to the box to reestablish the connection signal.
- Also listen for these details:
 - May need to ping the device for more information on its function.
 - Agent may need to educate the Customer on HDCP compliance issues.
 - Some isolation of equipment might be necessary to locate the issue.

{Knowledge Tool} - **Troubleshooting Specific RDK Errors**

Team Challenge 3 – RDK Errors

A Customer calls in and says: “I’m getting an error message on my screen. It says Error RDK-XXXX. What’s happening?” This is an XRE connection error.

After asking required questions and performing health checks, you discover:

- The issue can be resolved by power cycling and sending a signal to the box.

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Lesson 5: Troubleshooting, Continued



Scenario Practice – Role Play

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Activity: Practice Troubleshooting – Role Play

1. Divide the class into teams of two.
2. One Participant serves as the Agent, the other the Customer.
 - Customers will “call” with a specific issue.
 - For each scenario, give the Customer the index card with information that the Agent need to discover.
 - Agents will talk with the Customer to discover more about the scenario.
 - The Agent will walk the Customer through troubleshooting steps.
- The Participants may use:
 - {Knowledge Tool} articles
 - {Customer Care System} screens
 - Participant’s Guide
- Once a resolution has been reached, Participants should swap roles.
 - If there is enough time, have each Participant practice both roles.
 - If time is limited, have Participants swap and move on to the next scenario.
- Discuss results as a group when complete!



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Activity: Practice Troubleshooting – Role Play

- Your instructor will divide the class into teams of two.
- One Participant serves as the Agent, the other the Customer.
 - Customers will “call” with a specific issue.
 - For each scenario, your instructor will give the Customer additional information about the scenario.
 - Agents will talk with the Customer to discover the additional information.
 - Agents will walk the Customer through troubleshooting steps.
- Once a resolution has been reached, you should swap roles.
- You may use:
 - {Knowledge Tool} articles
 - {Customer Care System} screens
 - Participant’s Guide

Take notes, if needed:

Continued on next page

Lesson 5: Troubleshooting, Continued

Role Play 1 – Remote Control A Customer calls in and says: “My remote doesn’t seem to be responding!” After asking required questions and performing health checks, you discover that (add your notes in the area below):

After asking required questions and performing health checks, the Agent should discover:

- The remote requires pairing.

Teams should more than likely reach the following resolution:

- Unpair and repair the remote.
- Power cycle the Customer’s device.

Continued on next page

Lesson 5: Troubleshooting, Continued

**Role Play 2 –
{New Product}
App**

A Customer calls in and says “When I try to access the {New Product} app, I get an error that says RDK 403.” After asking questions and performing the appropriate checks you discover that (add your notes in the area below):

After asking required questions and performing health checks, the Agent should discover:

- The Customer does not have {New Product} service.
- All else seems to be working properly.

Teams should more than likely reach the following resolution:

- Customer does not have {New Product} service; they have {Old Product}.

Also listen for these details:

- Customer should be upgraded.
- Customer should be directed to where he/she can find the correct app for his/her device or services.

{Knowledge Tool} – **Troubleshooting the {New Product} App**

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Lesson 5: Troubleshooting, Continued

Role Play 3 – RDK Errors

A Customer calls in and says: “I’m getting an error message on my screen. It says Error RDK-XXXXX. What’s happening?” This is an XRE connection error. After asking required questions and performing health checks, you discover that (add your notes in the area below):

After asking required questions and performing health checks, the Agent should discover:

- The issue can be resolved by power cycling and sending a signal to the box.

Teams should more than likely reach the following resolution:

- In most cases, an RDK error is resolved by a power cycle and sending a **hit-signal to the box to reestablish the connection signal.**

Also listen for these details:

- May need to ping the device for more information on its function.
- Agent may need to educate the Customer on HDCP compliance issues.
- Some isolation of equipment might be necessary to locate the issue.

{Knowledge Tool} - **Troubleshooting Specific RDK Errors**

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Lesson 5: Troubleshooting, Continued



Note: If you and the Participants have already practiced with either the Team Challenge or Role Plays, there is no need to perform this practice.

Individual Practice (for Virtual Delivery):

- Have Participants practice troubleshooting each scenario.
- Participants may use:
 - Discussion
 - {Customer Care System} screens
 - Participant's Guide

Discuss results as a group when complete.

Practice Scenario - Individual

Activity: Practice Troubleshooting – Individual Practice

It's time to practice what we have learned. For this exercise:

- Troubleshoot each scenario.
- You may use:
 - {Knowledge Tool} articles
 - Discussion
 - {Customer Care System} screens
 - Participant's Guide
- Discuss results as a group when complete.

Use the following space to take notes, if needed.

Individual Practice 1 – Remote Control

Scenario:

A Customer calls in and says: “My remote doesn't seem to be responding!”

After asking required questions and performing health checks, you discover:

- The remote requires pairing.

Participants should reach the following resolution:

- Unpair and repair the remote.
 - Power cycle the Customer's device.
-

Continued on next page

Lesson 5: Troubleshooting, Continued

Individual Practice 2 – Equipment Issues

Scenario:

A Customer calls in and says “When I try to access the {New Product} app, I get an error that says RDK 403.”

After asking questions and performing the appropriate checks, you discover:

- The Customer does not have {New Product} service.
- All else seems to be working properly.

Participants should more than likely reach the following resolution:

- Customer does not have {New Product} service; they have {Old Product}. Also listen for these details:
- Customer should be upgraded.
- Customer should be directed to where he/she can find the correct app for his/her device or services.

{Knowledge Tool} – Troubleshooting the {New Product} App

Individual Practice 3 – RDK Errors

Scenario:

A Customer calls in and says: “I’m getting an error message on my screen. It says Error RDK-XXXX. What’s happening?”

After asking required questions and performing health checks, you discover:

- This is an XRE connection error.
- The issue can be resolved by power cycling and sending a signal to the box.

Participants should more than likely reach the following resolution:

- Send an H-signal to the box to reestablish signal.
- Also listen for these details:
 - May need to ping the device for more information on its function.
 - Agent may need to educate the Customer on HDCP compliance issues.
 - Some isolation of equipment might be necessary to locate the issue.

Continued on next page

Lesson 5: Troubleshooting, Continued



Review the Knowledge Check questions with the class.

Participants can do them individually and review with the class or if time is a factor, simply review them aloud.



Answer the following questions about Troubleshooting. When the class has completed the Knowledge Check, your Facilitator will review the correct answers.

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Question 1

When an issue can't be resolved and the levels are good, who should you escalate the problem to?

- a. Comm Center
 - b. Field Services
 - c. UNO
 - d. {New Product} Technical Support Tier 2
-

Question 2

If the Customer is having an RF issue, you should escalate to:

- a. RNOc
 - b. UNO
 - c. Field Services as a TC
 - d. Field Services as an SRO
-

Question 3

Select all that apply. Which of the following are formatted the way an error code would appear on the TV screen?

- a. 3-digit code
 - b. {Customer Care System}-XXXXX
 - c. RDK-XXXXX
 - d. XRE-XXXXX
-

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Lesson 5: Troubleshooting, Continued

Question 4

Select all that apply. Which of the following health checks are required on every call?

- a. Account Health Check
 - b. Amplifier Health Check
 - c. Receiver Health Check
 - d. Signal Health Check
-

Question 5

Which of the following may help when troubleshooting {New Product} app issues?

- a. Checking for the IPSS code in {Customer Care System} or {Billing System}
 - b. {Knowledge Tool} articles
 - c. List of TV apps available to Customers on {Company Site}
 - d. Use the {Customer Care System} Corrective Action button to send a ping to the device
-

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Lesson 5: Troubleshooting, Continued



Review the Lesson Summary with the class.

**Lesson
Summary**

PPT 66

You should now be able to:

1. Perform required health checks to the Customer's account, receivers, and signals.
 2. Identify and access steps to correct device issues using {New Product} error codes.
 3. Identify and access the steps to {New Product} app issues.
 4. Describe the escalation process.
-

Course Summary and Assessment



PPT 67-70

Review the Course Summary with the class.

Thank Participants for their time and attention.

Direct Participants to complete the assessment, which can be found in {Company Name} University/SkillPort.

The title of the assessment is: {New Product} Tier 1 Assessment.

Its course code is: CCIVDVID0062.



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At this time you should be able to:

1. Describe the {New Product} product.
 2. Describe network architecture and compatible Customer Premise Equipment (CPE).
 3. Identify the new user functionalities.
 4. Identify tools and resources to support {New Product} Customers.
 5. Troubleshoot and resolve Customers' technical issues.
-



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Please follow your Facilitator's instructions for completing the assessment.

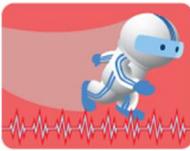
To pass the assessment, you will need to answer 80% of the questions correctly.

Role Play Instructions for “Customers”



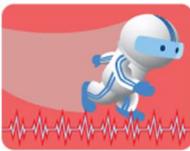
Role Play 1: Remote Control

1. As the Customer, begin the role play by stating:
 - “My remote doesn’t seem to be responding!”
 2. During the role play, help the Agent to identify that:
 - The remote requires pairing.
 3. Work with the Agent to identify relevant {Knowledge Tool} articles.
 4. Work with the Agent to determine the troubleshooting steps.
-



Role Play 2: {New Product} App

1. As the Customer, begin the role play by stating:
 - “When I try to access the {New Product} app, I get an error that says RDK 403.”
 2. During the role play, help the Agent to identify that:
 - The Customer does not have {New Product} service.
 - All else seems to be working properly.
 3. Work with the Agent to identify relevant {Knowledge Tool} articles.
 4. Work with the Agent to determine the troubleshooting steps.
-



Role Play 3: RDK Error

1. As the Customer, begin the role play by stating:
 - “I’m getting an error message on my screen. It says Error RDK-XXXXX. What’s happening?”
 2. During the role play, help the Agent to identify that:
 - This is an XRE connection error.
 - It can be resolved by power cycling and sending a signal to the box.
 3. Work with the Agent to identify relevant {Knowledge Tool} articles.
 4. Work with the Agent to determine the troubleshooting steps.
-