



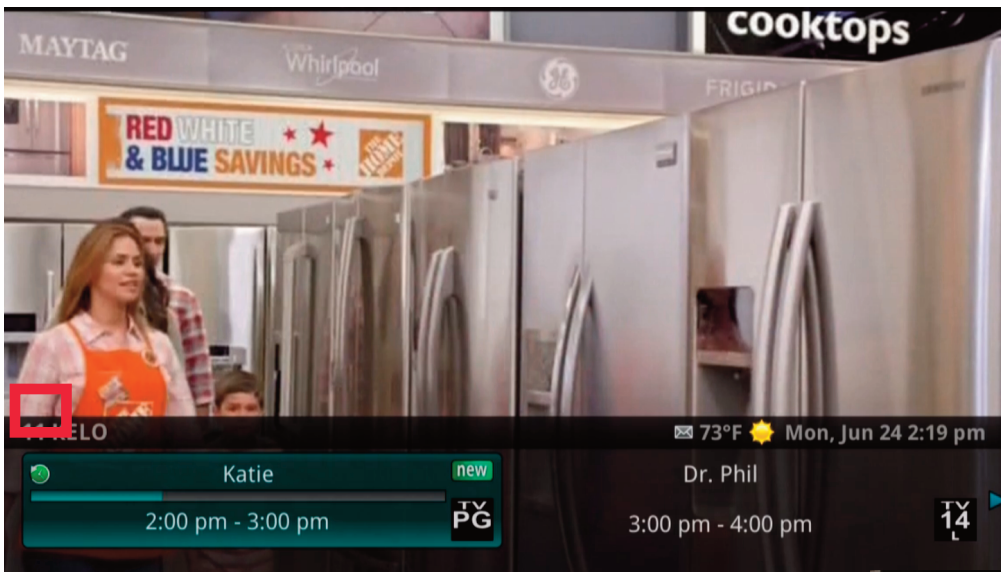
Running a little late and missed the beginning of your show...Restart it!

Innovative Systems now offers Restart TV as an optional service with our IPTV Middleware Solution. Restart TV allows subscribers to Restart a TV program that is already in progress. Running a little late getting home to watch the 5:00 news, not a problem - Restart the programming when you get home. Or if you are browsing channels and see a show you want to watch that has already begun, Restart it.



Restart TV:

- ~ Gives your subscribers flexibility
- ~ Allows your subscribers to restart a show already airing by the press of one button
- ~ Permits use of DVR functions - pause, rewind and fast forward**
- ~ Programs can be restarted multiple times during the live time frame
- ~ Differentiates your service from cable and satellite competitors



Restart TV in the Program Guide and Browser Bar

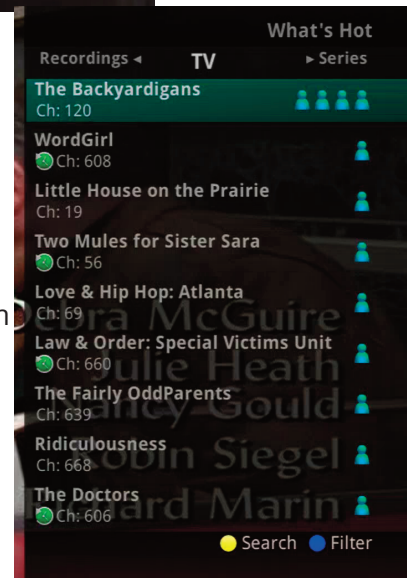
- Restart TV Programming is indicated by the Green and White Restart icon next to the channel.
- Highlight the programming and press the GREEN button to Restart the programming.

Restart TV in the What's Hot App

- All Restart TV programming in the *What's Hot App* is indicated by the green and white Restart icon next to the channel information below the program title.
- Highlight a program and press the GREEN button to tune to the program and watch from start.

**Restart TV requires a separate server and approval from content owners for implementation on their channels.*

*** Use of DVR functions in Restart TV programming is dependant on agreements with content providers.*



Restart TV FAQs

Q. What is Restart TV?

A. *Restart allows the video subscriber to start viewing from the beginning of a currently airing program on a restart enabled channel.*

Q. Can I Restart a program after it has ended?

A. *No Restart is only available on currently airing programs.*

Q. How is a Restart session different from watching live programming?

A. *A Restart session is a Unicast transmission of the video stream, meaning there is a dedicated connection between the Restart server and the STB for the duration of the Restarted program.*

Q. What happens to the live stream when you invoke a Restart session?

A. *The live stream (multi-cast) is un-tuned once Restart is invoked*

Q. What happens at the end of a Restarted program?

A. *The Unicast session is over and the subscriber is connected back to live tv (multicast)*

Q. Can I use the trick play (FF, RW, Pause) functions on a Restarted program?

A. *The operator has the ability to configure restrictions of trick play such as FF when configuring the channel in order to comply with content contract requirements.*

Q. Can I record a Restarted program?

A. *The operator has the ability to configure restrictions of recording when configuring the channel in order to comply with content contract requirements. If recording is allowed, the streams can be recorded using a 540 or Live STB.*

Q. What is required for Restart?

A. *Version 10 Middleware and a Restart server with appropriate licensing. Hardware is available for purchase from Innovative Systems and consists of an HPDL380 server.*

Q. How is Restart licensed?

A. *Restart is licensed in blocks of 10 channels, and by the number of Ethernet interfaces used for Restart functions.*

Q. How many channels and Ethernet interfaces do I need?

A. *The number of channels is going to be based on what content contracts allow you to enable Restart and how many you then wish to enable. The number of Ethernet interfaces needed will depend on the number of simultaneous subscribers invoking the feature and the Bandwidth of the channels that are Restarted. Example – 100 subscribers Restarting a channel that is 5Mbps requires 500Mbps which would mean you would need 1 interface.*

Q. How much output bandwidth can the restart server stream?

A. *The Innostream Restart server supports up to 5Gbps output streaming with corresponding licensing.*