

# Publish/playback channel quality control

Since build [2.6.110](#) it is possible to receive messages containing current publishing or playback bitrate from server and to [control channel quality](#) based on client and server bitrates difference.

To enable channel quality control, use the method `WCSStream.enableConnectionQualityCalculation()`

```
publishStream?.enableConnectionQualityCalculation(true);
```

Then register a callback function to get quality metric and current client and server bitrate values averaged by Kalman filter

```
publishStream?.onConnectionQualityCallback({currentQuality, clientFiltered, serverFiltered in  
    self.updateQualityStatus(currentQuality, view: self.publishQuality);  
});
```

Usage example:

[code](#) of handler registration, [code](#) of handler

```
@IBOutlet weak var publishQuality: UILabel!  
...  
publishStream?.enableConnectionQualityCalculation(true);  
publishStream?.onConnectionQualityCallback({currentQuality, clientFiltered, serverFiltered in  
    self.updateQualityStatus(currentQuality, view: self.publishQuality);  
});  
...  
fileprivate func updateQualityStatus(_ quality:kFPWCSConnectionQuality, view: UILabel) {  
    switch (quality) {  
        case .fpwcsConnectionQualityBad:  
            view.text = "BAD";  
            view.textColor = .red;  
            break;  
        case .fpwcsConnectionQualityGood:  
            view.text = "GOOD";  
            view.textColor = .yellow;  
            break;  
        case .fpwcsConnectionQualityPerfect:  
            view.text = "PEFRECT";  
            view.textColor = .green;  
            break;  
        case .fpwcsConnectionQualityUnknown:  
            view.text = "UNKNOWN";  
            view.textColor = .darkText;  
    }  
}
```