

# RTMP Streaming Automatic Reconnect

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## General Information

Nanocosmos Rtmp streaming can be configured to try to reconnect after connection to the streaming server failed (for example due to unstable internet connection).

The following settings are available:

- ReconnectAttempts: how often a reconnection should be attempted
- UseUnlimitedReconnect: unlimited reconnection attempts, this will override ReconnectAttempts
- ReconnectPeriod: time to wait before a new reconnection attempt is made
- UseInternalReconnect: the graph is not restarted when trying to reconnect

If all reconnection attempts were unsuccessful, streaming will be stopped - except UseUnlimitedReconnect is used.

## Important

If a reconnection attempt was successful the internal reconnection counter is reset. For following disconnections, the rtmp writer tries again to reconnect the given number of reconnect attempts before stopping the encoder.

## Valid Values

- ReconnectAttempts: from 0 to max(int32) - default value: five (5)
- UseUnlimitedReconnect: 0 for disable and 1 for enable - default value: 0
- ReconnectPeriod: from 100ms to max(int32)ms; if you specify a value below 100ms reconnection will be disabled - default value: 5000
- UseInternalReconnect: 0 for disable and 1 for enable - default value: 0

## Using Reconnection with the browser plugin

To use the reconnection ability of the rtmp writer `SetConfig(Option, Value)` can be used:

- ⤴ **ReconnectAttempts**: how often a reconnection should be attempted (i.e. 10), the default value is five (5)
- ⤴ **ReconnectPeriod**: the time between reconnection attempts, if the previous attempt was unsuccessful (i.e 5000) - the value is interpreted in ms, the default value is 5000ms
- ⤴ **UseInternalReconnect**: set the value for this option to one (1), if the internal reconnect of the rtmp writer should be used, else the reconnection is done by stopping and starting the filter graph
- ⤴ **UseUnlimitedReconnect**: set the value to one (1), if the graph should never be stopped and a reconnect attempt should be made every x interval (x being the value specified via `ReconnectPeriod`)

## Using Reconnection with the rtmp writer

Reconnection can be configured via the interface `IRTMPOptions`:

```
CComQIPtr<IRTMPOptions, &IID_IRTMPOptions> optRtmp = pSink;  
if (optRtmp)  
{  
    optRtmp->SetReconnectInterval(reconnectPeriodValue);  
    optRtmp->SetReconnectAttempts(reconnectAttemptsValue);  
}
```

Further options are available via `ICodecApi`:

```
CComQIPtr <ICodecAPI> api = pSink;  
if (SUCCEEDED(api->IsSupported(&PROPID_nanoRTMPUnlimitedReconnect)))  
{  
    VARIANT vt;  
    VariantInit(&vt);  
    vt.vt = VT_BOOL;  
    vt.boolVal = VARIANT_TRUE; // or VARIANT_FALSE  
  
    api->SetValue(&PROPID_nanoRTMPUnlimitedReconnect, &vt);  
}
```

## Using Reconnection with XML

Also see "LiveVideoEncoder-XML-Config.pdf".

```
<reconnectinterval>
  <attempts>5</attempts>
  <interval>5000</interval>
  <restartgraph>>false</restartgraph>
  <unlimitedattempts>>true</unlimitedattempts>
</reconnectinterval>
```

<restartgraph> has the same meaning as UseInternalReconnect (although the meaning is reversed). If set to false, the internal reconnect of the rtmp writer will be used. Setting <unlimitedattempts> to true, enables the use of unlimited reconnect attempts. The number supplied with <attempts> will be overridden. So <attempts> is not required in this case.

## Using Reconnection to keep the encoder running

If the rtmp writer is disconnected from the streaming server URL, the whole encoder graph will be stopped. When a parallel stream to another destination is running, this recording will be stopped as well. This is especially important for the local mp4 file writer. To avoid this, you can use the option **UseInternalReconnect**. The filter graph will then keep running until all reconnect attempts fail.

Example: reconnect attempts = 100, reconnect period = 6000 ms. The encoder will keep running for ten minutes if all reconnection attempts failed (100\*6s).

If you use the option **UseUnlimitedReconnect** the graph will never be stopped by the rtmp filter - a reconnection attempt is made every x ms (depending on the specified value).