



# Delta Media Server Content Protection System

User Guide



## Content Protection System : User Guide

### Trademark Information

The 7thsense logo, and various hardware and software product names are trademarks of 7thSense Design Ltd. Product or company names that may be mentioned in 7thSense publications are tradenames or trademarks of their respective owners, and such trademarks may also be registered in their respective countries. Windows is a registered trademark of Microsoft Corporation in the United States and other countries.

### Copyright Information

All Rights Reserved. This document is copyrighted © by 7thSense Design Ltd and shall not be reproduced or copied without express written authorisation from 7thSense Design Ltd.

The information in this document is subject to change without notice. 7thSense Design Ltd assumes no responsibility for errors, and/or omissions contained in this information.

Printed: July 2021

This edition is for software version CPS 1.0, DFM 2.4  
Document ref.: M079-2

E: [info@7thsense.one](mailto:info@7thsense.one)  
W: 7thsense.one

7thSense Design Ltd  
2 The Courtyard, Shoreham Road  
Upper Beeding  
Steyning  
West Sussex  
BN44 3TN  
UK

T: +44 (0) 1903 812299

7thSense Design LLC, Michigan  
332 E Lincoln Ave  
Suite 100  
Royal Oak, MI 48067  
USA

T: +1 248 599 2717

7thSense Design LLC, Orlando  
4207 Vineland Rd  
Suite M1  
Orlando, FL 32811  
USA

T: +1 407 505 5200

What is the Delta Content Protection System?	4
Delta Content Protection System Architecture	4
The Content Encryption Process	6
Encrypted Content on the Delta Media Server	6
Remotely Updating an Encrypted Configuration	7
Creating Encrypted Content using DFM	7
Prepare Configuration	8
Venue and Date Configuration	9
Run the Encryption	10
Installing the Encrypted Content onto Delta	10
Manage Shows Remotely	13
FAQs	19
Document Information	19
Index	21

## What is the Delta Content Protection System?

---

Delta Content Protection System (CPS) is a content encryption and decryption system whereby content imported onto a Delta Media Server can only be played back if certain criteria are met.

Traditionally, Delta plays back its own native movie format (STH/7TH files) which are optimized for streaming uncompressed movies from standard hard disks or newer solid state drives.

Delta CPS has the ability to allow the Content Creator to encrypt the STH/7TH movie files selecting a playback date-range and/or venue codes, so that their content will only play back within the dates specified or the venue they choose.

This manual should be read in conjunction with the **Delta User Guide**, which explains the basic concepts of adding and working with content on the timeline, also the **DFM User Guide**, this explains the content conversion process.

## Delta Content Protection System Architecture

---

### What You Need

#### Encrypted Content Creation

The tools needed for the content creation are the 7thSense **DFM Utility** with a **Delta CPS Encryption licence** (USB key), plus a manual Registry key setting.

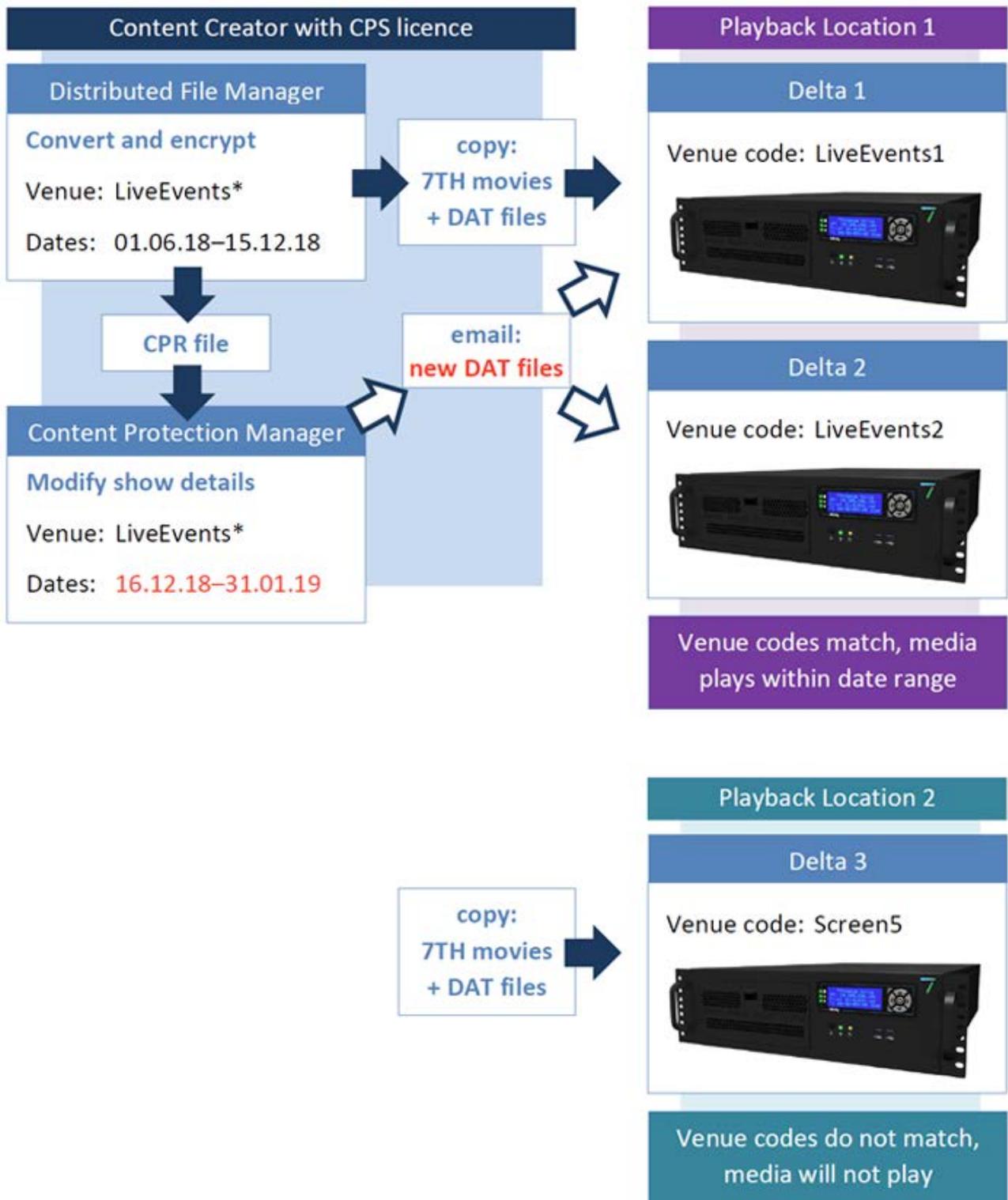
#### Encrypted Content Playback

To playback the encrypted content, the **7thSense Delta Media Server Software** with associated **Delta licence** is required.

#### Managing Content Licences Remotely

To change any previously produced encryption criteria, the **7thSense Content Protection Manager**, **Delta CPS Encryption licence** and the original **CPR file** are required.

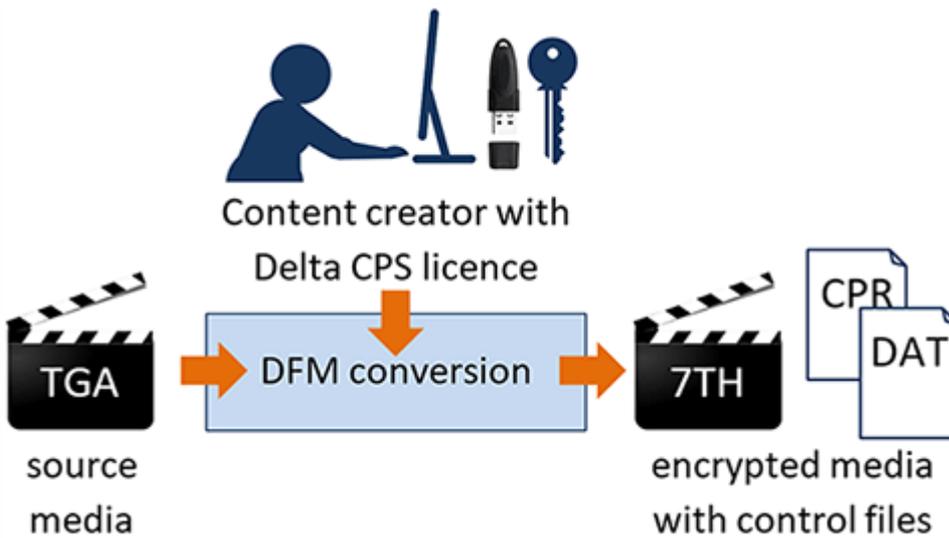
**Workflow**



## The Content Encryption Process

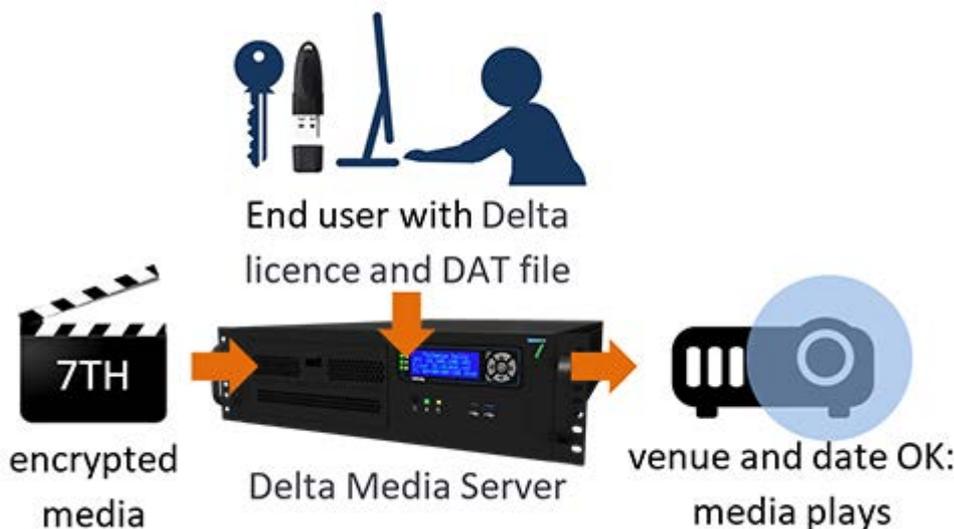
Delta licences are purchased with a specific Venue Code burned in, for example '7thSense'.

Using the **7thSense DFM Utility**, the Content Creator can encrypt the source movie content and the supporting information is held within a DAT file.



## Encrypted Content on the Delta Media Server

The creator can now send the movie (7th files) and a copy of the DAT file on a USB hard drive to their customer, secure in the knowledge that the movie will only play back between the chosen dates and if the Venue Code matches the Delta licences on site.



If any of the security criteria are not met, the movie is scrambled onscreen and cannot be decoded.

Security criteria that will prevent the movie from being viewed include:

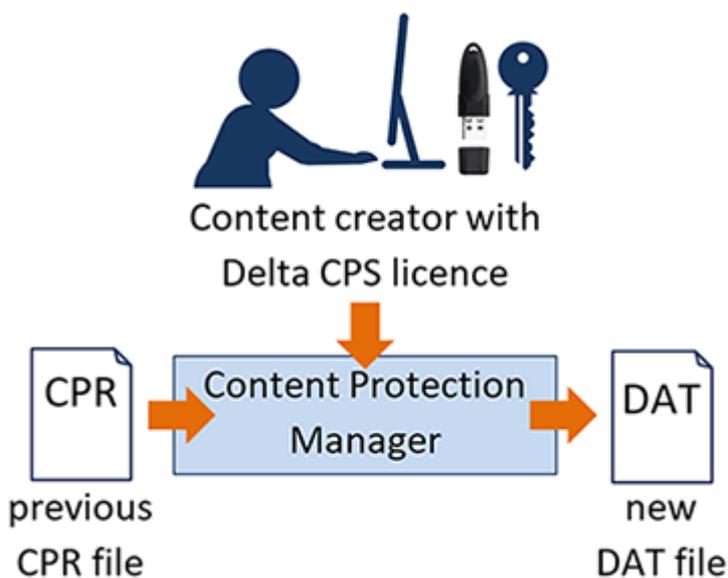
- DAT file missing
- DAT file Venue Code does not match the Delta USB key Venue Code
- PC Date not within DAT file’s Start to End Date
- Time source has been tampered with
- Delta not licensed for encryption playback

## Remotely Updating an Encrypted Configuration

If the Content Creator wants to remotely extend a show’s dates or change it to play at any or other venues, they can use the **7thSense Content Protection Manager**. This is accomplished by the Creator editing the originally created CPR files held locally.

Using this program, the Creator can change the venue code, start or end date. Wildcards can also be used for the Venue Code, so for example setting it to LiveEvents\* would allow this show to play on a Delta server licensed with LiveEvents1, LiveEvents2 and so on.

The output of this Manager is a modified DAT file that can be easily emailed to the site, and placed on the Delta PCs, changing the playback criteria immediately.



## Creating Encrypted Content using DFM

The items needed for the encryption process are:

- the Source Movie
- the 7thSense DFM Software Utility and
- a Delta CPS licence.

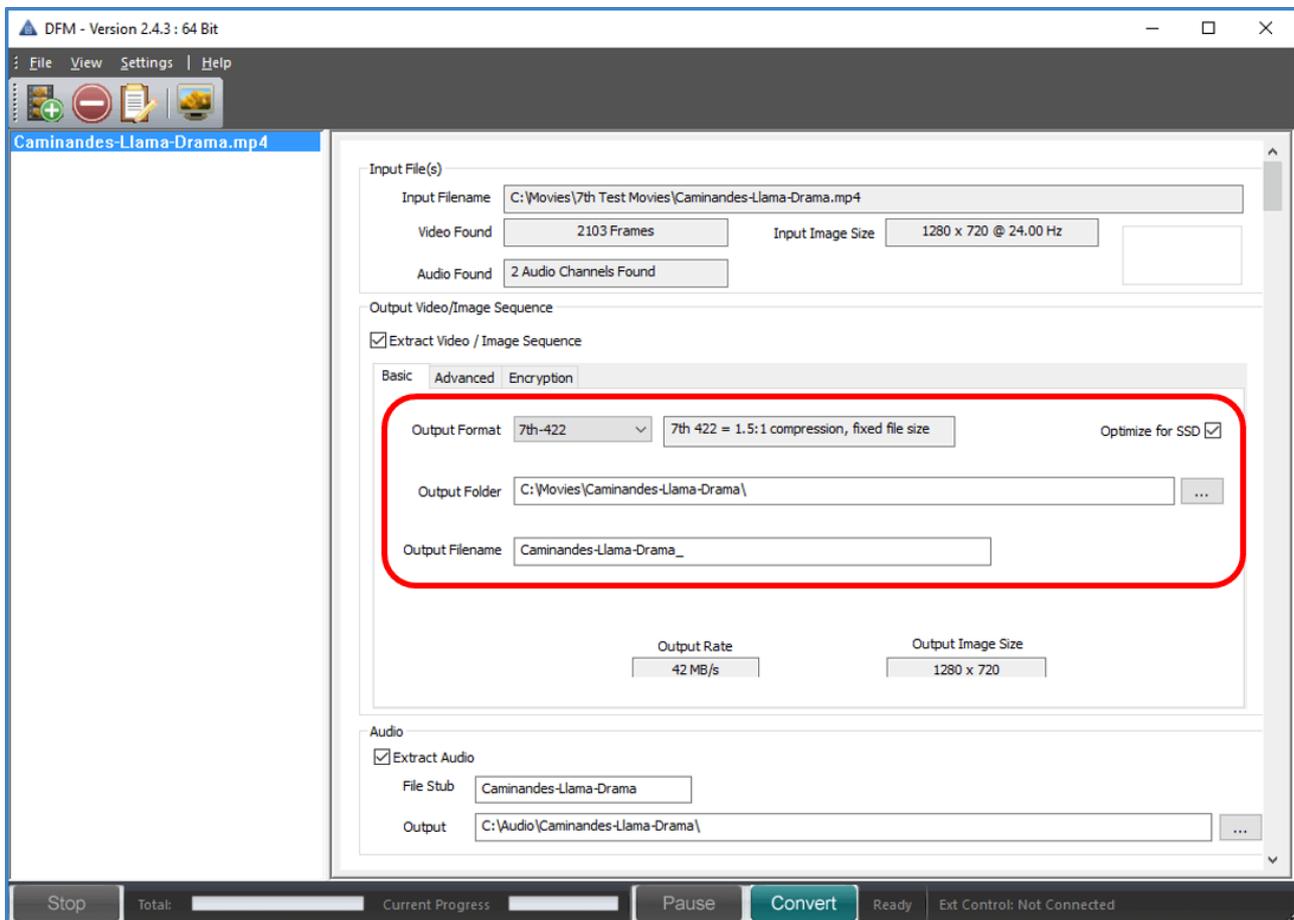
**Note** that DeltaGUI will not recognise the CPS licence if it is on a second dongle: ensure that it is on your main server licensing dongle.

## Prepare Configuration

On the PC used for encrypting the movie content:

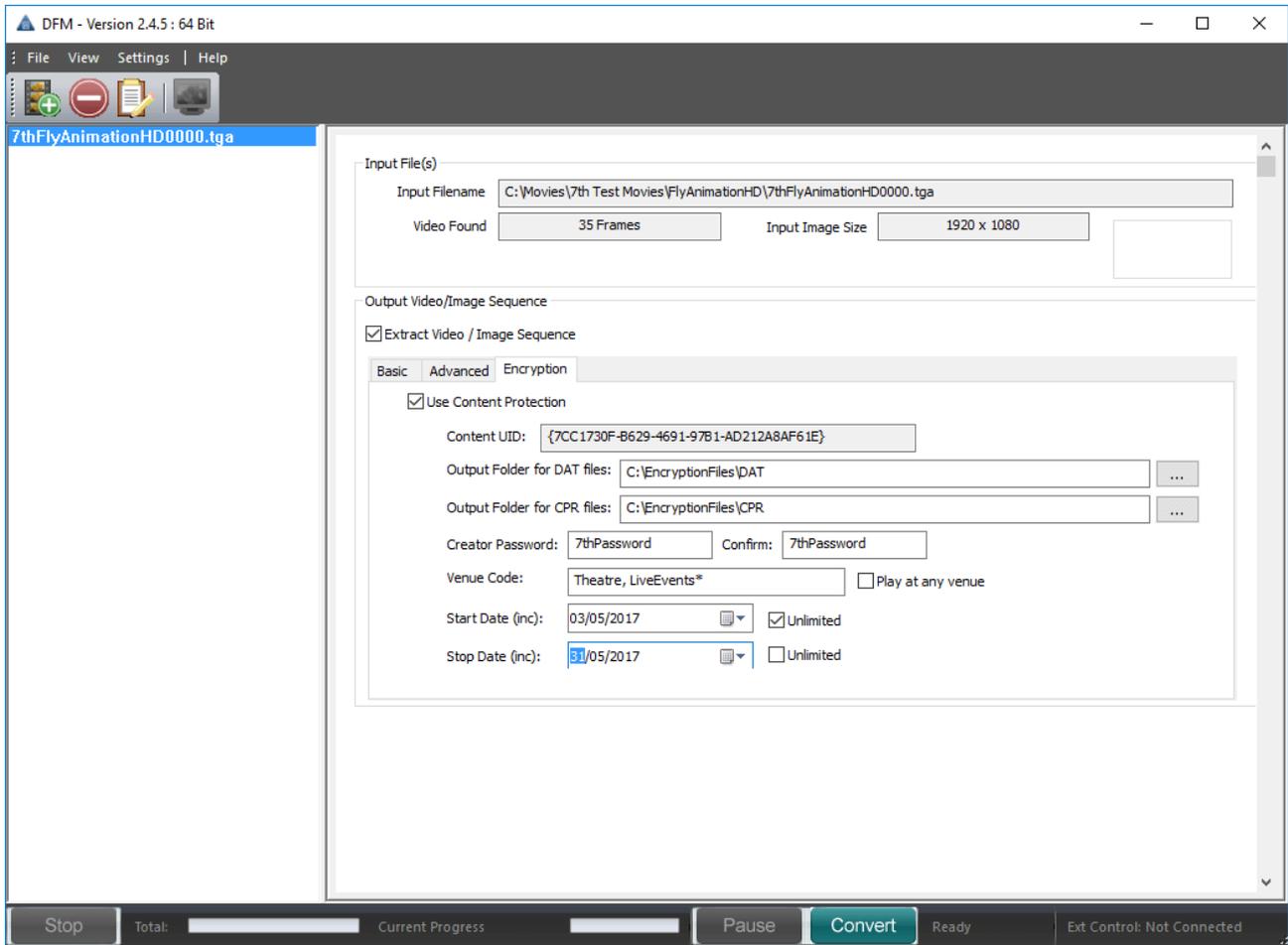
- Install **DFM**
- Insert the **USB Delta CPS Licence Key**
- Confirm the movie content to encrypt is accessible from this PC
- Start **DFM**

Drag and drop a single movie file into DFM, selecting an appropriate location for the converted files to be output. (Note: DFM will pick up the rest of the movie for conversion.)



More information on DFM file conversion is in the DFM User Guide.

To encrypt the converted files, click on the **Encryption** tab. By default, content protection is not active in DFM; check the **Use Content Protection** checkbox. A new **Content UID** will be generated automatically.



- Create a location to store the **DAT** and **CPR** files in by using the browse button or typing the location in the relevant box.
- Create a password and retype to confirm.

## Venue and Date Configuration

### Venue Configuration

- To set to playback at a specific Venue location, add the Venue name in the **Venue Code** box. The venue name is the ID within the **venue specific Delta USB key** at the Delta playback location. For example, the Venue ID might be **LiveEvents1**.

Multiple venue codes can be entered, separated with a **Comma**, **Space** or **Semi-Colon** so for example, to play the media on all Delta Media Servers at the venue named **LiveEvents**, type in **LiveEvents\***. The asterisk is a wild card so will pick up all servers named LiveEvents[n].

- Make sure the **Play at any venue** checkbox is **unchecked**. If checked, media will not be limited to your selection and will be allowed to play at all venues.

## Date Range Configuration

- To have the movie to play within certain dates, uncheck the checkbox next to either the **Start date (inc)** or the **Stop date (inc)** or both. Type the start/stop dates in the appropriate boxes.

### Notes:

- Venue codes are **not** case sensitive and **MUST** match the venue code that is recorded on your licence
- Dates are inclusive, so for a licence with a stop date of 31/05/2018, the content will play up to midnight on the 31 May 2018.

## Run the Encryption

---

Once you have added your media and configured your preferences for Encryption, press Convert and the movie will start converting into the 7TH format. The progress bars at the bottom of the screen demonstrate the conversion progress. You can Pause or Stop the process at any time.



Once completed, the encrypted movie content is stored as a CPR and a DAT file.

The movie content files (7TH movie files that were created within DFM from the original) and the DAT file can then be sent to the End User for installing and ingesting on the Delta Media Server.

The CPR file and known password should be kept **with the creator** for future amendments.

## Installing the Encrypted Content onto Delta

---

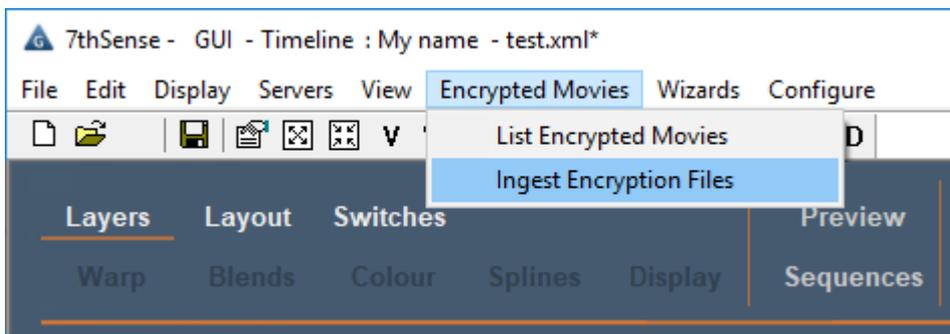
- Add the **Encrypted Content** as you would for non-encrypted content (information on how to do this is in the Delta User Guide).
- Add the DAT file in a known location on the Delta Media Server.
- Confirm the Delta Venue licence is plugged in to a USB port on the Server.

**Note:** if you have a separate Delta Licence already plugged in (often internally), your second dongle will not be recognized and the GUI will not have the appropriate **Encrypted Movies** menu. Remove your first dongle if necessary!

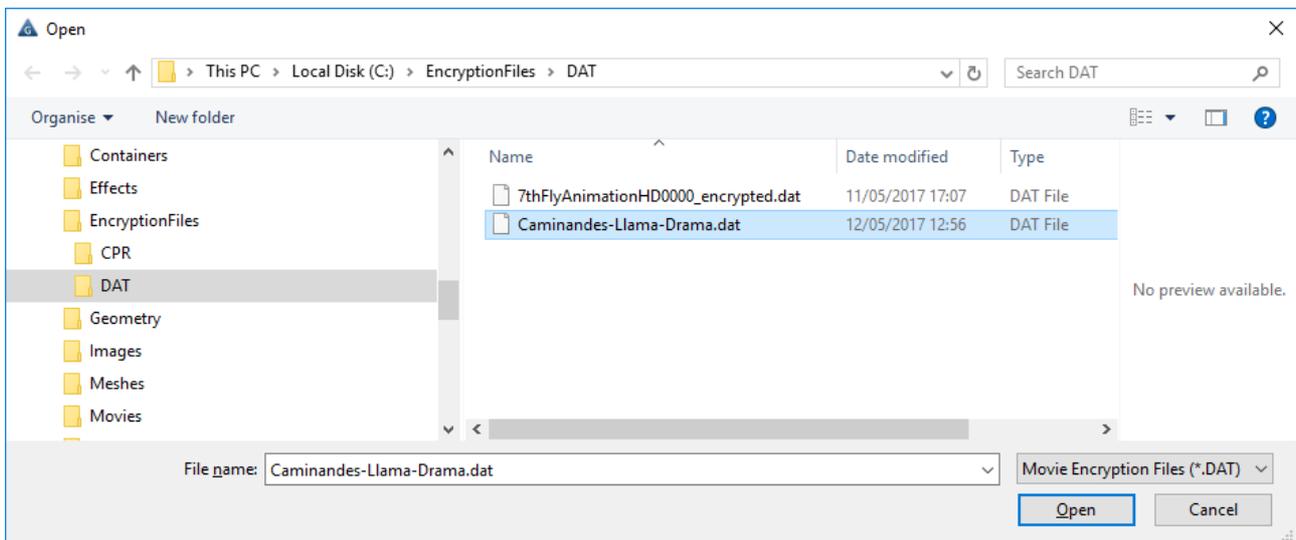
- Run the DeltaServer and DeltaGUI software.

## Ingest the Media

To ingest the DAT file, click on the **Encrypted Movies** tab at the upper left of DeltaGUI, then click **Ingest Encryption Files**.



- Browse to the location where the DAT files are stored
- Select the DAT file to Ingest.
- Click **Open** button to ingest the DAT file.



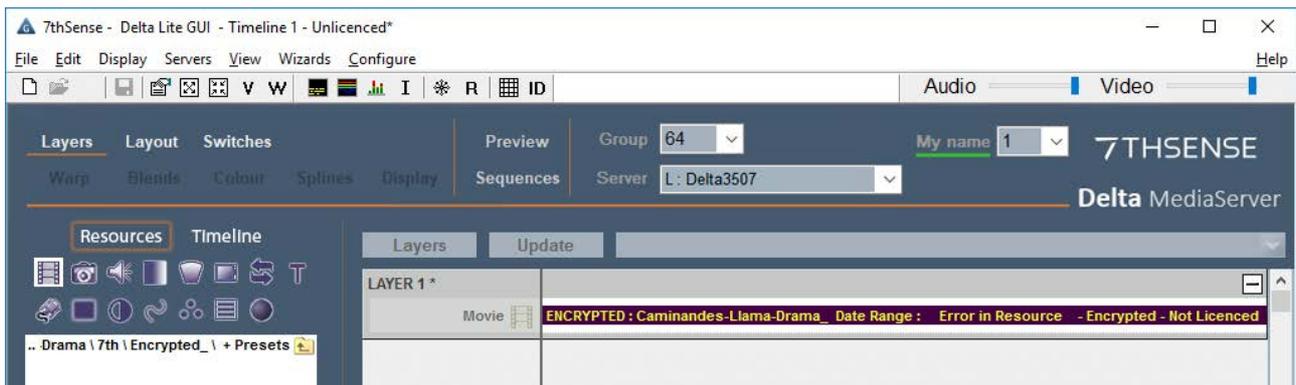
**DAT File Ingested** will show briefly on the DeltaGUI message bar when ingested:



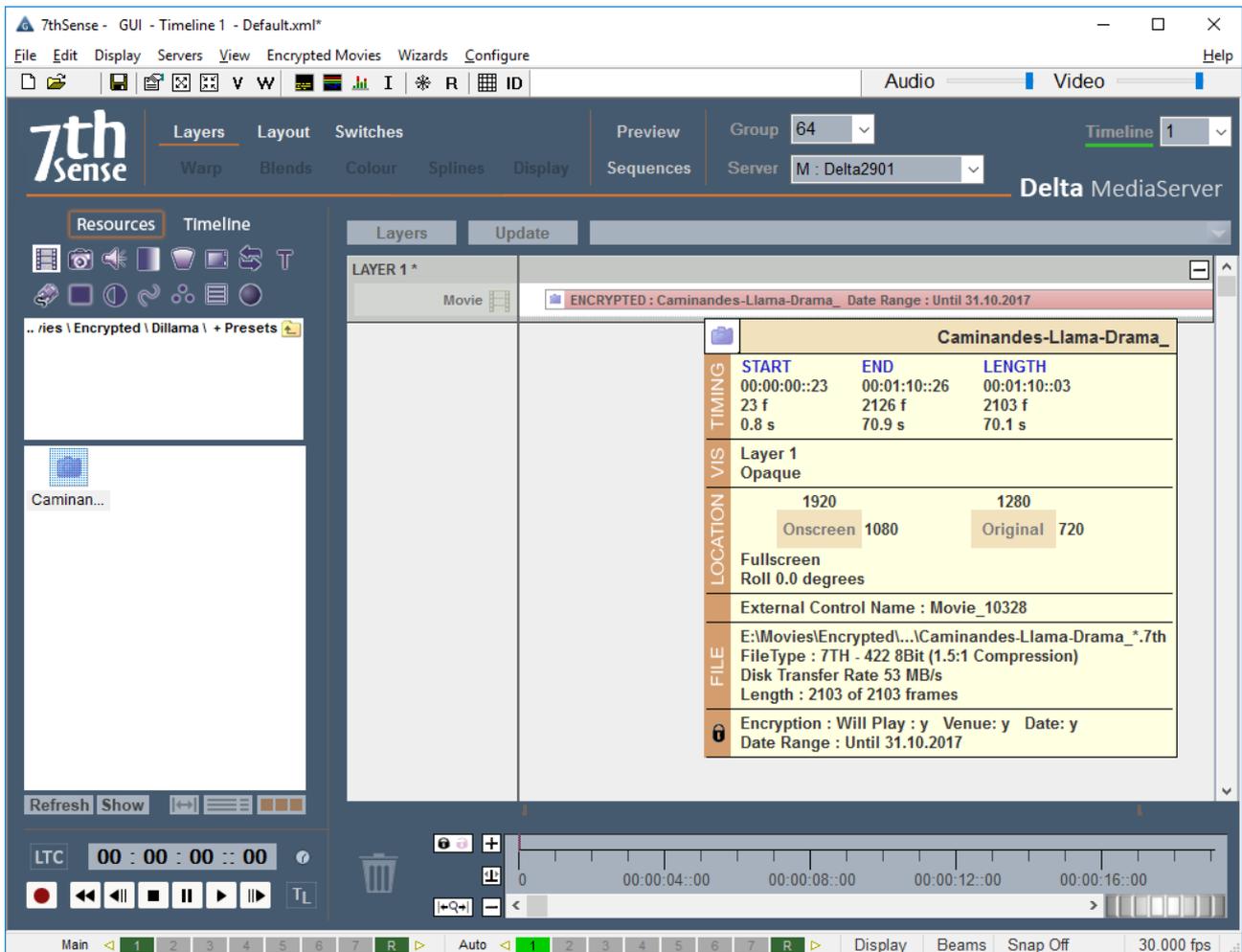
To confirm the content and movie will work at this venue, click on the **Encrypted Movies** tab, then **List Encrypted Movies**.

The list shows the encrypted movies Delta can locate. It will also show the status of each movie, when and whether it is able to play at this venue.

**Note:** the encrypted movie won't play if the venue doesn't match the licence or the current date is not within the encryption date limits. If either case is preventing the resource to run, when dropped onto the timeline the movie will look like this:



However, if the encryption properties are within range and Delta is able to play the movie at this venue, when dragged onto the timeline, the movie will be pink and play in the same way as non-encrypted movies. If you hover over the resource, you are able to see further details of the Encryption status and dates range (if appropriate).



## Manage Shows Remotely

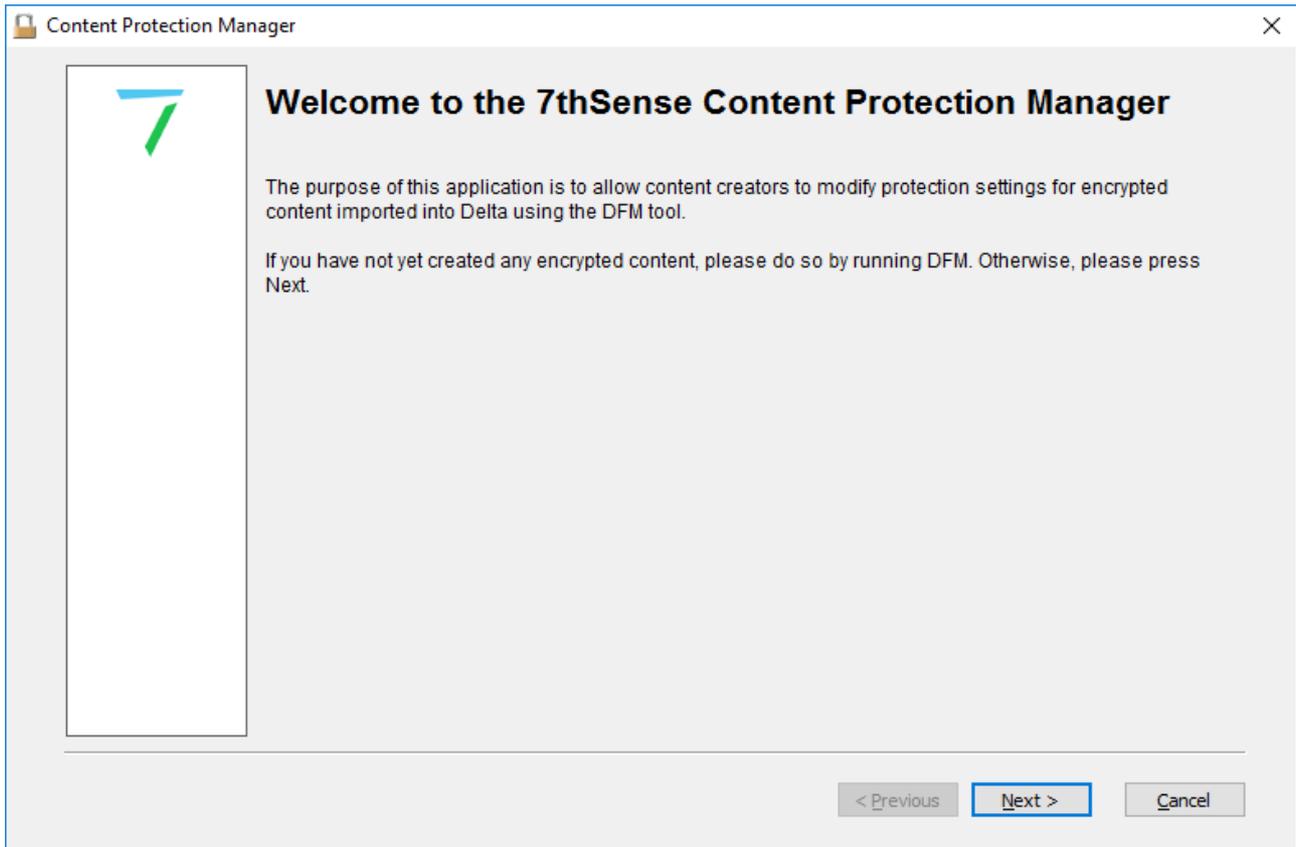
If the Content Creator wants to remotely make changes to the encryption properties (such as change dates or venue details) they need the **7thSense Content Protection Manager** application.

The items needed for the remote management process are the **originally created CPR file**, the **Content Protection Manager Software Utility**, the **Delta CPS licence** and the **Creator password**.

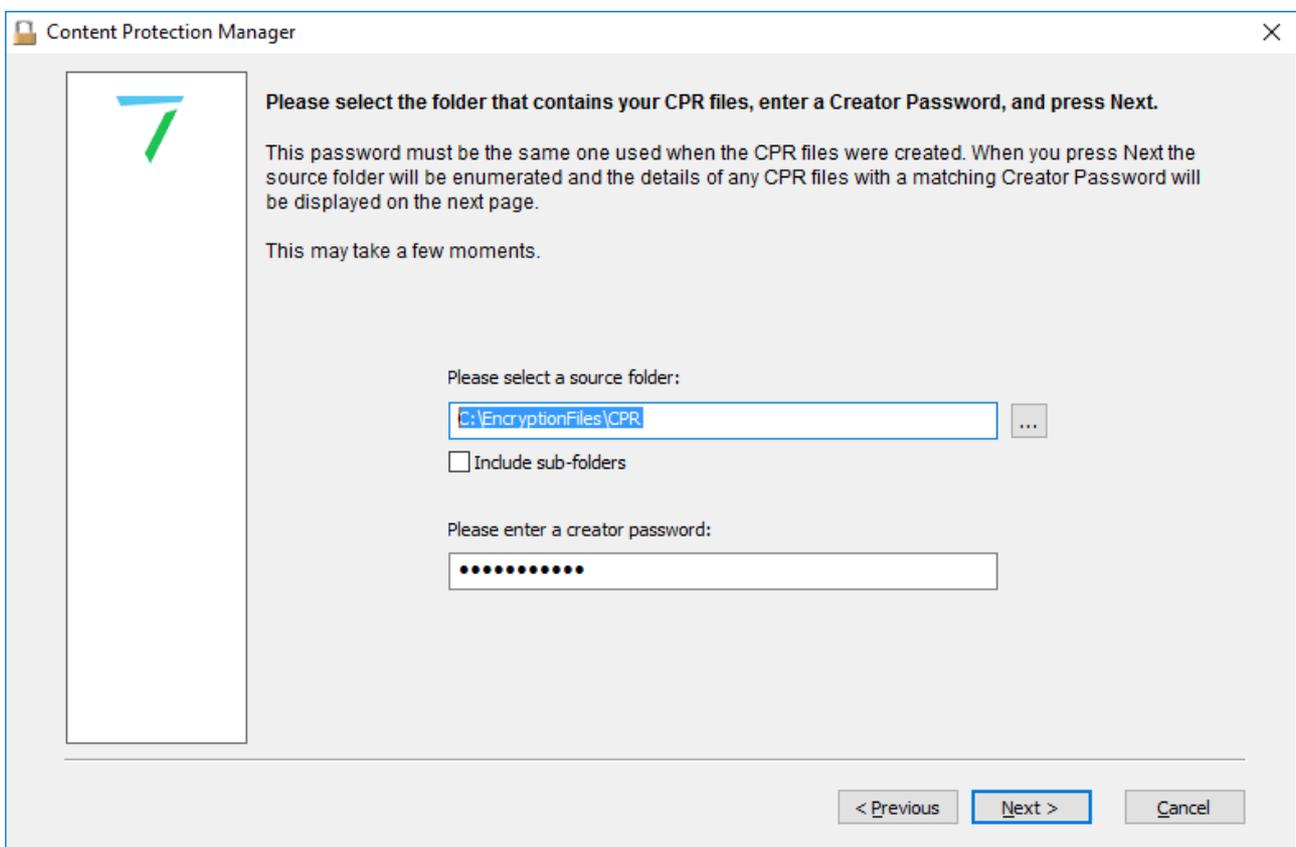
On the PC that is to be used for encrypting the movie content:

- Install Content Protection Manager
- Insert the USB Delta CPS Licence Key
- Load/confirm the original CPR is present.

Start the **Content Protection Manager**

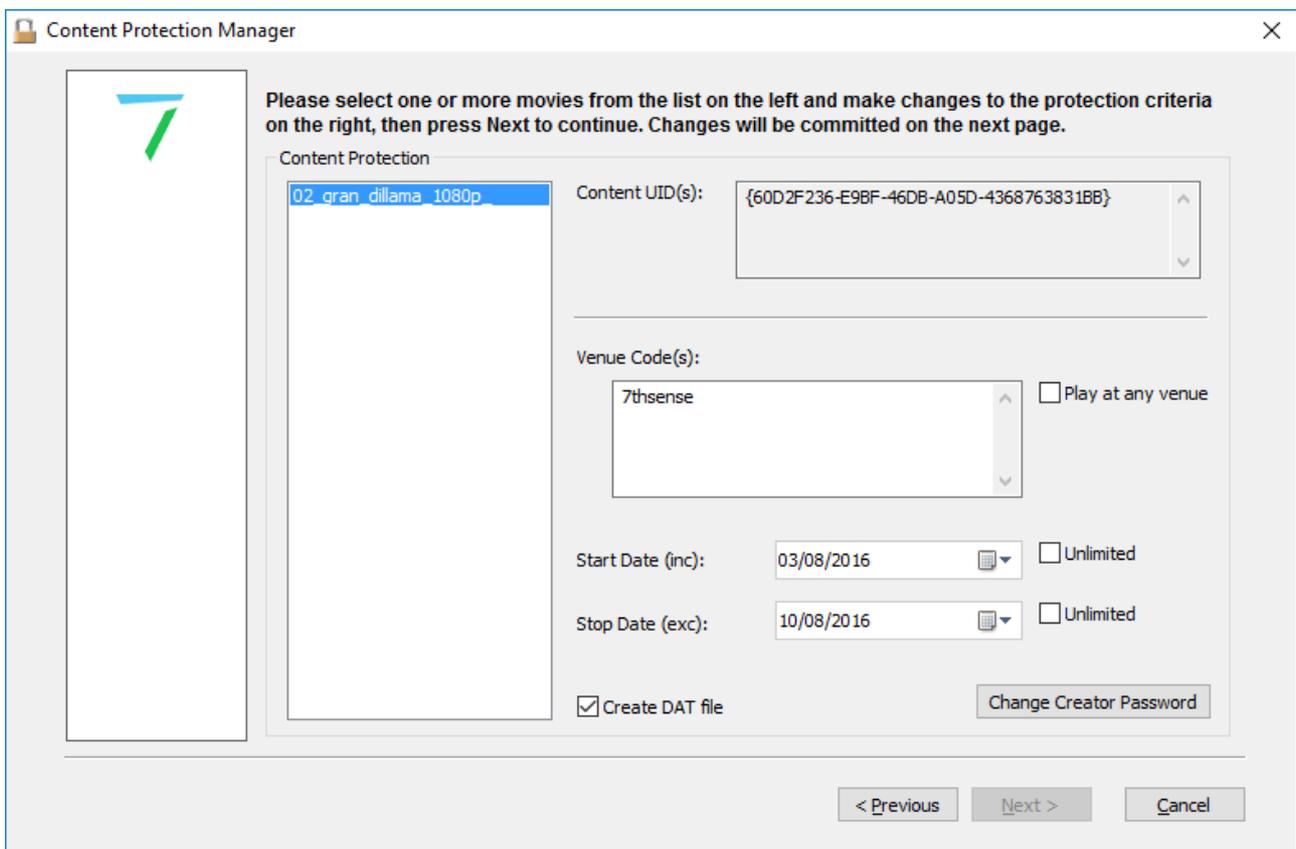


Click **Next** to continue



- Browse and select the source folder of the CPR file in C:\EncryptionFiles\CPR
- Check the Include sub-folders checkbox if the file is in a sub folder of the current folder.
- Type the password that was used to create the original CPR, in the creator password box.
- Once the next button is pressed, the Manager will search for CPR files that are related to the password entered.
- If any CPRs are found relating to the password, the Manager will open a new window showing all relevant CPRs.

Select the CPR to manage:



The relevant details will be displayed for your selected movie.

Note that if you have set the movie to play at any venue with unlimited dates (all checked) no Venue Code will be visible and the dates will default to 01/01/2000 and be greyed out.

Please select one or more movies from the list on the left and make changes to the protection criteria on the right, then press **Next** to continue. Changes will be committed on the next page.

Content Protection

02\_gran\_dillama\_1080p

Content UID(s): {97358CB5-264D-4EFF-8773-2BB801B17F95}

Venue Code(s):  Play at any venue

Start Date (inc): 01/01/2000  Unlimited

Stop Date (exc): 01/01/2000  Unlimited

Create DAT file

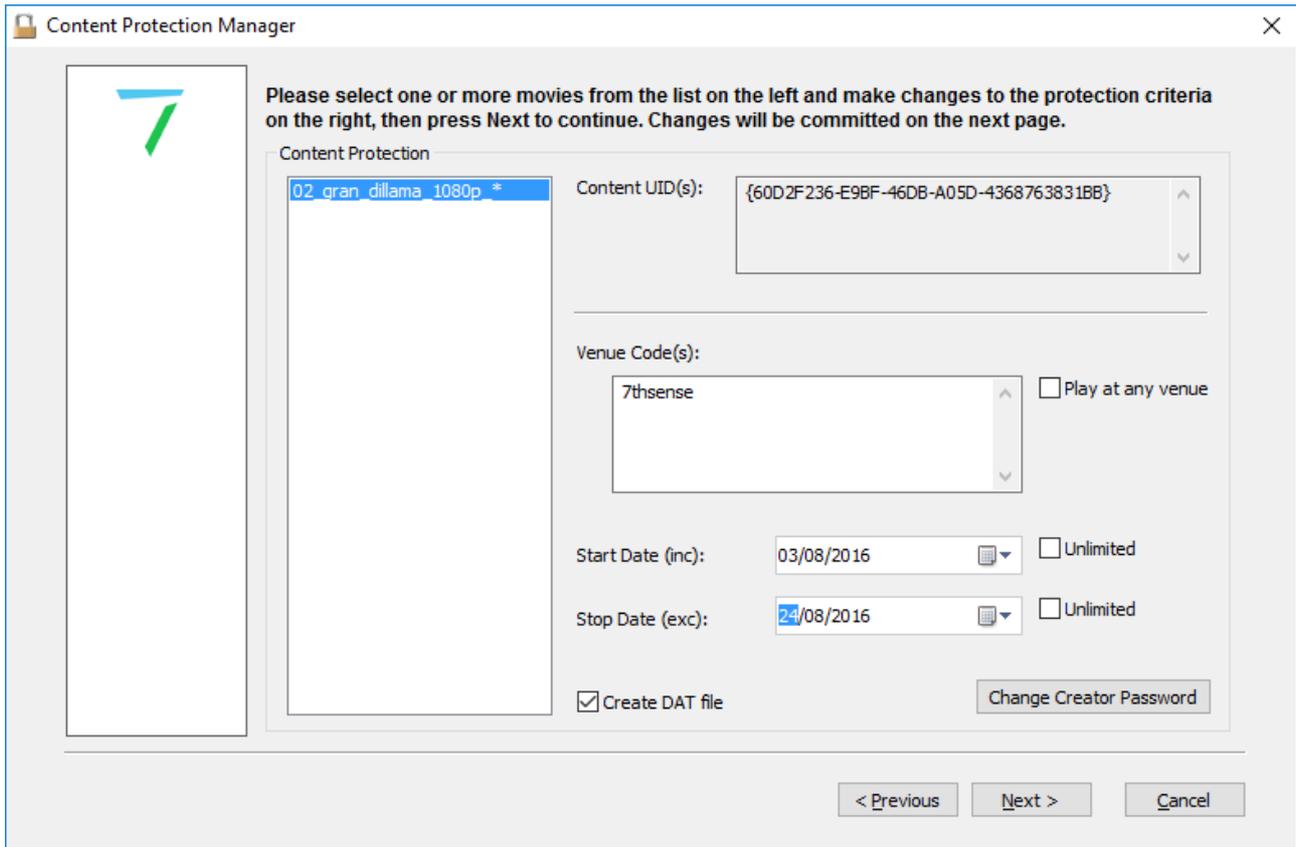
< Previous Next > Cancel

**Note:** You can select multiple CPRs and add the same protection information to multiple CPR's simultaneously.

The encryption information may now be edited if required:

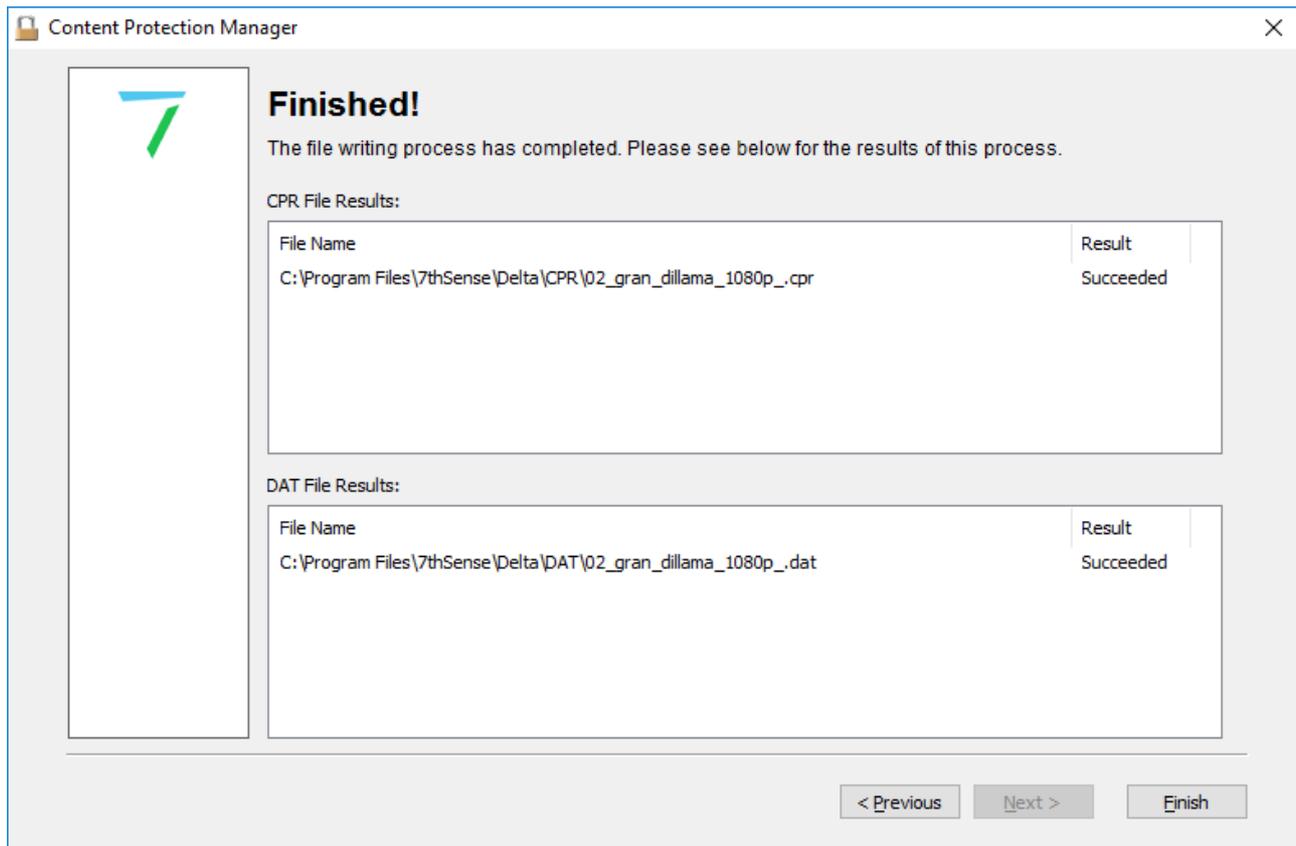
- To set to playback at a different Venue location, change the Venue name in the **Venue Code(s)** box.
- To play at any venue, check the **Play at any venue** checkbox.
- To have the movie play within certain dates, uncheck the checkbox (if checked), next to either the **Start date (inc)** or the **Stop date (inc)** or both. Type the start/stop dates in the appropriate boxes.
- To set unlimited start and stop dates, check the **Unlimited** checkboxes next to the relevant dates.
- Pressing the change Creator password button allows you to change the currently saved password for the selected CPR. Type in the old password and then the new one.
- To create and new DAT file for the encrypted content, check the **Create DAT file** checkbox.

If you make changes to the encryption details, the **Next** button will become active:



Click **Next** to show a window asking for you to select new output folders for modified CPR and DAT files. This is to enable you to maintain previous as well as create new – else the system will overwrite your previous files.

Click **Next** once you have selected where you want your DPR and DAT files to be stored.



Click the **Finish** button to close the Management program.

The newly-created DAT file can now be sent to the Venue for installing on the relevant Delta Media Server. The CPR file should be kept with the Content creator for any further possible changes.

## FAQs

### Does it also encrypt the audio?

No, only the video is encrypted.

### Can the content and DAT file also be used on another Server?

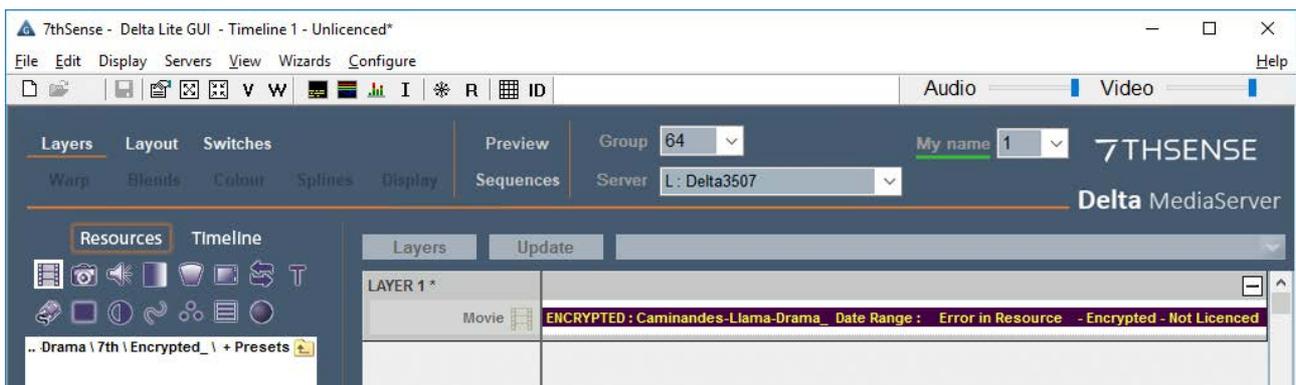
Yes, providing the correct licensing criteria are met.

### Do I need to keep the DAT file once it's been ingested?

Yes, this needs to reside in the DAT folder.

### What happens if I try and play a movie that is not allowed at my venue?

The output from Delta will be scrambled and the resource in timeline will show in purple with yellow text stating why the resource won't play:



### I have lost the DAT file before ingesting it. Can I get another one?

The Content Creator can create a duplicate DAT file from the original CPR file

### I have forgotten my management password, what can I do?

The content will need to be re-encrypted.

## Document Information

Date	Document edition	Software version	Revision Details	Author/Editor
December 2009	1.0	CPS 1.0	New release	

Date	Document edition	Software version	Revision Details	Author/Editor
		Delta DFM 1.8 or later		
January 2016	1.1	DFM 2.4.2.10: 64	Updated screenshots and information	Helen Ward
August 2016	1.2	CPS 1.0 DFM 2.4.2.10: 64 Delta 2.4 build 5	Updated further screenshots and information to new CPM interface	Helen Ward
July 2017	1.3	CPS 1.0 DFM 2.4.3 Delta 2.5 and above	Edited and updated	Andie Davidson
December 2020	2	CPS 1.0 DFM 2.4.3 Delta 2.5, 2.6, 2.7	Rebranded	Andie Davidson

## C

- content protection 4
- Content Protection Manager 7
- convert files to 7TH/STH format 10
- CPR file (encryption) 19
- CPR files 13
- CPR files (encryption) 4

## D

- DAT files (encryption) 4, 19
- date restriction for movies 6, 9
- Delta CPS 4

## E

- encryption process for movies 6

## F

- frequently asked questions, encryption 19

## I

- ingest encrypted movie 10
- install encrypted movie on server 10

## L

- license, CPS 4

## P

- playback process for encrypted files 6

## R

- remote media encryption management 13
- requirements for content protection 4, 7

## S

- select file to encrypt using CPS 8

## U

- update encryption restrictions 7

## V

- venue restriction for movies 6, 9

## W

- workflow for encryption 4





E: [info@7thsense.one](mailto:info@7thsense.one)  
W: [7thsense.one](http://7thsense.one)

7thSense Design Ltd  
2 The Courtyard, Shoreham Road  
Upper Beeding  
Steyning  
West Sussex  
BN44 3TN  
UK

T: +44 (0) 1903 812299

7thSense LLC, Michigan  
332 E Lincoln Ave  
Suite 100  
Royal Oak, MI 48067  
USA

T: +1 248 599 2717

7thSense LLC, Orlando  
4207 Vineland Rd  
Suite M1  
Orlando, FL 32811  
USA

T: +1 407 505 5200