

# **Product Requirement Spec for Cloud Recording**

**D-Link Confidential**

**Version: 0.4**

### Revision History

Version	Date	Name	Comment Remarks
V0.1	4/9/2015	Cheng Yi Chang	1 <sup>st</sup> draft
V0.2	6/4/2015	Cheng Yi Chang	<ol style="list-style-type: none"> <li>1. Add free trial</li> <li>2. Add change plan process</li> <li>3. Modify subscription process</li> <li>4. Add live view sharing (TBD)</li> <li>5. Add clip sharing (TBD)</li> <li>6. Add motion &amp; detection event in timeline (TBD)</li> </ol>
V0.3	8/28/2015	Amy Ho	<ol style="list-style-type: none"> <li>1. Document architecture adjustment</li> <li>2. Modify subscription/un-subscription/change plan flow</li> <li>3. Modify clip sharing</li> <li>4. Add time-lapse clip making</li> <li>5. Add order history</li> <li>6. Remove Live view sharing</li> <li>7. Remove free service plan</li> <li>8. Modify free trial flow</li> <li>9. Modify service plan</li> </ol>
V0.4	12/15/2015	Amy Ho	<ol style="list-style-type: none"> <li>1. Change service name "Cloud NVR" to "Cloud Recording"</li> <li>2. Update service plan table</li> <li>3. Add an online payment type "PayPal"</li> <li>4. Modify the length of an event recording and add event recording daily quota</li> <li>5. Remove downgrade policy</li> </ol>

			<ul style="list-style-type: none"><li>6. Remove “Save Clip” feature from event-based plan</li><li>7. Remove Date scale of timeline</li><li>8. Update scope of phase 2</li><li>9. Update check point of phase 2</li></ul>
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Approver Name	Title	Signature	Date

- 1**    **Introduction**
  - 1.1**    **Product Description**
  - 1.2**    **Use Cases**
    - 1.2.1**    **Home Users (ex. working mother)**
    - 1.2.2**    **Small Business Owners**
  - 1.3**    **Model Support**
  - 1.4**    **OS Support**
  - 1.5**    **Language Support**
  - 1.6**    **Requirement Priority Definition**
  - 1.7**    **Scope (TBD)**
  - 1.8**    **Schedule (TBD)**
- 2**    **Cloud Recording Service Description**
  - 2.1**    **Service Policy**
  - 2.2**    **Subscription**
    - 2.2.1**    **Free Trial**
    - 2.2.2**    **Free Service Plan**
    - 2.2.3**    **Paid Service Plan**
  - 2.3**    **Un-subscription**
  - 2.4**    **Change Plan**
    - 2.4.1**    **Upgrade**
    - 2.4.2**    **Downgrade**
  - 2.5**    **Recording**
  - 2.6**    **Playback**
    - 2.6.1**    **Timeline Mode**
    - 2.6.2**    **Event List Mode**
  - 2.7**    **Event Notifications**
  - 2.8**    **E-mail Notifications**

[2.9 Clip Editing, Clip Management, Clip Sharing](#)

**3** [Requirements](#)

[3.1 Capacity \(TBD\)](#)

[3.2 Subscription](#)

[3.2.1 Subscription Entrance](#)

[3.2.2 Cloud Recording Service Introduction Page](#)

[3.2.3 Free Trial Subscription \(Phase 2\)](#)

[3.2.4 Subscription](#)

[3.2.5 On-line Payment \(Phase 2\)](#)

[3.2.6 Subscription Result \(Phase 2\)](#)

[3.2.7 E-mail Notifications for Subscription \(Phase 2\)](#)

[3.2.8 My Profile \(Phase 2\)](#)

[3.2.9 Subscribed Services tab](#)

[3.2.10 Order History \(Phase 2\)](#)

[3.3 Recording](#)

[3.4 Playback](#)

[3.4.1 Timeline Mode](#)

[3.4.2 Event List Mode](#)

[3.4.3 Normal Playback](#)

[3.4.4 Event Playback](#)

[3.4.5 Clip Playback \(Phase 2\)](#)

[3.5 E-mail & Push Notifications](#)

[3.6 Clip Management, and Clip Sharing \(Phase 2\)](#)

[3.6.1 Clip Management](#)

[3.6.2 Clip Sharing](#)

[3.7 Log for Analysis \(TBD, Phase 2\)](#)

[3.7.1 Analytics on GA](#)



3.7.2 Additional for Data Analysis

4 Go-to-Market Plan

5 Appendix I

# 1 Introduction

## 1.1 Product Description

The document is about the requirements of Cloud Recording. The function will be implemented on portal as well as apps.

Cloud Recording is aimed at supporting the following requests:

1. mydlink IP Cam users want to view recorded video clips when receiving event notifications from the IP Cams.
2. mydlink IP Cam users want to record videos captured from their IP Cams in cloud storage and review the videos later (or for backup purpose).
3. mydlink IP Cam users want to edit video clips from the recorded videos.
4. mydlink IP Cam users want to make time-lapse clips from the recorded videos.
5. mydlink IP Cam users want to download the recorded video clips.
6. mydlink IP Cam users want to share the recorded video clips.

## 1.2 Use Cases

### 1.2.1 Home Users (ex. working mother)

- Jane is a working mom using mydlink IP Cam to help her seeing how her baby is doing with the nanny at home. Although she can use her mobile phone or tablet to see the live view remotely, she would like her monitoring solution to offer more:
  1. She would like to receive notifications when there are events triggered from the IP Cam. When she receives the notification from e-mail or push notification from mobile App, despite seeing the live view, she would like to check the recorded clips of the event to know what's actually going on.
  2. She would like to save the clips if it is something significant or interesting. She would also like to have an easy to use platform to manage these clips.
  3. She would like to share the clips through e-mails or social network site to her friends to have their attention or simply share the joy of the

event.

4. After a day of work, she would like to roll back to the dinnertime she missed and see if there are something interesting or noticeable.
5. She found her baby singing during the dinnertime and would like to make a clip of it.
6. After making the clip, she would like to share it with other family members through e-mail or post it on her Facebook.
7. She would also like to invite her sister to be able to watch the recorded video or receiving notification to take care the condition sometimes for her if she is very busy.

### **1.2.2 Small Business Owners**

- Bob is an owner of a coffee shop. He installed 3 mydlink IP Cams to monitor the status of the front desk, seating area, and the kitchen when he is out of the shop. Despite remote viewing, he would like to have more from his current solution:
  1. He would like to receive notifications when there are events triggered from the IP Cam. When he receive the notification from e-mail or push notification from mobile App, despite seeing the live view, he would like to check the recorded clips of the event to know what's actually going on.
  2. He would like to save the clips if it is something significant. He would also like to have an easy to use platform to manage these clips.
  3. He would like to share the clips through e-mails to his employees to have their attention or spread the clips for marketing purpose.
  4. After a day of work, he would like to roll back to the busy hours and see how it goes because he is not sure if the number of waiters were enough to serve the customers in time. Or there was a customer complaint during the day and he would like to check how it happened. (He didn't receive the clip of the related event through the notifications.)
  5. He found the related event during lunchtime and would like to make a clip of it and save it for further usage.
  6. He may also like to edit some clips for marketing purpose or internal training.
  7. He would like to make some of the clips public and be available on the shop's blogs for marketing purpose.



### 1.3 Model Support

Device type	Model Name
IP Camera (phase 1)	DCS-935L/ <del>DCS-935LX</del>
IP Camera (phase 2)	mydlink enabled IP camera by demand

### 1.4 OS Support

Follow the specification of mydlink portal.

### 1.5 Language Support

Follow the specification of mydlink portal.

### 1.6 Requirement Priority Definition

The product requirements in the following sections will be classified to one of the corresponding priority.

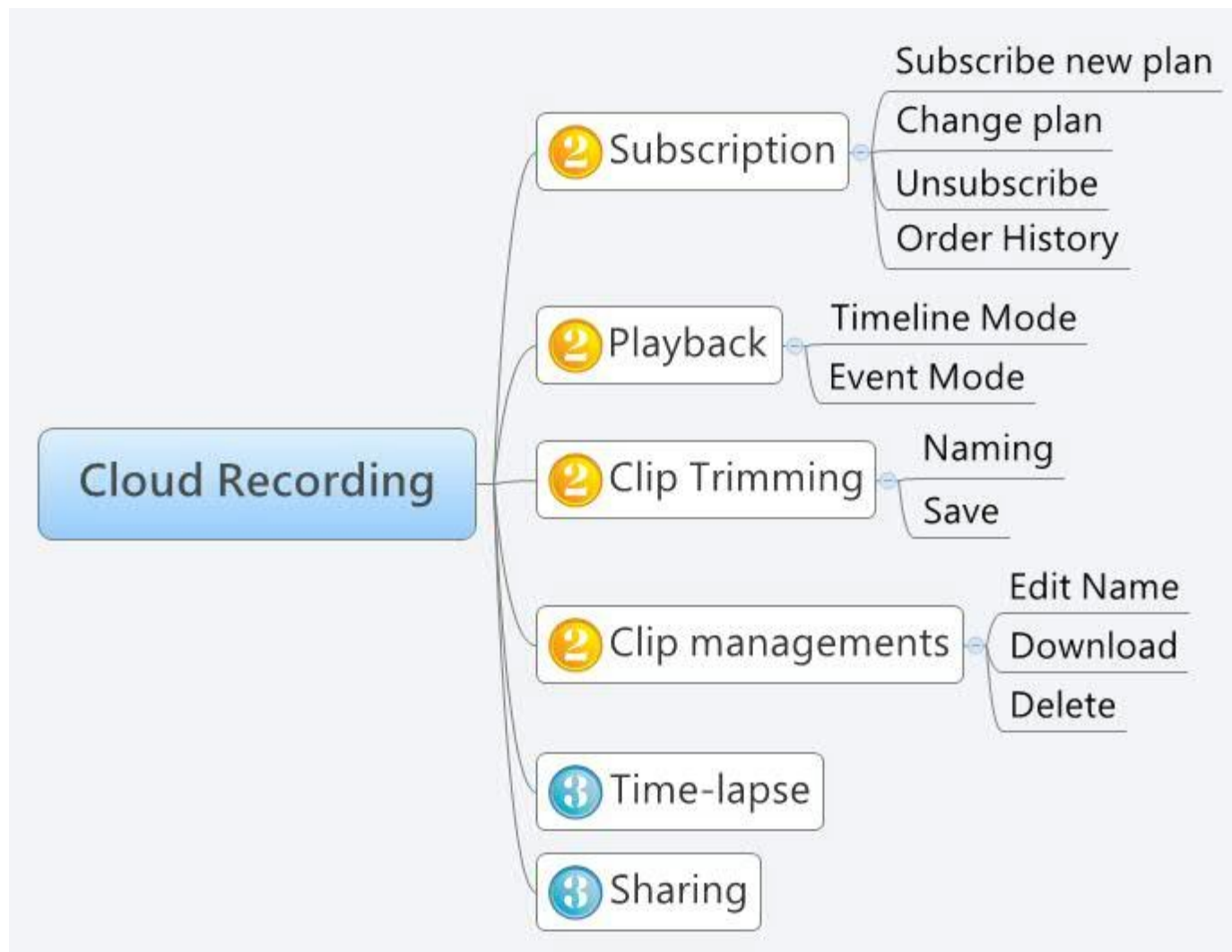
- The requirements are prioritized using three different priorities: **Must**, **Useful** and **Nice to Have**.
- **Must** Requirements are necessary to support the basic functionality to bring the product to market and they have to be implemented.
- **Useful** Requirements are not in the mandatory vain they satisfied ask a question, if there is enough time.
- **Nice to Have** Requirements are additional and optional features of the system. They will be implemented if there is still time after implementing the Useful features.

## 1.7 Scope (TBD)

- Phase 1 (for demo)
  - ✧ **Service Subscription**
    1. Should be supported on mydlink portal.
    2. ~~Should be supported on mydlink Lite and mydlink+ on iOS, aOS and wOS on both phone and pad devices.~~
    3. Should be supported on mydlink Home on iOS and aOS.
    4. Inform and request for user's agreement for enabling recording function.
    5. Provide a page for user to select which service plan (event base/continuously recording) to subscribe.
  - ✧ **Recording Functions**
    1. Should be supported on mydlink portal.
    2. ~~Should be supported on mydlink Lite and mydlink+ on iOS, aOS and wOS.~~
    3. Should be supported on mydlink Home on iOS and aOS.
    4. Continuously recording.
    5. Event triggered recording (MD/SD/Policy).
      - (1) MD/SD recording settings on mydlink portal.
      - (2) ~~MD/SD recording settings on mydlink Lite and mydlink+.~~
      - (3) Policy recording settings on mydlink Home.
  - ✧ **Playback Functions**
    1. Should be supported on mydlink portal.
    2. ~~Should be supported on mydlink Lite and mydlink+ on iOS, aOS and wOS on both phone and pad devices.~~
    3. Should be supported on mydlink Home on iOS and aOS.
    4. Event/continuously recordings playback.
    5. Timeline display for continuously recordings.
    6. List of event clips.

- Phase 2
  - ✧ **Supported Clients**
    1. A customer will be able to access Cloud Recording on mydlink portal and mydlink Lite and mydlink+.
  - ✧ **Service Subscription**
    1. Inform and request for user's agreement for enabling recording function.
    2. Provide a page for user to select which service plan (event-triggered/continuously recording) to subscribe.
    3. Provide a page for user to manage his/her subscription (change plan/unsubscribe).
    4. Provide a page for user to check order history.
  - ✧ **Playback Functions**
    1. Event/continuously recordings playback.
    2. Timeline display for event/continuously recordings.
    3. List of event recordings.
    4. Provide a guidance page for user to learn how to use.
  - ✧ **Clip Trimming Functions**
    1. Clip trimming.
    2. Provide the sliders which can be dragged upward and downward to select the start and end times for the new clip.
    3. For fine-tuning, provide the start and end time fields.
    4. Provide a guidance page for user to learn how to trim a clip.
  - ✧ **Clip managements**
    1. List of clips.
    2. Allow user to edit clip name, download clip, and delete clip.
- Phase 3 (TBD)
  - ✧ **Supported Clients**
    1. A customer will be able to access Cloud Recording on mydlink portal and mydlink Lite and mydlink+.
  - ✧ **Time-lapse Functions**
  - ✧ **Sharing Functions**





## 1.8 Schedule

- Phase 1
  - Nov. 24, 2014 as the check point whether to demo in 台北資訊月
  - Phase 1 should be delivered before 12/19/2014 to D-Link USA for CES, 2015 demo use
  - 12/15/2014 Portal & Backend code freeze
- Phase 2
  - ✧ **mydlink Portal**

Check Point	Date	Target	Note
1	Dec. 31, 2015	1. Playback Functions 2. Clip Trimming Functions 3. Clip managements 4. Service subscription	
2	Jan. 8, 2016	2 <sup>nd</sup> Demo	
3	Jan. 15, 2016	Beta	
4	Jan. 22, 2016	QA round 1	
5	Jan. 29, 2016	QA round 2	
6	Feb. 29, 2016	To market	

✧ **iOS mydlink Lite and mydlink+**

Check Point	Date	Target	Note
1	Dec. 18, 2015	1. Playback Functions 2. Clip Trimming Functions	Incomplete: 1. 5-hour daily quota for event-based recording 2. Time picker for clip trimming functions
2	Dec. 31, 2015	1. 5-hour daily quota for event-based recording 2. Time picker for clip trimming functions 3. Clip managements 4. Service subscription	
3	Jan. 8, 2016	3 <sup>rd</sup> Demo	
4	Jan. 15, 2016	Beta	
5	Jan. 22, 2016	QA round 1	
6	Jan. 29, 2016	QA round 2	
7	Feb. 29, 2016	To market	

✧ **Android mydlink Lite and mydlink+**

Check Point	Date	Target	Note
1	Dec. 31, 2015	1. Playback Functions 2. Clip Trimming Functions 3. Clip managements 4. Service subscription	
2	Jan. 8, 2016	2 <sup>nd</sup> Demo	
3	Jan. 15, 2016	Beta	
4	Jan. 22, 2016	QA round 1	
5	Jan. 29, 2016	QA round 2	
6	Feb. 29, 2016	To market	

✧ Windows mydlink Lite and mydlink+ (TBD)



## 2 Cloud Recording Service Description

### 2.1 Service Policy

1. Only allow user to start free trial & subscription procedure while the e-mail account has been verified.
2. User should accept service agreement to enjoy free, free trial and paid service.
3. mydlink provides a 7-day free trial service for 7 days continuously service subscription of each device under an account.  
e.g. If an account had already subscribed service plan A for device number 12345678 before, should NOT have free trial again for the device of the user account. A warning message should pop-up to alert that no free trial service will be provided when the user intends to subscribe service plan A for device 12345678.
4. When a user is charged by a monthly or yearly payment to continue a service but failed, such as credit card is expired or there's not enough amount to bill, have to notify user that the payment has failed and allow user to deal with it before grace period deadline (usually 7 business days, should be configurable). If we have not received payment until that date, the subscription should be automatically cancelled. It should be able to reactivate a subscription manually after grace period has ended (in case the user has made a payment).
5. Apply new service price to next subscription payments if the new service price is lower than original service price paid by the customer.
6. **Do not allow the user to downgrade the plan, upgrade is welcome.**
7. When a user unsubscribes a service during the free trial, no service fee will be charged.
8. When a user unsubscribes a service after free trial period, ~~the user is not allowed to refund its subscription fee, but is allowed to discontinue the subscription after the current subscription expired instead.~~ There are 2 options allowed to discontinue the subscription, one is to unsubscribe immediately, and the other one is to unsubscribe after current subscription expired.
9. When a user unsubscribes a service immediately, the user is allowed to refund its remaining subscription fee.
10. ~~When~~ No matter a user unsubscribes a service to stop the payment from the next service expiration date or immediately, the system should show a message that mydlink will no more record camera content for the user and will provide 7 days or 30 days more, according to the subscribed service, to allow the user to download the recorded contents. During the additional free service period, it should stop recording the camera content to the cloud to avoid privacy concern from the user and further legal issue.

11. ~~(Future Enhancement)~~ However, it is required to provide a way to refund in case the user wants to have its subscription fee refund anyway. Only people with certain permission can refund subscription fee for end users, which would need a solid workflow for the refund procedure.

## 2.2 Subscription

1. Inform and request for user's agreement for enabling recording function.
2. User has to agree service terms of use and privacy policy before start subscribing.
3. Provide a page for user to select which service plan (event/continuously recording) to subscribe.
4. A Cloud Recording tab should be shown dynamically according to user's subscription situation.
5. User will receive a subscription e-mail notification after subscribed successful.
6. There should be the following service plans when formal launch.

	A	B	C	D
	7-day Event Triggered Recording	30-day Event Triggered Recording	7-day Continuously Recording	30-day Continuously Recording
Live view	V	V	V	V
In App snapshot	V	V	V	V
E-mail alert	V	V	V	V
Mobile alert	V	V	V	V
IP Cam settings	V	V	V	V
2-way audio (Support on specific models)	V	V	V	V
How long will an event triggered video be kept	7 days	30 days	7 days	30 days
How long will continuously video be kept			7 days	30 days
Event triggered video daily quota (At least 15 secs per video)	5 hours	5 hours	unlimited	unlimited
Trimming clips	V	V	V	V
Make time-lapse clips	V	V	V	V
Clip management	V	V	V	V
Download Clips	V	V	V	V
Clip sharing	V	V	V	V
Extra clip storage	90 minutes	300 minutes	180 minutes	600 minutes
Suggested price	US\$ 4.99/monthly US\$ 49.9 /yearly	US\$ 14.99/monthly US\$ 149.9/yearly	US\$ 9.99/monthly US\$ 99.9/yearly	US\$ 29.99/monthly US\$ 299.9/yearly
Note	Provide 7 days free trial			

### 2.2.1 Free Trial

1. Mydlink provides user a 7-day free trial for 7 days continuously recording service (number of days for free trial should be configurable).
2. User only can use free trial once of each device under an account.
3. When user subscribes a free trial service, system should show a warning that user only can use free trial once.
4. There's no need to run payment procedure.
5. If free trial service is due within 2 days, pop-up a warning message once per day until expiration date, to notify the user that the service will expire soon and advise the user to subscribe paid service plan for advanced service.
6. If free trial is due, but user doesn't unsubscribe, system should unsubscribe automatically from expiration date.

### 2.2.2 Free Service Plan

1. ~~Mydlink provides Cloud Recording-enabled IP Cam users limited number of cloud storage for~~
  - ~~20 clips per day.~~
  - ~~18 seconds long each clip. The first 6 seconds in the video clip is the video prior to the event triggering time, and the remaining 12 seconds is the video after event is triggered.~~
  - ~~7 days can be kept for each recorded clip (should be configurable).~~
2. ~~There's no time limit of using free service plan.~~
3. ~~There's no need to run payment procedure.~~

### 2.2.3 Paid Service Plan

1. Mydlink provides user several options
  - (1) Event recording: 7 days, 30 days monthly or yearly selections (should be configurable)
    - ~~Unlimited clips per day.~~ There will be a 5-hour video clip daily quota for each camera. When storage of today is full, it will stop recording, and mydlink server will send a push notification.

- ~~18 15 seconds long each clip. The first 6 5 seconds in the video clip is the video prior to the event triggering time, and the remaining 12 10 seconds is the video after event is triggered.~~ The minimum length of an event recording is 15 seconds, but if time length of the event is more than 15 seconds, it will record until event finish. The first 5 seconds in the video clips is the video prior to the event triggering time, and the remaining is the video after event is triggered.
  - 7 days or 30 days can be kept for each recorded clip (depends on which plan is chosen).
- (2) Continuously recording: 7 days, 30 days monthly or yearly selections (should be configurable)
- 7 or 30 days can be kept for each recorded video (depends on which plan is chosen).
2. There's monthly or yearly time limit of using (should be configurable).
  3. User can **only** pay by credit card **and PayPal**.
  4. When a service is to be expired, it should charge as the same service package automatically if the user doesn't unsubscribe the service.
  5. It should support users to do the following actions via client:
    - Service subscription/un-subscription/change plan.
    - Playback continuous/event recordings.
    - Trimming as a clip.
    - Make a time-lapse clip.
    - Clip management.
    - Download a clip.
    - Clip sharing.

## 2.3 Un-subscription

1. User is allowed to unsubscribe service any time.
2. If a user unsubscribes a service during the free trial, the user should NOT be charged any bucks, and the Cloud Recording service for the target device should then be terminated.
3. When a user unsubscribes a service, there should be two options, one is unsubscribe and stop the service immediately, and the other one is to keep the service until the original service due.

(1) Unsubscribe immediately

- a. System should be able to calculate refund fee and show in the system for user to decide confirm or cancel.
- b. Formula of refund fee as below

**Refund fee = (Rest of service fee) – (Handling charge)**

- Rest of service fee:  $(\text{Service fee}) / (30 \text{ or } 365) * (\text{Rest of day})$   
30 or 365 depends on its monthly or yearly plan  
Rest of day should be rounded down to the nearest integer
  - Handling charge:  $(\text{service fee}) * 10\%$
  - Refund fee should be rounded off to the 2<sup>nd</sup> decimal place
- c. If refund fee  $\leq 0$ , It will be considered as 0, and there's no need to refund.
  - d. System shows the message that the service will stop recording shortly, and the video footage will erase gradually, and will provide additional free service period, according to the subscribed service, for user to download all the clips.
  - e. It will enter Digital River's side for refund after user decide to unsubscribe.
  - f. Digital River unsubscribes old plan and sends un-subscription e-mail notification to user.
  - g. System unsubscribes old plan after receiving an un-subscription successful notification from Digital River.
  - h. System shows the message to notice user that the service unsubscribes successfully.

(2) Use up current service period

- a. System shows the message that the service will be terminated from expiration date, and the video footage will erase gradually, and will provide additional free service period, according to the subscribed service, for user to download all the clips, user can decide to confirm or cancel.
- b. System unsubscribes the service from expiration date.
- c. System informs Digital River to unsubscribe service and stop charging from expiration date.
- d. Digital River sends un-subscription e-mail notification to user.
- e. System shows the message to notice user that the service unsubscribes successfully.

(3) ~~Prohibit user to unsubscribe~~

- a. ~~For yearly service: system should prohibit user to unsubscribe when user has used 10 months. System should pop up a window shows "There's \$??? left in account, please use up current service", user can only confirm it. Then Show the message "Old plan will expire on yyyy/mm/dd"~~
  - a-1. ~~D-Link unsubscribe old plan after service is end~~
  - a-2. ~~D-Link inform Digital River unsubscribe old plan to stop charging~~
  - a-3. ~~D-Link send un-subscription mail notification to user~~
  - a-4. ~~System should show contact message which can link to contact us in portal to contact if user don't receive mail notification~~
- b. ~~For monthly service: system should prohibit user to unsubscribe when service only left 7 days. System should pop up a window shows "There's \$??? left in account, please use up current service", user can only confirm it. Then Show the message "old plan will expire on yyyy/mm/dd"~~
  - b-1. ~~D-Link unsubscribe old plan after service is end~~
  - b-2. ~~D-Link inform Digital River to unsubscribe old plan to stop charging~~
  - b-3. ~~D-Link send un-subscription mail notification to user~~
  - b-4. ~~System should show contact message which can link to contact us in portal to contact if user don't receive mail notification~~

4. It should not charge a user with the service after the original one has been expired if the user has already unsubscribed it.

5. It should do the following actions after the service has been unsubscribed:

- Stop recording immediately.
- Video footage will be gradually erased.
- Not allow user to make a clip.
- Clips have already saved in the clip management area will keep extra 7/30 days (depends on which plan is subscribed).

## 2.4 Change Plan

1. User is allowed to change plan if needed.

2. Upgrade is welcome, but downgrade is not allowed.
3. Plan change of a camera will be limited to 1 time per service period (monthly or yearly depends on subscribed plan).
4. If a user changes a service during the free trial, the user should NOT be charged any handling fee.
5. Based on old plan to decide whether new plan is upgrade or downgrade.
  - (1) Upgrade:  $(\text{New service fee}) - (\text{Old service fee}) \geq 0$
  - (2) Downgrade:  $(\text{New service fee}) - (\text{Old service fee}) < 0$
6. User has to agree service terms of use and privacy policy before start changing plan.

### 2.4.1 Upgrade

1. System should be able to calculate upgrade fee for new service cycle and show in the system for user to decide confirm or cancel.
2. Formula of upgrade fee as below

**Upgrade fee = (New service fee) – (Rest of old service fee)**

- Rest of old service fee:  $(\text{Old service fee}) / (30 \text{ or } 365) * (\text{Rest of day})$   
30 or 365 depends on its monthly or yearly plan  
Rest of day should be rounded down to the nearest integer
  - Upgrade fee should be rounded off to the 2<sup>nd</sup> decimal place
3. It will enter Digital River's side for payment after user decides to change to new plan and presses checkout.
  4. Digital River unsubscribes old plan and subscribes new plan, and charges upgrade fee, and sends change plan e-mail notification to user.
  5. System unsubscribes old plan and subscribes new plan after receiving notification from Digital River.
  6. Shows the message to notice user that new service is starting.



## 2.4.2 Downgrade

1. System should be able to calculate downgrade fee for new service cycle and show in the system for user to decide confirm or cancel.
2. Formula of refund as below

$$\text{Downgrade fee} = (\text{New service fee}) - \{(\text{Rest of old service fee}) - (\text{Handling Charge})\}$$

- Rest of old service fee:  $(\text{Old service fee}) / (30 \text{ or } 365) * (\text{Rest of day})$   
30 or 365 depends on its monthly or yearly plan  
Rest of day should be rounded down to the nearest integer
  - Handling charge:  $(\text{Old service fee}) * 10\%$
  - All the number should be rounded off to the 2nd decimal place
3. There's 2 situations might happen:
    - (1) Have to pay the difference
      - a.  $\text{Downgrade fee} \geq -0$
      - b. Shows the message that user has to pay the difference for user to decide whether confirm or cancel.
      - c. It will enter Digital River's side for payment after user decides to change to new plan and presses checkout.
      - d. Digital River unsubscribes old plan and subscribes new plan, and charges downgrade fee, and sends change plan e-mail notification to user.
      - e. System unsubscribes old plan and subscribes new plan after receiving notification from Digital River.
      - f. Shows the message to notice user that new service is starting.
    - (2) Refundable
      - a.  $\text{Downgrade fee} < -0$
      - b. Shows the message that how many refund fee will return back for user to decide whether confirm or cancel.
      - c. It will enter Digital River's side for refund after user decides to change to new plan and presses checkout.

- d. ~~Digital River unsubscribes old plan and subscribes new plan, and return refund fee back, and sends change plan e-mail notification to user.~~
- e. ~~System unsubscribes old plan and subscribes new plan after receiving notification from Digital River.~~
- f. ~~Shows the message to notice user that new service is starting.~~

(3) ~~Prohibit user to downgrade~~

- a. ~~For yearly service: system should prohibit user to downgrade when user has used 10 months. System should pop up a message show "There's \$??? left in account, please use up current service and subscribe new service after service is due", user can only confirm it. Then Show the message "old plan will expire on yy/month/date"~~
  - a-1. ~~D-Link unsubscribe old plan after service is end~~
  - a-2. ~~D-Link inform Digital River to unsubscribe old plan to stop charging~~
  - a-3. ~~D-Link send un-subscription mail notification to user~~
  - a-4. ~~System should show contact message which can link to contact us in portal to contact if user don't receive mail notification~~
- b. ~~For monthly service: system should prohibit user to downgrade when service only left 7 days. System should pop up a message show "There's \$??? left in account, please use up current service and subscribe new service after service is due", user can only confirm it. Then Show the message "old plan will expire on yy/month/date"~~
  - b-1. ~~D-Link unsubscribe old plan after service is end~~
  - b-2. ~~D-Link inform Digital River to unsubscribe old plan to stop charging~~
  - b-3. ~~D-Link send un-subscription mail notification to user~~
  - b-4. ~~System should show contact message which can link to contact us in portal to contact if user don't receive mail notification~~

## 2.5 Recording

1. Event/continuously recording.
2. Cloud Recording will start the recording after the confirmation of the subscription.

3. There will be a plan for 24/7 continuously recording for **168** hours. ( $X = 7$ )
4. Cloud Recording only keeps the subscribed length of the day of video. For example, for **7** days subscription, if it is 10:00:00am, Oct. 10, 2014 now, Cloud Recording will start recording videos from 10:00:00am, Oct. 10, 2014 to 09:59:59am, Oct. 10+**7**. 2014. However, the beginning time of the video will not be earlier than the time point the subscription started, and the service should last until the user stop the service payment.
5. Cloud Recording will stop to record if the IP Cam loses the connection. But will still keep the videos for **7** days. (refer to Fig. 2.5-1)
6. If a subscriber stop paid for Cloud Recording service, it should stop recording the specified IP Cam immediately, and the existing recording should be kept for **7** days from the time user stop the payment (i.e. the time the original service has just been expired). (refer to Fig. 2.5-2)
7. ~~If the subscriber switches the Cloud Recording function to another IP Cam, the Cloud Recording will stop recording the original IP cam immediately; meanwhile, it should start recording the new IP Cam immediately.~~

1. IP Cam disconnected



Fig. 2.5-1

## 2. Stop subscription



Fig. 2.5-2  
Red bar = the length of recording video

## 2.6 Playback

1. Event/continuously recordings playback.
2. Subscriber can choose a certain time point and start to play the recorded video.
3. Subscriber can stop the playback manually any time.
4. If the subscriber does not stop the playback, it will keep playing.

### 2.6.1 Timeline Mode

1. Subscriber can have a quickly and smoothly review over the storyboard of the recorded video by mouse over the timeline.
2. It should show related event icon as a remark of all triggered events on timeline.
3. Three different scales: second, minute, hour of timeline should be provided, to make it easier for user to have more detailed view on the events over the timeline.
4. Timeline bar should allow the user to go back to current time.

## 2.6.2 Event List Mode

1. It should show triggered type and time of the event.
2. Through the event, subscriber can be directed back to the Cloud Recording's playback page and watch the playback started from 6 5 seconds prior of the event.

## 2.7 Event Notifications

1. When there is an event triggered by the IP Cam, a notification through e-mail or mobile App will be sent to the subscriber.
2. Subscriber can see a snapshot of the event in the notification message.
3. Through the notification message, subscriber can be directed back to the Cloud Recording's playback page and watch the playback started from 6 5 seconds prior of the event.
4. The events will be recorded and tagged for subscriber to make the search in the playback page.
5. Subscriber will be able to manage the recorded notifications (turn on/off notification) in a place in mydlink portal or mobile App.

## 2.8 E-mail Notifications

1. Every time when a service is paid successfully, i.e. credit card is valid and is charged successfully, an e-mail notification should be sent.
2. Every time when a service plan has been changed, an e-mail notification should be sent to the user to inform the changes as a double confirmation.
3. ~~There should be an ON/OFF switch to enable system warning if a recording is terminated by network disconnection for over 1 minute. When the system warning is enabled, a system warning e-mail notification should be sent when a recording is terminated by network disconnection. When a recording has been resumed, a system e-mail notification should be sent to notify the resume of the recording.~~
4. When a user unsubscribe a service plan, an e-mail notification should be sent and inform the user that when the service will be terminated.

## 2.9 Clip Editing, Clip Management, Clip Sharing

1. Subscriber can make clips manually from the recorded video.
2. A place mydlink portal or mobile App will be available for subscriber to retrieve clips.
3. Subscriber can trim the clips with length limit between 15 seconds – 10 minutes.
4. Subscriber can make time-lapse clips.
  - (1) When subscriber selects to make a time-lapse clip, there should be fields as below for setting
    - Start time
    - End time
    - Expected time-lapse clip length
  - (2) System should be able to calculate how often to snap an image to make a time-lapse clip. Formula of time-lapse interval as below

$$\text{Time-lapse interval} = (\text{Time span}) / [(\text{Expected time-lapse clip length}) * (\text{Frame Rate})]$$

- Time-lapse interval (unit: sec/per snap): should be rounded off to the 2<sup>nd</sup> decimal place
- Time span (unit: second): (Start time) – (End Time), limit between 1 hour – 1 day
- Expected time-lapse clip length (unit: second): limit between 30 seconds – 3 minutes
- Frame Rate (unit: fps): Use **15 24** fps since it's a standard for the motion picture film and the movie to achieve smooth playback

- (3) Then the time-lapse clip will be shown at **15 24** frames per second.
5. Subscriber can edit the file name of clips.
6. ~~Subscriber can categorize recorded clips with tags.~~
7. Subscriber can sort the clips.
8. Subscriber can delete the clips.
9. Subscriber can download the clips to local storage.
10. Subscriber can share the clips.

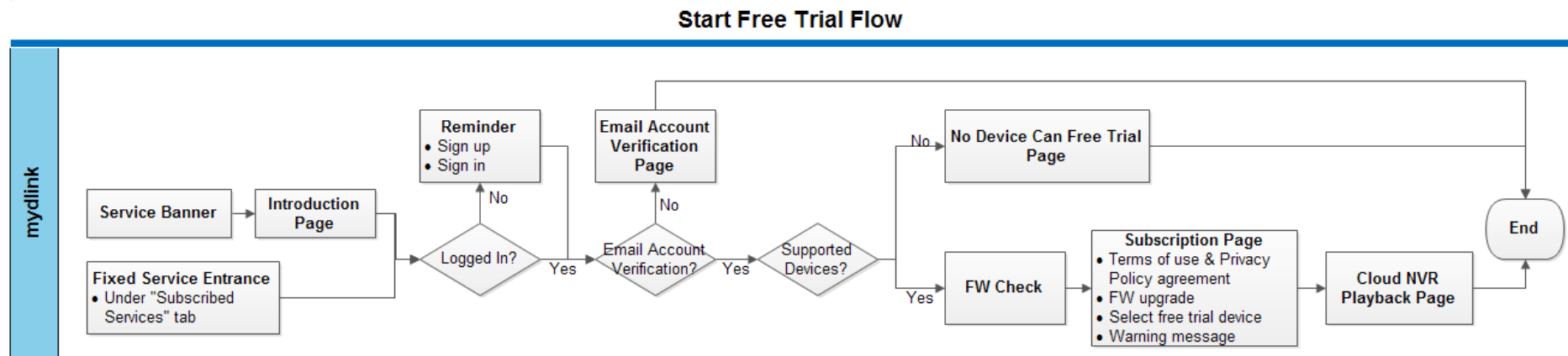
## 3 Requirements

### 3.1 Capacity (TBD)

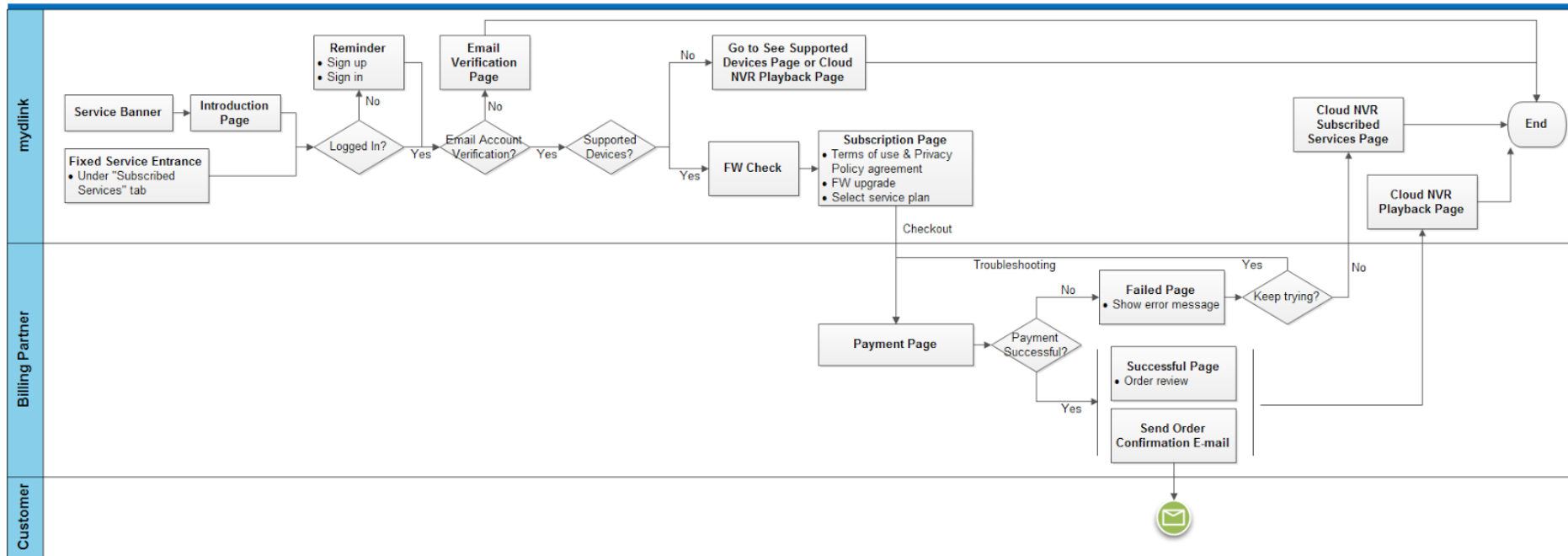
- The number of registered IP Cams the system needs to support.
  1. 2,000 selected subscribers from USMP in Beta Trial.

\* Please note the following graphics are for illustration purpose to describe the flow, UE and GUI team will work on the real screen design.

### 3.2 Subscription

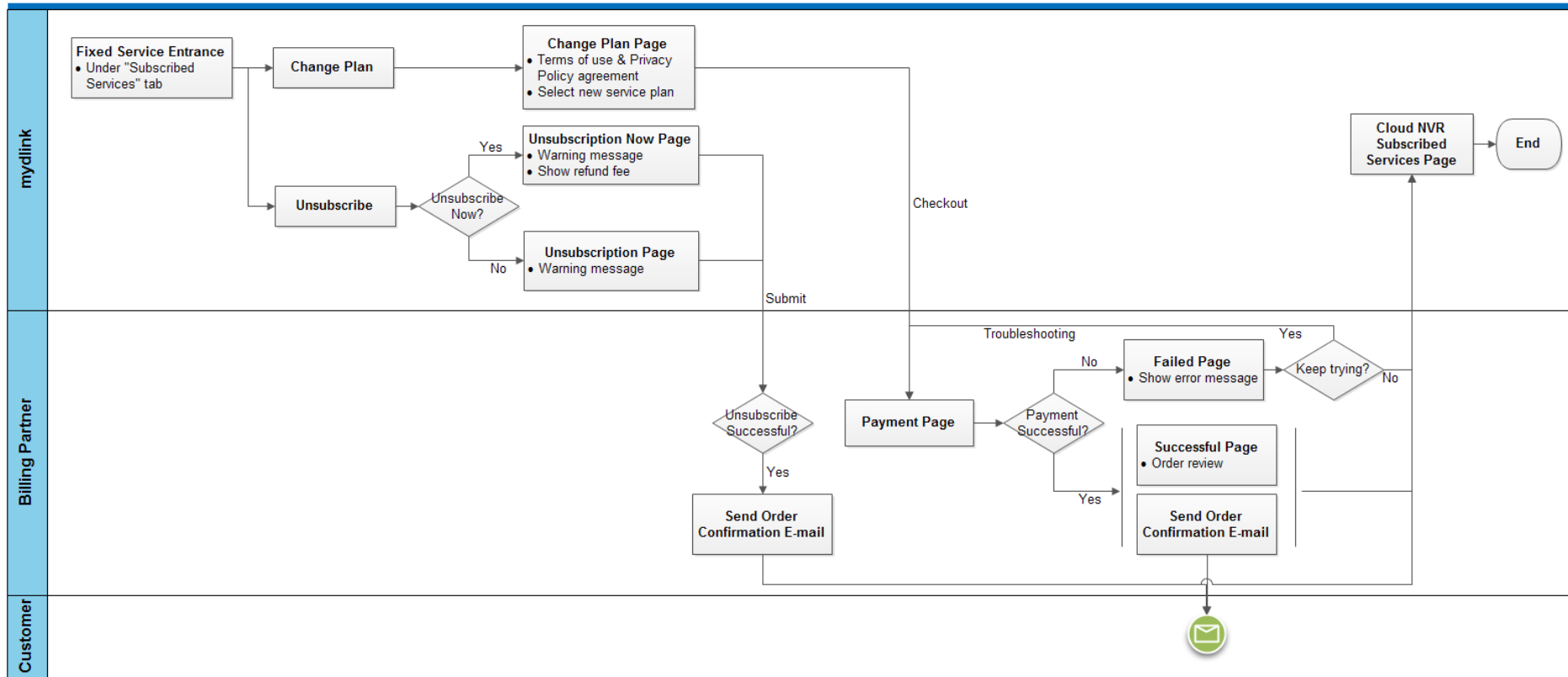


### Subscription Flow





### Change Plan & Unsubscription Flow



## 3.2.1 Subscription Entrance

### 3.2.1.1 Portal Home Page

#	Priority	Requirement	Description	Notes
REQ-CNVR-01-01-01-01	Must	Cloud Recording service introduction entrance	An entrance of Cloud Recording service should be shown on the mydlink portal. The entrance should be like as a banner advertisement.	
REQ-CNVR-01-01-01-02	Must	Direct to service introduction page	When Cloud Recording banner is clicked, direct the user to Cloud Recording service introduction page.	
REQ-CNVR-01-01-01-03	Useful	Link to Add-on services page	Provide an Add-on services page, that collects all the Add-on services as one of the fixed entrance of every Add-on services.	Additional Add-on service page would be required if this requirement is implemented

### 3.2.1.2 Add-on Service page {TBD}

#	Priority	Requirement	Description	Notes
REQ-CNVR-01-01-02-01	Must	Add-on service page	A page to list all add-on services entrance. When Cloud Recording item is clicked, check if any free trial services are due within 2 days, if yes, pop-up a warning message once per day with information as	

			below: <ul style="list-style-type: none"> <li>- List of devices with remaining days.</li> <li>- Wording to push the user to subscribe paid service plan for advanced service.</li> </ul>	
<b>REQ-CNVR-01-01-02-01</b>	Must	Fixed subscription entrance	<del>Provide a fixed subscription entrance at all device live view, SD card, and Settings page as an entrance to direct the user to Cloud Recording service subscription page.</del>	
<b>REQ-CNVR-01-01-02-02</b>	Must	Cloud Recording banner on the original ad banner area	Ad banner to introduce Cloud Recording service on the original ad banner area. When Cloud Recording banner is clicked, check if any free trial services are due within 2 days, if yes, pop-up a warning message once per day with information as below: <ul style="list-style-type: none"> <li>- List of devices with remaining days.</li> <li>- Wording to push the user to subscribe paid service plan for advanced service.</li> </ul>	<del>(TBD, reserved for Phase 2)</del>

### 3.2.2 Cloud Recording Service Introduction Page

Non-subscriber will be notified with Cloud Recording marketing information.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-01-02-</b>	Must	Go Subscribe	Check if the user has logged in; if the user	

01			has not logged in, prompt the user to log in his account. Check if the user has verified email account, if not, prompt the user to verify email account. Check if there are supported devices. Check if the camera is with proper FW, then direct user to the subscription page.	
REQ-CNVR-01-02-02	Must	List Service Plan table	List the service plan table of Cloud Recording.	Refer to Appendix I for Cloud Recording service plan
REQ-CNVR-01-02-03	Must	Hyper link to FAQ		
REQ-CNVR-01-02-04	Must	License agreement	Show license agreement description with "Accept" and "Cancel" buttons. If "Accept", user agrees mydlink's terms of use for the Cloud Recording service. If "Cancel", user stop the subscription procedure, and mydlink will be not allowed to provide Cloud Recording service for the user.	
REQ-CNVR-01-02-05	Must	Free trial introduction	introduce there's 2 service for user to subscribe for free trial.	separate with paid version subscription
REQ-CNVR-01-02-06	Must	Go Free Trial	Check if the user has logged in; if the user has not logged in, prompt the user to log in his account. Check if the user has verified email	

			<p>account, if not, prompt the user to verify email account.</p> <p>Check if there are supported devices.</p> <p>Check if the camera is with proper FW, then direct user to the free trial subscription page.</p>	
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### 3.2.3 Free Trial Subscription (Phase 2)

The following content describes the free trial subscription page when user is directed to Cloud Recording free trial subscription procedure.

#	Priority	Requirement	Description	Notes
REQ-CNVR-01-03-01	Must	Check log-in status	A user should be prompted to log in before directed to free trial subscription page if the user has not logged in mydlink account.	
REQ-CNVR-01-03-02	Must	Check email verification status	A user should be prompted to verify before directed to free trial subscription page if the user has not verified email account.	
REQ-CNVR-01-03-03	Must	Free trial check	Check if there's any camera devices that can subscribe free trial service.	
REQ-CNVR-01-03-04	Must	Firmware check	<p>Check if the specified camera is with proper firmware version.</p> <ul style="list-style-type: none"> <li>- If yes, just passed the firmware check.</li> <li>- If NOT, prompt the user to do</li> </ul>	

			<p>firmware upgrade before started subscribing.</p> <p>If the camera is not online, or the firmware upgrade has not been done successfully, it should</p> <p>(a) prompt on Portal/App client about the failure of upgrade, and</p> <p>(b) ask the user to check for the camera connection.</p>	
<b>REQ-CNVR-01-03-05</b>	Must	Service terms of use and privacy policy agreement	<p>Show service terms of use and privacy policy with “Accept” and “Cancel” buttons.</p> <p>If “Accept”, user agrees mydlink’s terms of use and privacy policy for the Cloud Recording free trial service, direct user to free trial subscription page.</p> <p>If “Cancel”, user stops the free trial subscription procedure, and mydlink will be not allowed to provide Cloud Recording free trial service for the user.</p>	
<b>REQ-CNVR-01-03-06</b>	Must	List all supported camera devices	List all camera devices that can support Cloud Recording free trial service.	
<b>REQ-CNVR-01-03-07</b>	Must	Free trial period	Show start date and expiration date for each listed camera device.	
<b>REQ-CNVR-01-03-08</b>	Must	Free trial warning	When the user chooses a free trial service, show a warning message “You can only use free trial once for this	

			device”.	
<b>REQ-CNVR-01-03-09</b>	Must	Checkbox for free trial service subscription	Provide a checkbox for each listed camera device. Checked as to subscribe, and Unchecked as not to subscribe.	
<b>REQ-CNVR-01-03-10</b>	Must	Try free trial button	Direct the user to playback page of the new subscribed device.	If the user has subscribed Cloud Recording free trial service for more than one device, show the service tab of the new subscribed device at the most front

### 3.2.4 Subscription

Portal need to implement the service plan selection for user to choose which service plan or recording type to use.

The following content describes the subscription page when user is directed to Cloud Recording subscription procedure.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-01-04-01</b>	Must	Check log-in status	A user should be prompted to log in before directed to subscription page if the user has not logged in mydlink account.	
<b>REQ-CNVR-01-04-02</b>	Must	Check email verification status	A user should be prompted to verify before directed to subscription page if the user has not verified email account.	
<b>REQ-CNVR-01-04-</b>	Must	Check supported	There should be supported devices for	

03		devices	subscription, otherwise direct the user to “See Supported Devices Page or Cloud Recording Playback Page”.	
REQ-CNVR-01-04-04	Must	Firmware check	<p>Check if the specified camera is with proper firmware version.</p> <ul style="list-style-type: none"> <li>- If yes, just passed the firmware check.</li> <li>- If NOT, prompt the user to do firmware upgrade before started subscribing.</li> </ul> <p>If the camera is not online, or the firmware upgrade has not been done successfully, it should</p> <p>(a) prompt on Portal/App client about the failure of upgrade, and</p> <p>(b) ask the user to check for the camera connection.</p>	
REQ-CNVR-01-04-05	Must	Service terms of use and privacy policy agreement	<p>Show service terms of use and privacy policy with “Accept” and “Cancel” buttons.</p> <p>If “Accept”, user agrees mydlink’s terms of use and privacy policy for the Cloud Recording service, direct user to subscription page.</p> <p>If “Cancel”, user stops the subscription procedure, and mydlink will be not allowed to provide Cloud Recording service for the user.</p>	
REQ-CNVR-01-04-	Must	List all supported	List all camera devices that can support	



<b>06</b>		camera devices	Cloud Recording service.	
<b>REQ-CNVR-01-04-07</b>	Must	List all service plan	List all available service plan of Cloud Recording service at each listed device.	
<b>REQ-CNVR-01-04-08</b>	Must	List all service period options	List Monthly / Yearly options.	
<b>REQ-CNVR-01-04-09</b>	Must	Checkbox for service subscription	Provide a checkbox for each listed camera device. Checked as to subscribe, and Unchecked as not to subscribe.	
<b>REQ-CNVR-01-04-10</b>	Must	Show subscription fee	Check user's site before show subscription fee: <ul style="list-style-type: none"> <li>- If UK, show price and currency of UK (£)</li> <li>- If EU, show price and currency of EU (€)</li> <li>- If US and others, show price and currency of US (\$)</li> </ul> Show the subscription fee of the selected service plan of each device. The format should be like <subscription fee>/<Bill period>.	
<b>REQ-CNVR-01-04-11</b>	Must	Calculate the subtotal of service fee	Calculate the service fee of all checked service.	
<b>REQ-CNVR-01-04-12</b>	Must	Hyper link to FAQ	Provide a hyper link to FAQ.	
<b>REQ-CNVR-01-04-13</b>	Must	Brief list of service plans	Provide brief list of the service plans.	

<b>REQ-CNVR-01-04-14</b>	Must	Hyper link to detailed service plan	Provide a hyper link to detailed Cloud Recording service plan introduction.	
<b>REQ-CNVR-01-04-15</b>	Must	Checkout button	Direct the user to on-line payment page with the subtotal of new subscribed service plans.	
<b>REQ-CNVR-01-04-16</b>	Must	Promotion code checkbox	Provide a checkbox to use promotion code. When a user goes Next step with checkbox checked, it should show Promotion code page.	(TBD, Phase 3)

### 3.2.5 On-line Payment (Phase 2)

The free trial service plan doesn't need to run payment procedure.

When a user checkouts the new selected subscriptions, the user should be directed to payment page.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-01-05-01</b>	Must	Go Subscribe	Direct user to the subscription page with secured connection, based on the interface requirement of payment gateway service.	
<b>REQ-CNVR-01-05-02</b>	Nice to have	Selection of added credit cards	<del>Selections of added credit cards for online payment.</del> Show the last 4 digits of last input card number, the card's owner name, and the expiration date as the selection, e.g. XXXX-XXXX-XXXX-1234, Barack Obama,	Bundle with <b>REQ-CNVR-01-07-04</b>

			If the edited credit card info is different from the selected info, keep the input info as the update info of the selected item for future use.	
<b>REQ-CNVR-01-05-03</b>	Must	Keep user's and credit card info	Need to keep user name, billing address info, credit card name, credit card number, and expiration info for the user securely	Do by Digital River
<b>REQ-CNVR-01-05-04</b>	Must	Examine the required input fields	All required input fields for on-line payment should be examined that whether the user has input the fields or not.	Do by Digital River
<b>REQ-CNVR-01-05-05</b>	Must	Subscription summary	After user fills out credit card info with confirmation, show personal info, credit card info, and device name with device photo, subscribed service plan, billing period, price should be listed accordingly.	Do by Digital River

### 3.2.6 Subscription Result (Phase 2)

When a payment transaction has been submitted, it should then show the transaction result on the page.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-01-06-01</b>	Must	Successful transaction result	Show "Thank you for your subscription!" "Your credit card has been charged as follows. An e-mail with invoice and subscription information will be sent to you shortly." And the subscription	Do by Digital River

			summary with device name, device photo, subscribed service, subscribed service plan for the device, billing period, payment date, price should be listed accordingly.	
<b>REQ-CNVR-01-06-02</b>	Must	Failed transaction result	Show error message <del>code and error string</del> on the page for user to do troubleshooting.	Do by Digital River
<b>REQ-CNVR-01-06-03</b>	Useful	Add credit card automatically	<del>Use the last 4 digits of last input card number as the selection, e.g. XXXX-XXXX-XXXX-1234</del> If there is no credit card info for the user on the system, or the input number is different from the one logged on the system, keep the input credit card number as the new for future use.	
<b>REQ-CNVR-01-06-04</b>	Must	Enjoy the service button	Direct the user to playback page of the new subscribed device.	Do by Digital River  If the user has subscribed Cloud Recording service for more than one device, show the service tab of the new subscribed device at the most front
<b>REQ-CNVR-01-06-05</b>	Must	Firmware check	Once the billing system confirm the payment, the Cloud Recording backend system should check if the specified camera is with proper firmware version. - If yes, just passed	

			<p>the firmware check</p> <ul style="list-style-type: none"> <li>- If NOT, the system should trigger the camera to do firmware upgrade.</li> <li>- If the camera is not online, or the firmware upgrade has not been done successfully, it should <ul style="list-style-type: none"> <li>(a) prompt on Portal/App client about the failure of upgrade, and</li> <li>(b) ask the user to check for the camera connection</li> <li>(c) firmware upgrade should be tried again next time when</li> </ul> </li> </ul>	
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			the camera is online	
<b>REQ-CNVR-01-06-06</b>	Must	Charge service fee	Charge service fee monthly or yearly according to service plan until user unsubscribes the service.	

### 3.2.7 E-mail Notifications for Subscription (Phase 2)

When a user has finished the subscription of services, the user should receive an e-mail with invoice and the subscription detailed information.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-01-07-01</b>	Must	E-mail for free trial subscription	<p>An e-mail should be sent to user's e-mail account with detailed free trial subscription information as listed:</p> <ul style="list-style-type: none"> <li>- Thanks wording</li> <li>- E-mail account</li> <li>- List of subscribed devices, including description, adopted device name, mydlink no., service start date, service expiration date</li> </ul>	
<b>REQ-CNVR-01-07-02</b>	Must	E-mail for free trial expiration	<p>An e-mail should be sent to user's e-mail account with detailed free trial expiration information as listed:</p> <ul style="list-style-type: none"> <li>- Thanks wording</li> <li>- E-mail account</li> <li>- Expired device, including description, adopted device name,</li> </ul>	

			mydlink no., service start date, service expiration date	
<b>REQ-CNVR-01-07-03</b>	Must	E-mail for free trial un-subscription	<p>An e-mail should be sent to user's e-mail account with detailed free trial un-subscription information as listed:</p> <ul style="list-style-type: none"> <li>- Thanks wording</li> <li>- E-mail account</li> <li>- Unsubscribed device, including description, adopted device name, mydlink no., service start date, service expiration date</li> </ul>	
<b>REQ-CNVR-01-07-04</b>	Must	E-mail for new service subscription	<p>An e-mail should be sent to user's e-mail account. The invoice of the new service subscription should be appended with detailed subscription information as listed:</p> <ul style="list-style-type: none"> <li>- Thanks wording</li> <li>- Account name (first name, last name)</li> <li>- Company name (optional)</li> <li>- Billing address</li> <li>- List of subscribed service plans, including description,</li> </ul>	<p>Do by Digital River</p> <p><del>Need to add a field in "My Account" for "Company"</del></p>

			<p>adopted device name, mydlink no., service start date, service expiration date, <del>unit price</del>, price, payment period</p> <ul style="list-style-type: none"> <li>- Amount of the price of all new subscribed service plans</li> <li>- Payment date</li> </ul>	
<b>REQ-CNVR-01-07-05</b>	Must	E-mail for un-subscription	<p>An e-mail should be sent to user's e-mail account. The content should include detailed un-subscription information as listed:</p> <ul style="list-style-type: none"> <li>- Thanks wording</li> <li>- Account name (first name, last name)</li> <li>- Company name (optional)</li> <li>- Billing address</li> <li>- Unsubscribed service plan, including description,</li> </ul>	<p>Do by Digital River</p> <p>Only send when user unsubscribe by himself</p>



			<p>adopted device name, mydlink no., service expiration date</p> <ul style="list-style-type: none"> <li>- Refund fee and refund date (show if refundable)</li> </ul>	
<b>REQ-CNVR-01-07-06</b>	Must	E-mail for upgrade subscription	<p>An e-mail should be sent to user's e-mail account. The invoice of the upgrade service subscription should be appended with detailed subscription information as listed:</p> <ul style="list-style-type: none"> <li>- Thanks wording</li> <li>- Account name (first name, last name)</li> <li>- Company name (optional)</li> <li>- Billing address</li> <li>- Upgrade subscribed service plan, including description, adopted device name, mydlink</li> </ul>	Do by Digital River

			no., service start date, service expiration date, price, payment period - Charged price - Payment date	
<b>REQ-CNVR-01-07-07</b>	Must	E-mail for downgrade subscription	An e-mail should be sent to user's e-mail account. The invoice of the downgrade service subscription should be appended with detailed subscription information as listed: - Thanks wording - Account name (first name, last name) - Company name (optional) - Billing address - Downgrade subscribed service plan, including description, adopted device name, mydlink no., service start	Do by Digital River

			<p>date, service expiration date, price, payment period</p> <ul style="list-style-type: none"> <li>- Charged price or refund fee</li> <li>- Payment date or refund date</li> </ul>	
<b>REQ-CNVR-01-07-08</b>	Must	Payment successful	When a user is charged by a monthly or yearly payment to continue a service, an e-mail should be sent to user's e-mail account to notify about the payment summary.	Do by Digital River
<b>REQ-CNVR-01-07-09</b>	Must	Payment failed	<p>If credit card for payment is expired or there's no enough amount to bill, <del>Digital River will cancel subscription and send an e-mail to user's e-mail account to notify about the cancel subscription summary, and inform mydlink platform.</del> Digital River will send an e-mail to user's e-mail account to notify that the payment has failed, and with bank details and a grace period deadline (usually 7 business days). If Digital River has not received payment until that date, the subscription will be automatically cancelled and inform mydlink platform. The user will receive an</p>	Do by Digital River

			e-mail that the subscription has ended.	
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### 3.2.8 My Profile (Phase 2)

To provide enough information for invoices, more information is required to be provided from users.

#	Priority	Requirement	Description	Notes
REQ-CNVR-01-08-01	Must	Company	Company information should be added and should be editable in My Profile tab	
REQ-CNVR-01-08-02	Must	Credit Card	To log and show user's credit card number; however, only the last four digits can be shown (e.g. XXXX-XXXX-XXXX-1234) and when user clicks to edit the card number, always show blank field for input, DO NOT provide the original card number in the field. "Save" button, to save the new input credit card number on system "Cancel" button, to cancel the new input credit card number and use the original one	
REQ-CNVR-01-08-03	Must	Billing Address	Provide a billing address field, of which info is required for invoice	

<b>REQ-CNVR-01-08-04</b>	Nice to have	Selection of credit card	Provide a selection of credit cards that logged in the DB to make it easier for user to maintain There should be selection of card numbers and New to allow adding a new one	<b>Bundle with REQ-CNVR-01-04-02</b>
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### 3.2.9 Subscribed Services tab

Mydlink users will be able to review their subscription status and manage their subscription.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-01-09-01</b>	Must	Subscribed Services tab	The “Subscribed Service” tab can be found when a user clicks on its User Name on the top right area of mydlink service page “Cloud Recording” tab to show all subscribed services and invoice order history.	
<b>REQ-CNVR-01-09-02</b>	Must	List of subscribed services	All subscribed services (free trial / active / inactive) should be listed, and the listed information should be covered: <ul style="list-style-type: none"> <li>- Adopted device name, photo and mydlink no.</li> <li>- Subscribed service</li> <li>- Service start date</li> </ul>	

			<ul style="list-style-type: none"> <li>- Service expiration date</li> <li>- Next renewal date (show if user doesn't unsubscribe)</li> </ul>	
REQ-CNVR-01-09-03	Must	Hyper link to order history page Payment history	<p>All payment history should be listed for user to check. Listed information should be covered:</p> <ul style="list-style-type: none"> <li>- Service name/plan</li> <li>- Service brief description (capacity and duration should be covered)</li> <li>- Transaction result: if failed, show with error code message</li> <li>- Adopted device</li> <li>- Unit price</li> <li>- Charged Price</li> <li>- Payment date</li> <li>- Payment method (credit card/coupon)</li> </ul>	(Phase 2)

<del>REQ-CNVR-01-09-04</del>	Must	detailed description of failed transaction	<del>Mouse-over effect to show the detailed description of failed transaction when mouse-over the “Transaction Failed status”.</del>	
<del>REQ-CNVR-01-09-05</del>	Must	Edit button	<del>Provide an “Edit” button to allow user to edit a subscribed service.</del>	
REQ-CNVR-01-09-06	Must	Unsubscribe button (Use up current service)	<p>Provide an “Unsubscribe” button to allow user to unsubscribe a specific service after use up current service period. When the button is clicked, a dialog should be pop-up with an alert message <b>“Are you sure to end this service from the expiration date?”</b> The service will expire on yyyy/mm/dd. Your video footage will be permanently erased per day until X days. Please download clips you need before yyyy/mm/dd.”, with “Confirm” and “Cancel” buttons</p> <ul style="list-style-type: none"> <li>- If “Confirm” button is clicked, show the message “Un-subscription successfully!”, then terminate the service from the expiration</li> </ul>	<p>(Phase 2)</p> <p>Refer to Appendix II for options in the management menu of a subscribed service</p> <p>Show in subscribed paid services</p>

			<p>date.</p> <ul style="list-style-type: none"> <li>- If “Cancel” button is clicked, just cancel the un-subscription procedure.</li> </ul>	
<b>REQ-CNVR-01-09-07</b>	Must	Unsubscribe now button	<p>Provide an “Unsubscribe now” button to allow user to unsubscribe a specific service shortly.</p> <p>When the button is clicked, a dialog should be pop-up with an alert message <b>“Are you sure to end this service immediately?”</b> Your video footage will be permanently erased per day until X days. Please download clips you need before yyyy/mm/dd.”, with “Refund fee”, with “Confirm” and “Cancel” buttons</p> <ul style="list-style-type: none"> <li>- If “Confirm” button is clicked, show the message “Un-subscription successfully!”, then terminate the service immediately.</li> <li>- If “Cancel”</li> </ul>	<p>(Phase 2)</p> <p>Refer to Appendix II for options in the management menu of a subscribed service</p> <p>Refund fee = (Rest of fee of old plan) – (10% Handling fee)</p> <p>If Refund fee &lt; 0, it will consider as 0</p>



			button is clicked, just cancel the un-subscription procedure.	
REQ-CNVR-01-09-08	Must	Change plan button	<p>Allow user to change its service plan on a device.</p> <p>When user clicks on the “Change plan” button, it should pop-up a list of selectable service plan that allows user to switch to, and the new service plan should be in effect <del>from the next expiration date</del> shortly.</p> <p>Original plan should be grey out and can’t be chosen.</p> <p>When the button is clicked, a dialog should be pop-up with an alert message “<b>Are you sure to change service plan immediately?</b>”, with “Charged fee or Refund fee”, with “Confirm” and “Cancel” buttons</p> <ul style="list-style-type: none"> <li>- If “Confirm” button is clicked, direct user to start the change plan procedure, <del>show the message “Service</del></li> </ul>	<p>(Phase 2)</p> <p>Refer to Appendix II for options in the management menu of a subscribed service</p> <p>Upgrade fee = (New plan fee) – (Rest of old plan fee)</p> <p><del>Downgrade fee = (New plan fee) – [(Rest of old plan fee) – (10% Handling fee)]</del></p> <p>- If <math>\geq 0</math>, show “Charged fee”</p> <p>- If <math>&lt; 0</math>, show “Refund fee”</p>

			<p>changed successfully!”, then change to new service immediately.</p> <ul style="list-style-type: none"> <li>- If “Cancel” button is clicked, just cancel the change plan procedure.</li> </ul> <p>Plan change will be limited to 1 time per service period.</p>	<p>fe e” - If &lt; 0, sh e w “R ef un d fe e”</p>
REQ-CNVR-01-09-09	Must	Subscribe new service button	<p>User can subscribe new service</p> <ul style="list-style-type: none"> <li>- If has device supported, direct user to subscription page.</li> <li>- If no device supported, direct user to a page with message “Looks like no available devices to subscribe to.”,</li> </ul>	

			with link “See supported devices” and “Go to Cloud Recorder page”.	
<b>REQ-CNVR-01-09-10</b>	Must	Start free trial button	User can start free trial <ul style="list-style-type: none"> <li>- If has device supported, direct user to free trial subscription page.</li> <li>- If no device supported, direct user to a page with message “No available devices to start free trial.”</li> </ul>	(Phase 2)
<b>REQ-CNVR-01-09-11</b>	Useful	Display	Display the subscribed services by subscribed date (latest to oldest) and by name.	(Phase 2)

### 3.2.10 Order History (Phase 2)

Mydlink users will be able to review their order history.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-01-10-01</b>	Must	List of order histories	All <del>payment</del> histories under camera should be listed for user to check. Listed information should be covered: <ul style="list-style-type: none"> <li>- Order no.</li> <li>- Order date (YYYY/MM/DD)</li> </ul>	Refer to Appendix III for the field of order history

			<ul style="list-style-type: none"> <li>- Device name with photo, mydlink no.</li> <li>- Service plan, price and payment cycle</li> <li>- Service period (YYYY/MM/DD - YYYY/MM/DD)</li> <li>- Paid or refund fee</li> <li>- Type (free trial / subscribed / renewal / change plan / unsubscribe now / let expire)</li> </ul>	
<b>REQ-CNVR-01-10-02</b>	Useful	Display	Display the orders by order date and order no. (latest to oldest).	
<b>REQ-CNVR-01-10-03</b>	Useful	Search orders	User can search orders by <ul style="list-style-type: none"> <li>- Order no.</li> <li>- Device: provide list of cameras which have been subscribed</li> <li>- Duration: past 1 month / past 3</li> </ul>	

			months / past 6 months	
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### 3.3 Recording

1. Should provide an interface for user to select which recording type to use when the user agree to use Cloud Recording service.
2. Once the billing system confirm the registration, the Cloud Recording backend system will start to record the videos from the IP Cam.
3. If the IP Cam loses connection, Cloud Recording will stop recording and notify the subscriber. It will re-start the recording once the IP Cam goes back to live.
4. Cloud Recording will keep different 7 days of the video base on “7-Days” subscription plan.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-02-01</b>	Must	<u><b>Service plan Free</b></u> 7-day event triggered recording	When a user subscribes for event triggered recording, mydlink camera should upload the recorded content from 6 seconds before triggered to 12 seconds after triggered to mydlink platform securely. Mydlink platform keeps only the latest 7 days video content for the user from any moment.	20 clips per day
<b>REQ-CNVR-02-02</b>	Must	<u><b>Service plan A</b></u> 7-day event triggered recording	When a user subscribes for event triggered recording, mydlink camera should upload the recorded content from 6 5 seconds before triggered to 12 10 seconds event finish after triggered to mydlink platform securely.	(Phase 2)

			Mydlink platform keeps only the latest 7 days video content for the user from any moment.	
<b>REQ-CNVR-02-03</b>	Must	<b><u>Service plan B</u></b> 30-day event triggered recording	When a user subscribes for event triggered recording, mydlink camera should upload the recorded content from 5 seconds before triggered to 12 <del>10 seconds</del> event finish after triggered to mydlink platform securely. Mydlink platform keeps only the latest 30 days video content for the user from any moment.	(Phase 2)
<b>REQ-CNVR-02-04</b>	Must	<b><u>Service plan C</u></b> 7-day continuously recording	When a user subscribes for continuously recording, mydlink camera should upload the specified camera video content continuously to mydlink platform securely. Mydlink platform keeps only the latest 7 days video content for the user from any moment.	(Phase 2) Provide a 7-day free trial
<b>REQ-CNVR-02-05</b>	Must	<b><u>Service plan D</u></b> 30-days continuously recording	When a user subscribes for continuously recording, mydlink camera should upload the specified camera video content continuously to mydlink platform securely. Mydlink platform keeps only the latest 30 days video content for the user from any moment.	(Phase 2)

## 3.4 Playback

### 3.4.1 Timeline Mode

There should be a timeline to make it easier for users to have a directly mapping the video content or certain events to the time.

#	Priority	Requirement	Description	Notes
REQ-CNVR-03-01-01	Must	4 3 different time scales	<p>Provide buttons selection to switch in 4 3 different scales.</p> <p><del>Day Date</del> / hour / minute / second based of time scales should be provided</p> <p><u>Day Date scale</u></p> <ul style="list-style-type: none"> <li>- 1 day per scale</li> </ul> <p><u>Hour scale</u></p> <ul style="list-style-type: none"> <li>- 2 hours per scale</li> <li>- Hour scale should be the default scale when users entering Timeline page</li> </ul> <p><u>Minute scale</u></p> <ul style="list-style-type: none"> <li>- 10 minutes per scale</li> </ul> <p><u>Second scale</u></p> <ul style="list-style-type: none"> <li>- 10 seconds per scale</li> </ul>	
REQ-CNVR-03-01-02	Must	Storyboarding	<p>Provide storyboarding when mouse-over on the timeline.</p> <p>A resized snapshot should be shown smoothly and responsively with the interval of 6 15 seconds a resized snapshot.</p>	(Phase 2)
REQ-CNVR-03-01-	Must	Event tag	There should be motion / sound / thermal	

03			event tags on the timeline at the triggered time based on the triggered event.	
REQ-CNVR-03-01-04	Must	Consolidated event tags	<p>When two or more events triggered in a very closed time that the event tags would interference with each other on the timeline with the used time scale, it should show consolidated event tags instead of showing several event tags overlapping with each other.</p> <p>When clicked, time scale should be changed to smaller scale and show selected event tags in the middle of timeline.</p> <p>However, if the user uses a smaller time scale that the event tags don't interference with each other, the tags should be displayed individually.</p>	
REQ-CNVR-03-01-05	Must	Remarks of the time slots with recordings	It should have a clear remark to show which time slots have recordings and which time slots have no recording.	
REQ-CNVR-03-01-06	Must	Remarks of cursor for current playback time	It should have a clear remark to show the cursor for current playback time.	
REQ-CNVR-03-01-07	Useful	Remarks of time slots with clips	<del>It should have a clear remark or tag to show which time slots have made clips already.</del>	(Phase 2)
REQ-CNVR-03-01-	Useful	Remarks of event tag	It should have a clear remark to show the	



08		on playback	event tag currently on playback	
REQ-CNVR-03-01-09	Useful	Make clip button	It should provide a button, when clicked, pop-up a selectable menu as listed: - normal clip - time-lapse clip	(Phase 2)
REQ-CNVR-03-01-10	Must	Clips trimming button (normal clip)	It should provide a clip trimming function for user to trim a clip from a continuously recording. When user clicks on the trimming button, it should guide the user to set the start time and the end time by directly clicking on the timeline to trim for a clip. Any discontinuity is NOT allowed. Length limit of a clip is between 15 seconds – 10 minutes. When clicked “Save” button, if length of a clip is large than available storage space of clips, pop-up an alert and stay in current screen.	(Phase 2)
REQ-CNVR-03-01-11	Must	Save trimming button (normal clip)	It should provide a “Save” button to save a trimming of a clip when user clicks on the button.	(Phase 2)
REQ-CNVR-03-01-12	Useful	Time-lapse making button	It should provide a time-lapse making function for user to make a time-lapse clip from a continuously recording. When user clicks on the time-lapse making button, it should guide the user to set the	(Phase 3)  Time-lapse interval = (Time span) / [(Expected time-lapse clip

			<p><b>start time</b> (time interval of selection is 0.5 hour intervals) and the <b>end time</b> (time interval of selection is 0.5 hour intervals) and <b>length of a time-lapse clip</b> (time interval of selection is 0.5 minute intervals).</p> <p>The time span of the start time and the end time should be between 1 hour – 1 day.</p> <p>The length limit of a time-lapse clip is between 30 seconds – 3 minutes.</p> <p>Any discontinuity is NOT allowed.</p> <p>When clicked “Save” button, if length of a clip is large than available storage space of clips, pop-up an alert and stay in current screen.</p>	<p>length)*(Frame Rate)]</p> <p>Use 15 24 fps as frame rate</p>
REQ-CNVR-03-01-13	Useful	Make and save time-lapse clip button	It should provide a “Make and Save” button to make and save a time-lapse clip when user clicks on the button.	(Phase 3)
<del>REQ-CNVR-03-01-14</del>	<del>Must</del>	<del>Save clip button</del>	<p><del>It should provide a “Save” button to save clips of event recordings.</del></p> <p><del>When clicked “Save” button, if length of a clip is large than available storage space of clips, pop-up an alert and stay in current screen.</del></p>	<del>(Phase 2)</del>
REQ-CNVR-03-01-15	Must	Go Now button	“Go Now” button is to allow user to playback the most updated recordings	

			immediately, no matter where the user is at on the timeline.	
<b>REQ-CNVR-03-01-16</b>	Must	Flash NOT support warning	If user current flash doesn't support to see playback, should show warning message to guide user to use suitable flash.	
<b>REQ-CNVR-03-01-17</b>	Must	Browse	Browse the event/continuously recording by device.	

### 3.4.2 Event List Mode

Gather the events with snapshots for user to check.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-03-02-01</b>	Must	Event & Clips listing mode	Provide a button for user to switch between timeline mode and events listing mode, which should list all event triggered recordings.	
<b>REQ-CNVR-03-02-02</b>	Must	Name of event recordings	It should show triggered time and the triggered type of the event item.	
<b>REQ-CNVR-03-02-03</b>	Useful	Sorting	Sorting the event recordings and clips by name and by time.	

### 3.4.3 Normal Playback

1. The subscriber can log in mydlink portal or mobile App to watch the recorded video from any time within his subscribed plan.
2. The subscriber can choose the time point to start playback.

3. The subscriber can stop the playback at any time. He will need to choose a new starting point if he likes to re-start the playback.
4. The subscriber can pause the playback at any time and can re-start the playback from the time point the playback been paused.
5. The playback will not stop automatically.

#	Priority	Requirement	Description	Notes
REQ-CNVR-03-03-01	Must	Select time	Start the playback from the selected time point on timeline.	
REQ-CNVR-03-03-02	Must	Play	Start the playback.	
REQ-CNVR-03-03-03	Must	Stop	Stop the playback at any time. Subscriber will need to select the starting time again if he likes to re-start the playback.	
REQ-CNVR-03-03-04	Must	Pause	Pause the playback at any time. The playback will start from the paused time point if subscriber clicks on "Play" to re-start the playback.	
REQ-CNVR-03-03-05	Useful	Play continuously	In case there are some discontinuities of the recordings since network issue or any other reason, the playback should be able to continue automatically from the next beginning of the recording segment.	
REQ-CNVR-03-03-06	Must	Snapshot button	It should provide a snapshot button to take a snapshot for the current playback screen. When a user clicks on the snapshot button, it should prompt to ask user to specify where to save the snapshot at local storage.	Save to local directory (user can choose where to save)
REQ-CNVR-03-03-	Must	Sound adjustment	Adjust volume.	

<b>07</b>				
<b>REQ-CNVR-03-03-08</b>	Must	Full-screen button	Provide a full-screen function for user to playback with full-screen while playback under normal size screen mode.	
<b>REQ-CNVR-03-03-09</b>	Must	Normal size screen button	Provide a normal size screen function for user to playback with normal size screen while playback under full-screen mode.	

### 3.4.4 Event Playback

1. The playback will start 5 seconds prior to the triggered event.
2. There will be event tag on the video timeline to highlight the event from the recorded video.
3. There will be a page to gather the events with snapshots in mydlink portal and mobile App.
4. Other functions are the same as the Normal playback.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-03-04-01</b>	Must	Event page (event list mode)	See detail in 3.4.2 Event List Mode.	
<b>REQ-CNVR-03-04-02</b>	Must	Event tag	Tags in Timeline mode to highlight the event from the recorded video. Different event tags should be provided for different triggered events, including motion/sound/contact sensor/thermal/general. For those event that a client doesn't recognize, show general tag on timeline.	

<b>REQ-CNVR-03-04-03</b>	Must	Playback	When user clicks on an event tag, it should start playback no matter the tag is in timeline mode or in event list mode.	
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### 3.4.5 Clip Playback (Phase 2)

- Subscriber will be able choose the clip from the clip page ~~or from the tag of the video timeline~~ and start the playback.
- The playback will stop at the end of the clip.
- Other functions are the same as the normal playback.
- The page will show the previous clip and the clip afterward based on the time of the clips in the same category.

#	Priority	Requirement	Description	Notes
<del>REQ-CNVR-03-05-01</del>	Useful	Previous Clip	<del>A preview button which subscriber can preview and click on the start the playback of the previous clip base on the time of the clip.</del>	
<del>REQ-CNVR-03-05-02</del>	Useful	Next Clip	<del>A preview button which subscriber can preview and click on the start the playback of the next clip base on the time of the clip.</del>	

## 3.5 E-mail & Push Notifications

A subscriber should receive e-mail notifications and push notification to portal & App clients when specific situation has been happened.

- A subscriber will receive notification through e-mail for subscription.
- A subscriber will receive notification through e-mail or mobile App when an event triggered the IP Cam.
  - ✧ In the e-mail notification, there will be information of event for check, and a link to go watch the recorded video.

- ✧ If subscriber clicks on the “Go watch the recorded video”, he will be directed to the playback page of the Cloud Recording.
- ✧ Other functions will be the same as 3.4.4 Event Playback.
- ✧ There will be event tag on the video timeline to highlight the event from the recorded video.
- ✧ There will be a page to gather the events with snapshots in mydlink portal and mobile App for subscribers to find search for the event the user want to playback.
- ✧ There will be a place in mydlink portal and mobile App to turn on/off notifications.

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-04-01</b>	Must	E-mail for subscription	See detail in 3.2.6 E-mail Notification for Subscription.	(Phase 2)
<b>REQ-CNVR-04-02</b>	Must	E-mail for triggered event	<p>An e-mail should be sent to user’s e-mail account about triggered event with information as listed:</p> <ul style="list-style-type: none"> <li>- Triggered type: MD/SD</li> <li>- Triggered time</li> <li>- Triggered device: device name, mydlink no., MAC, IP</li> <li>- Go watch link: when clicked, direct user to playback page of the Cloud Recording</li> </ul>	

## 3.6 Clip Management, and Clip Sharing (Phase 2)

### 3.6.1 Clip Management

1. There will be a place in mydlink portal and app for the subscriber to save and categorize the edited clips
2. Subscriber can edit the name of the clips
3. Subscriber can delete the clips
4. Subscriber can download the clips to local storage

#	Priority	Requirement	Description	Notes
REQ-CNVR-05-01-01	Must	My Clips tab	The “My Clips” tab can be found when a user clicks on “Cloud Recording” tab to show and manage all clips.	
REQ-CNVR-05-01-02	Must	List of clips	<p>All clips should be listed, and the listed information should be covered:</p> <ul style="list-style-type: none"> <li>- Snapshot of the clip</li> <li>- Clip name</li> <li>- Clip length</li> <li>- Edited time</li> <li>- If it’s time-lapse clip, show “time-lapse”</li> </ul>	
<del>REQ-CNVR-05-01-03</del>	<del>Must</del>	<del>Edit category (tag)</del>	<del>Let subscriber categorize the clips.</del>	
REQ-CNVR-05-01-04	Must	Edit name	Allow user to rename the name of a clip.	



REQ-CNVR-05-01-05	Must	Delete	Allow user to delete the selected clips. When user clicks to delete any clip(s), a dialog should be popped up to ask the user to confirm the number of clips to be deleted. If “Yes”, delete the selected clip(s). If “Cancel”, ignore the deletion.	
REQ-CNVR-05-01-06	Must	Download	Allow user to download all selected clips.	
REQ-CNVR-05-01-07	Useful	Zip the clips to be downloaded	Zip the selected clips to one file before downloading them	
REQ-CNVR-05-01-08	Must	Storage quota of clips	Display the related information about storage quota of clips. The quota, used %, and the available space should be provided. Each device has 3 hours long storage quota	
REQ-CNVR-05-01-09	Useful	Notable remark when storage is about full	When the available storage space is under 20%, there should be a notable remark to alert the user the storage is about full.	
REQ-CNVR-05-01-10	Useful	Direct link to purchase extra storage space	It’s better to provide a direct link of purchasing extra storage space near the storage quota info. When a user clicks on the link, both the device, and the subscribed service plan should be carried out automatically.	(TBD, Phase 3)
REQ-CNVR-05-01-11	Useful	Sorting	Sorting the clips by name, date, or length - Name (A - Z)	

			<ul style="list-style-type: none"> <li>- Date (latest - oldest) (default)</li> <li>- Length (short - long)</li> </ul>	
<b>REQ-CNVR-05-01-12</b>	Must	Browse	Browse the clips by device, date, <del>time</del> , <del>tag</del> . Set the latest subscribed device to browse by default.	

### 3.6.2 Clip Sharing (Phase 3)

#	Priority	Requirement	Description	Notes
<b>REQ-CNVR-05-02-01</b>	Nice to have	Sharing button	Allow user to share a clip on user's social network accounts or e-mail. When clicked, there will pop-up a sharing menu for user to make a selection.	
<b>REQ-CNVR-05-02-02</b>	Nice to have	Sharing on Facebook	Check log-in status of Facebook, if the user has not logged in, prompt the user to log in, then direct user to the post page. Share the link of a clip on Facebook account. When the link is clicked, direct user to mydlink page to playback the clip.	
<b>REQ-CNVR-05-02-03</b>	Nice to have	Sharing via e-mail	Share via e-mail to allow input e-mail addresses to share the access link of the clip. Should allow to input multiple e-mail addresses separated by “,” or “;”.	

REQ-CNVR-05-02-04	Nice to have	Check invalid argument in e-mail input field	Check invalid argument in e-mail input field when left focus from e-mail input field.	
REQ-CNVR-05-02-05	Nice to have	Submit button	Clicks on “Submit” button to submit the sharing action.	

## 3.7 Log for Analysis (TBD, Phase 2)

### 3.7.1 Analytics on GA

#	Priority	Requirement	Description	Notes
REQ-CNVR-06-01-01	Must	Service introduction tracker at portal	Track when user clicks on Cloud Recording service introduction link at mydlink portal.	
REQ-CNVR-06-01-02	Must	Service introduction tracker at device’s live view page	Track when user clicks on Cloud Recording service introduction link at device’s live view page at a fixed area.	
REQ-CNVR-06-01-03	Must	Intention of service subscription tracker	Track when user clicks on “Subscribe” button to go next step of Cloud Recording service subscription page.	
REQ-CNVR-06-01-04	Must	Intention of un-subscription	Track when user clicks on “Unsubscribe” button to intend to unsubscribe Cloud Recording service.	
REQ-CNVR-06-01-05	Must	Change service plan tracker	Track when user clicks on “Change Plan” button to intend to change its subscription plan.	

<b>REQ-CNVR-06-01-06</b>	Must	Trimming intention tracker	Track when user clicks on “Trimming” button to intend to trim a clip.	
<b>REQ-CNVR-06-01-07</b>	Must	Save trimming tracker	Track when user clicks on “Save” button to save a trimming action.	
<b>REQ-CNVR-06-01-08</b>	Useful	Time-lapse making intention tracker	Track when user clicks on “Time-lapse making” button to intend to make a time-lapse clip.	
<b>REQ-CNVR-06-01-09</b>	Useful	Make and save time-lapse tracker	Track when user clicks on “Make and save” button to make and save a time-lapse making action.	
<b>REQ-CNVR-06-01-10</b>	Nice to have	Sharing intention tracker	Track when user clicks on “Sharing” button to intend to share a clip.	
<b>REQ-CNVR-06-01-11</b>	Nice to have	Sharing action tracker	Track when user clicks on “Submit” button to submit its sharing request.	
<b>REQ-CNVR-06-01-12</b>	Must	Clips management tracker	Track when user clicks on “My Clips” tab to view the clips management tracker.	
<b>REQ-CNVR-06-01-13</b>	Must	Timeline playback tracker	Track when user clicks on “timeline” for playback.	
<b>REQ-CNVR-06-01-14</b>	Must	Event listing mode tracker	Track when user clicks on “Event listing mode” to switch from timeline to event list.	
<b>REQ-CNVR-06-01-15</b>	Must	Time scale tracker	Track when user clicks on time-scale for a finer time scale on timeline.	
<b>REQ-CNVR-06-01-16</b>	Must	Service un-subscription tracker in FAQ	Track when user is looking for service un-subscription information in FAQ.	
<b>REQ-CNVR-06-01-</b>	Must	Delete intention	Track when user clicks on “Delete” button	

17		tracker	to intend to delete a clip.	
REQ-CNVR-06-01-18	Must	Delete action tracker	Track when user clicks on “Confirm” button to confirm its delete request to mydlink platform.	
REQ-CNVR-06-01-19	Must	Download intention tracker	Tracker when user clicks on “Download” button to intend to download a clip.	
REQ-CNVR-06-01-20	Must	Download action tracker	Track when user clicks on “Confirm” button to confirm its download request to mydlink platform.	
REQ-CNVR-06-01-21	Must	Edit intention tracker	Track when user clicks on “Edit” button to intend to edit a clip.	
REQ-CNVR-06-01-22	Must	Save edit tracker	Track when user clicks on “Save” button to save an edited action.	
REQ-CNVR-06-01-23	Must	Sorting intention tracker	Track when user make a selection on “Sorting” field to intend to sort clips.	
REQ-CNVR-06-01-24	Must	Subscribed services management tracker	Track when user clicks on “My Subscriptions” tab to view the subscribed services management tracker.	
REQ-CNVR-06-01-25	Must	Order history management tracker	Track when user clicks on “Order History” tab to view the order histories management tracker.	
REQ-CNVR-06-01-26	Must	Searching intention tracker of order histories	Track when user make selections on “Searching” fields to intend to search order histories.	

### 3.7.2 Additional for Data Analysis

#	Priority	Requirement	Description	Notes
REQ-CNVR-06-02-01	Must	Number of service plan	Calculate how many of each service plans are currently used by devices.	
REQ-CNVR-06-02-02	Must	Successful initial payment	Calculate how many times of initial payment are successful.	
<del>REQ-CNVR-06-02-03</del>	<del>Must</del>	<del>Failure of initial payment</del>	<del>Calculate how many times of initial payment are failed.</del>	
REQ-CNVR-06-02-04	Must	Amount of clips	Calculate the amount of clips of Cloud Recording service.	
REQ-CNVR-06-02-05	Useful	Average clip length	Calculate the average video length of all clips.	
REQ-CNVR-06-02-06	Must	Percentage of upgrading to paid service plan	Calculate how much percentage of service will upgrade to paid service plan after using <del>free or</del> free trial.	
REQ-CNVR-06-02-07	Useful	Percentage of making time-lapse clip	Calculate how much percentage of clips are time-lapse clip.	
REQ-CNVR-06-02-08	Useful	Average length of time-lapse clips	Calculate the average video length of all time-lapse clips.	
REQ-CNVR-06-02-09	Nice to have	Percentage of sharing clips on Facebook	Calculate how much percentage of clips are shared on Facebook.	
REQ-CNVR-06-02-	Nice to	Average length of	Calculate the average video length of all	

10	have	shared clips	shared clips.	
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## 4 Go-to-Market Plan

- For Beta Trial:
  1. Continuously recording for 24 hours, 7 days.
  2. Duration:
- Target Audience:
  1. 2,000 candidates from USMP in total.
  2. The majority of candidates are mydlink heavy-users (VIP). Selected media columnists are also recommended to include.
- Cost Simulation:

Plan	Subscrib er	Storage			Transfer					Connection	Cost/ppl (\$)	Total Cost (\$)
		Continuously recording storage (GB)	Clips storage (GB)	Pricing (\$)	Recording playback		Clips playback and download		Pricing (\$)	Server Fee (\$)		
					Usage Rate (%)	Data out (GB)	Usage rate (%)	Data out (GB)				
Plan C (7-day continuously recording)	1	30.24	0.54	0.095	2	0.6048	120	0.648	0.12	0.35	3.424436	3.424436
	1000	30240	540	0.08	2	604.8	120	648	0.12	350	2.962736	2962.736
	2000	60480	1080	0.07	2	1209.6	120	1296	0.12	700	2.654936	5309.2





## **5 Appendix**

- **I. Service Plan Package**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	<b>7-day Event Triggered Recording</b>	<b>30-day Event Triggered Recording</b>	<b>7-day Continuously Recording</b>	<b>30-day Continuously Recording</b>
<b>Live view</b>	V	V	V	V
<b>In App snapshot</b>	V	V	V	V
<b>E-mail alert</b>	V	V	V	V
<b>Mobile alert</b>	V	V	V	V
<b>IP Cam settings</b>	V	V	V	V
<b>2-way audio</b> (Support on specific models)	V	V	V	V
<b>How long will an event triggered video be kept</b>	7 days	30 days	7 days	30 days
<b>How long will continuously video be kept</b>			7 days	30 days
<b>Event triggered video daily quota</b> (At least 15 secs per video)	5 hours	5 hours	unlimited	unlimited
<b>Trimming clips</b>	V	V	V	V
<b>Make time-lapse clips</b>	V	V	V	V
<b>Clip management</b>	V	V	V	V
<b>Download Clips</b>	V	V	V	V
<b>Clip sharing</b>	V	V	V	V
<b>Extra clip storage</b>	90 minutes	300 minutes	180 minutes	600 minutes
<b>Suggested price</b>	US\$ 4.99/monthly US\$ 49.9 /yearly	US\$ 14.99/monthly US\$ 149.9/yearly	US\$ 9.99/monthly US\$ 99.9/yearly	US\$ 29.99/monthly US\$ 299.9/yearly
<b>Note</b>	Provide 7 days free trial			

## ● II. Options In the Management Menu of A Subscribed Service

Type Option	Free trial	Active (*1)	Inactive
Subscribe	V		V
Change Plan		V	
Unsubscribe now		V	
Let expire		V	

(\*1) Options in 1<sup>st</sup> period of an active subscribed service after making change

Action Option	Change plan	Unsubscribe now	Let expire
Subscribe		V	
Change Plan			
Unsubscribe now			V
Let expire	V		

● III. The Field of Order History

Field \ Type	Free trial	Subscribed	Renewal	Change plan	Unsubscribe now	Let expire
Order #	v	v	v	v	v	v
Order date	v	v	v	v	v	v
Type	v	v	v	v	v	v
Device info	v	v	v	v	v	v
Service plan	v	v	v	v	v	v
Plan price	v	v	v	v		
Rest fee of old plan				v	v	
Handling fee					v	
Tax	v	v	v	v	v	
Total price / Refund	v	v	v	v	v	
Period	v	v	v	v		
Expiration date					v	v