

The purpose of this application note is to provide an overview of commercial mobile credentials within the UniKey platform. The various actors in a typical deployment will be defined as well as a review of the typical lifecycle of the mobile credential.

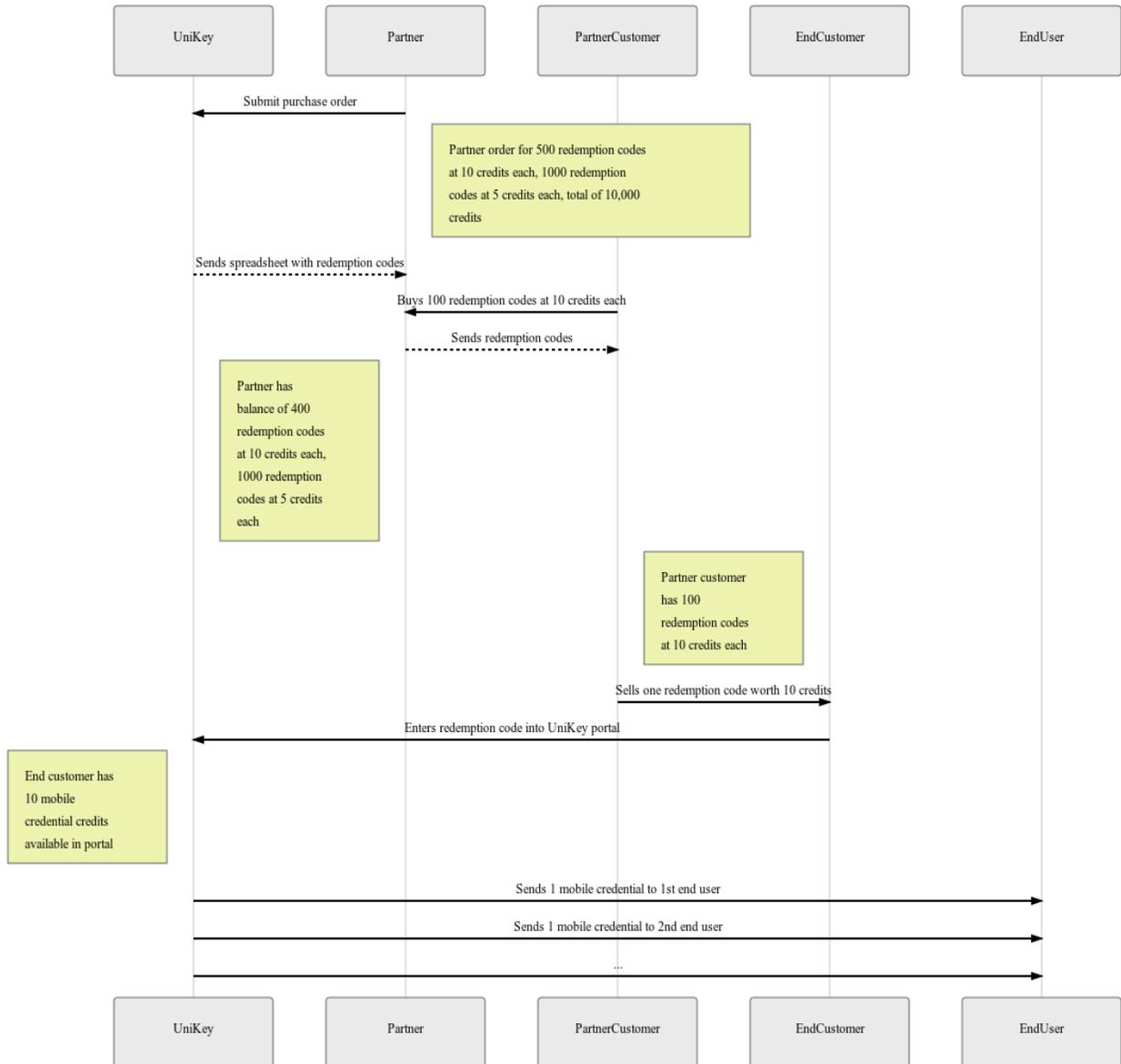
### Definitions

Term	Definition
Credential Credit	A mobile credential that has not yet been assigned to a mobile device
Mobile Credential	A digital key that contains card ID and facility code information that is transmitted from a mobile device to a reader for the purpose of entering a protected area
Redemption Codes	Two numbers that represent a quantity of credential credits. Redemption codes can be redeemed for credential credits within the portal. Partners can specify the number of credits that are assigned to each redemption code.
Partner	Organization that partners with UniKey to leverage our mobile credential solution in their products. Partners purchase redemption codes from UniKey.
Partner Customer	An entity that purchases redemption codes from the partner for resale to End Customers.
End Customers	An entity that manages mobile credentials and access rights to a protected area.
End User	An individual that uses a mobile credential to gain access to a protected area.

### Typical Lifecycle

1. Partner orders redemption codes from UniKey by submitting a purchase order.
2. UniKey delivers spreadsheet containing redemption codes.
3. Partner sells redemption codes to partner customer.
4. Partner customer sells codes to end customer.
5. End customer enters redemption codes in UniKey portal and receives credential credits.
6. End customer consumes credential credits by issuing mobile credentials to end users.
7. End users use their mobile credential day to day to enter a door.

This exchange is illustrated with the sequence diagram below using contrived values as an example:



When a customer submits a purchase order to UniKey to procure redemption codes, information such as that in the example table below must be included. It is important to note that the number of credentials per code is arbitrary and is defined entirely by the partner.

Qty Redemption Codes	Credentials Per Code	Line Total Credentials
500	100	50,000
260	25	6,500
250	10	2,500
200	5	1,000
	<b>Total Credentials Ordered</b>	60,000

Once UniKey receives and processes the partner purchase order, we will deliver the redemption codes as a spreadsheet formatted similar to the one below.

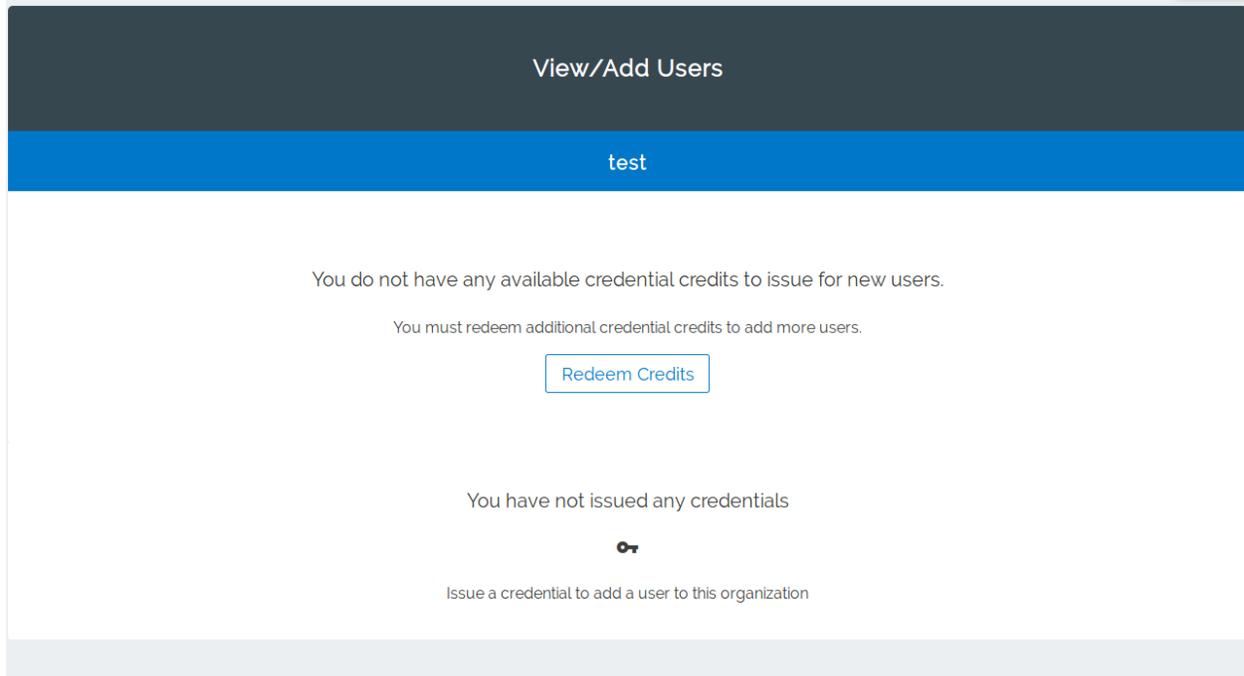
Example redemption codes delivered to partner:

Serial Number	Authorization Code	Number of Credentials
2000220563	123456	100
2000110088	887474	100
2000118831	898773	5
	...	
	...	
	...	

Once the partner has received these codes they distribute them by any means of their choosing. Ultimately the codes will be consumed by the end customer. The end customer consumes a credential code in the portal. Once the process is completed, the credential code used will no longer be valid and the end customer will have a balance of credential credits

within the portal. This process is outlined in the screenshots below from the perspective of the end customer.

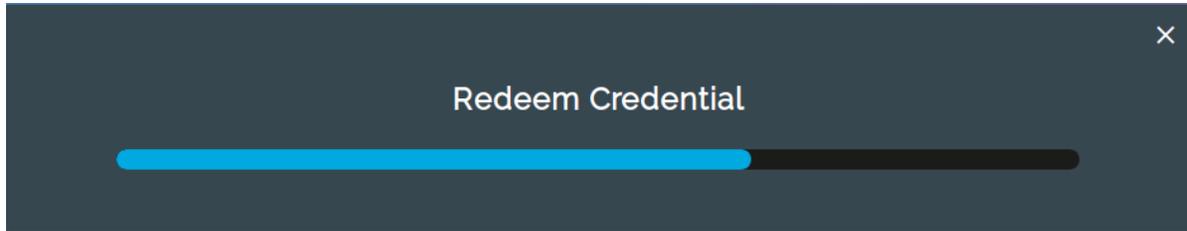
**Step 1:** End customer navigates to the View / Add Users page in the portal and clicks "Redeem Credits"



**Step 2:** End customer enters a valid credential code serial number.

The image shows a mobile application screen titled "Redeem Credential". At the top, there is a dark blue header with the title and a close button (X). Below the header is a progress bar with a blue segment on the left and a black segment on the right. The main content area is white and contains the instruction "Enter the Serial Number of you Credentials-To-Go Card". Below this is a text input field with a green border containing the serial number "1234567890". Above the input field, the text "serial number" and "Serial Number" are displayed. Below the input field, a disclaimer states: "Credential-To-Go cards cannot be refunded once the protective film over the card control number is removed". At the bottom, there are two buttons: a red "Cancel" button and a blue "Next" button.

**Step 3:** End customer enters valid authentication number for the credential code.



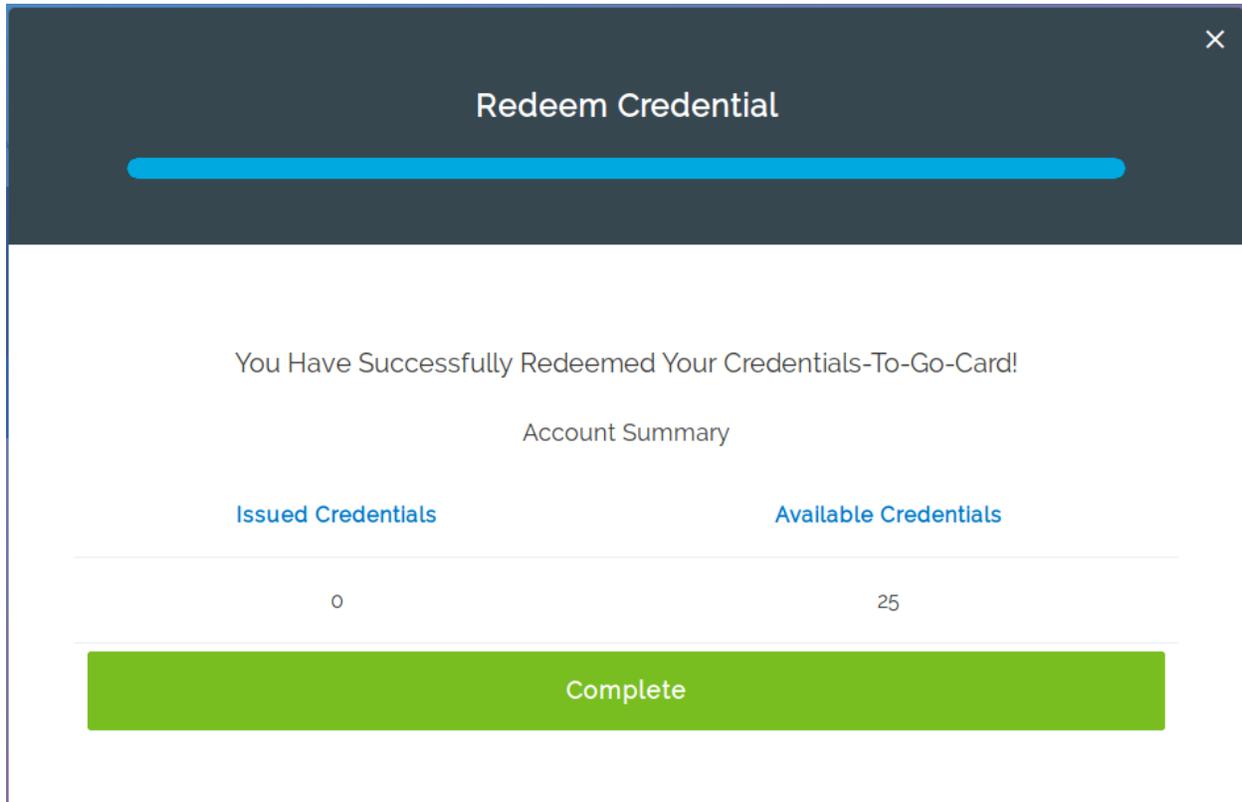
Scratch off the protective layer and enter the Authentication Number of your Credentials-To-Go Card

authentication number  
Authentication Number

Prev

Redeem

**Step 4:** End customer's available credential balance increases. End customer can now send mobile credentials to end users.



Now that the end customer has mobile credential credits available in their portal account, they can issue mobile credentials to end users. These mobile credentials will allow an end user to enter a door that supports the mobile credential. Every time a mobile credential is issued, a credential credit is consumed. When the credential credit balance of the end customer is depleted, they would be required to purchase an additional credential code from the partner customer before they could issue additional mobile credentials.

One final note - this document is illustrating a typical lifecycle. The number of tiers in the partner distribution scheme of the redemption codes are entirely up to the partner. For example, if the partner has additional levels of resale or distribution in their value chain, the process would still work the same. If the partner chose to sell redemption codes direct to end customers, the system supports that as well. Additionally, if a partner chooses not to issue credits at all and allow unlimited sending of credentials by end customers, that is also possible.

### Revision History

Revised By	Date	Version	Change Summary
RLJ & WLH & EKC	2/1/18	1.0	Initial Release
RLJ	2/5/18	1.1	Minor edits