

Additional Information on Offline Mode



Note: The information detailed below is specific to processing through the U.S. Gateway. (It does not include processing details for the International Gateway.) In addition, it describes Offline Mode in its current state, but does not describe how to configure available options. See the *Configuring Offline Mode* section of the [UTG Installation and Configuration Guide](#) for additional information.

Offline Mode

Shift4 strives to maintain constant uptime; however, due to the nature of the environment, the Universal Transaction Gateway® (UTG®) application needs to have the ability to service the needs of merchants even when the merchant cannot access the data center (or if there is a service interruption upstream from the UTG). UTG solves this by a set of capabilities known as "Offline Mode."

Offline Mode is a feature available in the UTG, allowing a merchant to configure offline storage of transactional data for later processing.

When the UTG first connects to the data center, it will obtain an offline key from the U.S. Gateway that allows it to encrypt transactions that can only be decrypted using the other portion of the key, which exists only in the U.S. Gateway. The UTG then enters Offline Mode for the following scenarios:

- **The UTG has just started and has not yet connected to the data center.**
- **X number of errors occurred within Y number of seconds.**
 - X is the number the merchant configured in UTG TuneUp for the *Failure Count* field. The field defaults to 1, but can be configured to be up to 10. Y is the number the merchant configured in UTG TuneUp for the *Timeout Failure* field. The field defaults to 30, but can be configured to be up to 75.
 - For additional information, see the *Error Codes that Cause the UTG to Use Its Offline Feature* section of the [UTG Error Codes](#) document.
- **One transaction has taken more than Y seconds.**
 - Y is the number the merchant configured in UTG TuneUp for the *Timeout Failure* field. The field defaults to 30, but can be configured to be up to 75.

Except for the scenario where the UTG is just starting, the UTG will stay in Offline Mode for the configured amount of minutes, allowing time for intermittent or isolated interruptions to pass while transactions process offline. (The merchant can configure how many minutes to stay offline by using the *Forced Offline Period* field. The default is 10 minutes, but can be configured as short as 5 minutes or as long as 60 minutes.) For the duration of the UTG being in Offline Mode, the UTG will receive the transaction, and with a few exceptions —such as debit or card verification requests which require a connection — the UTG will process the transaction as if it were online. The UTG returns a temporary authorization code (formatted as "44###44"), and stores the request securely encrypted in a local database.

There is a default stand-in limit amount per merchant type that will be used (or a *Stand-In Limit Amount Global Override* amount if the default for the merchant type was not appropriate). Either way, the amount is the maximum the UTG will allow for offline approvals. If the transaction is over that amount, the UTG will return an "Amount Exceeded" response (the default configuration) or a "Call for Referral" response. These two responses are based on the *Behavior for transactions over Stand-in Limit* field the merchant configures in UTG TuneUp.

When the timer has elapsed, the UTG will attempt to connect to the data center. When successful, it will send three "GetNextDBA" calls. When the three calls are successful, the UTG enters a "PendingReady" state and begins to upload the transactions six at a time. The UTG then checks the status of the transactions using a "GetInvoice" call, and if any come back as a failure, the UTG will place them in a secondary queue to be tried at a later time (approximately 60 minutes later). The UTG will continue to upload the main queue until it is empty, and will come online completely, which is the "Ready" state.

Once online, the UTG will attempt to upload these transactions Z number of times. (Z is the number the merchant configured in UTG TuneUp for the *Max Upload Attempts* field. The default is 3.) It will store the transactions in the file based on the number of days the merchant configured in the *Transaction Storage Period* field in UTG TuneUp. (The default is 60 days.)

When the transactions process in the data center, they will attempt authorization, and this will be viewable through Lighthouse Transaction Manager. However, as the transaction loop has already completed, the interface will not get the updated authorization code/status. These transactions will need to be batched per the merchant's process. If an EMV transaction fails to approve (due to the nature of EMV), it will reattempt in the data center as a manually entered transaction.



Tip: When the UTG enters Offline Mode, a text file is generated: UTGOfflineTimestamp.log. This file is located in the folder the UTG was installed to, and it contains the last offline date and time. Once the UTG is online, the file will be automatically deleted.
