

Pre-Stored Image Reference for Device Commands

SCA currently supports a lightweight preloaded image reference option for Display commands. Instead of sending a full base64-encoded image using `DISPLAY_IMG_TOP` field with each screen render, the POS can reference a preloaded image by filename using the optional `DISPLAY_IMG_TOP_NAME` field. This approach reduces payload size, minimizes redundant data transfer, while preserving full backward compatibility with the existing `DISPLAY_IMG_TOP` base64 field.

Background

A major retail client running SCA through a third-party payment processor needed UI consistency across two POS systems during a platform migration. The legacy approach rendered screens by transmitting a large base64-encoded image payload on every single update, bandwidth-heavy, repetitive, and increasingly unreliable under high-frequency display command flows.

This feature removes that overhead by allowing the POS to reference images already stored on the terminal, sending only a short filename instead of a full binary-encoded payload. Images must be preloaded onto the terminal in advance via MSR package deployment or VHQ content management before they can be used.

Applicable Commands

The `DISPLAY_IMG_TOP_NAME` field is added as a new optional field to the following SCA device commands:

- [Customer Question](#)
- [Quick Credit Application](#)
- [Display Message](#)

How It Works

- The POS sends `DISPLAY_IMG_TOP_NAME` containing only the filename with extension of a pre-stored image.
- Images must reside at `/home/usr1/flash/www/<resolution>/Images` on the terminal.
- Supported image formats: **PNG** and **JPEG / JPG**.
- SCA resolves the filename at render time and displays the image as the top image on the screen.
- If both `DISPLAY_IMG_TOP` (base64) and `DISPLAY_IMG_TOP_NAME` are present in the same request, `DISPLAY_IMG_TOP` takes priority and `DISPLAY_IMG_TOP_NAME` is ignored. This ensures full backward compatibility for existing integrations.

Fallback Behaviour

If the referenced image file is not found on the terminal, the application:

- Continues processing the command without interruption.
- Renders the screen without the top image (no failure or error returned to POS).
- Logs the event, including the missing image filename.

Sample Request from Customer Question Command

```
<TRANSACTION>  
  <FUNCTION_TYPE>PAYMENT</FUNCTION_TYPE>  
  <COMMAND>CUST_QUESTION</COMMAND>  
  <DISPLAY_IMG_TOP_NAME>store_logo.png</DISPLAY_IMG_TOP_NAME>  
  <CUST_QUESTION_PROMPT>Do you want a receipt?</CUST_QUESTION_PROMPT>  
</TRANSACTION>
```