

E-Signature Integration Requirements

Representative requirements package for integrating an e-signature service into an enterprise leasing workflow.

Artifact type	Integration Requirements Specification	Product area	Leasing & Rents
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Confidentiality note. This document is a representative reconstruction based on the type of work performed professionally. Proprietary system details, data, business rules, vendor implementation specifics, and identifiers have been modified or replaced. It is not an original employer document.

1. Background and objective

Leasing users need to generate a lease, send it to one or more residents for electronic signature, track outstanding signatures, and continue the leasing workflow once execution is complete. The integration must keep the product and the external e-signature service aligned without requiring users to understand the underlying technical handoff.

Objective: provide a controlled e-signature workflow that validates required data before sending, reflects meaningful signature statuses inside the leasing product, preserves completed documents, and gives users a recoverable path when the external service or callback fails.

2. Scope

In scope	Out of scope for this sample
Generate and send signature requests from the leasing workflow	Vendor procurement, commercial terms, or account provisioning
Single and multiple signer handling	Jurisdiction-specific legal interpretation of electronic signatures
Status synchronization, void/resend, failure handling	Redesign of the underlying lease-generation engine
Completed document availability and audit history	Advanced identity-verification features not required for initial release

3. End-to-end flow

1. Leasing user generates the lease document.
2. Product validates the document, signer names, signer email addresses, and required lease identifiers.
3. Product creates an e-signature request and stores the external reference.
4. Signers receive and complete the signature request.
5. External service sends status updates to the product.
6. Product maps the external status to a leasing-facing status.
7. When complete, the signed document is made available and the leasing workflow can continue.

4. Functional requirements

ID	Requirement	Description	Priority
FR-01	Validate send prerequisites	The system shall validate that the lease document and all required signer information are present before creating a signature request.	Must
FR-02	Create signature request	The system shall create a signature request using the current approved lease document and associate the returned external reference with the lease transaction.	Must
FR-03	Multiple signers	The system shall support more than one required signer and retain signer-level completion information where provided by the external service.	Must
FR-04	Prevent accidental duplicates	The system shall prevent a second active signature request from being created for the same lease unless the prior request has been completed, voided, expired, or otherwise made inactive.	Must
FR-05	Status synchronization	The system shall receive or retrieve signature status changes and map them to product-facing statuses meaningful to leasing users.	Must
FR-06	Completed document	When all required signatures are complete, the system shall make the executed document available from the lease record.	Must
FR-07	Void and resend	Authorized users shall be able to void an active request and create a new request when the lease document or signer information materially changes.	Must
FR-08	Failure visibility	If the external request is created but the product cannot persist or process the resulting status, the failure shall be recoverable without creating an unnecessary duplicate request.	Must
FR-09	Audit history	The product shall retain an auditable history of send, resend, void, completion, and relevant failure events.	Should
FR-10	User feedback	The user shall receive a clear outcome when a send, resend, or void action succeeds or fails.	Must

5. Representative data mapping

Source field	Target concept	Required	Validation / note
Lease transaction ID	Envelope/reference metadata	Yes	Unique product reference used for correlation
Lease document	Document to sign	Yes	Must be the current approved version
Resident name	Signer name	Yes	Required for each signer
Resident email	Signer delivery address	Yes	Must pass email validation
Signer role/order	Recipient role/order	Conditional	Required when signing sequence is configured

6. Status mapping

External status	Product-facing status	Expected behaviour
Sent / Delivered	Awaiting signatures	Display request as active; show outstanding signer information when available.
Completed	Signed	Make completed document available and allow downstream leasing workflow to continue.
Declined	Signature declined	Stop normal completion path; show actionable status to leasing user.
Voided	Voided	Request is inactive; user may generate a new request if the lease remains eligible.

7. Business rules and exception handling

BR-01 - A lease may not have more than one active signature request unless the product explicitly supports a replacement/versioning scenario.

BR-02 - A materially changed lease must not silently continue under a signature request created for an earlier document version.

BR-03 - Only authorized leasing users may void or resend a signature request.

BR-04 - The leasing-facing status must be derived from an agreed mapping rather than exposing vendor terminology directly where meanings differ.

BR-05 - Completion requires all required signers, not merely the first completed signer.

Failure scenarios

Scenario	Expected direction
External service unavailable during send	Do not mark as sent. Show actionable failure and allow retry without duplicate creation.
External request created but local save fails	Recover using correlation/reference data before allowing a new envelope to be created.
Callback/status update delayed	Keep last known status; allow reconciliation/polling strategy where supported.
Signer declines	Reflect declined state and stop automatic completion path.
Lease changes after send	Require explicit void/replacement decision before revised lease is sent.

8. User stories and acceptance criteria

US-01 - Send a lease for electronic signature

As a leasing user, I want to send the current lease to the required residents for electronic signature so that the lease can be executed without leaving the leasing workflow.

AC-01: Given the lease and required signer data are valid, when the user sends the lease for signature, then one active signature request is created and its reference is associated with the lease.

AC-02: Given required signer data is missing or invalid, when the user attempts to send, then no signature request is created and the missing/invalid information is identified.

AC-03: Given an active signature request already exists, when the user attempts to send the same lease again, then the system prevents an unintended duplicate and directs the user to the available resend/void path.

US-02 - Replace a signature request after a lease change

As an authorized leasing user, I want to replace an active signature request when the lease materially changes so that residents do not sign an outdated document.

AC-01: Given an active request exists and the lease has materially changed, when the user initiates replacement, then the existing request must be made inactive before the revised document is sent.

AC-02: Given the previous request cannot be voided successfully, when replacement is attempted, then a new request is not silently created and the user receives an actionable error.

AC-03: When a replacement succeeds, the audit history identifies the prior request and the new request.

9. Open questions and assumptions

ID	Question / assumption	Owner	Status
OQ-01	Confirm whether signing order is required for all lease types or only selected workflows.	Product	Open
OQ-02	Confirm how long inactive/voided external references must remain visible in product history.	Product / Compliance	Open
OQ-03	Confirm whether a partially signed request may be automatically voided after a material lease change or requires explicit user confirmation.	Product / Legal	Open
A-01	Assume the existing lease-generation process remains the source of the document sent for signature.	BA	Assumption

10. Traceability snapshot

Business need	Requirement	Story / validation
Send leases without leaving leasing workflow	FR-01, FR-02, FR-03	US-01 / AC-01, AC-02
Avoid duplicate or outdated signature requests	FR-04, FR-07	US-01 / AC-03; US-02
Keep product status aligned with external service	FR-05, FR-08	Integration/status reconciliation tests
Retain completed document and history	FR-06, FR-09	Completion and audit UAT scenarios

What this sample is intended to demonstrate: integration analysis beyond the happy path - data ownership, status mapping, duplicate prevention, failure recovery, business rules, user-facing behaviour, open questions, and traceability into stories and validation.