IXC

Subscription billing rules and verification specification

A template for defining plan changes, billing, failure and cancellation as contract terms and expected results

A practical IXC resource for adoption decisions and delivery

Published 2026.09 · English edition · PDF + Excel worksheets

Using this resource

Sets the timing and amount rules of a subscription contract and verifies that invoice, payment and access states agree.

Product owners, billing engineers, finance staff and payment operations staff for B2B subscription products

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How to complete and reuse it

Read the criteria in this PDF, then fill the blank fields with your actual conditions and anything still unconfirmed. The Excel file for the same practice area has a worksheet for each resource. Keep the worked examples separate from real customer cases and confirmed quotes.

With attribution, you may quote and adapt this material for internal review and your own work. The latest files are at www.ixc.co.kr/en/assets.

Fix the contract terms and their effective period

Under the same plan name, the applicable terms can differ by sign-up date and individual contract. Record the price list, contract version, billing period and entitlement linked to one another.

Worked example: B2B monthly subscription	Fictional policy v1	Scope of application
Monthly price	Basic KRW 120,000; Pro KRW 180,000	Example calculation excluding tax
Billing period	From 00:00 on the 1st to 00:00 on the 1st of the next month	Asia/Seoul; end exclusive
Upgrade	Applies at 00:00 on the scheduled date	Additional payment approval confirmed
Downgrade	Applies from the next billing period	No current-month difference adjustment
Cancellation at expiry	Access ends at period end	Next period's charge stopped

Subscription contract rule sheet

Rule ID and version	Condition and target	Timing and handling rule	Reviewer
Worked example: B-01 v1	Monthly subscription contract S-01	Invoice on the 1st of each month	Product and finance
Worked example: B-02 v1	Basic→Pro upgrade	Confirm payment approval before it applies	Product and development

The amounts and dates in this document are worked examples of a fictional B2B subscription policy. The owners responsible for the service confirm tax, documentation and mid-period settlement terms. Check the payment provider's features and contract requirements separately. Do not enter card details, billing keys or real customer identifiers in a rule sheet meant for sharing.

Calculate plan-change amounts with their timing

Do not set the additional charge from the monthly price difference alone. Put the date the change applies, the number of days in the period, where rounding happens and how unpaid invoices are handled in the same rule.

Worked example: September 2026	Input and calculation	Expected result
Current and new monthly price	KRW 120,000 → KRW 180,000	Difference of KRW 60,000
Applicable period	September 16 to October 1	15 days remaining of 30 in total
Additional charge	60,000×15÷30	KRW 30,000
Condition	Approval confirmed before 00:00 on September 16	Switch to Pro at that time
Unpaid or response unconfirmed	Approval unconfirmed by the scheduled time	Switch held; existing terms retained

Change amount and timing specification

Rule or change ID	Input and period	Calculation and expected result	Verification and approval
Worked example: UP-0916	KRW 60,000 difference; 15/30	Additional KRW 30,000	Applied as scheduled after payment is confirmed
Mid-period downgrade			
Change while unpaid			

The fictional policy applies changes at midnight Seoul time and divides by the actual number of days in the month. Fractions of a won are discarded once, in the final calculation. If a price or date is missing, mark it as a calculation hold. If a date falls outside the period, do not calculate. If late approval misses the scheduled time, confirm the effective date and amount again, and check any late-approved amount separately before any duplicate charge.

Separate contract, invoice, payment and access states

A failed payment does not mean the contract is canceled. Confirm which payment attempt it is and which invoice it belongs to, and set the conditions for changing entitlement separately.

Worked example: renewal invoice	Invoice and payment	Contract and access	Expected handling
First charge on October 1	Unpaid; approval failed	Active; access in grace	Check the reason; decide on a retry
Retry approved on October 2	Paid; approval complete	Active; normal access	Same invoice marked as paid
Same success event redelivered	Payment already recorded	Existing state retained	Not applied twice
Previous month's success notification arrives	Event for the earlier invoice	October state retained	Applied to that period only

State transition specification

Object and current state	Confirmed event	Next state and action	Linked ID and evidence
Invoice			
Payment attempt			
Subscription contract			
Service entitlement			

Keep contract IDs, billing period IDs, invoice IDs and payment attempt IDs distinct. Apply a success response or webhook only when its target invoice, amount and currency match. If receipt records are kept apart from records of business processing, you can confirm that entitlement or a refund was not duplicated even when an event already received is processed again.

Set retries and access by failure reason

Assuming that a transaction with no response was not approved can create a duplicate charge. Query the existing transaction to confirm its state, then set the next action by the failure reason and the contract terms.

Situation under the fictional policy	Next action	Example timing	Access handling
Confirmed temporary failure	Confirm it is still unpaid, then retry	October 2 and 4 at 09:00	Grace until 00:00 on the 5th
Card expired or unusable	Payment method replacement notice	After the reason is confirmed	Contract's grace rules apply
Approval response lost	Query the original transaction; await confirmation	Until confirmed	Duplicate charge and restriction held
Still unpaid when grace ends	Final check of nonpayment	00:00 on October 5	Access restricted; contract remains active

Failure and retry decision sheet

Reason and confirmation status	Re-query and retry conditions	Notice and access handling	Owner and closing condition
Temporary failure			
Payment method replacement needed			
Unconfirmed or conflicting state			

The two retry dates and the grace period in the table are policy choices of the fictional service. An actual implementation sets them after checking the retry conditions each payment method allows and the contract. The Toss Payments billing integration guide tells the merchant to implement the billing schedule. Do not assume that issuing a billing key by itself manages plans, retries and cancellation automatically.

Schedule cancellation apart from adjustment approval

Stopping the next period's charge, ending current-period access and adjusting money already received are separate decisions. Link effective times to approval evidence and confirm refund completion in the transaction state.

Worked example: approved mid-period settlement	Confirmed condition	Expected result
Contract adjustment	Approved: access ends 00:00 September 21	10 unused days
Adjustment calculation	Pro 180,000×10÷30	KRW 60,000 adjustment
Already paid	September 120,000 + change 30,000	Total of KRW 150,000
After adjustment	150,000−60,000	Remaining paid amount of KRW 90,000
Next period	October renewal invoice canceled	No additional charge

Cancellation and adjustment check sheet

Request and effective time	Contractual decision and amount	Original transaction and processing state	Approval and reconciliation owners
Worked example: ADJ-0921	KRW 60,000 adjustment approved	Check allocation to original transactions and cancellation results	Finance approval; operations reconciliation
End-of-period cancellation			
Mid-period adjustment request			

KRW 60,000 is a settlement example the responsible owner approved under a fictional contract. Do not treat it as a statutory refund amount or as default handling for all PGs. Allocate an actual refund after checking each original transaction's refundable amount and its payment method's processing rules. Distinguish request, internal approval, provider processing and completed reconciliation, and do not cancel an item again while its result is unconfirmed.

Link rules to expected results and verification records

Attach test inputs and expected results to the rule IDs the product owner set. Confirm separately that development is complete, that the real payment methods are ready for use and that finance and operations have accepted the handover.

Subscription billing verification sheet

Rule and test condition	Expected result	Run & evidence	Verdict and owner
UP-0916; payment approval confirmed	KRW 30,000; switch on September 16	Not run	
UP-0916; approval unconfirmed	Switch held; no duplicate charge	Not run	
Duplicate renewal success event	Applied once to one invoice	Not run	
Success notification for an earlier period	Current unpaid state retained	Not run	
ADJ-0921; settlement approved	KRW 60,000 adjusted; reconciled to original transactions	Not run	
Scheduled end-of-period cancellation	No invoice for the next period	Not run	

Checking the amount formula locally does not verify a real payment approval or refund. In the test environment, check queries, state conflicts and redelivery as well; in production, separately review the contracted payment methods and keys, the schedule, customer notices and the permissions to query and refund. Stripe's proration documentation also describes unpaid invoices and adjustment handling separately, so confirm that the product's defaults match the policy you approved.

> **Scope to request from IXC**
>
> IXC provides billing builds that connect plans, contracts, invoices, retries and cancellation. Based on your current contract rules and change examples, we define the scope of the data model, integration, verification and operations handover. Identifying first where payment state and access state diverge makes the split of work among development, finance and operations concrete.

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Publication and use

Based on your plan-change, nonpayment and cancellation examples, we design the invoice, payment and access states together with the integration and verification scope.

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www.ixc.co.kr/en/services/recurring-billing

www.ixc.co.kr/en/assets/subscription-billing-specification

References

Toss Payments billing integration: contract, billing key and billing schedule (in Korean)

https://docs.tosspayments.com/guides/v2/billing/integration

Toss Payments: connecting webhooks (in Korean)

https://docs.tosspayments.com/guides/v2/webhook

Stripe Billing: Prorations

https://docs.stripe.com/billing/subscriptions/prorations

IXC Recurring Billing

https://www.ixc.co.kr/en/services/recurring-billing