

Billing Terminology

Storage Billing Modes

Storage Billing Modes determine how the billable storage quantity is calculated during a billing period.

Storage charges can be based on either:

- The number of actual Volumes stored.
- The number of storage slots used or allocated.

The selected mode determines whether billing uses accumulated daily quantities, the highest recorded quantity, or the lowest recorded quantity.

Storage Modes

Mode	Meaning for Billing
Storage	The general billing category for Volumes held in a Repository during the billing period. The selected Storage Billing Mode determines how the billable quantity is calculated.
Daily Total	The sum of the actual inventory count recorded for each day. The resulting quantity is measured in Volume-days and is normally used for per-Volume, per-day billing.
Real High-Water	The highest number of actual Volumes stored at any point during the billing period.
Real Low-Water	The lowest number of actual Volumes stored at any point during the billing period.
Slot Total	The sum of the daily storage-slot counts. The resulting quantity is measured in slot-days and is used when the Customer is charged for storage capacity.
Slot High-Water	The highest number of storage slots used or allocated at any point during the billing period.
Slot Low-Water	The lowest number of storage slots used or allocated at any point during the billing period.

Real and Slot Measurements

Real and Slot measurements use different methods to determine the billable storage quantity.

Measurement Type	Counts	Typical Use
Real	Actual tape Volumes present in the Repository.	Billing the Customer for each physical Volume stored.
Slot	Storage positions occupied, allocated or required for the Customer's inventory.	Billing the Customer for storage capacity rather than individual Volumes.

A Slot quantity may be different from the actual Volume inventory when:

- Some slots are empty but remain allocated to the Customer.

- Storage is sold in fixed blocks of slots.
- Inventory quantities are rounded up to the next storage-unit size.
- A container or storage position represents more than one Volume.
- The Customer reserves more capacity than is currently being used.

Daily Total Example

The following example shows the actual number of Volumes stored over five days.

Day	Actual Volumes
1	101
2	108
3	104
4	115
5	110

The Real Storage measurements are:

Mode	Result
Daily Total	538 Volume-days
Real High-Water	115 Volumes
Real Low-Water	101 Volumes

If storage is charged at \$0.01 per Volume per day, the Daily Total charge is:

$$538 \times \$0.01 = \$5.38$$

Real High-Water Example

Real High-Water uses the highest actual Volume count recorded during the billing period.

From the previous example:

$$\text{Real High-Water} = 115 \text{ Volumes}$$

If the High-Water quantity is applied to all five days:

$$115 \times 5 \text{ days} \times \$0.01 = \$5.75$$

The Billing Rules must define whether the High-Water value is charged once or multiplied by the number of days in the billing period.

Real Low-Water Example

Real Low-Water uses the lowest actual Volume count recorded during the billing period.

From the previous example:

Real Low-Water = 101 Volumes

If the Low-Water quantity is applied to all five days:

$101 \times 5 \text{ days} \times \$0.01 = \$5.05$

Real Low-Water may be used to:

- Apply a minimum storage charge.
- Identify the Customer's base storage usage.
- Compare minimum and maximum inventory levels.
- Support contract-specific storage calculations.

Slot Total Example

Assume storage is allocated in blocks of 10 slots. Each daily actual inventory count is rounded up to the next block of 10.

Day	Actual Volumes	Billable Slots
1	101	110
2	108	110
3	104	110
4	115	120
5	110	110

The Slot Storage measurements are:

Mode	Result
Slot Total	560 slot-days
Slot High-Water	120 slots
Slot Low-Water	110 slots

If storage is charged at \$0.01 per slot per day, the Slot Total charge is:

$560 \times \$0.01 = \5.60

Slot High-Water Example

Slot High-Water uses the highest slot quantity recorded during the billing period.

From the previous example:

Slot High-Water = 120 slots

If the Slot High-Water quantity is applied to all five days:

$$120 \times 5 \text{ days} \times \$0.01 = \$6.00$$

Slot High-Water may be used when the Customer is charged for the maximum storage capacity used during the billing period.

Slot Low-Water Example

Slot Low-Water uses the lowest slot quantity recorded during the billing period.

From the previous example:

$$\text{Slot Low-Water} = 110 \text{ slots}$$

If the Slot Low-Water quantity is applied to all five days:

$$110 \times 5 \text{ days} \times \$0.01 = \$5.50$$

Slot Low-Water may be used when the Customer is charged for a minimum level of allocated or reserved storage capacity.

Comparison

Mode	Measurement	Result Type	Typical Billing Use
Daily Total	Sum of daily actual Volume counts.	Volume-days	Per-Volume, per-day storage billing.
Real High-Water	Highest actual inventory count.	Volumes	Maximum actual storage usage.
Real Low-Water	Lowest actual inventory count.	Volumes	Minimum actual storage usage.
Slot Total	Sum of daily slot quantities.	Slot-days	Per-slot, per-day capacity billing.
Slot High-Water	Highest slot quantity.	Slots	Maximum storage capacity used or allocated.
Slot Low-Water	Lowest slot quantity.	Slots	Minimum storage capacity used or allocated.

Billing Rule Requirements

The Billing Rules should clearly define:

- Which Storage Billing Mode applies.
- Whether storage is measured using Volumes or slots.
- How often inventory is sampled.
- Whether slot quantities are occupied, allocated or rounded quantities.
- The size of any slot block or rounding unit.
- The price per Volume or slot.
- Whether the price is a daily or period rate.

- Whether High-Water and Low-Water quantities are charged once or multiplied by the number of days.
- Whether minimum charges or exclusions apply.



The meaning of a slot must be agreed in the Customer Billing Profile. Occupied slots, allocated slots and rounded storage capacity may produce different invoice totals.

Inventory

Term	Description
Inventory	The number of items held at a particular point in time, usually the current inventory or the inventory recorded on a specified date.
Total inventory	The accumulated inventory across the billing period. For daily billing, this is normally the sum of each day's inventory count and represents item-days rather than a single physical count.
Inventory high-water	The highest inventory count recorded at any point during the billing period. This can be used when billing the customer for their maximum storage usage.
Inventory low-water	The lowest inventory count recorded at any point during the billing period. This shows the minimum storage level and may be used for minimum-usage billing or analysis.

Example

Suppose a customer's inventory over five days is:

Day	Inventory count
1	100
2	110
3	105
4	120
5	115

On day 5, the Inventory is 115 Volumes.

Total Inventory, the sum of the number of Volumes over the 5 days, 550 Volume days. Billing on the total inventory number at \$0.05 per Volume per day or $550 * 0.05 = \$27.50$

Inventory High-water, the highest Volume daily count, 120 Volumes. Billing off the high-water mark at \$0.05 per Volume per day or $5 \text{ days} * 120 * 0.05 = \30.00

Inventory Low-water, the lowest Volume daily count, 105 Volumes. Inventory low-water mark is usually used to assess the minimum amount of storage a Customer uses over a certain time frame.

The important distinction is that inventory, high-water, and low-water are point-in-time counts, while total inventory usually accumulates counts across time.

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