Relational Database



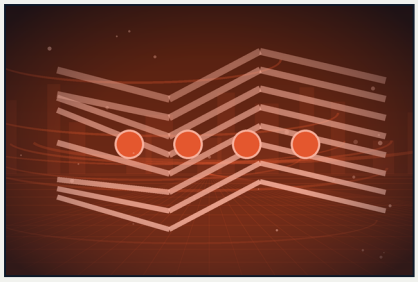
Basic Source C

Engage: add {B}.

PPL1-001 · C
PIPELINE · SET 1

→ {B}

Event Stream



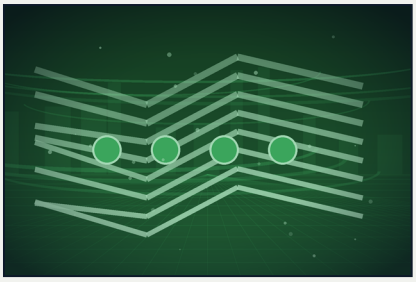
Basic Source C

Engage: add {S}.

PPL1-002 · C
PIPELINE · SET 1

→ {S}

Log Bucket



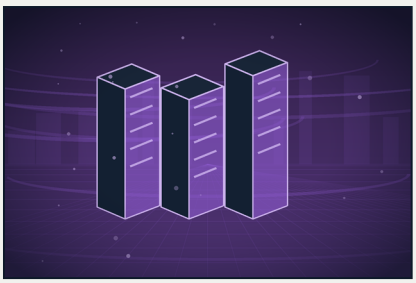
Basic Source C

Engage: add {J}.

PPL1-003 · C
PIPELINE · SET 1

→ {J}

Document Archive



Basic Source C

Engage: add {U}.

PPL1-004 · C
PIPELINE · SET 1

→ {U}

Metadata Catalog



Basic Source C

Engage: add {G}.

PPL1-005 · C
PIPELINE · SET 1

→ {G}

Flat File Share



Basic Source C

Engage: add {1}.

PPL1-006 · C
PIPELINE · SET 1

→ {1}

Data Warehouse



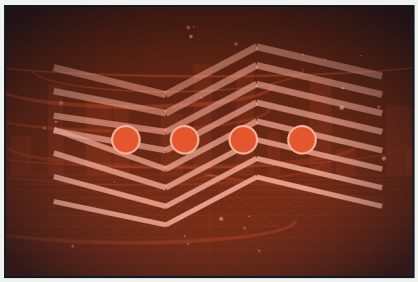
Source U

Enters engaged. Engage: add {B}{B}.

PPL1-007 · U
PIPELINE · SET 1

→ {B}{B}

Message Broker



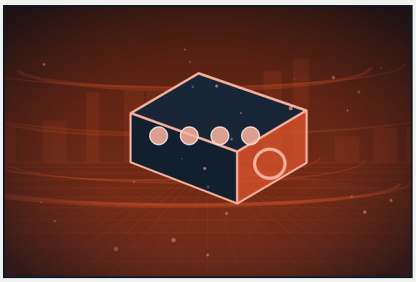
Source U

Engage: add {S}. Once per turn, when you run a Stream Query, ready Message Broker.

PPL1-008 · U
PIPELINE · SET 1

→ {S}

IoT Sensor Mesh



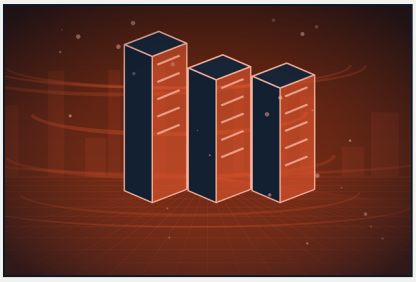
Source C

Enters with 3 Signal counters. Engage: add {S}, or remove a Signal counter to add {S}{S} instead.

PPL1-009 · C
PIPELINE · SET 1

→ {S}

Clickstream Feed



Source C

Engage: add {S}. Opponents' Constraints cost {1} more to attach to this.

PPL1-010 · C
PIPELINE · SET 1

→ {S}

Change Data Capture



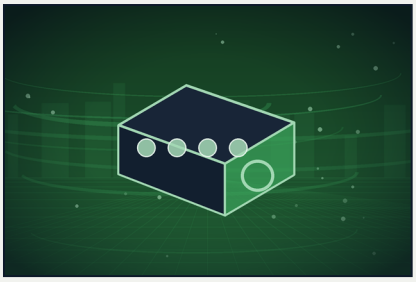
Dual Source C

Enters engaged. Engage: add {B} or {S}.

PPL1-011 · C
PIPELINE · SET 1

→ {B} or {S}

API Endpoint



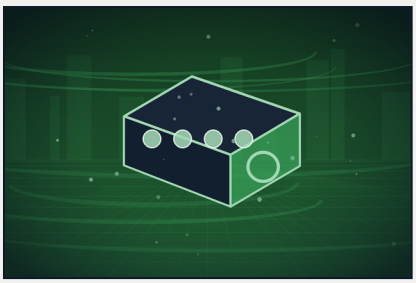
Source C

Engage: add {J}. Pay {1}: add one more {J} (once per turn).

PPL1-012 · C
PIPELINE · SET 1

→ {J}

Web Scraper



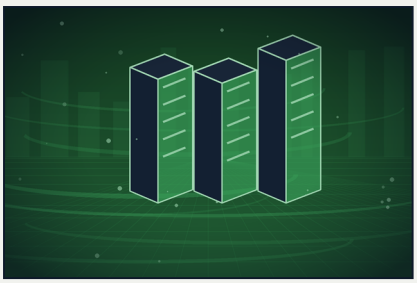
Source C

When it enters, draw a card, then Archive a card. Engage: add {J}.

PPL1-013 · C
PIPELINE · SET 1

→ {J}

Application Logs



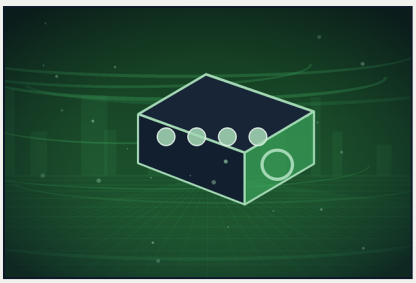
Source U

Engage: add {J}. Whenever a Query of yours Fails, score 1 QP.

PPL1-014 · U
PIPELINE · SET 1

→ {J}

JSON Lake



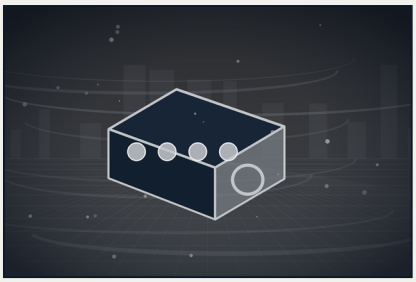
Dual Source C

Enters engaged. Engage: add {J} or {U}.

PPL1-015 · C
PIPELINE · SET 1

→ {J} or {U}

Object Storage Bucket



Source C

Engage: add {1}. Pay {1}, Engage: add one Data of any type.

PPL1-016 · C
PIPELINE · SET 1

→ {1}

Data Lake



Source R

Enters engaged. Engage: add one Data of any type.

PPL1-017 · R
PIPELINE · SET 1

→ any

The Lakehouse



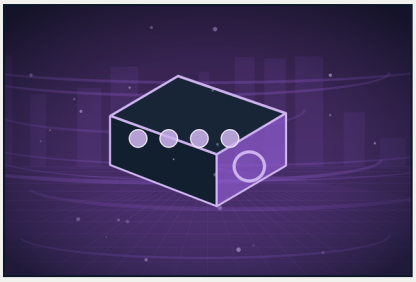
Source L

Engage: add one Data of any type. Queries paid with Data from The Lakehouse get -1 Complexity.

PPL1-018 · L
PIPELINE · SET 1

→ any

Vector Database



Source U

Engage: add {U}. Your Similarity Queries cost {1} less.

PPL1-019 · U
PIPELINE · SET 1

→ {U}

PDF Archive



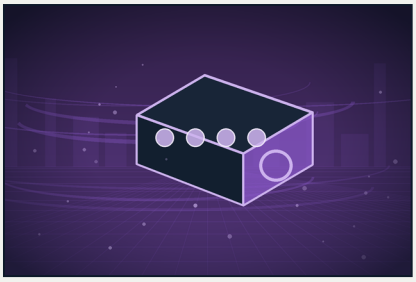
Source C

Enters engaged. When it enters, look at the top 3 cards of your Backlog and put them back in any order. Engage: add {U}.

PPL1-020 · C
PIPELINE · SET 1

→ {U}

Image Repository



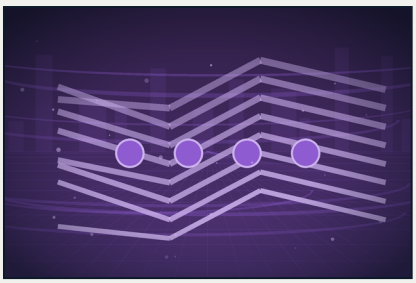
Source C

Engage: add {U}. Engage, Archive a card from your hand: add {U}{U}.

PPL1-021 · C
PIPELINE · SET 1

→ {U}

Audio Transcripts



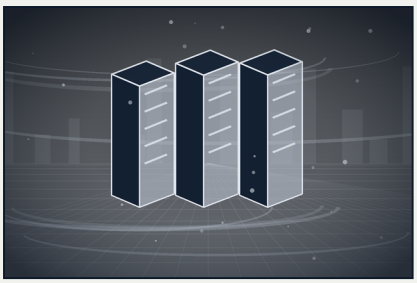
Source U

Enters engaged. When it enters, draw a card. Engage: add {U}.

PPL1-022 · U
PIPELINE · SET 1

→ {U}

Master Data Registry



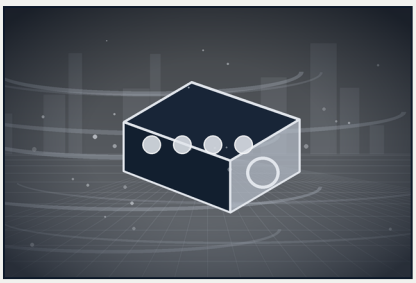
Source R

Engage: add {G}. Your Sources can't be Disconnected.

PPL1-023 · R
PIPELINE · SET 1

→ {G}

Data Contract



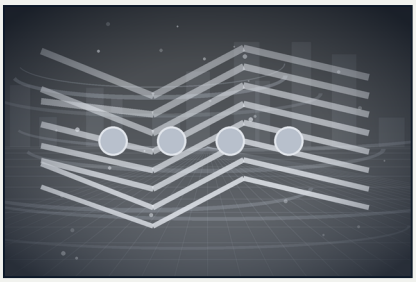
Source U

Engage: add {G}. Your Queries with {G} in their cost can't be Throttled.

PPL1-024 · U
PIPELINE · SET 1

→ {G}

Audit Log



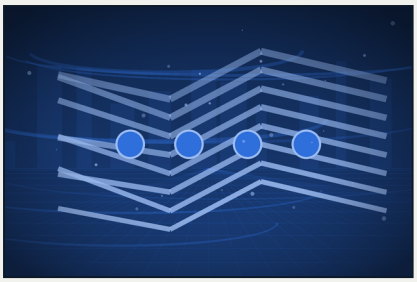
Source C

Engage: add {G}. Whenever an opponent plays a Bottleneck, look at the top card of your Backlog; you may Archive it.

PPL1-025 · C
PIPELINE · SET 1

→ {G}

Lineage Graph



Dual Source C

Enters engaged. Engage: add {B} or {G}.

PPL1-026 · C
PIPELINE · SET 1

→ {B} or {G}

Feature Store



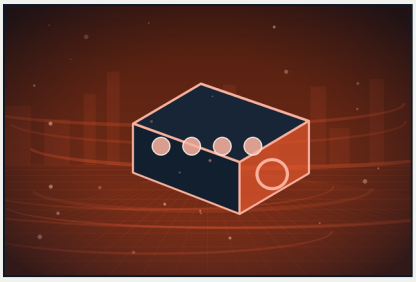
Dual Source C

Enters engaged. Engage: add {B} or {U}.

PPL1-027 · C
PIPELINE · SET 1

→ {B} or {U}

Event Topic Log



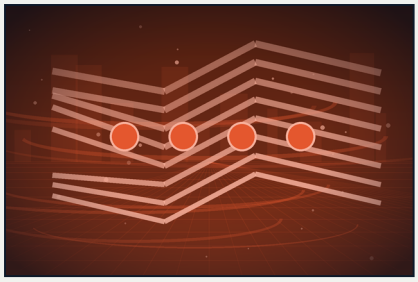
Dual Source C

Enters engaged. Engage: add {S} or {J}.

PPL1-028 · C
PIPELINE · SET 1

→ {S} or {J}

Governed Stream



Dual Source C

Enters engaged. Engage: add {S} or {G}.

PPL1-029 · C
PIPELINE · SET 1

→ {S} or {G}

Variant Table



Dual Source C

Enters engaged. Engage: add {B} or {J}.

PPL1-030 · C
PIPELINE · SET 1

→ {B} or {J}

Live Transcript Feed



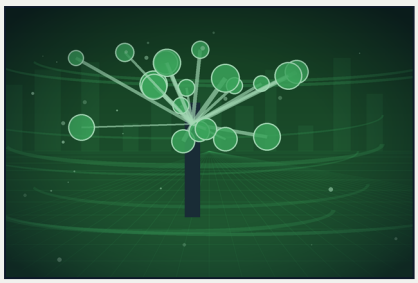
Dual Source C

Enters engaged. Engage: add {S} or {U}.

PPL1-031 · C
PIPELINE · SET 1

→ {S} or {U}

Schema Registry



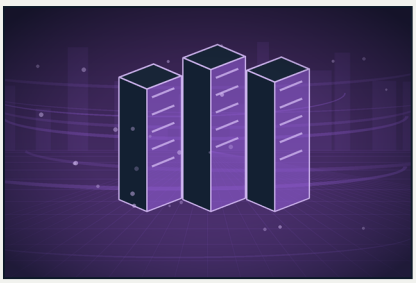
Dual Source C

Enters engaged. Engage: add {J} or {G}.

PPL1-032 · C
PIPELINE · SET 1

→ {J} or {G}

Governed Knowledge Base



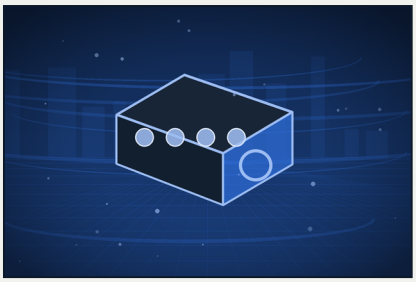
Dual Source C

Enters engaged. Engage: add {U} or {G}.

PPL1-033 · C
PIPELINE · SET 1

→ {U} or {G}

Legacy Mainframe



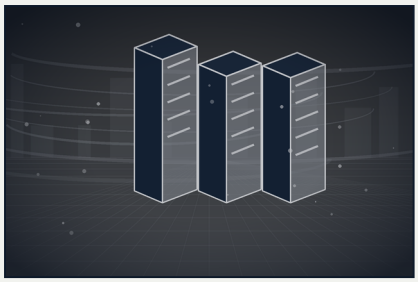
Source R

Engage: add {B}{B}{B}. It doesn't ready during your Refresh unless you pay {1}.

PPL1-034 · R
PIPELINE · SET 1

→ {B}{B}{B}

Spreadsheet on a Shared Drive



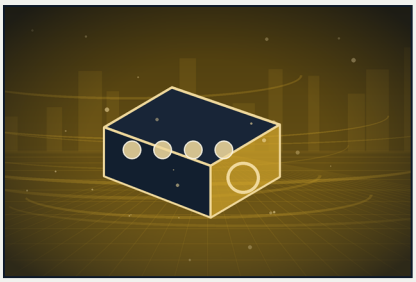
Source C

Engage: add one Data of any type. That Data can't pay for Queries with Complexity 4 or more.

PPL1-035 · C
PIPELINE · SET 1

→ any

Data Marketplace



Source U

Pay {2}, Engage: add two Data of any one type.

PPL1-036 · U
PIPELINE · SET 1

→ 2 of one type

Synthetic Data Generator



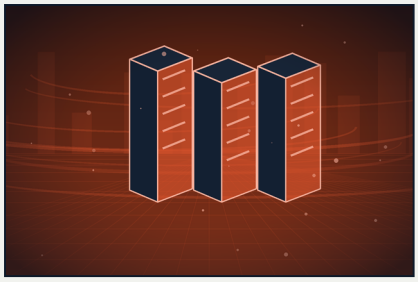
Source R

Engage: add {U}. Pay {U}{U}, Engage: create a Synthetic Data token, a Source with "Engage, Archive this: add one Data of any type."

PPL1-037 · R
PIPELINE · SET 1

→ {U}

Edge Device Fleet



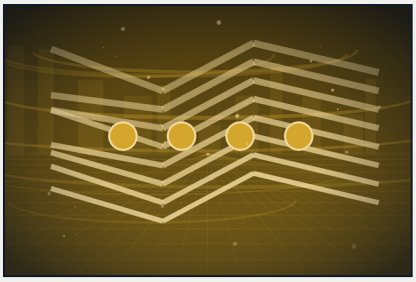
Source U

Engage: add {S}. Can't be Disconnected by cards that cost 2 or less.

PPL1-038 · U
PIPELINE · SET 1

→ {S}

Data Mesh Domain



Source L

Engage: add one Data of a type you already produced this turn. Your other Sources can't be targeted by Constraints.

PPL1-039 · L
PIPELINE · SET 1

→ any (see text)

Zero-Copy Share



Source R

Engage: add {1}, or add one Data of a type an opponent's Source can produce.

PPL1-040 · R
PIPELINE · SET 1

→ {1} or special

Single-Node Server 2



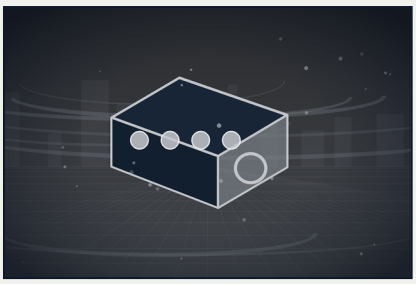
Engine C

(No ability.)

PPL1-041 · C
PIPELINE · SET 1

3 / 1

Laptop Notebook 1



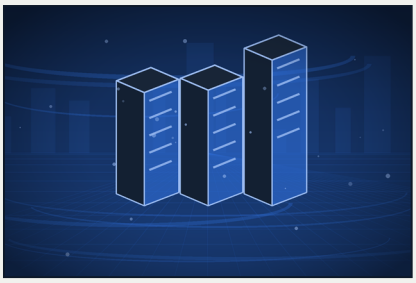
Engine C

Can't run Long-Running Queries.

PPL1-042 · C
PIPELINE · SET 1

2 / 1

Batch Cluster 2 B



Engine C

(No ability.)

PPL1-043 · C
PIPELINE · SET 1

5 / 1

Cloud Data Warehouse 3 B B



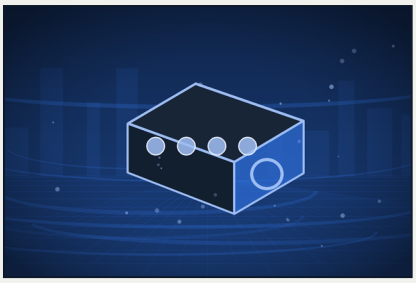
Engine R

Pay {2}: +2 Compute until end of turn.

PPL1-044 · R
PIPELINE · SET 1

6 / 2

MPP Appliance 4 B



Engine U

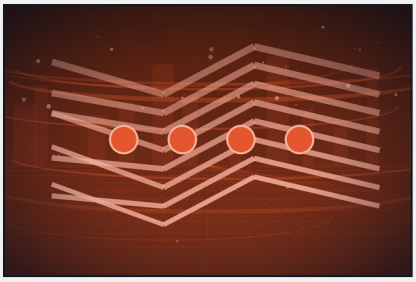
Is Offline the turn it's deployed.

PPL1-045 · U
PIPELINE · SET 1

7 / 1

Stream Processor

1 S



Engine C

(No ability.)

PPL1-046 · C
PIPELINE · SET 1

3 / 2

Micro-Batch Engine

2 S



Engine U

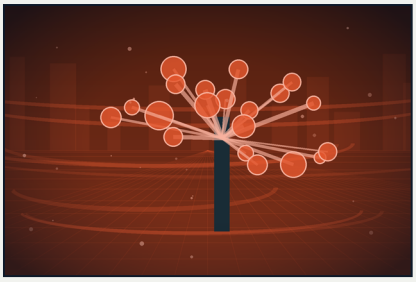
Long-Running Queries here lose 2 Progress counters each Refresh instead of 1.

PPL1-047 · U
PIPELINE · SET 1

4 / 1

Event Router

S



Engine C

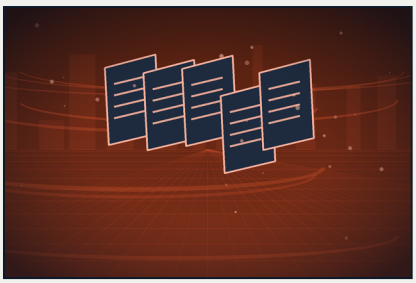
Can only run Queries with Complexity 1.

PPL1-048 · C
PIPELINE · SET 1

1 / 3

Real-Time OLAP Store

2 S S



Engine R

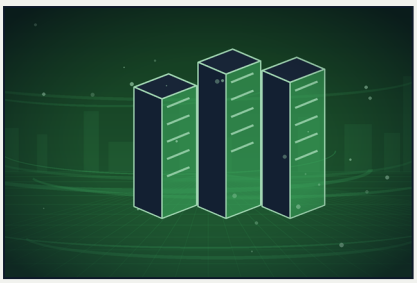
Instant Queries run here score +1 QP.

PPL1-049 · R
PIPELINE · SET 1

5 / 2

Log Search Cluster

2 J



Engine C

Queries with {J} in their cost cost {1} less here.

PPL1-050 · C
PIPELINE · SET 1

4 / 1

Document DB Engine

1 J



Engine C

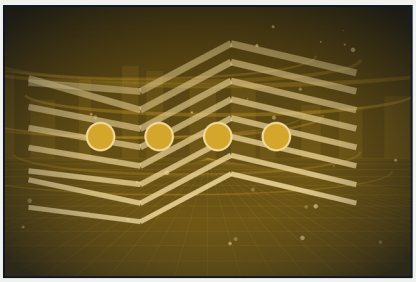
(No ability.)

PPL1-051 · C
PIPELINE · SET 1

3 / 1

Distributed SQL Engine

2 B J



Engine R

Federated: when you run a Query here, you may pay one of its colored pips with Data of any type.

PPL1-052 · R
PIPELINE · SET 1

5 / 2

Vector Search Engine

1 U



Engine C

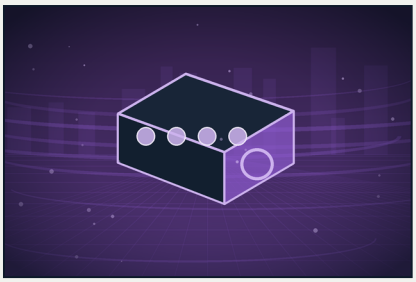
Similarity Queries run here score +1 QP.

PPL1-053 · C
PIPELINE · SET 1

3 / 1

GPU Inference Cluster

3 U U



Engine R

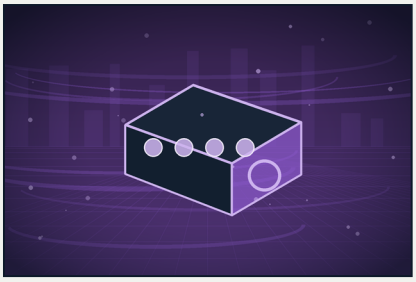
At the start of your turn, pay {U} or this Engine is Offline this turn.

PPL1-054 · R
PIPELINE · SET 1

6 / 1

RAG Orchestrator

2 U



Engine U

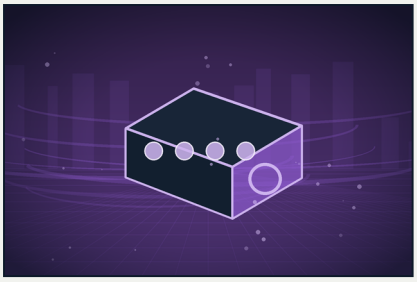
Whenever a Query resolves here, draw a card.

PPL1-055 · U
PIPELINE · SET 1

4 / 1

AI Agent

2 U U



Engine L

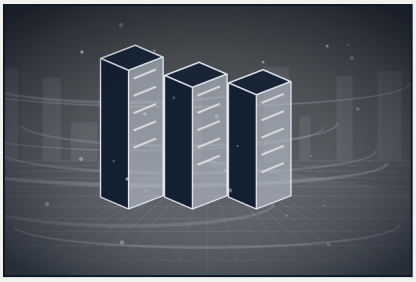
Once per turn, reveal the top card of your Backlog. If it's a Query, you may run it here by paying its cost; otherwise put it on the bottom.

PPL1-056 · L
PIPELINE · SET 1

4 / 2

Policy Engine

1 G



Engine U

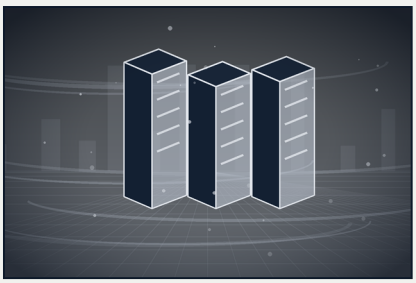
Your other Engines can't be targeted by Incidents that cost 2 or less.

PPL1-057 · U
PIPELINE · SET 1

2 / 1

Semantic Layer

2 G



Engine U

Queries run here can't be Failed by Schema Drift or Deprecated API.

PPL1-058 · U
PIPELINE · SET 1

3 / 2

Governed Query Gateway

2 G G



Engine R

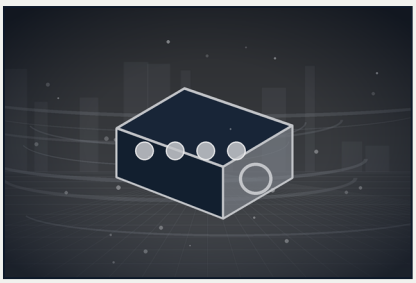
At the start of each opponent's turn, they pay {1} for each Constraint they have on your cards or Archive that Constraint.

PPL1-059 · R
PIPELINE · SET 1

4 / 2

Serverless Query Service

3



Engine U

Each Query run here costs {1} more. Can't be Throttled.

PPL1-060 · U
PIPELINE · SET 1

3 / 2

Autoscaling Cluster

4



Engine R

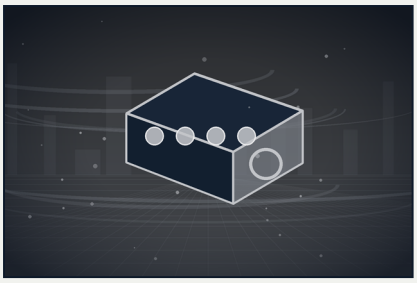
Pay {2}: +1 Concurrency until end of turn.

PPL1-061 · R
PIPELINE · SET 1

4 / 1

Spot Instance Fleet

1



Engine C

Any opponent may pay {2} at any time to Archive this Engine.

PPL1-062 · C
PIPELINE · SET 1

4 / 1

In-Memory Cache Engine

2



Engine U

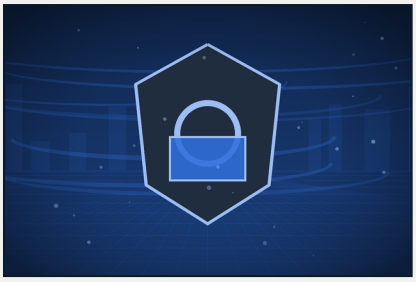
Queries with the same name as a card in your Archive cost {2} less here.

PPL1-063 · U
PIPELINE · SET 1

2 / 2

Columnar Execution Engine

1 B B



Engine U

(No ability.)

PPL1-064 · U
PIPELINE · SET 1

4 / 2

Embedded Analytics DB

B J



Engine C

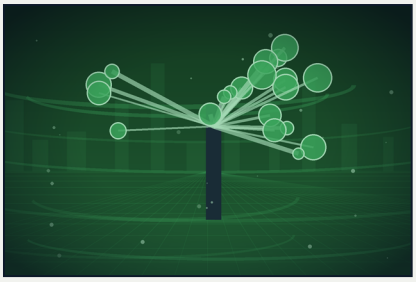
Instant: you may deploy this Engine at any time.

PPL1-065 · C
PIPELINE · SET 1

3 / 1

Graph Database Engine

2 J J



Engine U

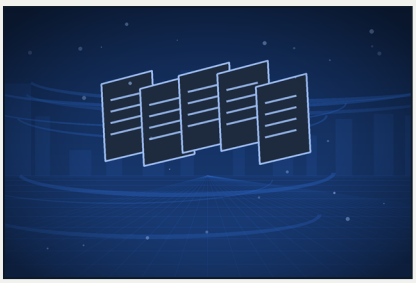
Join Queries run here get -1 Complexity.

PPL1-066 · U
PIPELINE · SET 1

4 / 2

Notebook Cluster

1 B U



Engine C

(No ability.)

PPL1-067 · C
PIPELINE · SET 1

3 / 2

Edge Compute Node

S G



Engine C

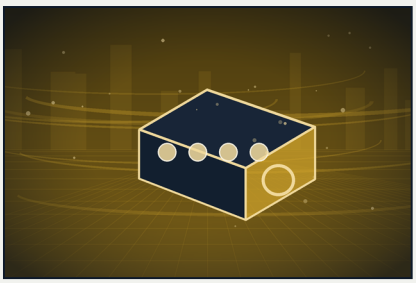
Can't be Throttled.

PPL1-068 · C
PIPELINE · SET 1

2 / 2

Federated Mesh Engine

1 B S J



Engine R

(No ability.)

PPL1-069 · R
PIPELINE · SET 1

5 / 3

Lakehouse Engine

2 B G U



Engine L

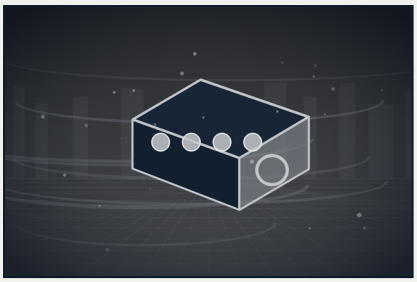
Queries run here get -1 Complexity and can't be Failed by Incidents.

PPL1-070 · L
PIPELINE · SET 1

6 / 3

SELECT 1

1



Query — Health Check C

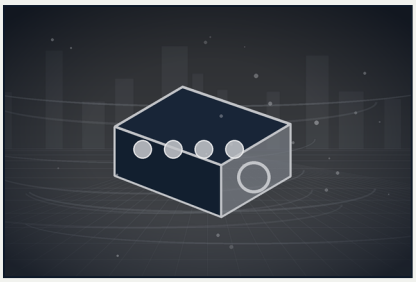
When it resolves, draw a card.

PPL1-071 · C
PIPELINE · SET 1

C1 · 1 QP

Row Count

1



Query — Aggregation C

+1 QP if an opponent's Query Failed this turn.

PPL1-072 · C
PIPELINE · SET 1

C1 · 1 QP

Ad-Hoc Analysis

2



Query — Report C

(No ability.)

PPL1-073 · C
PIPELINE · SET 1

C2 · 2 QP

Executive Dashboard Refresh

3



Query — Report R

Recurring.

PPL1-074 · R
PIPELINE · SET 1

C3 · 3 QP

Copy-Paste Query

2



Query — Report U

X is the QP of the last Query you scored this game, minus 1.

PPL1-075 · U
PIPELINE · SET 1

C2 · X QP

Quarterly Board Report

4



Query — Report U

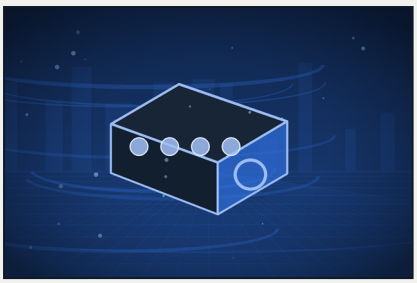
Long-Running 2.

PPL1-076 · U
PIPELINE · SET 1

C5 · 6 QP

Daily Sales Rollup

1 B



Query — Aggregation C

(No ability.)

PPL1-077 · C
PIPELINE · SET 1

C2 · 2 QP

GROUP BY Region

B



Query — Aggregation C

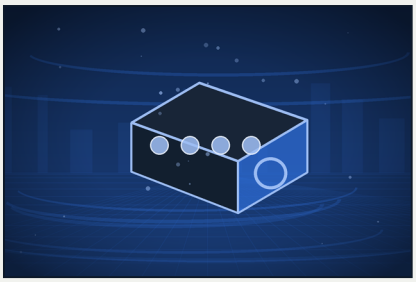
+1 QP if you control 2 or more Batch Sources.

PPL1-078 · C
PIPELINE · SET 1

C1 · 1 QP

Nightly ETL Load

2 B



Query — Transformation C

Long-Running 1.

PPL1-079 · C
PIPELINE · SET 1

C3 · 4 QP

Full Table Scan

B B



Query — Aggregation C

Ignores Partition Skew.

PPL1-080 · C
PIPELINE · SET 1

C4 · 3 QP

Star Schema Rollup

1 B B



Query — Aggregation U

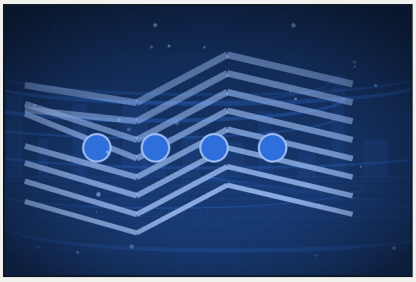
(No ability.)

PPL1-081 · U
PIPELINE · SET 1

C3 · 4 QP

Year-over-Year Report

2 B B



Query — Report U

(No ability.)

PPL1-082 · U
PIPELINE · SET 1

C4 · 5 QP

Backfill Job

3 B



Query — Transformation R

Long-Running 3.

PPL1-083 · R
PIPELINE · SET 1

C4 · 6 QP

Materialized View Build

2 B



Query — Transformation U

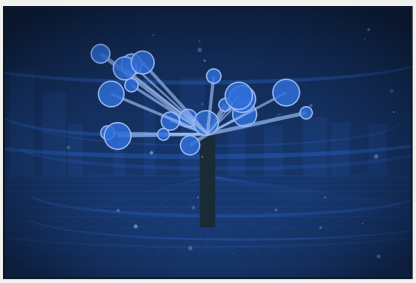
When it resolves, the next Query you run this game costs {2} less.

PPL1-084 · U
PIPELINE · SET 1

C3 · 2 QP

Slowly Changing Dimension Merge

1 B B



Query — Transformation C

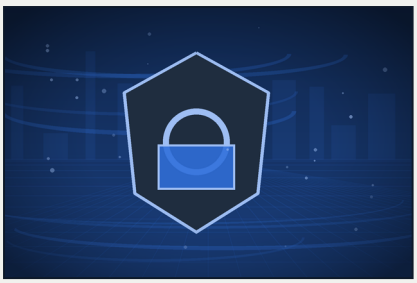
When it resolves, remove 1 Tech Debt from yourself.

PPL1-085 · C
PIPELINE · SET 1

C3 · 3 QP

Petabyte Aggregation

4 B B



Query — Aggregation R

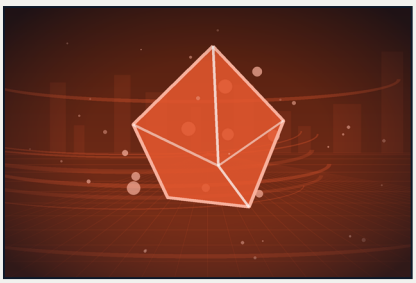
Long-Running 2.

PPL1-086 · R
PIPELINE · SET 1

C7 · 9 QP

Tumbling Window Count

S



Query — Window C

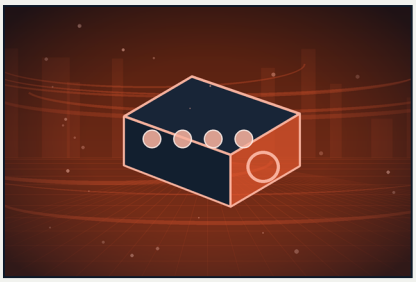
Instant.

PPL1-087 · C
PIPELINE · SET 1

C1 · 1 QP

Real-Time Fraud Check

1 S



Query — Window U

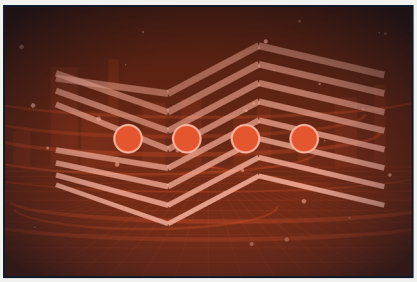
Instant. +2 QP if run during an opponent's turn.

PPL1-088 · U
PIPELINE · SET 1

C2 · 2 QP

Sliding Window Average

S S



Query — Window C

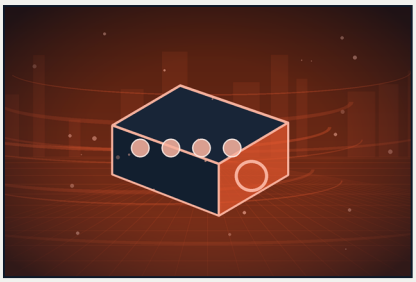
(No ability.)

PPL1-089 · C
PIPELINE · SET 1

C2 · 3 QP

Live Leaderboard

1 S



Query — Aggregation U

Recurring.

PPL1-090 · U
PIPELINE · SET 1

C2 · 1 QP

Anomaly Alert

S



Query — Window C

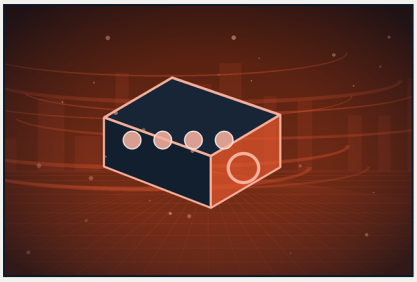
Instant. When it resolves, look at an opponent's hand.

PPL1-091 · C
PIPELINE · SET 1

C1 · 1 QP

Session Stitching

2 S



Query — Transformation C

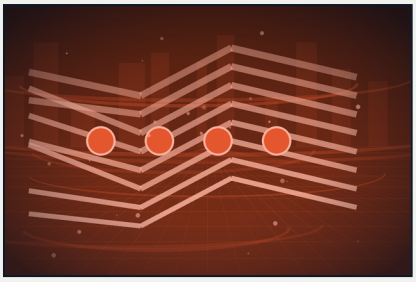
(No ability.)

PPL1-092 · C
PIPELINE · SET 1

C3 · 3 QP

Event Correlation

1 S S



Query — Window U

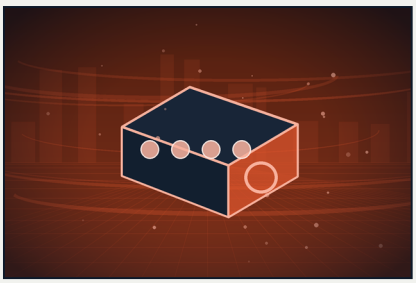
(No ability.)

PPL1-093 · U
PIPELINE · SET 1

C4 · 5 QP

Exactly-Once Delivery

2 S S



Query — Transformation R

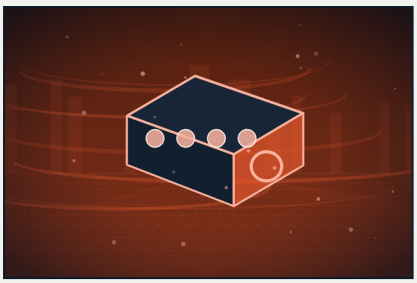
Can't Fail.

PPL1-094 · R
PIPELINE · SET 1

C3 · 4 QP

Late Arrival Handler

1 S



Query — Window U

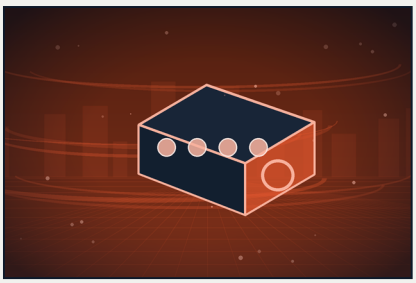
Instant. Run only if a Query of yours Failed this turn. When it resolves, return that Query to your hand and remove the Tech Debt it gave you.

PPL1-095 · U
PIPELINE · SET 1

C2 · 2 QP

Firehose Ingest

X S



Query — Transformation R

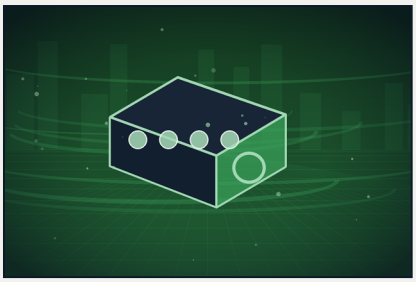
X is the extra Data you pay.

PPL1-096 · R
PIPELINE · SET 1

CX · X+1 QP

Parse JSON Blob

J



Query — Transformation C

(No ability.)

PPL1-097 · C
PIPELINE · SET 1

C1 · 1 QP

Log Grep

1 J



Query — Filter C

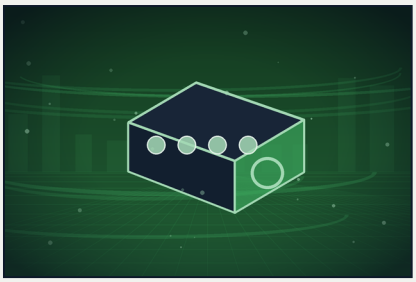
When it resolves, reveal the top card of an opponent's Backlog; you may put it on the bottom.

PPL1-098 · C
PIPELINE · SET 1

C2 · 2 QP

Error Rate Report

1 J



Query — Report U

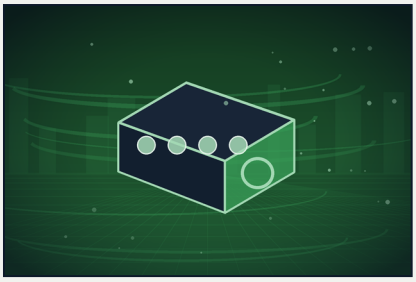
+1 QP for each Bottleneck in opponents' Archives (max +3).

PPL1-099 · U
PIPELINE · SET 1

C2 · 2 QP

Flatten Nested Arrays

J J



Query — Transformation C

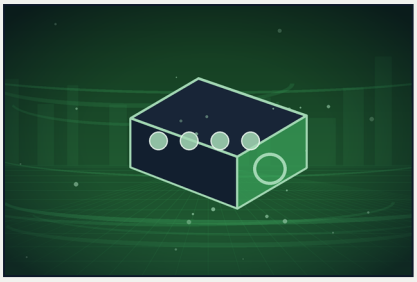
(No ability.)

PPL1-100 · C
PIPELINE · SET 1

C3 · 3 QP

Schema Inference

2 J



Query — Transformation C

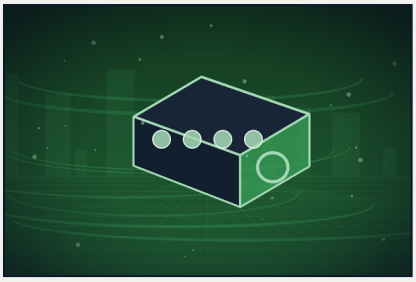
When it resolves, your next Query this turn can't be Failed by Schema Drift or Deprecated API.

PPL1-101 · C
PIPELINE · SET 1

C2 · 2 QP

Graph Traversal

2 J J



Query — Filter U

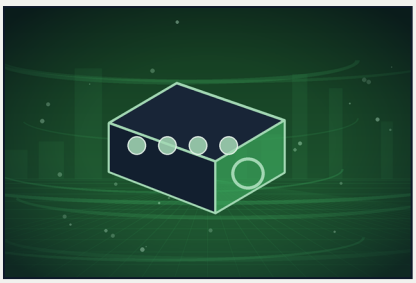
(No ability.)

PPL1-102 · U
PIPELINE · SET 1

C4 · 5 QP

Root Cause Analysis

1 J J



Query — Report R

When it resolves, Archive one Constraint attached to a card you control.

PPL1-103 · R
PIPELINE · SET 1

C3 · 3 QP

API Usage Billing

3 J



Query — Aggregation C

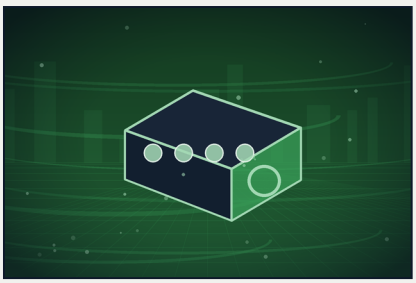
(No ability.)

PPL1-104 · C
PIPELINE · SET 1

C3 · 4 QP

Log Retention Sweep

1 J



Query — Transformation U

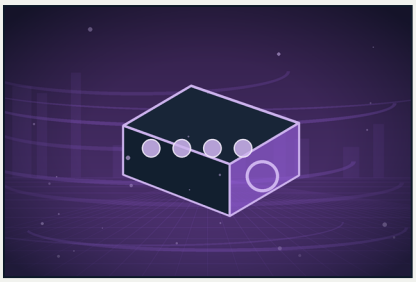
When it resolves, remove up to 2 Tech Debt from yourself.

PPL1-105 · U
PIPELINE · SET 1

C2 · 1 QP

Semantic Search

U



Query — Similarity C

(No ability.)

PPL1-106 · C
PIPELINE · SET 1

C1 · 1 QP

Document Summarization

1 U



Query — Report C

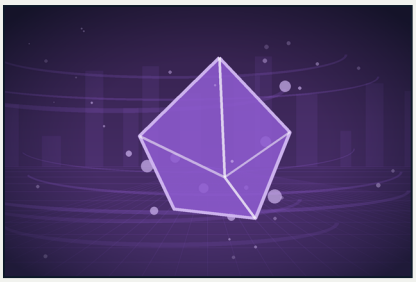
When it resolves, draw a card.

PPL1-107 · C
PIPELINE · SET 1

C2 · 2 QP

Embedding Generation

2 U



Query — Transformation C

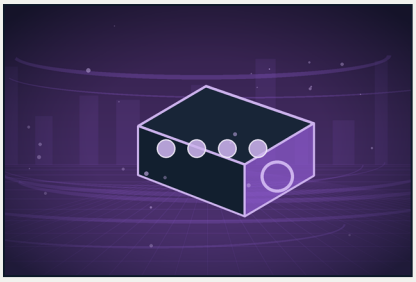
When it resolves, your Similarity Queries score +1 QP until end of turn.

PPL1-108 · C
PIPELINE · SET 1

C3 · 2 QP

Image Classification

1 U U



Query — Aggregation U

(No ability.)

PPL1-109 · U
PIPELINE · SET 1

C3 · 4 QP

RAG Answer

2 U



Query — Similarity R

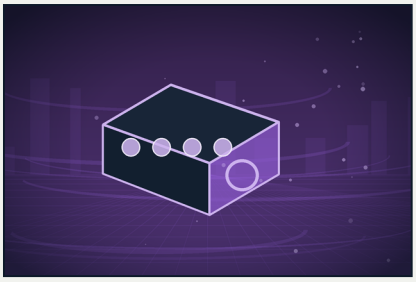
When it resolves, return a Query from your Archive to your hand.

PPL1-110 · R
PIPELINE · SET 1

C3 · 3 QP

Sentiment Analysis

U U



Query — Aggregation C

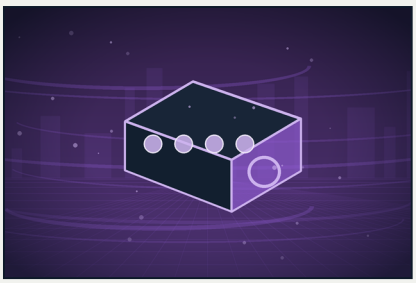
(No ability.)

PPL1-111 · C
PIPELINE · SET 1

C2 · 3 QP

Hallucination Check

U



Query — Similarity U

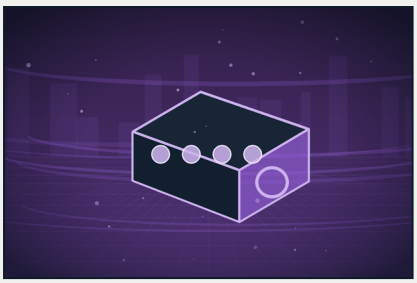
Instant. When it resolves, Cancel target Incident that targets a Similarity Query.

PPL1-112 · U
PIPELINE · SET 1

C1 · 1 QP

Fine-Tune Run

3 U U



Query — Transformation R

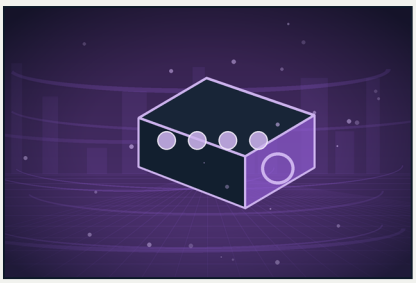
Long-Running 2.

PPL1-113 · R
PIPELINE · SET 1

C6 · 8 QP

Agentic Workflow

2 U U



Query — Transformation L

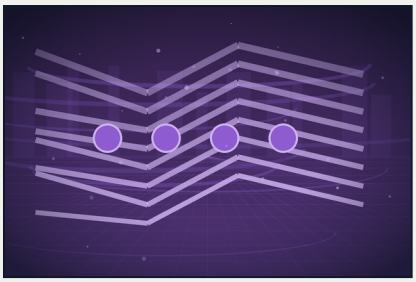
When it resolves, you may run a Query with Complexity 2 or less from your hand on the same Engine without paying its cost.

PPL1-114 · L
PIPELINE · SET 1

C4 · 4 QP

Transcript Search

1 U



Query — Similarity C

(No ability.)

PPL1-115 · C
PIPELINE · SET 1

C2 · 2 QP

Access Audit

G



Query — Report C

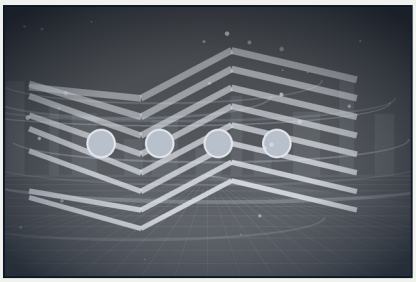
When it resolves, Archive one Constraint with cost 1 or less attached to a card you control.

PPL1-116 · C
PIPELINE · SET 1

C1 · 1 QP

Data Quality Check

1 G



Query — Health Check C

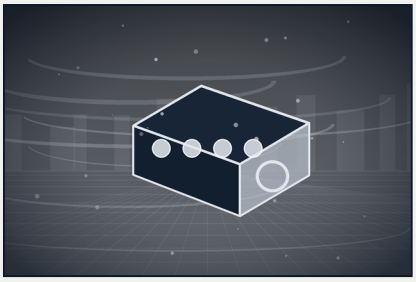
When it resolves, your next Query this turn can't Fail.

PPL1-117 · C
PIPELINE · SET 1

C2 · 2 QP

PII Masking

1 G



Query — Transformation U

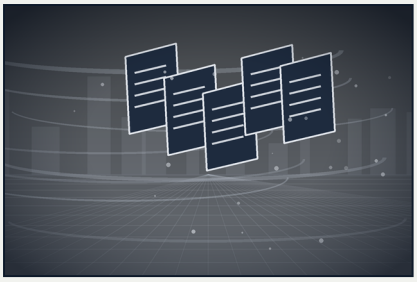
Can't be targeted by Incidents.

PPL1-118 · U
PIPELINE · SET 1

C2 · 2 QP

Compliance Report

2 G G



Query — Report U

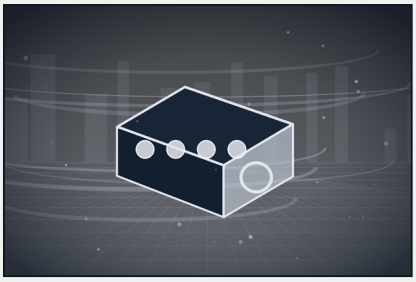
(No ability.)

PPL1-119 · U
PIPELINE · SET 1

C3 · 5 QP

Lineage Trace

2 G



Query — Report R

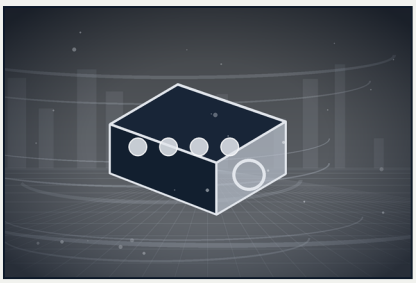
When it resolves, look at an opponent's hand and choose a Bottleneck there; they Archive it.

PPL1-120 · R
PIPELINE · SET 1

C2 · 2 QP

Certified Metric

1 G



Query — Aggregation C

+2 QP if run on a Governance Engine.

PPL1-121 · C
PIPELINE · SET 1

C2 · 2 QP

Regulatory Filing

3 G G



Query — Report R

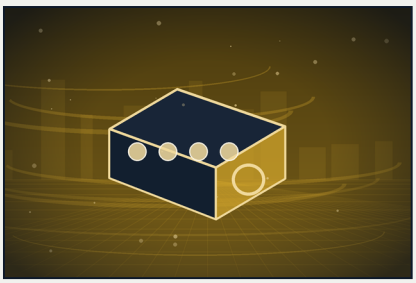
Long-Running 1.

PPL1-122 · R
PIPELINE · SET 1

C5 · 7 QP

Customer 360 View

1 B J U



Query — Join R

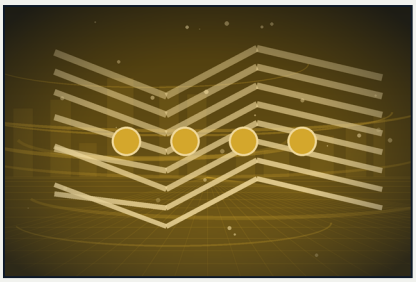
(No ability.)

PPL1-123 · R
PIPELINE · SET 1

C4 · 7 QP

Clickstream Funnel

1 S J



Query — Join U

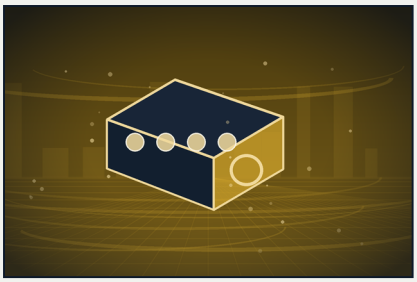
(No ability.)

PPL1-124 · U
PIPELINE · SET 1

C3 · 4 QP

Churn Prediction

1 B U



Query — Join U

(No ability.)

PPL1-125 · U
PIPELINE · SET 1

C4 · 5 QP

Real-Time Personalization

S U



Query — Join U

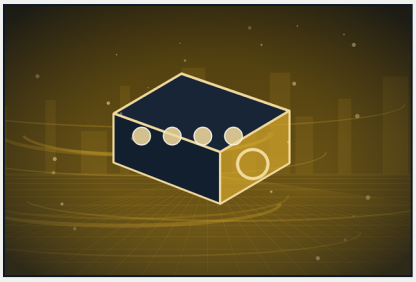
Instant.

PPL1-126 · U
PIPELINE · SET 1

C3 · 4 QP

Supply Chain Optimizer

2 B S



Query — Join U

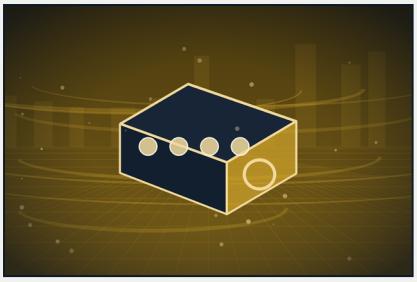
(No ability.)

PPL1-127 · U
PIPELINE · SET 1

C5 · 6 QP

Governed AI Answer

1 G U



Query — Join R

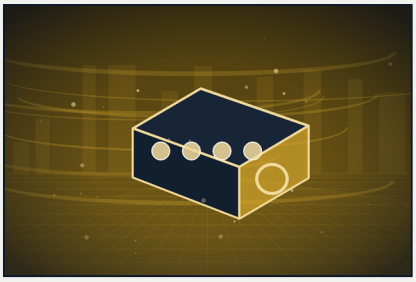
Can't Fail.

PPL1-128 · R
PIPELINE · SET 1

C3 · 4 QP

Cross-Region Federation

B S J U G



Query — Join L

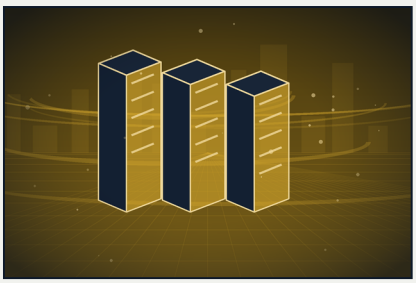
(No ability.)

PPL1-129 · L
PIPELINE · SET 1

C5 · 12 QP

The Golden Query

2 B G



Query — Join L

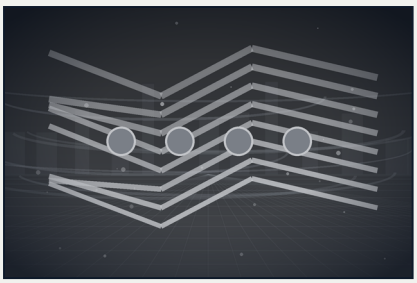
When it resolves, your Queries score +1 QP for the rest of the game.

PPL1-130 · L
PIPELINE · SET 1

C5 · 6 QP

Network Blip

1



Bottleneck — Incident C

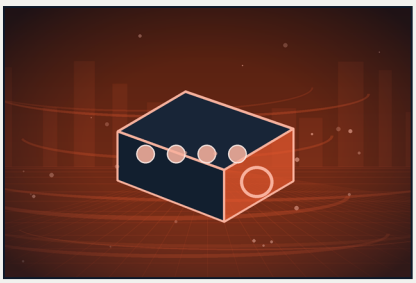
Target Source becomes engaged.

PPL1-131 · C
PIPELINE · SET 1

—

Query Timeout

1 S S



Bottleneck — Incident U

Target Query Fails.

PPL1-132 · U
PIPELINE · SET 1

—

Out of Memory

2 B



Bottleneck — Incident C

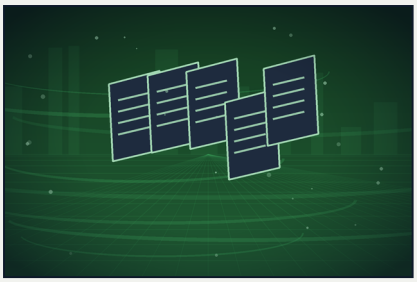
Target Query with Complexity 4 or more Fails.

PPL1-133 · C
PIPELINE · SET 1

—

Schema Drift

1 J



Bottleneck — Incident C

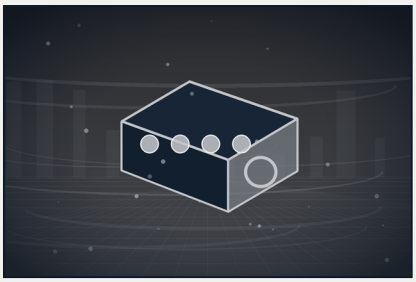
Target Query Fails unless its controller pays {2}.

PPL1-134 · C
PIPELINE · SET 1

—

Noisy Neighbor

1



Bottleneck — Constraint C

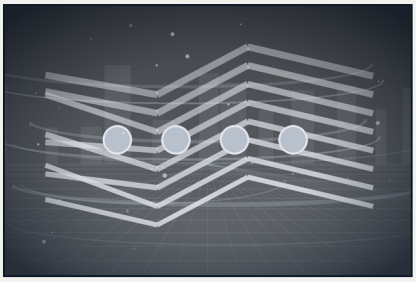
Attach to an Engine. It has -1 Compute.

PPL1-135 · C
PIPELINE · SET 1

—

Throttling Policy

1 G



Bottleneck — Constraint U

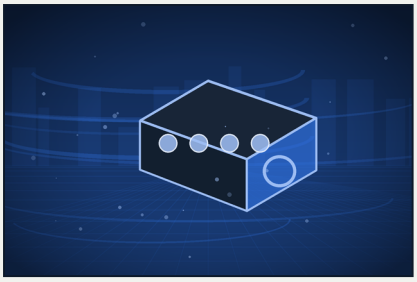
Attach to an Engine. It has -1 Concurrency (minimum 1).

PPL1-136 · U
PIPELINE · SET 1

—

Partition Skew

1 B



Bottleneck — Constraint C

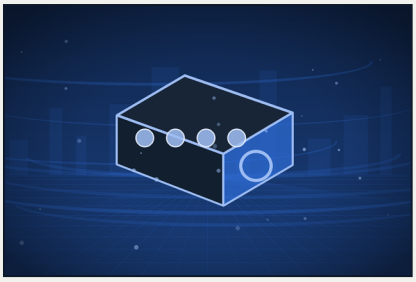
Attach to an Engine. Queries run on it have +1 Complexity.

PPL1-137 · C
PIPELINE · SET 1

—

Lock Contention

B



Bottleneck — Incident C

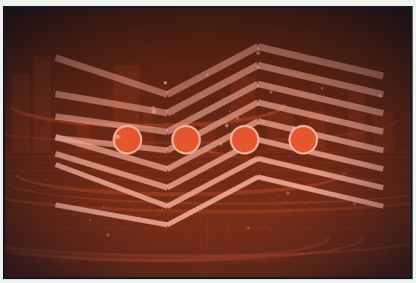
Target Engine can't start more Queries this turn.

PPL1-138 · C
PIPELINE · SET 1

—

Backpressure

S S



Bottleneck — Constraint U

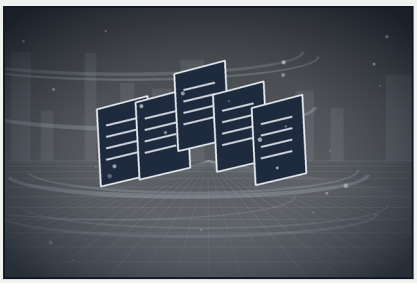
Attach to a Source. It doesn't ready during Refresh unless its controller pays {1}.

PPL1-139 · U
PIPELINE · SET 1

—

Credential Expired

1 G



Bottleneck — Incident U

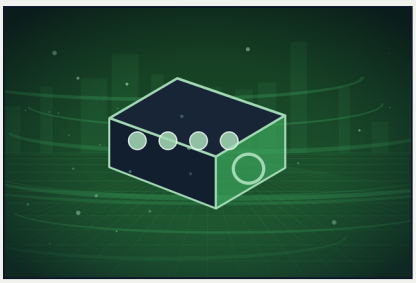
Target Source is Disconnected until the end of its controller's next turn.

PPL1-140 · U
PIPELINE · SET 1

—

Deprecated API

J



Bottleneck — Constraint C

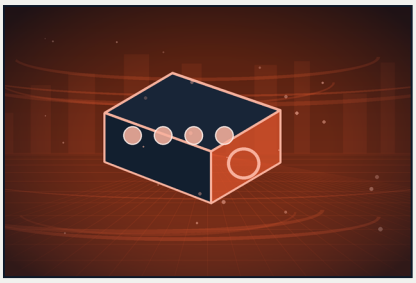
Attach to a Source. It produces {1} instead of its normal Data.

PPL1-141 · C
PIPELINE · SET 1

—

Cold Start

S



Bottleneck — Incident C

Target Query has +2 Complexity.

PPL1-142 · C
PIPELINE · SET 1

—

Data Corruption

2 J J



Bottleneck — Incident R

Target Query Fails. Its controller gains 1 additional Tech Debt.

PPL1-143 · R
PIPELINE · SET 1

—

Thundering Herd

2 S



Bottleneck — Incident U

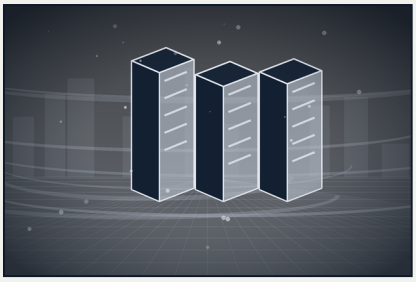
Each Engine target player controls gets -2 Compute until end of turn.

PPL1-144 · U
PIPELINE · SET 1

—

Budget Freeze

2 G



Bottleneck — Constraint U

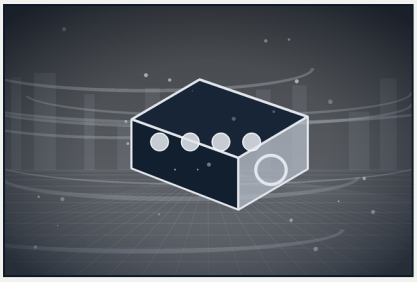
Global. Target opponent's Engines cost {2} more to deploy.

PPL1-145 · U
PIPELINE · SET 1

—

Change Advisory Board

1 G G



Bottleneck — Constraint R

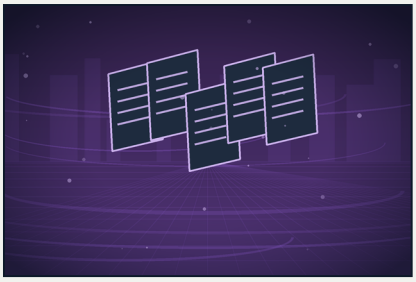
Global. Target opponent can't run more than 2 Queries per turn.

PPL1-146 · R
PIPELINE · SET 1

—

Prompt Injection

U U



Bottleneck — Incident R

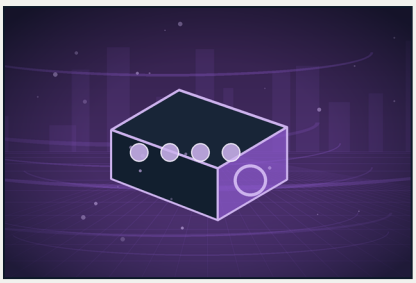
Play only on a Similarity Query as it resolves. You score its QP instead of its controller.

PPL1-147 · R
PIPELINE · SET 1

—

Model Drift

1 U



Bottleneck — Constraint C

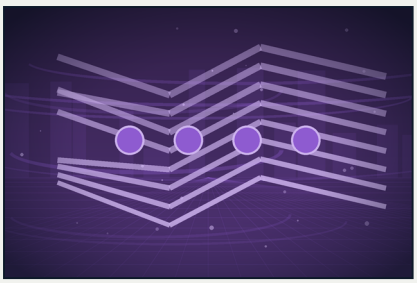
Attach to an Engine. Similarity Queries on it score -1 QP.

PPL1-148 · C
PIPELINE · SET 1

—

Token Limit Exceeded

1 U



Bottleneck — Incident C

Target Query with Complexity 3 or more Fails unless its controller Archives a card from hand.

PPL1-149 · C
PIPELINE · SET 1

—

GPU Shortage

2 U



Bottleneck — Constraint U

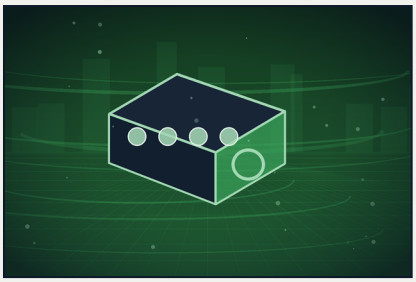
Global. Engines with Compute 5 or more cost {2} more for every player.

PPL1-150 · U
PIPELINE · SET 1

—

Dependency Hell

1 J



Bottleneck — Incident C

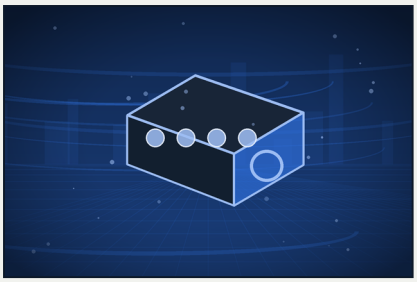
Archive target Upgrade.

PPL1-151 · C
PIPELINE · SET 1

—

Disk Full

2 B



Bottleneck — Constraint U

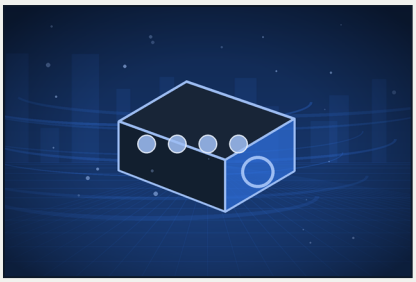
Attach to an Engine. Long-Running Queries on it don't lose Progress counters.

PPL1-152 · U
PIPELINE · SET 1

—

Deadlock

B B



Bottleneck — Incident U

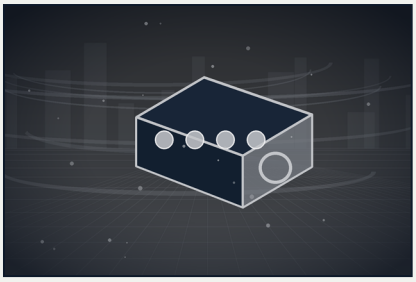
Target Long-Running Query Fails.

PPL1-153 · U
PIPELINE · SET 1

—

Runaway Query

2



Bottleneck — Incident U

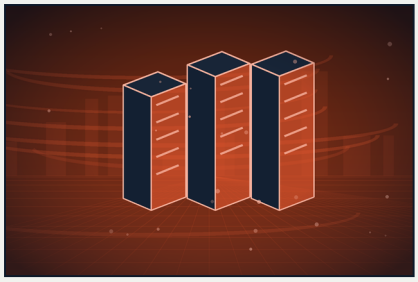
Target Engine is Offline until the end of its controller's next turn.

PPL1-154 · U
PIPELINE · SET 1

—

Ransomware Scare

3 S S



Bottleneck — Incident R

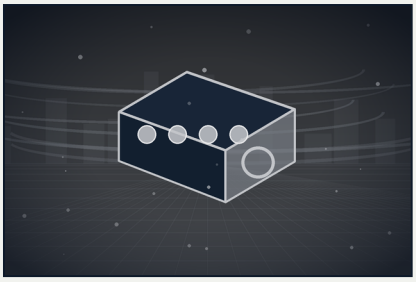
Engage all Sources target player controls.

PPL1-155 · R
PIPELINE · SET 1

—

Vendor Lock-In

3



Bottleneck — Constraint U

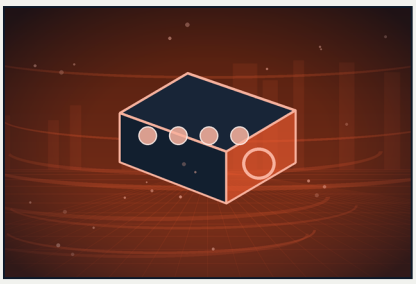
Attach to a Source. Its Data can pay only for Engines, not Queries.

PPL1-156 · U
PIPELINE · SET 1

—

Alert Fatigue

1 S



Bottleneck — Constraint R

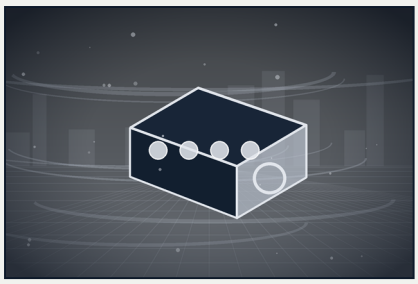
Global. Whenever target opponent runs a Query, they Archive a random card from hand unless they pay {1}.

PPL1-157 · R
PIPELINE · SET 1

—

Ticket Queue

G



Bottleneck — Incident C

Target Query costs {2} more. If its controller doesn't pay, return it to their hand; Data already paid is spent.

PPL1-158 · C
PIPELINE · SET 1

—

Legal Hold

1 G G



Bottleneck — Incident U

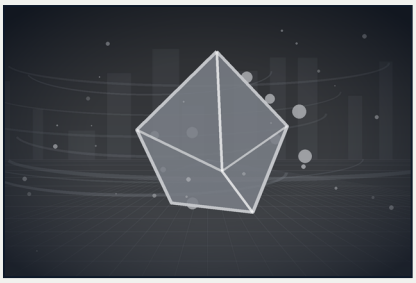
Return target Query being run to its owner's hand. Data paid for it is spent.

PPL1-159 · U
PIPELINE · SET 1

—

Stale Cache

1



Bottleneck — Incident C

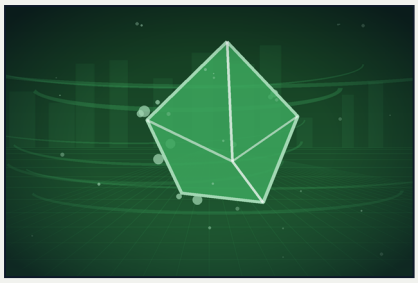
Target Query scores 2 less QP (minimum 0).

PPL1-160 · C
PIPELINE · SET 1

—

Flaky Test

J



Bottleneck — Incident C

Target player reveals the top card of their Backlog. If it's a Query, they Archive it.

PPL1-161 · C
PIPELINE · SET 1

—

Migration Weekend

2 B B



Bottleneck — Constraint R

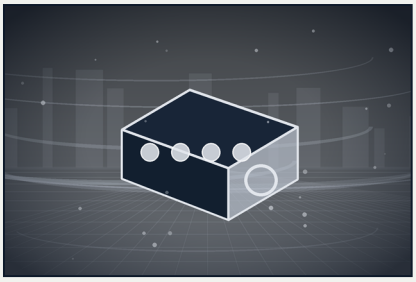
Global. Engines are Offline the turn they're deployed.

PPL1-162 · R
PIPELINE · SET 1

—

Cost Overrun

1 G



Bottleneck — Incident U

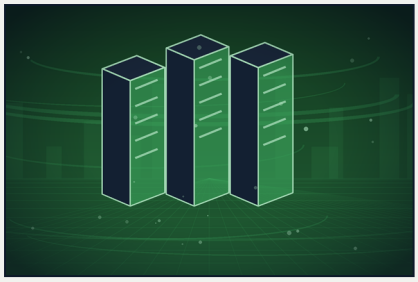
Target player gains Tech Debt equal to the number of Queries they ran this turn.

PPL1-163 · U
PIPELINE · SET 1

—

Shadow IT

1 J J



Bottleneck — Constraint U

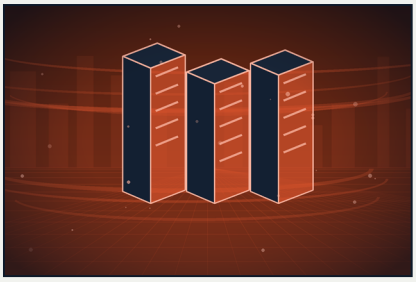
Global. At the start of target opponent's turn, they pay {1} or gain 1 Tech Debt.

PPL1-164 · U
PIPELINE · SET 1

—

Brownout

S S



Bottleneck — Incident C

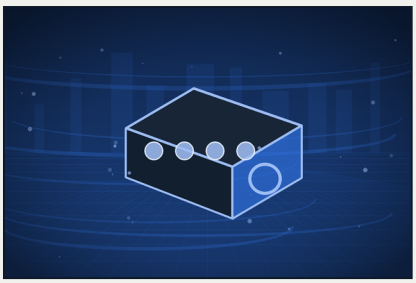
Target Engine gets -3 Compute until end of turn.

PPL1-165 · C
PIPELINE · SET 1

—

Cardinality Explosion

2 B



Bottleneck — Incident C

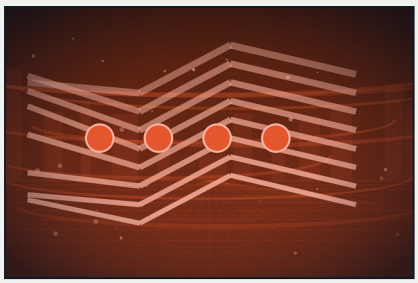
Target Join Query has +3 Complexity.

PPL1-166 · C
PIPELINE · SET 1

—

Single Point of Failure

3 S



Bottleneck — Incident R

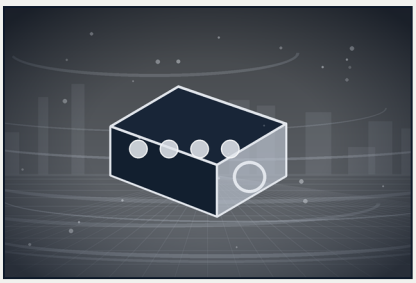
Archive target Engine with Compute 4 or less.

PPL1-167 · R
PIPELINE · SET 1

—

Hard Delete

3 G G



Bottleneck — Incident R

Archive target Engine or Source.

PPL1-168 · R
PIPELINE · SET 1

—

Cloud Region Outage

4 S S



Bottleneck — Incident L

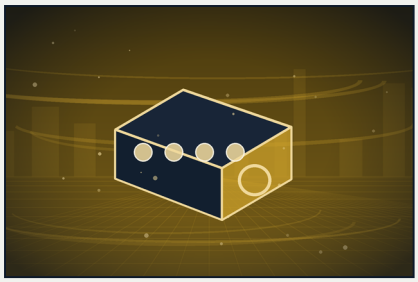
All Engines are Offline until the end of your next turn. Each player gains 1 Tech Debt for each Long-Running Query they control.

PPL1-169 · L
PIPELINE · SET 1

—

The 3 A.M. Page

2 S U



Bottleneck — Constraint L

Global. Target opponent's first Query each turn has +2 Complexity.

PPL1-170 · L
PIPELINE · SET 1

—

Add an Index

1 B



Optimization — Upgrade C

Attach to an Engine. It has +1 Compute.

PPL1-171 · C
PIPELINE · SET 1

—

Partition Pruning

B



Optimization — Tweak C

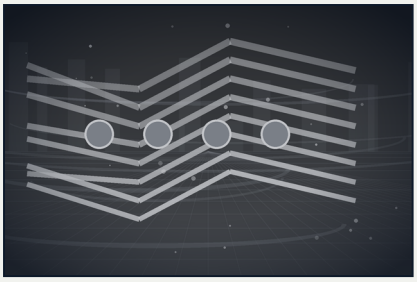
Target Query has -2 Complexity.

PPL1-172 · C
PIPELINE · SET 1

—

Predicate Pushdown

1



Optimization — Tweak C

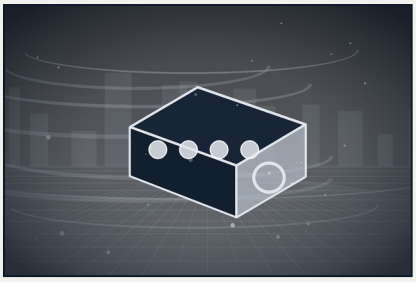
Play as you run a Query: it costs {1} less and has -1 Complexity.

PPL1-173 · C
PIPELINE · SET 1

—

Hotfix

1 G



Optimization — Tweak U

Cancel target Incident.

PPL1-174 · U
PIPELINE · SET 1

—

Rollback

2



Optimization — Tweak C

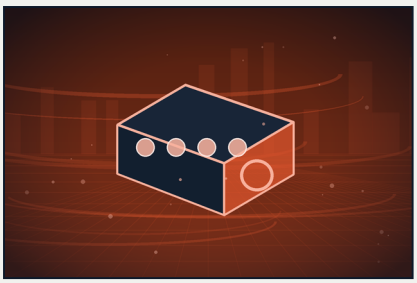
Cancel target Incident that would make a Query Fail.

PPL1-175 · C
PIPELINE · SET 1

—

Retry with Backoff

1 S



Optimization — Tweak U

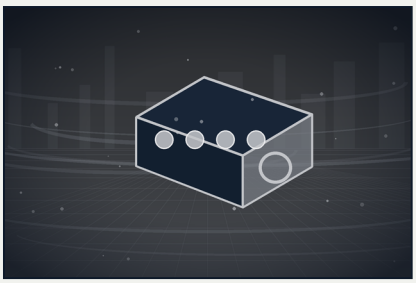
Run target Query of yours that Failed this turn from your Archive by paying its cost again.

PPL1-176 · U
PIPELINE · SET 1

—

Caching Layer

2



Optimization — Upgrade C

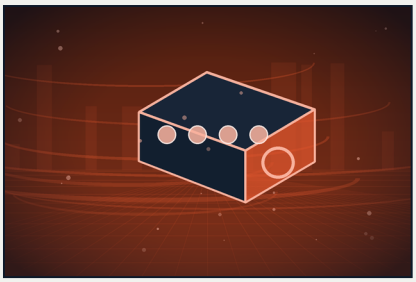
Attach to an Engine. The first Query run on it each turn costs {1} less.

PPL1-177 · C
PIPELINE · SET 1

—

Horizontal Scaling

2 S



Optimization — Upgrade U

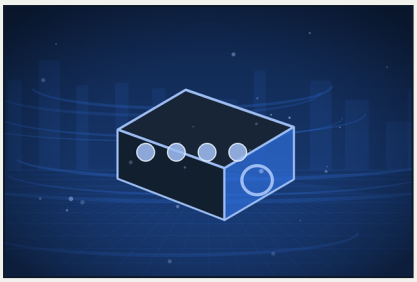
Attach to an Engine. It has +1 Concurrency.

PPL1-178 · U
PIPELINE · SET 1

—

Vertical Scaling

2 B



Optimization — Upgrade C

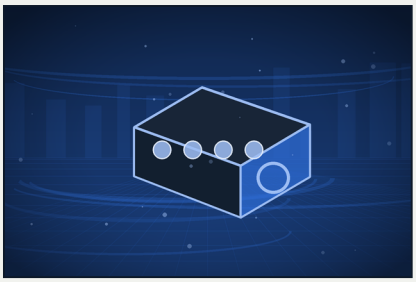
Attach to an Engine. It has +2 Compute.

PPL1-179 · C
PIPELINE · SET 1

—

Compaction

1 B



Optimization — Tweak C

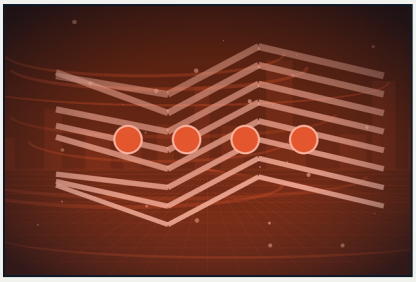
Archive target Constraint attached to a card you control.

PPL1-180 · C
PIPELINE · SET 1

—

Circuit Breaker

1 S



Optimization — Upgrade R

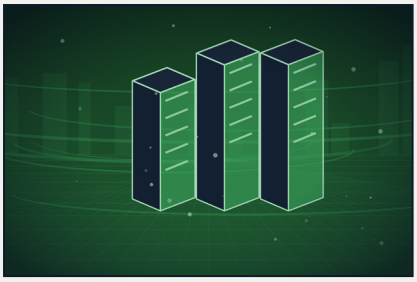
Attach to an Engine. The first Incident each turn that targets it or a Query on it is Canceled.

PPL1-181 · R
PIPELINE · SET 1

—

Observability Dashboard

1 J



Optimization — Upgrade U

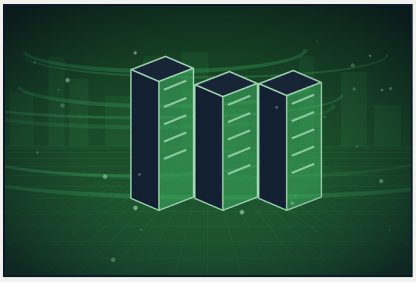
Global. Whenever an opponent plays a Bottleneck, draw a card.

PPL1-182 · U
PIPELINE · SET 1

—

Schema Evolution

J



Optimization — Tweak C

Cancel target Schema Drift, or Archive target Deprecated API.

PPL1-183 · C
PIPELINE · SET 1

—

Refactor

2 J



Optimization — Tweak C

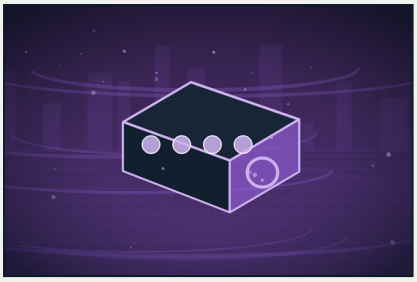
Remove 2 Tech Debt from yourself, then draw a card.

PPL1-184 · C
PIPELINE · SET 1

—

Prompt Engineering

U



Optimization — Tweak C

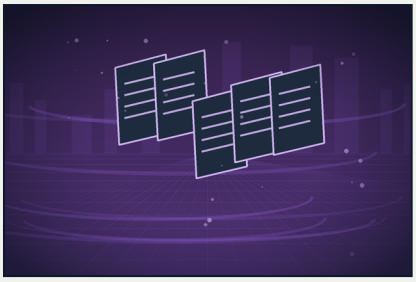
Target Similarity Query scores +2 QP.

PPL1-185 · C
PIPELINE · SET 1

—

Retrieval Reranker

1 U



Optimization — Upgrade C

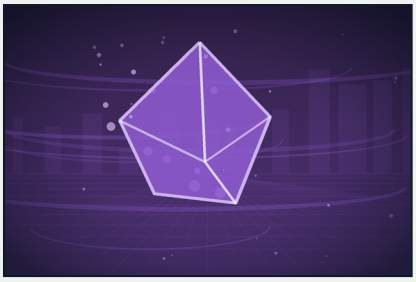
Attach to an Engine. Similarity Queries on it score +1 QP.

PPL1-186 · C
PIPELINE · SET 1

—

Distillation

1 U U



Optimization — Tweak R

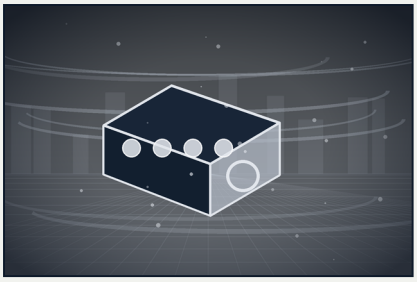
Target Query has Complexity 1 until end of turn.

PPL1-187 · R
PIPELINE · SET 1

—

Guardrails

1 G



Optimization — Upgrade U

Attach to an Engine. It can't be targeted by Incidents that cost 2 or less.

PPL1-188 · U
PIPELINE · SET 1

—

Access Review

G



Optimization — Tweak C

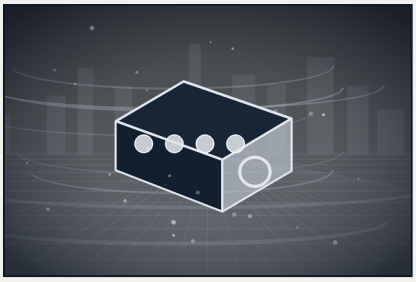
Archive target Constraint that costs 2 or less.

PPL1-189 · C
PIPELINE · SET 1

—

Data Catalog Tagging

G



Optimization — Upgrade U

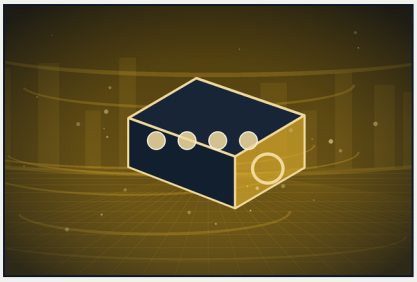
Attach to a Source. It may produce one Data of any type instead of its normal Data.

PPL1-190 · U
PIPELINE · SET 1

—

Cost-Based Optimizer

2 B G



Optimization — Upgrade R

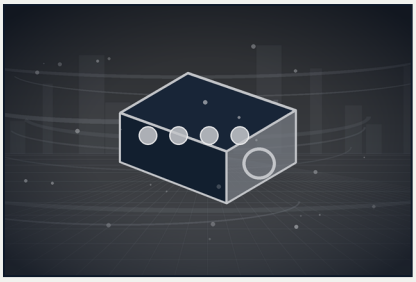
Attach to an Engine. Queries on it have -1 Complexity and cost {1} less.

PPL1-191 · R
PIPELINE · SET 1

—

Query Rewrite

1



Optimization — Tweak U

Return target Query of yours being run to your hand. Ready the Sources used to pay for it.

PPL1-192 · U
PIPELINE · SET 1

—

Auto-Vacuum

1



Optimization — Upgrade R

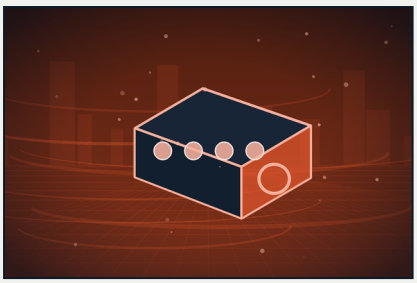
Global. At the start of your turn, remove 1 Tech Debt from yourself.

PPL1-193 · R
PIPELINE · SET 1

—

Load Balancer

1 S



Optimization — Tweak C

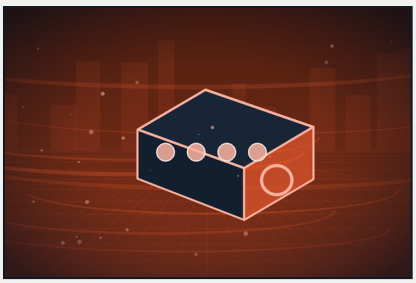
Move target Query of yours being run to another Engine you control with an unused Concurrency slot.

PPL1-194 · C
PIPELINE · SET 1

—

Speculative Execution

2 S



Optimization — Tweak U

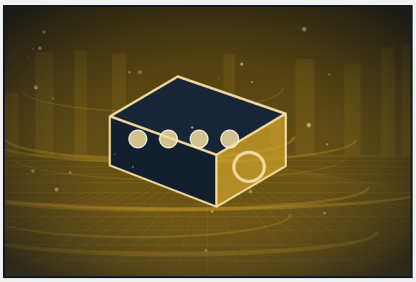
Remove 1 Progress counter from target Long-Running Query.

PPL1-195 · U
PIPELINE · SET 1

—

Incremental Refresh

1 B J



Optimization — Upgrade R

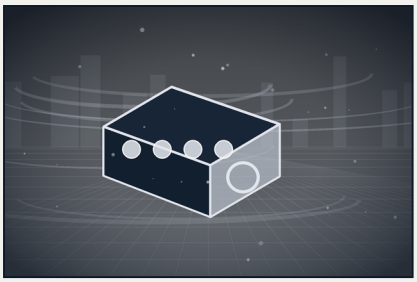
Attach to an Engine. Long-Running Queries on it lose 2 Progress counters each Refresh.

PPL1-196 · R
PIPELINE · SET 1

—

Infrastructure as Code

2 G



Optimization — Tweak R

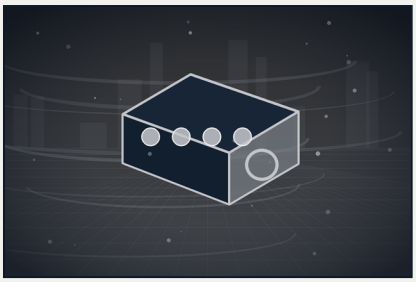
Search your Backlog for an Engine, reveal it, put it in your hand, then shuffle.

PPL1-197 · R
PIPELINE · SET 1

—

Postmortem

1



Optimization — Tweak C

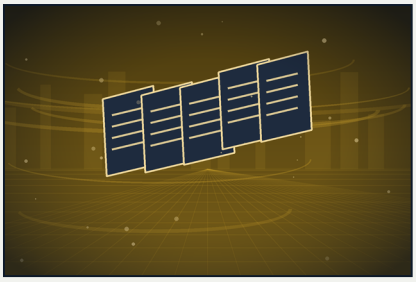
Draw a card for each Query of yours that Failed this turn (max 3).

PPL1-198 · C
PIPELINE · SET 1

—

Runbook

G J



Optimization — Upgrade U

Global. Your first Tweak each turn costs {1} less.

PPL1-199 · U
PIPELINE · SET 1

—

Zero-ETL

B S J U G



Optimization — Tweak L

This turn, your Queries cost no Data and have -2 Complexity.

PPL1-200 · L
PIPELINE · SET 1

—