

# Unified SQL Interface

## Self-Configuring

Workload  
Modeling

Workload  
Scheduling

Workload  
Predicting

Knob  
Tuning

Software  
Patching

Software  
Upgrading

## Self-Healing

Fault Recovery

Live Migration

## Self-Security

Masking

Auditing

Access Control

Immutability

Traceability

Transparent  
Encryption

## Self-Optimizing

### SQL Optimization

SQL  
Rewriter

Index  
Advisor

View  
Advisor

Partition  
Advisor

### Query Optimizer

Cardinality  
Estimation

Cost  
Estimation

Join Order  
Selection

RBO

CBO

Learned  
Optimizer

### Executor Engine

Row

Column

Vectorization

### Data Storage

Row

Column

In-Memory

## Self-Diagnosis

Hardware Error

Software Error

## Self-Monitoring

Data Statistics

System Statistics

Workload Statistics

## Self-Assembling

### AI Framework

AI as UDF

AI as View

Model-Free

Problem-Free

Full-Automatic

### Heterogeneous Computing Framework

Relational Model

Graph Model

Time-series Model

Tensor Model

X86

ARM

GPU

NPU

FPGA