NTT
Open Source
Software Center

Issues raising by NTT
-PostgreSQL Cluster Developers' Meeting-

November 19th, 2009
NTT Open Source Software Center

Trying to deploy PostgreSQL cluster products, but... (1/2)

- NTT provided a questionnaire to ask "what is obstacle to deploy PostgreSQL cluster products in each project."
- Interviewees were PostgreSQL professionals, project managers, database engineers, etc.

Lack of instruction, support, reliability, etc.

- "Pgpool-II feature seems to be good enough for load-balancing, but engineers are not confident in its operation, especially in error handling, and they don't take it." (NTT Software)
- "PostgreSQL 3rd party product is generally less quality or lack of support. Were the cluster product certified by development community, more quality and more supporting venders and tools would be provided by 3rd venders." (NTT OSSC)

Trying to deploy PostgreSQL cluster products, but... (2/2)

Competitors

- "One remarkable reason why number of MySQL users in Japan is increasing much faster than that of PostgreSQL recently is an usable clustering feature 'MySQL Replication', I heard." (SRA OSS, Japan)
- "Current Oracle RAC users in NTT group are NOT necessarily relying on sophisticated clustering features, but just selecting a HA usability." (NTT Comware)
  - "Then why not replacing by PostgreSQL cluster products ?"
- "Even Oracle RAC is a highly-professional and troublesome product, but tips and training are certainly provided by multiple partners." (NTT Software)
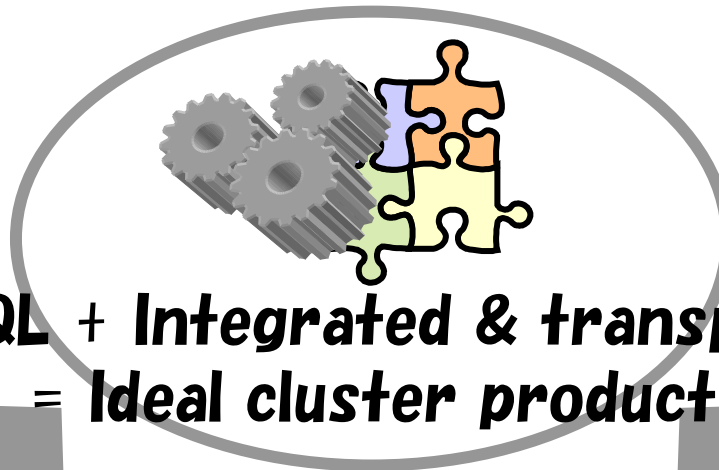
(Reference) Amount of available information via Web

Cluster Products	Case Studies	Manuals (Files)	Performance Data (Files)	Surpporting Providers
Oracle RAC	31	57 (include 3 books)	18	??? (a huge volume)
Microsoft SQL Server	13	684	1	3440 over
MySQL 5 (Embeded Replication)	5	128	1	604
Slony-I	4	53	0	4
pgpool-II	2	5	0	3
Bucardo	0	5	0	1
Sequoia & Tungsten	0	7	0	0
Londiste & pgQ	1	7	0	0
PgBouncer	2	5	0	1
Mammoth	0	10	0	0
PL/Ploxy	1	4	0	1
PgCluster	0	10	0	0
Postgres-R	0	8	0	0
Postgres Forest	1	2	0	0
GridSQL	2	4	0	1
Sync_Rep + Hot Standby	0	0	0	0

Ideal cluster product features
(NTT's expectation)

Ex. MySQL Replication, Synch_Rep

User-friendly Replication and HA

PostgreSQL + Integrated & transparent SQL
= Ideal cluster product

Read/Write Scalability		Client Integration

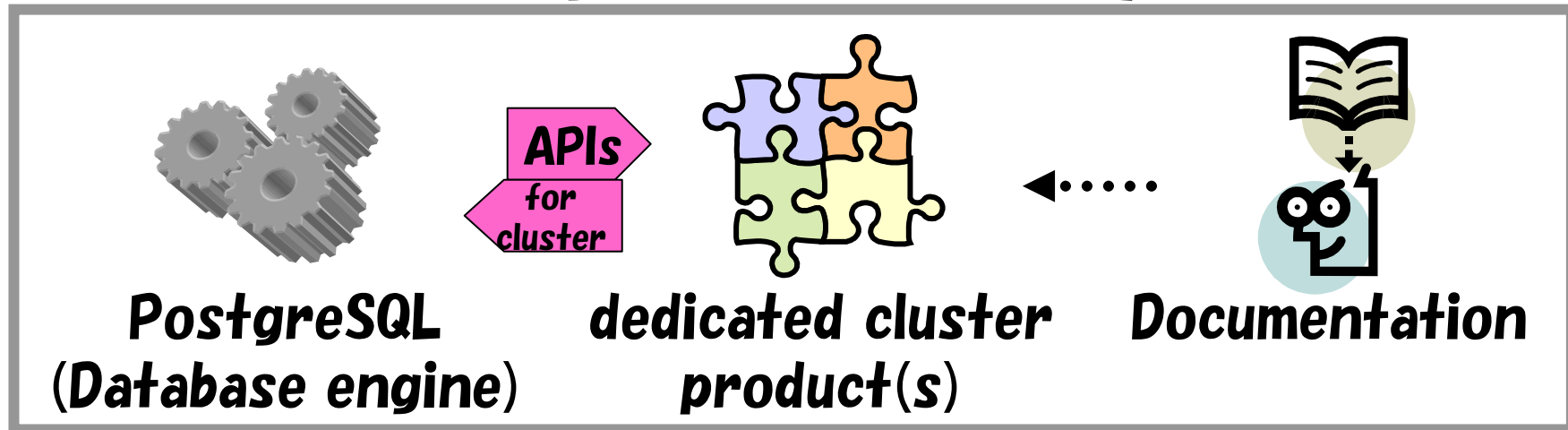**Ex. MySQL Cluster, Postgres-2**   **Ex. OracleRAC (as HA)**

Ideal cluster product distribution
(NTT's expectation)

PostgreSQL Community

PostgreSQL
(Database engine)

APIs for cluster

dedicated cluster product(s)

Documentation

3rd party service providers

Training course, Support service, Consultation, Advanced (commercial) utility tools, etc.

Possible actions by community
(NTT's proposal)

- **Starting a discussion in SIG;**
  - Sharing market needs, technical experiences, implementation ideas, etc.
  - Opening discussion over ML or Wiki.
- **Possible targets;**
  - Providing a widely-shared guide,
    - Features, tutorials, cases, roadmap, tips, etc.
  - Providing PostgreSQL API to implement clusters,
    - To help more sophisticated implementations, easy installations, etc.
  - Providing an adoption model & a conformance test,
    - Level 1: providing a standardized test model,
    - Level 2: operating a test center,
    - Level 3: providing a certification of product.