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Design and Implementation of the Protocol for Information Retrieval & Management System

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DBMS 가

가

DBMS

가

1.

DBMS 가

, 3

가 .[1]

4

DBMS

Z39.50

2.

.[2]

DBMS

가, ,

가

.[3]

가

가,

DBMS

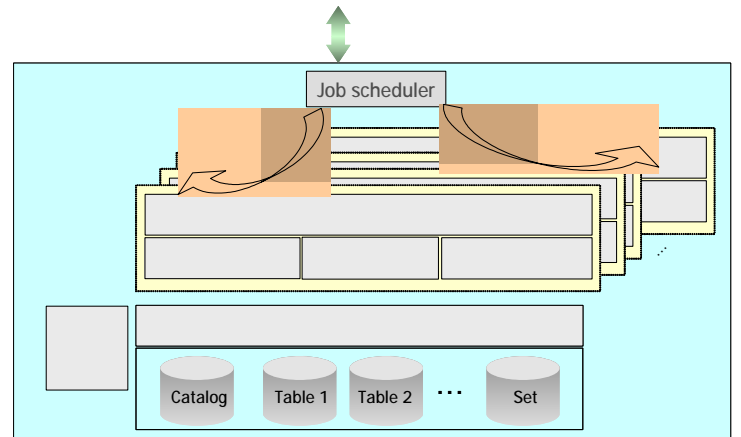
가



가

DBMS

가



B - tree

1.

.[4]

3.

가 fork

B -

tree

Pre - Fork

Pool

DB

가

가

TCP

connect

가

가

가

fork

<Message> tag

Header

Body

가
가
가

```

<Message>
  <Header>
    <Version>
      1.0
    </Version>
  </Header>
  <Body>
    <Process>
      Search
    </Process>
    <Object>
      Parameter
      Parameter
      ...
    </Object>
  </Body>
</Message>

```

HTTP가

가,

가

가가

XML

TCP connect -
- XML

Header
Version

Version

XML

- XML

- XML

- TCP close

code - set
가

XML

XML ,
, XML ,
ASCII

가 Major

가

code 1byte character

Minor

version 1.0

' Major . Minor

timeout

가

Body

가 , Process

2

. 2

Object

, Object 가 Process

Oagis

. Process

Oagis

. Oagis

e - Business

XML

' _RESPONSE '

The Open Applications Group

RETRIEVE

RETRIEVE_RESPONSE

가

가

가

'ERROR'

- (1) (RETRIEVE)

Object

- (2) (RETRIEVE_SIMILAR_DOCUMENTS)

가

Object

Tag

- (3) (RETRIEVE_IN_RESULT)

RETRIEVE

DB가

DB

DB,

● Presentation

가

- (1) DB (GET_DB_INFO)

DB

- (2) DB (GET_META_INFO_QUERY)

가

XML

XML

XML 가

가

- (3) (GET_DOCUMENTS_FROM_RESULT)

Object

String

Base64

encoding

()

String

Base64 decoding

[6]

- (4) (GET_DOCUMENTS_WITH_PRIMARY_KEY)

()

●

:

가

- (5) (GET_CATEGORY)

●

Presentation

:

●

- (1) (CHECK_STATUS)

가

●

:

●

- (1) (SORT_BY_SECTION)

●

:

●

(1) (APPEND_DOCUMENT)

DB

(2) (UPDATE_DOCUMENT)

Blob

가

(3) (DELETE_DOCUMENT)

DB

(4) XML (APPEND_XML_NODE)

[1] “ ”,

DB

XML

, 2002.

(5) XML (UPDATE_XML_NODE)

[2] Z39.50 Maintenance Agency,

XML

<http://www.loc.gov/z3950/agency/>

(6) XML (DELETE_XML_NODE)

[3] “ KRISTAL - 2000 ”,

XML

DB

, 2003

(7) XML (MOVE_XML_NODE)

[4] “ ”, , , 1993

XML

[5] Oagis, <http://www.openapplications.org/oagis/>

[6] RFC1521, <http://www.faqs.org/rfcs/rfc1521.html>

[7] The Apache XML Project, <http://xml.apache.org/>

XML

Apache Software Foundation

xerces

. [7]

C++

C++ Java

Unix

, Windows

NT

4.

DBMS

가

C++, Java

가

가