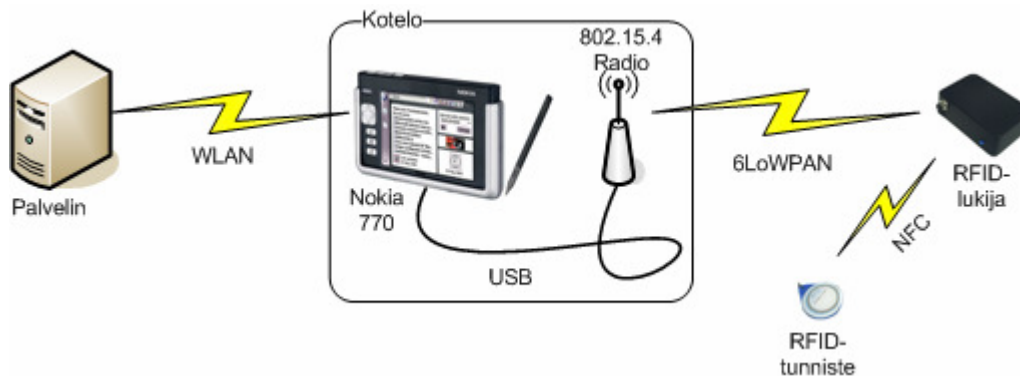


Communicating with the server

This document describes the basic idea how Ideasilo communicates with the server.

System structure



Node XML format

Every node can be serialized in the following format:

```
<[node type] ID="[ID string]" label="[label]" v="[version]" [extra attributes]>[content]</[node type]>
```

The node type can be one of the strings in the following table. If the node type is node, the attributes must consist only of one ID attribute. In any other case, the node must contain ID, label and version. The actual content varies according to the node type.

Node type	Explanation	Content
branch	Branch node, contains links to other nodes	The content is composed of a group of nodes. There can be any number of the nodes. The nodes can be of any type described here. There is no limit how far the nodes can be nested. Unknown nodes are considered so that the actual content should be queried explicitly. The application should disregard the order of the nodes.
text	Text node	Textual data. There is no limit to the length of the data.
uri	Link node	A URL address pointing outside of the system.
binary	Binary node	Base 64 encoded binary data enclosed in a CDATA section.
image	Image node	Base 64 encoded binary data containing an image file, enclosed in a CDATA section. Alternatively, the content can be a single URL address, enclosed in a single uri element.
node	Unknown node type	The content, label or version number cannot be defined. The content should be queried explicitly. Used usually to designate links or references to other nodes.

The node ID can be any kind of string of characters. Ideasilo considers the nodes the same if their node ID's match identically. Apart from the slash (/) character, single characters have no special meanings. The slash character is used in some applications to deduct nodes' parent nodes. If the part of the node ID from the beginning to the last slash character matches with some other node in the system, Ideasilo assumes the node is the parent of the original node.

Making queries

All server database queries are formatted in the following manner:

`http://<server>/ideasiloserver/db?action=query&nodeid=<nodeID>&depth=<depth>`

The `<nodeid>` part should contain the ID of the node to be queried. `<depth>` should be a number indicating how many levels of the queried node's children should be fetched.

Query examples

1) HTTP GET Query:

`http://www.ideasilo.fi/ideasiloserver/db?action=query&nodeid=IdeasiloDemo-00001&depth=0`

Response (200 OK):

```
<queryresult>
  <branch ID="IdeasiloDemo-00001" label="Blue pants, S" v="2">
    <node ID="IdeasiloDemo-00001/4"/>
    <node ID="IdeasiloDemo-00001/6"/>
    <node ID="IdeasiloDemo-00001/1"/>
    <node ID="IdeasiloDemo-00001/3"/>
    <node ID="IdeasiloDemo-00001/2"/>
  </branch>
</queryresult>
```

2) HTTP GET Query:

`http://www.ideasilo.fi/ideasiloserver/db?action=query&nodeid=IdeasiloDemo-00001&depth=1`

Response (200 OK):

```
<queryresult>
  <branch ID="IdeasiloDemo-00001" label="Blue pants, S" v="2">
    <image ID="IdeasiloDemo-00001/4" label="Image" v="2" format="jpg">
      <uri>http://www.ee.oulu.fi/~mipoloja/ideasilodemo/images/Blue_pants_S.jpg</uri></image>
    <branch ID="IdeasiloDemo-00001/6" label="Washing info" v="2">
      <node ID="IdeasiloDemo-00001/6/1"/>
      <node ID="IdeasiloDemo-00001/6/2"/>
    </branch>
    <text ID="IdeasiloDemo-00001/1" label="Item" v="2">Blue pants</text>
    <text ID="IdeasiloDemo-00001/3" label="Color" v="2">Blue</text>
    <text ID="IdeasiloDemo-00001/2" label="Size" v="2">S</text>
  </branch>
</queryresult>
```

3) HTTP GET Query:

`http://www.ideasilo.fi/ideasiloserver/db?action=query&nodeid=IdeasiloDemo-00001&depth=2`

Response (200 OK):

```
<queryresult>
  <branch ID="IdeasiloDemo-00001" label="Blue pants, S" v="2">
    <image ID="IdeasiloDemo-00001/4" label="Image" v="2"/>
    <branch ID="IdeasiloDemo-00001/6" label="Washing info" v="2">
      <text ID="IdeasiloDemo-00001/6/1" label="Temperature" v="2">40</text>
      <text ID="IdeasiloDemo-00001/6/2" label="Notes" v="2">Do not bleach, iron or tumble</text>
    </branch>
    <text ID="IdeasiloDemo-00001/1" label="Item" v="2">Blue pants</text>
```

```
<text ID="IdeasiloDemo-00001/3" label="Color" v="2">Blue</text>
<text ID="IdeasiloDemo-00001/2" label="Size" v="2">S</text>
</branch>
</queryresult>
```

4) HTTP GET Query:

<http://www.ideasilo.fi/ideasiloserver/db?action=query&nodeid=IdeasiloDemo-00001/4>

Response:

```
<queryresult>
  <image ID="IdeasiloDemo-00001/4" label="Image" v="2"/>
</queryresult>
```

5) HTTP GET Query:

<http://www.ideasilo.fi/ideasiloserver/db?action=query&nodeid=IdeasiloDemo-00002>

Response (200 OK):

```
<queryresult>
  <branch ID="IdeasiloDemo-00002" label="Blue pants, M" v="2">
    <text ID="IdeasiloDemo-00002/2" label="Size" v="2">M</text>
    <text ID="IdeasiloDemo-00002/1" label="Item" v="2">Blue pants</text>
    <image ID="IdeasiloDemo-00002/4" label="Image" v="2" format="jpg">
      <uri>http://www.ee.oulu.fi/~mipoloja/ideasilodemo/images/Blue\_pants\_M.jpg</uri>
    </image>
    <text ID="IdeasiloDemo-00002/3" label="Color" v="2">Blue</text>
  </branch>
</queryresult>
```

6) HTTP POST Query:

<http://www.ideasilo.fi/ideasiloserver/db?action=update>

Content:

```
<update>
  <branch ID="IdeasiloDemo-00002" label="Dark blue pants, M" v="2">
    <text ID="IdeasiloDemo-00002/2" label="Size" v="2">M</text>
    <text ID="IdeasiloDemo-00002/1" label="Item" v="2">Dark blue pants</text>
    <image ID="IdeasiloDemo-00002/4" label="Image" v="2" format="jpg">
      <uri>http://www.ee.oulu.fi/~mipoloja/ideasilodemo/images/Dark\_blue\_pants\_M.jpg</uri>
    </image>
    <text ID="IdeasiloDemo-00002/3" label="Color" v="2">Dark blue</text>
  </branch>
</update>
```

Response (200 OK):

```
<queryresult>
  <branch ID="IdeasiloDemo-00002" label="Dark blue pants, M" v="2">
    <text ID="IdeasiloDemo-00002/2" label="Size" v="2">M</text>
    <text ID="IdeasiloDemo-00002/1" label="Item" v="2">Dark blue pants</text>
    <image ID="IdeasiloDemo-00002/4" label="Image" v="2" format="jpg">
      <uri>http://www.ee.oulu.fi/~mipoloja/ideasilodemo/images/Dark\_blue\_pants\_M.jpg</uri>
    </image>
    <text ID="IdeasiloDemo-00002/3" label="Color" v="2">Dark blue</text>
  </branch>
</queryresult>
```