

## 1 Zabbix Agent

Zabbix uses JSON based communication protocol for communication with Zabbix Agent.

## 2 Passive checks

Passive check is a simple data request. Zabbix Server (or Proxy) asks for a data, for example, CPU load, and Zabbix Agent sends the result back to the Server.

### Server Request

```
<item key>\n
```

### Agent Response

```
<HEADER><DATALEN><DATA>
```

For example:

1. Server opens TCP connection
2. Server sends **agent.ping\n**
3. Agent reads the request and responds with **<HEADER><DATALEN>1**
4. Server processes data to get the value, '1' in our case
5. TCP connection is closed

## 3 Active checks

Active checks requires more complex processing. The Agent must retrieve list of items for independent processing first. It also periodically sends new values to the Server.

### 3.1 Get list of items

#### Agent Request

```
<HEADER><DATALEN>{  
  "request":"active checks",  
  "host": "<hostname>"  
}
```

#### Server Response

```
{
  "response": "success",
  "data": [
    {
      "key": "log[\\home\\zabbix\\logs\\zabbix_agentd.log]",
      "delay": "30",
      "lastlogsize": "0"
    },
    {
      "key": "agent.version",
      "delay": "600"
    }
  ]
}
```

The Server must respond with success. For each returned item, **key** and **delay** must exist. For items having type "Log", the **lastlogsize** must exist as well.

For example:

1. Agent opens TCP connection
2. Agent asks for the list of checks
3. Server responds with a list of items (item key, delay)
4. Agent parses the response
5. TCP connection is closed
6. Agent starts periodical collection of data

### 3.2 Send collected data

#### Agent Sends

```
<HEADER><DATALEN>{
  "request": "agent data",
  "data": [
    {
      "host": "<hostname>",
      "key": "log[\\home\\zabbix\\logs\\zabbix_agentd.log]",
      "value": " 13039:20090907:184546.759 zabbix_agentd started. ZABBIX
1.6.6 (revision {7836}).",
      "lastlogsize": 80,
      "clock": 1252926015
    },
    {
      "host": "<hostname>",
      "key": "agent.version",
      "value": "1.6.6",
      "clock": 1252926015
    }
  ]
}
```

```
],  
  "clock":1252926016  
}
```

## Server Response

```
<HEADER><DATALEN>{  
  "response":"success",  
  "info":"Processed 2 Failed 0 Total 2 Seconds spent 0.002070"  
}
```

For example:

1. Agent opens TCP connection
2. Agent sends list of values
3. Server processes the data and sends status back
4. TCP connection is closed

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