**DTC性能测试报告**

修订记录

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| --- | --- | --- | --- | --- |
| 序号 | 版本 | 编写人 | 日期 | 备注 |
| 1 | V1.0 | 王洋 | 2014-07-22 | 初稿 |
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版本更新摘要

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| 序号 | 内容 | 编写人 | 日期 |
| 1 | 初稿 | 王洋 | 2014-07-22 |
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**DTC性能测试报告**

1. **测试目的**

测试DTC agent在DTC有源模式下性能如何，并与Redis在同等环境下进行比较。

1. **测试环境**
2. **网络环境**

如图1所示，10.42.0.1、10.42.0.83、10.42.0.74、10.42.0.73、10.42.0.61、10.42.0.30均连接至千兆交换机。



图 1

1. **硬件环境**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IP | OS | CPU | 内存 | 网卡 | 用途 |
| 10.42.0.73 | Ubuntu 12.04 32位 | 2.8GHz 2核 | 4G | 1000Mb/s | 客户端SDK1 |
| 10.42.0.61 | Ubuntu 13.10 32位 | 3.3GHz 4核 | 4G | 100Mb/s | 客户端SDK2 |
| 10.42.0.1 | Ubuntu 12.04 32位 | 3.2GHz 4核 | 4G | 1000Mb/s | Agent |
| 10.42.0.83 | Ubuntu 12.04 32位 | 3.2GHz 4核 | 4G | 1000Mb/s | DTC1 |
| 10.42.0.30 | Ubuntu 14.04 32位 | 3.3GHz 4核 | 4G | 1000Mb/s | DTC2 |
| 10.42.0.74 | Ubuntu 12.04 32位 | 2.8GHz 4核 | 3.8G | 1000Mb/s | DB(Mysql) |

1. **软件环境**

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| --- | --- | --- |
| 软件名称 | 软件版本 | 是否开源 |
| DTC | 1.0 | 否 |
| Redis | 2.2.12 | 是 |

1. **测试场景**

1.key的长度固定为10个字节，加上30字节（小数据块）, 每次操作线程数为10个，每线程100万条记录，在老数据基础上进行测试。分别测试insert、select、update、delete情况。

2．key的长度固定为10个字节，加上990字节（大数据块），每次操作线程数为10个，每线程40万条记录，在老数据基础上进行测试。分别测试insert、select、update、delete情况。

**三、测试结果**

1. **insert操作性能情况**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 内存使用率 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 次/s（DTC） |  |  |  |  |  |  |  |  |  |  |
| 次/s（Redis） |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(DTC) |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(Redis) |  |  |  |  |  |  |  |  |  |  |

1. **select操作性能情况**
2. 命中率0%的情况

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 内存使用率 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 次/s（DTC） |  |  |  |  |  |  |  |  |  |  |
| 次/s（Redis） |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(DTC) |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(Redis) |  |  |  |  |  |  |  |  |  |  |

1. 命中率50%的情况

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| 内存使用率 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 次/s（DTC） |  |  |  |  |  |  |  |  |  |  |
| 次/s（Redis） |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(DTC) |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(Redis) |  |  |  |  |  |  |  |  |  |  |

1. 命中率100%的情况

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| 内存使用率 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 次/s（DTC） |  |  |  |  |  |  |  |  |  |  |
| 次/s（Redis） |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(DTC) |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(Redis) |  |  |  |  |  |  |  |  |  |  |

1. **update操作性能情况**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 内存使用率 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 次/s（DTC） |  |  |  |  |  |  |  |  |  |  |
| 次/s（Redis） |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(DTC) |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(Redis) |  |  |  |  |  |  |  |  |  |  |

1. **delete操作性能情况**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 内存使用率 | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
| 次/s（DTC） |  |  |  |  |  |  |  |  |  |  |
| 次/s（Redis） |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(DTC) |  |  |  |  |  |  |  |  |  |  |
| cpu使用率(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡流量(Redis) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(DTC) |  |  |  |  |  |  |  |  |  |  |
| 网卡中断率(Redis) |  |  |  |  |  |  |  |  |  |  |