

UCS Hyperflex Zookeeper サービスの説明および確認

目次

[はじめに](#)

[Exhibitor サービス ステータスの確認](#)

[Zookeeper Serviceの参照](#)

[ライブ セットアップの Zookeeper ログ ファイル](#)

[サポートバンドル \(storfs\) からの Zookeeper ログ ファイル](#)

はじめに

このドキュメントでは、ZooKeeper について説明しています。ZooKeeper は、基本的に階層型のキー値ストアに対する分散システム向けの集中型サービスです。大規模な分散システム向けの分散型構成サービス、同期サービス、およびネーミング レジストリを提供するために使用します。ZooKeeper のアーキテクチャでは、冗長サービスによって高可用性がサポートされています。そのため、クライアントは、最初の呼び出しが失敗した場合には別の ZooKeeper リーダーを要求できません。ZooKeeper ノードでは、ファイル システムやツリー データ構造のように、階層型の名前空間にデータが格納されます。クライアントはノードに対して読み書きを行うことができ、これによって共有構成サービスが実現されます。ZooKeeper は、更新を包括的に管理するためのアトミックブロードキャスト システムとして表示できます。

ZooKeeper は、次の主な機能を提供します。

- 信頼性の高いシステム：1 つのノードで障害が発生した場合でも適切に機能し続けるため、非常に信頼性の高いシステムとなっています。
- シンプルなアーキテクチャ：ZooKeeper のアーキテクチャは非常にシンプルで、プロセスの調整に役立つ共有の階層型名前空間を使用しています。
- 高速な処理：ZooKeeper は読み取り主体のワークロードに対して特に高速で動作します。
- 拡張性：ZooKeeper のパフォーマンスは、ノードを追加することで強化できます。

HXには、下記の特定の実装があります。

- **Exhibitor** と呼ばれるサービスは、zookeeper の起動/シャットダウンを管理します。
- HX クラスタ内のプロセスは、Zookeeper に対するクライアントであり、tcp ポート 2181 ex storfs、stmgrなどを介して通信します。
- 5 個以上のノードを持つシステムには、一部スタンドアロンのノードがあります。5 個以下のノードを持つシステムでは、スタンドアロンのノードはありません。
- クォーラム = $N/2 + 1$ に必要なノードの最小数。

たとえば、3 ノード クラスタの場合、 $N/2 = 1.5$ は $1 + 1 = 2$ の概数にすることが可能です (1 個のノード障害のみ許容されます)。

たとえば、5 ノード クラスタの場合、 $N/2 = 2.5$ は $2 + 1 = 3$ の概数にすることが可能です (2 個のノード障害のみが許容されます)。

ZK クラスタでは 5 個のノードのみが実行されるため、クラスタ内の任意の数のノードに対して最大 2 個のノード障害が許容されます。これはコンバージド ノードの場合に当てはまります。

Exhibitor サービス ステータスの確認

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# service exhibitor status
exhibitor start/running, process 4905
```

```
root @ help:/var/log/springpath # ps-aux |grep-i exhibitor
root 12519 0.0 0.2 4690592 198892? Ssl May19 7:19 exhibitor -cp exhibitor. .jar:/etc/exhibitor/-
Xmx256M-XX: + HeapDumpOnOutOfMemoryError-XX: heapdumpspath
=/var/log/exhibitor_heap_dump_2019_05_19_22:19:48. hprof-Dlog4j. configuration =
File:///etc/exhibitor/log4j.properties-Dspringpath. zkdownscript =/usr/share/springpath/storfs-
misc/zkMonitor.sh 01 djava. security. config d = file:/dev/./urandom--hostname exhibitor-c file-
-fsconfigdir 10.197.252.100--port 8180--listenaddress 10.197.252.100
root@help:/var/log/springpath# pidof exhibitor
12519
```

クエリ Zookeeper サービス

Zookeeper には、ステータスのクエリ、接続の一覧表示、znodes の数などを有効にする 4つのレター コマンド構文があります。

ローカル ノード zookeeperのステータスを確認します (ruok == > Are you OK?. imok == > I am OK)。

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# echo ruok|nc localhost 2181
imok
```

zookeeper がリーダーまたはフォロワーであるかどうかを確認します。

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# echo srvr | nc localhost 2181
Zookeeper version: 3.4.6--1, built on 06/16/2015 22:50 GMT
Latency min/avg/max: 0/0/101
Received: 213128515
Sent: 213164119
Connections: 6
Outstanding: 0
Zxid: 0xa000301d0
Mode: leader
Node count: 17090
```

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# echo stat | nc localhost 2181
Zookeeper version: 3.4.6--1, built on 06/16/2015 22:50 GMT
Clients:
/192.168.5.161: 56128 [1] (queued = 0, recved = 169146196, sent = 169162634)
/192.168.5.161: 38614 [1] (queued = 0, recved = 186015, sent = 186017)
/192.168.5.164: 44412 [1] (queued = 0, recved = 184398, sent = 184399)
/192.168.5.164: 44447 [1] (queued = 0, recved = 561168, sent = 563034)
/127.0.0.1: 60060 [0] (queued = 0, recved = 1, sent = 0)
/192.168.5.161: 58754 [1] (queued = 0, recved = 39233, sent = 39261)

Latency min/avg/max: 0/0/101
Received: 213109927
Set: 213145531
Connections: 6
outstanding : 0
Zxid: 0xa000301d0
Mode: leader
Node count: 17090
```

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# echo mntr | nc localhost 2181
zk_version      3.4.6--1, built on 06/16/2015 22:50 GMT
zk_avg_latency  0
zk_max_latency  101
zk_min_latency  0
zk_packets_received  213148668
zk_packets_sent    213184272
zk_num_alive_connections  6
zk_outstanding_requests  0
zk_server_state   leader
zk_znode_count    17090
zk_watch_count    4305
zk_ephemerals_count  20
zk_approximate_data_size  1831768
zk_open_file_descriptor_count  43
zk_max_file_descriptor_count  4096
zk_followers      3
zk_synced_followers  3
zk_pending_syncs  0
```

Zookeeper の設定を確認します。

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# echo conf | nc localhost 2181
clientPort = 2181
dataDir = /var/zookeeper/version-2
dataLogDir = /var/zookeeper/version-2
tickTime = 3000
maxClientCnxns = 60
minSessionTimeout = 6000
maxSessionTimeout = 60000
serverId = 3
initLimit = 10
syncLimit = 3
electionAlg = 3
electionPort = 3888
quorumPort = 2888
peerType = 0
```

ライブ セットアップの Zookeeper ログ ファイル

Zookeeper サービスに問題が発生している場合、これらのログ ファイルは次のトレースを検出するのに役立ちます。

- /var/log/zookeeper/zookeeper *: アーカイブされたログ、有用な検索キーワード WARN, ERROR, Goodbye, Leaderなどを維持します。
- /var/log/springpath/zk-*
- /var/log/springpath/exhibitor.log

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# grep -i leader
/var/log/zookeeper/zookeeper.log*
117 /var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,088 [myid:3] - INFO
  [QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Leader@60] - TCP NoDelay set to: true
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,099 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Leader@358] - LEADING - LEADER ELECTION TOOK - 354
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,120 [myid:3] - INFO [LearnerHandler-
/192.168.5.164:36487:LearnerHandler@522] - Received NEWLEADER-ACK message from 0
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,120 [myid:3] - INFO [LearnerHandler-
/192.168.5.163:43451:LearnerHandler@522] - Received NEWLEADER-ACK message from 1
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,120 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Leader@943] - Have quorum of supporters, sids: [ 0,1,3
```

```
]; starting up and setting last processed zxid: 0x100000000
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,272 [myid:3] - INFO
[WorkerReceiver[myid=3]:FastLeaderElection@597] - Notification: 1 (message format version), 3
(n.leader), 0x0 (n.zxid), 0x1 (n.round), LOOKING (n.state), 2 (n.sid), 0x0 (n.peerEpoch) LEADING
(my state)
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,291 [myid:3] - INFO [LearnerHandler-
/192.168.5.162:48778:LearnerHandler@486] - Sending snapshot last zxid of peer is 0x0 zxid of
leader is 0x100000000sent zxid of db as 0x100000000
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:59:26,298 [myid:3] - INFO [LearnerHandler-
/192.168.5.162:48778:LearnerHandler@522] - Received NEWLEADER-ACK message from 2
```

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# grep -i warn
/var/log/zookeeper/zookeeper.log*
```

```
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:46:30,354 [myid:] - WARN
[main:QuorumPeerMain@113] - Either no config or no quorum defined in config, running in
standalone mode
/var/log/zookeeper/zookeeper.log.7:2016-10-14 22:52:55,238 [myid:] - WARN
[main:QuorumPeerMain@113] - Either no config or no quorum defined in config, running in
standalone mode
```

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# grep -i goodbye
/var/log/zookeeper/zookeeper.log*
```

```
/var/log/zookeeper/zookeeper.log.1:2017-01-23 03:55:50,429 [myid:3] - WARN [LearnerHandler-
/192.168.5.163:44118:LearnerHandler@646] - ***** GOODBYE /192.168.5.163:44118 *****
/var/log/zookeeper/zookeeper.log.1:2017-01-24 23:30:14,956 [myid:3] - WARN [LearnerHandler-
/192.168.5.164:44720:LearnerHandler@646] - ***** GOODBYE /192.168.5.164:44720 *****
/var/log/zookeeper/zookeeper.log.3:2016-12-01 23:45:22,510 [myid:3] - WARN [LearnerHandler-
/192.168.5.164:44051:LearnerHandler@646] - ***** GOODBYE /192.168.5.164:44051 *****
/var/log/zookeeper/zookeeper.log.3:2016-12-08 00:36:37,752 [myid:3] - WARN [LearnerHandler-
/192.168.5.162:46577:LearnerHandler@646] - ***** GOODBYE /192.168.5.162:46577 *****
/var/log/zookeeper/zookeeper.log.1:2017-01-23 03:55:50,429 [myid:3] - WARN [LearnerHandler-
/192.168.5.163:44118:LearnerHandler@646] - ***** GOODBYE /192.168.5.163:44118 *****
/var/log/zookeeper/zookeeper.log.4:2016-11-23 00:03:59,397 [myid:3] - WARN [LearnerHandler-
/192.168.5.164:45952:LearnerHandler@646] - ***** GOODBYE /192.168.5.164:45952 *****
/var/log/zookeeper/zookeeper.log.4:2016-12-01 22:51:00,538 [myid:3] - WARN [LearnerHandler-
/192.168.5.163:45284:LearnerHandler@646] - ***** GOODBYE /192.168.5.163:45284 *****
/var/log/zookeeper/zookeeper.log.5:2016-11-10 23:39:47,477 [myid:3] - WARN [LearnerHandler-
/192.168.5.163:43576:LearnerHandler@646] - ***** GOODBYE /192.168.5.163:43576 *****
/var/log/zookeeper/zookeeper.log.5:2016-11-11 00:49:39,782 [myid:3] - WARN [LearnerHandler-
/192.168.5.164:35219:LearnerHandler@646] - ***** GOODBYE /192.168.5.164:35219 *****
```

いくつかのサンプル ログ-Zookeeper ロギングの選択

```
2017-01-22 23:47:29,427 [myid:3] - INFO [Thread-2:QuorumCnxManager$Listener@504] - My election
bind port: /192.168.5.161:3888
2017-01-22 23:47:29,435 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:2181:QuorumPeer@714] - LOOKING
2017-01-22 23:47:29,438 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:2181:FastLeaderElection@815] - New election. My id = 3,
proposed zxid=0x9000a6b4d
2017-01-22 23:47:29,443 [myid:3] - INFO [WorkerReceiver[myid=3]:FastLeaderElection@597] -
Notification: 1 (message format version), 2 (n.leader), 0x800055ea0 (n.zxid), 0x1 (n.round),
FOLLOWING (n.state), 0 (n.sid), 0x9 (n.peerEpoch) LOOKING (my state)
2017-01-22 23:47:29,444 [myid:3] - INFO [WorkerReceiver[myid=3]:FastLeaderElection@597] -
Notification: 1 (message format version), 2 (n.leader), 0x800055ea0 (n.zxid), 0x1 (n.round),
FOLLOWING (n.state), 0 (n.sid), 0x9 (n.peerEpoch) LOOKING (my state)
2017-01-22 23:47:29,444 [myid:3] - INFO [WorkerReceiver[myid=3]:FastLeaderElection@597] -
Notification: 1 (message format version), 3 (n.leader), 0x9000a6b4d (n.zxid), 0x1 (n.round),
LOOKING (n.state), 3 (n.sid), 0x9 (n.peerEpoch) LOOKING (my state)
2017-01-22 23:47:29,444 [myid:3] - INFO [WorkerReceiver[myid=3]:FastLeaderElection@597] -
Notification: 1 (message format version), 2 (n.leader), 0x800055ea0 (n.zxid), 0x1 (n.round),
```

FOLLOWING (n.state), 0 (n.sid), 0x9 (n.peerEpoch) LOOKING (my state)
2017-01-22 23:47:29,445 [myid:3] - INFO [WorkerReceiver[myid=3]:FastLeaderElection@597] -
Notification: 1 (message format version), 2 (n.leader), 0x800055ea0 (n.zxid), 0x1 (n.round),
LEADING (n.state), 2 (n.sid), 0x9 (n.peerEpoch) LOOKING (my state)
2017-01-22 23:47:29,445 [myid:3] - INFO [WorkerReceiver[myid=3]:FastLeaderElection@597] -
Notification: 1 (message format version), 2 (n.leader), 0x800055ea0 (n.zxid), 0x1 (n.round),
FOLLOWING (n.state), 0 (n.sid), 0x9 (n.peerEpoch) LOOKING (my state)
2017-01-22 23:47:29,435 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:QuorumPeer@714] - LOOKING
2017-01-22 23:47:29,449 [myid:3] - INFO [QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Learner@86] -
TCP NoDelay set to: true
2017-01-22 23:47:29,449 [myid:3] - INFO [WorkerReceiver[myid=3]:FastLeaderElection@597] -
Notification: 1 (message format version), 2 (n.leader), 0x800055ea0 (n.zxid), 0x1 (n.round),
LEADING (n.state), 2 (n.sid), 0x9 (n.peerEpoch) FOLLOWING (my state)
2017-01-22 23:47:29,660 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] -
Serverenvironment:zookeeper.version=3.4.6--1, built on 06/16/2015 22:50 GMT
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:host.name=SpringpathControllerMSH7NHXRFL
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:java.version=1.7.0_79
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:java.vendor=Oracle Corporation
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:java.home=/usr/lib/jvm/java-7-openjdk-amd64/jre
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:java.class.path=/usr/share/zookeeper/bin/./build/classes:/usr/share/zookeeper/bin/.
./build/lib/*.jar:/usr/share/zookeeper/bin/./lib/slf4j-log4j12-
1.6.1.jar:/usr/share/zookeeper/bin/./lib/slf4j-api-
1.6.1.jar:/usr/share/zookeeper/bin/./lib/netty-
3.7.0.Final.jar:/usr/share/zookeeper/bin/./lib/log4j-
1.2.16.jar:/usr/share/zookeeper/bin/./lib/jline-
0.9.94.jar:/usr/share/zookeeper/bin/./zookeeper-
3.4.6.jar:/usr/share/zookeeper/bin/./src/java/lib/*.jar:/usr/share/zookeeper/bin/./conf:
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:java.library.path=/usr/java/packages/lib/amd64:/usr/lib/x86_64-linux-
gnu/jni:/lib/x86_64-linux-gnu:/usr/lib/x86_64-linux-gnu:/usr/lib/jni:/lib:/usr/lib
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:java.io.tmpdir=/tmp
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:java.compiler=<NA>
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server environment:os.name=Linux
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server environment:os.arch=amd64
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server environment:os.version=3.2.0-
58-generic
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server environment:user.name=root
2017-01-22 23:47:29,661 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server environment:user.home=/root
2017-01-22 23:47:29,662 [myid:3] - INFO
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Environment@100] - Server
environment:user.dir=/usr/share/zookeeper
2017-01-22 23:47:29,662 [myid:3] - INFO

```
[QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:ZooKeeperServer@162] - Created server with tickTime
3000 minSessionTimeout 6000 maxSessionTimeout 60000 datadir /var/zookeeper/version-2 snapdir
/var/zookeeper/version-2
2017-01-22 23:47:29,663 [myid:3] - INFO [QuorumPeer[myid=3]/0:0:0:0:0:0:0:0:2181:Follower@63] -
FOLLOWING - LEADER ELECTION TOOK - 226
```

```
root@SpringpathControllerMSH7NHXRFL:/var/log/springpath# cat zk-debug-storfs.log
```

```
2017-01-22 23:47:18,702:5866(0x7fd1f7ef5700):ZOO_INFO@check_events@1760: initiated connection to
server [192.168.5.163:2181]
2017-01-22 23:47:18,704:5866(0x7fd1f7ef5700):ZOO_INFO@check_events@1807: session establishment
complete on server [192.168.5.163:2181], sessionId=0x159165ff6310005, negotiated timeout=17001
2017-01-22 23:47:18,704:5866(0x7fd1f76f4700):ZOO_INFO@process_completions@2170: Calling a
watcher for node s], type = s
2017-01-23 01:50:16,809:5866(0x7fd1f7ef5700):ZOO_ERROR@handle_socket_error_msg@1778: Socket
[192.168.5.163:2181] zk retcode=-4, errno=112(Host is down): failed while receiving a server
response
2017-01-23 01:50:16,818:5866(0x7fd1f76f4700):ZOO_INFO@process_completions@2170: Calling a
watcher for node s], type = s
2017-01-23 01:50:16,818:5866(0x7fd1f7ef5700):ZOO_INFO@check_events@1760: initiated connection to
server [192.168.5.164:2181]
2017-01-23 01:50:16,818:5866(0x7fd1f7ef5700):ZOO_ERROR@handle_socket_error_msg@1778: Socket
[192.168.5.164:2181] zk retcode=-4, errno=112(Host is down): failed while receiving a server
response
2017-01-23 01:50:17,819:5866(0x7fd1f7ef5700):ZOO_ERROR@handle_socket_error_msg@1740: Socket
[192.168.5.162:2181] zk retcode=-4, errno=115(Operation now in progress): poll refused to accept
read/write from the client
```

```
root @ help:/var/log/springpath # cat zkEvents .log
```

```
INFO:ZkEvents:Send changes to listeners
INFO:EventDB:Received message{"timestamp": 1559200009008, "description": "Cluster policy
compliance is satisfied", "id": "ClusterPolicyComplianceSatisfiedEvent"}
DEBUG:kazoo.client:Received EVENT: Watch(type=3, state=3,
path=u'/zkEvents/lastModificationTime')
DEBUG:kazoo.client:Sending request(xid=42): GetData(path='/zkEvents/lastModificationTime',
watcher=<bound method DataWatch._watcher of <kazoo.recipe.watchers.DataWatch object at
0x7fec80ffd0d0>>)
DEBUG:kazoo.client:Received response(xid=42): ('{"timestamp": 1559200009009, "description":
"Cluster is healthy", "id": "ClusterHealthNormalEvent"}', ZnodeStat(czxid=4294968021,
mzxid=85899377486, ctime=1543045592975, mtime=1559200010730, version=465, cversion=0,
aversion=0, ephemeralOwner=0, dataLength=99, numChildren=0, pzxid=4294968021))
INFO:ZkEvents:Version: 465, data: {"timestamp": 1559200009009, "description": "Cluster is
healthy", "id": "ClusterHealthNormalEvent"}
INFO:ZkEvents:Send changes to listeners
INFO:EventDB:Received message{"timestamp": 1559200009009, "description": "Cluster is healthy",
"id": "ClusterHealthNormalEvent"}
INFO:EventDB:Client(38) disconnected
INFO:EventDB:New client connected and was given id 39
INFO:EventDB:Client(39) disconnected
```

```
root@SpringpathControllerPZTMTRSH7K:/var/log/springpath# tail exhibitor.log
```

```
05-20 05:28:52.223 INFO org.mortbay.log - Started SocketConnector@10.197.252.99:8180
05-20 05:29:20.106 INFO com.netflix.exhibitor.core.activity.ActivityLog - State: down
05-20 05:29:20.106 INFO com.netflix.exhibitor.core.activity.ActivityLog - Attempting to stop
instance
05-20 05:29:20.106 INFO com.netflix.exhibitor.core.activity.ActivityLog - Attempting to
start/restart ZooKeeper
05-20 05:29:20.328 INFO com.netflix.exhibitor.core.activity.ActivityLog - jps didn't find
instance - assuming ZK is not running
05-20 05:29:20.347 INFO com.netflix.exhibitor.core.activity.ActivityLog - Process started via:
/usr/share/zookeeper/bin/zkServer.sh
05-20 05:29:20.353 ERROR com.netflix.exhibitor.core.activity.ActivityLog - ZooKeeper Server:
ZooKeeper JMX enabled by default
```

```
05-20 05:29:20.353 ERROR com.netflix.exhibitor.core.activity.ActivityLog - ZooKeeper Server:
Using config: /usr/share/zookeeper/bin/./conf/zoo.cfg
05-20 05:29:21.366 INFO com.netflix.exhibitor.core.activity.ActivityLog - ZooKeeper Server:
Starting zookeeper ... STARTED
05-20 05:29:50.128 INFO com.netflix.exhibitor.core.activity.ActivityLog - State: serving
```

サポートバンドル (storfs) からの Zookeeper ログ ファイル

サポートバンドルでは、次の重要なファイルを参照してください。

```
root@SpringpathControllerMSH7NHXRFL:/var/log/zookeeper# echo conf | nc localhost 2181
clientPort = 2181
dataDir = /var/zookeeper/version-2
dataLogDir = /var/zookeeper/version-2
tickTime = 3000
maxClientCnxns = 60
minSessionTimeout = 6000
maxSessionTimeout = 60000
serverId = 3
initLimit = 10
syncLimit = 3
electionAlg = 3
electionPort = 3888
quorumPort = 2888
peerType = 0
```