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官方网站: <http://www.bmpj.net>

19. 设备驱动和 OPC Client 支持 mysql、oracle、sqlite、sqlserver 的持久化

19.1 概述

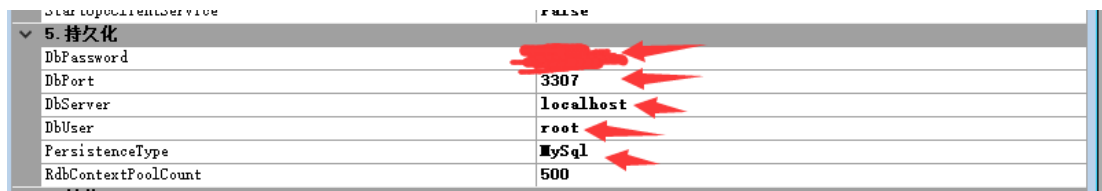
ServerSuperIO 支持设备驱动和 OPC Client 采集的数据信息按标签集合写入 mysql、oracle、sqlserver 和 sqlite 数据库。现在还支持写入实时数据库, 例如: edna、golden 和 corert 等。同时支持实时数据库和关系数据库主要考虑项目环境和支撑的能力。

本质上还是统一继承 IDataPersistence 接口, 然后扩展完成的操作。如果其他网友需要支持 nosql 数据库等, 也可以继承这个接口来完成对 DeviceDynamic 的持久化。

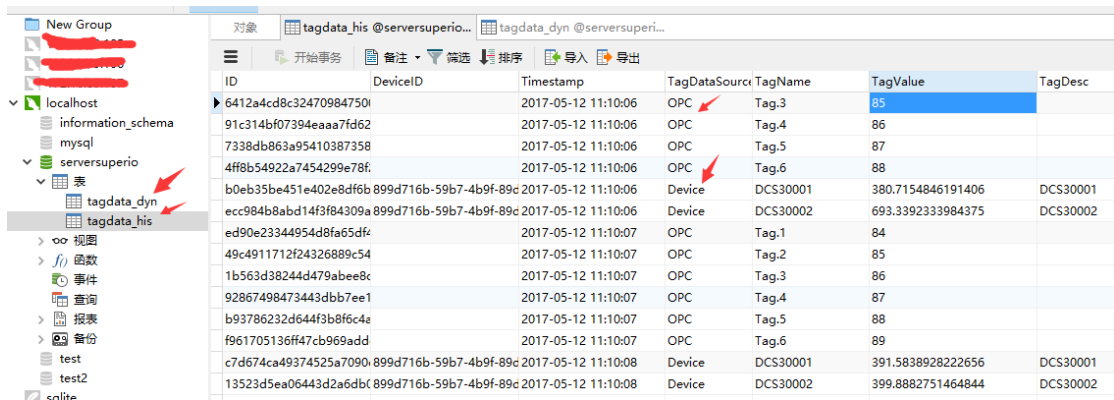
具体操作过程请参见: [17.集成 Golden 实时数据库, 高并发保存测点数据](#)。

19.2 对 mysql 数据库的支持

可以自动创建数据库和数据表, 参数设置, 如下图:



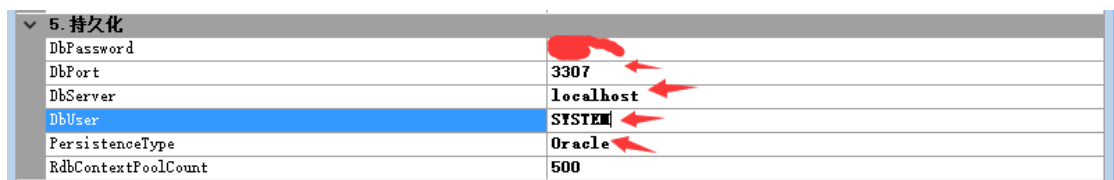
可以同是保存设备驱动和 OPC Client 读取过来的数据也可以进行保存, 如下图:



ID	DeviceID	Timestamp	TagDataSource	TagName	TagValue	TagDesc
6412a4cd8c32470984750f		2017-05-12 11:10:06	OPC	Tag.3	85	
91c314bf07394eaaa7fd62		2017-05-12 11:10:06	OPC	Tag.4	86	
7338db863a95410387358		2017-05-12 11:10:06	OPC	Tag.5	87	
4f8b54922a7454299e78f		2017-05-12 11:10:06	OPC	Tag.6	88	
b0eb35be451e402e8df6b899d716b-59b7-4b9f-89c		2017-05-12 11:10:06	Device	DCS30001	380.7154846191406	DCS30001
ecc984b8abd14f3f84309a899d716b-59b7-4b9f-89c		2017-05-12 11:10:06	Device	DCS30002	693.3392333984375	DCS30002
ed90e23344954d8fa65df		2017-05-12 11:10:07	OPC	Tag.1	84	
49c4911712f24326889c54		2017-05-12 11:10:07	OPC	Tag.2	85	
1b563d38244d479abee8c		2017-05-12 11:10:07	OPC	Tag.3	86	
92867498473443dbb7ee1		2017-05-12 11:10:07	OPC	Tag.4	87	
b93786232d644f3b8f6c4a		2017-05-12 11:10:07	OPC	Tag.5	88	
f961705136ff47cb969add		2017-05-12 11:10:07	OPC	Tag.6	89	
c7d674ca49374525a709c899d716b-59b7-4b9f-89c		2017-05-12 11:10:08	Device	DCS30001	391.5838928222656	DCS30001
13523d5ea06443d2a6dbcb899d716b-59b7-4b9f-89c		2017-05-12 11:10:08	Device	DCS30002	399.8882751464844	DCS30002

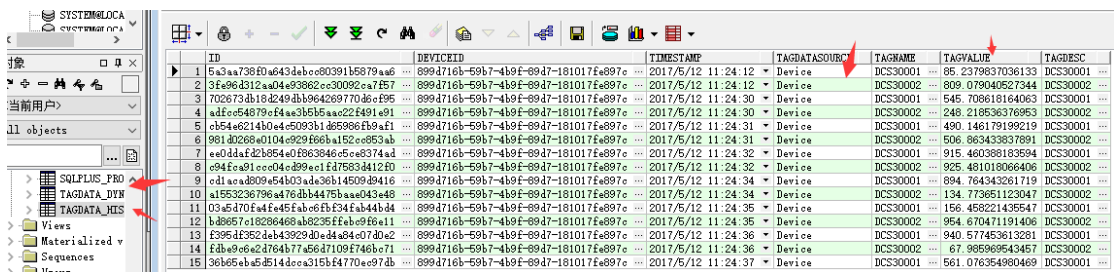
19.3 对 oracle 数据库的支持

需要提前创建数据库实例, 数据库名称为: ServerSuperIO, 之后配置连接参数, 可以自动创建数据表, 如下图:



DbPassword	
DbPort	3307
DbServer	localhost
DbUser	SYSTEM
PersistenceType	Oracle
RdbContextPoolCount	500

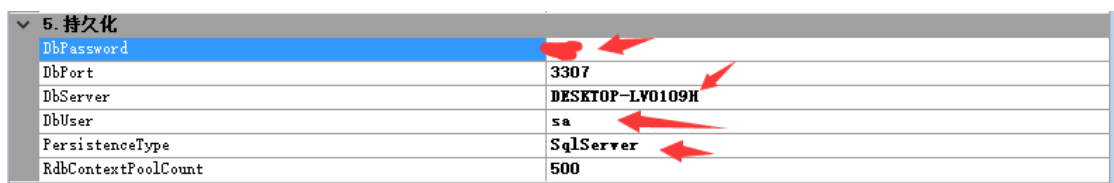
可以同是保存设备驱动和 OPC Client 读取过来的数据也可以进行保存, 如下图:



ID	DeviceID	Timestamp	TagDataSource	TagName	TagValue	TagDesc
1 5a3aa738f0a643debcc80391b5879a6	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:12	Device	DCS30001	85.2379837036133	DCS30001
2 3fe96d312aa04e93862cc30092ca7f57	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:12	Device	DCS30002	809.079040527344	DCS30002
3 702673db1842494bb96426977046cf95	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:30	Device	DCS30001	545.708618164063	DCS30001
4 adfc054879cf4a3b5b5a0c22f491a91	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:30	Device	DCS30002	248.218536376953	DCS30002
5 cb54e214b04e5093b1b6590619af1	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:31	Device	DCS30001	490.146179199219	DCS30001
6 98140268a0104c929f66ba152c853ab	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:31	Device	DCS30002	506.863433837891	DCS30002
7 eed1daf2b854a0f963046c5cc8374ad	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:32	Device	DCS30001	915.460388183594	DCS30001
8 e94fca91ccc04a09ec1fd75834412f0	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:32	Device	DCS30002	925.481018066406	DCS30002
9 cdlacda809e54b03ade36b1450949416	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:34	Device	DCS30001	894.764343261719	DCS30001
10 a1553236796ad76db4475baae043e48	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:34	Device	DCS30002	134.773651123047	DCS30002
11 03a5d70f4f4f45fab0fbf34fab44b84	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:35	Device	DCS30001	156.458221435547	DCS30001
12 1ba957c1829468a8235f4ab916a11	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:35	Device	DCS30002	954.670471191406	DCS30002
13 f3954f362deb43929d0e44a84c7d0c2	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:36	Device	DCS30001	940.577453613281	DCS30001
14 f8ba9c6e2d764b77a56d7109f746bc71	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:36	Device	DCS30002	67.985969543457	DCS30002
15 36b65eb5d514dcca315b54770ec97db	899d716b-59b7-4b9f-89d7-181017fe897e	2017/5/12 11:24:37	Device	DCS30001	561.076354980469	DCS30001

19.4 对 sqlserver 数据库的支持

可以自动创建数据库和数据表, 参数设置, 如下图:



DbPassword	
DbPort	3307
DbServer	DESKTOP-LV0109H
DbUser	sa
PersistenceType	SqlServer
RdbContextPoolCount	500

可以同是保存设备驱动和 OPC Client 读取过来的数据也可以进行保存, 如下图所示:

ID	DeviceID	Timestamp	TagData Source	TagName	TagValue	TagDesc
1	01e009ffa3214b72b5b44d089ae62c6	2017-05-12 12:27:34.083	Device	DCS30002	6.52047967910767	DCS30002
2	0215a08938a5a48f82be4d1510cbbab8	2017-05-12 12:27:16.697	Device	DCS30002	456.760589599609	DCS30002
3	03458e77c7674d1caeffad115e0222f10	2017-05-12 12:27:13.127	Device	DCS30001	236.355499267578	DCS30001
4	0f110729e0584ae4b475c32a6b1bef4a	2017-05-12 12:27:28.630	Device	DCS30001	828.725402832031	DCS30001
5	137a74f00a884676a5b54b1aac98a8a	2017-05-12 12:27:29.740	Device	DCS30001	720.824157714844	DCS30001
6	16b04717c5ae458499224f879e1cd133	2017-05-12 12:27:26.443	Device	DCS30002	288.282104492188	DCS30002
7	1f8ab451e247b491771322f13a0a30	2017-05-12 12:27:17.773	Device	DCS30002	762.030334472656	DCS30002
8	2390f6ae18e4f28a0aaa20a41b5f468	2017-05-12 12:27:19.937	Device	DCS30001	520.021057128906	DCS30001
9	2f6329e8db948ab84295889da70f2fc	2017-05-12 12:27:05.730	Device	DCS30001	210.119369506836	DCS30001
10	3435531alcad4c7aa98f7f868266eaa3d	2017-05-12 12:27:28.630	Device	DCS30002	994.798767089844	DCS30002

19.5 对 sqlite 数据库的支持

需要在参数 Server 中填写 db 数据库的文件路径, 如下图:

DbPassword	
DbPort	3307
DbServer	E:\sqlite-tools-win32\test.db
DbUser	SYSTEM
Persistencetype	Sqlite
RdbContextPoolCount	500

可以同是保存设备驱动和 OPC Client 读取过来的数据也可以进行保存, 如下图所示:

New Group

localhost

sqlite

main

表

COMPANY

myuser

TagData_Dyn

TagData_His

树图

索引

触发器

查询

报表

备份

对象

TagData_His @main (sqlite) ...

开始事务

备注

筛选

排序

导入

导出

ID	DeviceID	Timestamp	TagDataSource	TagName	TagValue	TagDesc
4e369ff076d54e77996a25899d716b-59b7-4b9f-89c	2017-05-12 12:19:56.8020	Device	DCS30001	335.886444091797	DCS30001	
2a72a8c62331413898cc8:899d716b-59b7-4b9f-89c	2017-05-12 12:19:56.8020	Device	DCS30002	666.300231933594	DCS30002	
f2431f70cc2b419d84f710:899d716b-59b7-4b9f-89c	2017-05-12 12:20:03.8727	Device	DCS30001	333.860107421875	DCS30001	
1385b80a7ff84aacae58f899d716b-59b7-4b9f-89c	2017-05-12 12:20:03.8727	Device	DCS30002	663.346313476563	DCS30002	
2ebc691fae2e47bea885a:899d716b-59b7-4b9f-89c	2017-05-12 12:20:05.3682	Device	DCS30001	971.831359863281	DCS30001	
fc6bd521c68141bd84585:899d716b-59b7-4b9f-89c	2017-05-12 12:20:05.3682	Device	DCS30002	791.272705078125	DCS30002	
7ad64367bf044a54a7461:899d716b-59b7-4b9f-89c	2017-05-12 12:20:06.8385	Device	DCS30001	892.192626953125	DCS30001	
d8fe7da881274737831be:899d716b-59b7-4b9f-89c	2017-05-12 12:20:06.8385	Device	DCS30002	529.803344726563	DCS30002	
68bbebaba89d425da9f6c:899d716b-59b7-4b9f-89c	2017-05-12 12:20:08.2677	Device	DCS30001	139.794418334961	DCS30001	
faedc36ade854480be1d6:899d716b-59b7-4b9f-89c	2017-05-12 12:20:08.2677	Device	DCS30002	465.775421142578	DCS30002	
653e61b4927e4c96bd9d1899d716b-59b7-4b9f-89c	2017-05-12 12:20:09.6727	Device	DCS30001	669.786193847656	DCS30001	
a350ce7d2a7442359ec03:899d716b-59b7-4b9f-89c	2017-05-12 12:20:09.6727	Device	DCS30002	12.3517513275146	DCS30002	