

接口说明

历史案例查询

输入：

路径：/findByLine

方法：GET

参数：line=线路名称（精准匹配）如：大甲线

示例：

```
localhost:5000/findByLine?line=大甲线
```

输出：

返回结果：

```
"links":[
  {
    "source":源节点id,
    "target":目标节点id
  },
  ...
]
"nodes":[
  {
    "id":节点id,
    节点其他属性
  }
]
```

示例：

```
{
  "links": [
    {
      "source": 83184,
      "target": 83185
    },
    {
      "source": 83183,
```

```

        "target": 83184
    },
    {
        "source": 83182,
        "target": 83183
    },
    {
        "source": 83181,
        "target": 83182
    },
    {
        "source": 83180,
        "target": 83181
    },
    {
        "source": 83179,
        "target": 83180
    },
    {
        "source": 83178,
        "target": 83179
    }
],
"nodes": [
    {
        "estimatedPowerDeliveryTime": "2022-06-02 02:00",
        "faultEndTime": NaN,
        "faultLevel": NaN,
        "faultStartTime": "2022-06-01 19:51",
        "id": 83185,
        "isChanged": NaN,
        "isDefective": "否",
        "isLowVoltageEquipment": "否",
        "landLossSituation": "完全失地",
        "name": "A54A21AD-7C1F-4D94-816F-93840FF65DCB",
        "powerOutageCommonVariable": 23.0,
        "powerOutageSpecificVariable": 7.0,
        "powerOutageStartTime": "2022-06-01 19:52",
        "powerSupplyRestoreTime": "2022-06-01 21:07",
        "protectionActionSituation": "无",
        "reclosingSituation": "无",
        "time": "2022-06-01"
    },
    {
        "estimatedPowerDeliveryTime": "2022-12-26 03:00",
        "faultEndTime": "2022-12-25 21:56",
        "faultLevel": NaN,
        "faultStartTime": "2022-12-25 20:49",
        "id": 83184,
        "isChanged": "否",
        "isDefective": "否",
        "isLowVoltageEquipment": "否",
        "landLossSituation": "无",
        "name": "C6B72B6B-015B-45C3-A22B-06A7A510459B",
        "powerOutageCommonVariable": 4.0,
        "powerOutageSpecificVariable": 5.0,
        "powerOutageStartTime": "2022-12-25 20:53",
        "powerSupplyRestoreTime": "2022-12-25 21:56",
    }
]

```

```
"protectionActionSituation": "无",
"reclosingSituation": "无",
"time": "2022-12-25"
},
{
  "estimatedPowerDeliveryTime": "2021-09-24 00:00",
  "faultEndTime": "2021-09-23 20:45",
  "faultLevel": NaN,
  "faultStartTime": "2021-09-23 17:14",
  "id": 83183,
  "isChanged": "否",
  "isDefective": "否",
  "isLowVoltageEquipment": "否",
  "landLossSituation": "不完全失地",
  "name": "07F360BB-0C90-458C-8344-A6C86C215133",
  "powerOutageCommonVariable": 22.0,
  "powerOutageSpecificVariable": 5.0,
  "powerOutageStartTime": "2021-09-23 17:15",
  "powerSupplyRestoreTime": "2021-09-23 21:13",
  "protectionActionSituation": "无",
  "reclosingSituation": "无",
  "time": "2021-09-23"
},
{
  "estimatedPowerDeliveryTime": "2020-12-31 19:00",
  "faultEndTime": "2020-12-31 13:30",
  "faultLevel": NaN,
  "faultStartTime": "2020-12-31 12:34",
  "id": 83182,
  "isChanged": "否",
  "isDefective": "否",
  "isLowVoltageEquipment": "否",
  "landLossSituation": "无",
  "name": "FB4AC84D-8287-4ABB-BBA8-6E50DAD91543",
  "powerOutageCommonVariable": 4.0,
  "powerOutageSpecificVariable": 5.0,
  "powerOutageStartTime": "2020-12-31 12:35",
  "powerSupplyRestoreTime": "2020-12-31 15:45",
  "protectionActionSituation": "无",
  "reclosingSituation": "无",
  "time": "2020-12-31"
},
{
  "estimatedPowerDeliveryTime": "2020-12-14 07:00",
  "faultEndTime": "2020-12-14 10:57",
  "faultLevel": NaN,
  "faultStartTime": "2020-12-14 00:16",
  "id": 83181,
  "isChanged": "否",
  "isDefective": NaN,
  "isLowVoltageEquipment": "否",
  "landLossSituation": "完全失地",
  "name": "6765A246-6047-4182-BE5B-5B43775E3F8C",
  "powerOutageCommonVariable": 4,
  "powerOutageSpecificVariable": 5,
  "powerOutageStartTime": "2020-12-14 00:16",
  "powerSupplyRestoreTime": "2020-12-14 02:02",
  "protectionActionSituation": "无",
```

```
    "reclosingSituation": "无",
    "time": "2020-12-14"
  },
  {
    "estimatedPowerDeliveryTime": "2020-06-29 15:00",
    "faultEndTime": "2020-06-29 09:43",
    "faultLevel": "Ⅲ级",
    "faultStartTime": "2020-06-29 08:31",
    "id": 83180,
    "isChanged": "否",
    "isDefective": "否",
    "isLowVoltageEquipment": "否",
    "landLossSituation": "无",
    "name": "7AC9CCF1-A1CC-46C3-9F2F-3F792C30272B",
    "powerOutageCommonVariable": 4,
    "powerOutageSpecificVariable": 5,
    "powerOutageStartTime": "2020-06-29 08:31",
    "powerSupplyRestoreTime": "2020-06-29 09:53",
    "protectionActionSituation": "无",
    "reclosingSituation": "无",
    "time": "2020-06-29"
  },
  {
    "estimatedPowerDeliveryTime": "2020-06-16 15:00",
    "faultEndTime": "2020-06-16 10:23",
    "faultLevel": "Ⅲ级",
    "faultStartTime": "2020-06-16 08:30",
    "id": 83179,
    "isChanged": "否",
    "isDefective": "否",
    "isLowVoltageEquipment": "否",
    "landLossSituation": "无",
    "name": "6254A005-C9E5-4621-BDF2-99E0C6C3007D",
    "powerOutageCommonVariable": 23,
    "powerOutageSpecificVariable": 5,
    "powerOutageStartTime": "2020-06-16 08:30",
    "powerSupplyRestoreTime": "2020-06-16 10:36",
    "protectionActionSituation": "过流Ⅲ段",
    "reclosingSituation": "重合不成功",
    "time": "2020-06-16"
  },
  {
    "estimatedPowerDeliveryTime": "2020-02-22 22:00",
    "faultEndTime": "2020-02-22 15:34",
    "faultLevel": "Ⅲ级",
    "faultStartTime": "2020-02-22 15:01",
    "id": 83178,
    "isChanged": "否",
    "isDefective": "否",
    "isLowVoltageEquipment": "否",
    "landLossSituation": "无",
    "name": "19477315-1E3D-4635-8190-1149A77DEF2E",
    "powerOutageCommonVariable": 4,
    "powerOutageSpecificVariable": 0,
    "powerOutageStartTime": "2020-02-22 15:01",
    "powerSupplyRestoreTime": "2020-02-22 15:40",
    "protectionActionSituation": "无",
    "reclosingSituation": "无",
```

```
    "time": "2020-02-22"
  }
]
}
```

关联线路推荐

输入：

路径：/neighbors

方法：GET

参数：line=线路名称（精准匹配）如：大甲线

示例：

```
localhost:5000/neighbors?line=东吉支
```

输出：

返回结果：

```
[
{
  "name":一阶邻居线路名称（不包括自身）
},
...
]
```

示例：

```
[
  {
    "name": "杉洋线"
  },
  {
    "name": "小甲线"
  },
  {
    "name": "大甲线"
  },
  {
    "name": "杉洋变"
  }
]
```

FDM预测

输入：

路径：/FDMpredict

方法：GET

参数：line=线路名称（精准匹配）如：大甲线，year=四位数年份，month=两位数月份，day=两位数日期

示例：

```
localhost:5000/FDMpredict?line=东吉支&year=2021&month=08&day=23
```

输出：

返回结果：

```
[
{
  "equipment":故障设备预测,
  "reason":故障原因预测,
  "score":该预测得分
}
...
]
```

示例：

```
[
{
  "equipment": "无间隙避雷器",
  "reason": "本体击穿",
  "score": 7.5512
},
{
  "equipment": "用户设备",
  "reason": "",
  "score": 3.2614
},
{
  "equipment": "裸导线",
  "reason": "短路、接地",
  "score": 3.1459
},
{
  "equipment": "柱上开关",
  "reason": "开关跳闸（原因不清）",
  "score": 3.0737
},
{
  "equipment": "绝缘导线",
  "reason": "短路、接地",
  "score": 3.0737
}
```

```
"score": 2.32
},
{
  "equipment": "绝缘导线",
  "reason": "断线断股",
  "score": 1.8201999999999998
},
{
  "equipment": "间隙避雷器",
  "reason": "本体击穿",
  "score": 0.9703
},
{
  "equipment": "裸导线",
  "reason": "断线断股",
  "score": 0.9597
},
{
  "equipment": "开关柜（环网柜）",
  "reason": "开关跳闸（原因不清）",
  "score": 0.6106
},
{
  "equipment": "隔离刀闸",
  "reason": "刀片故障",
  "score": 0.5238
},
{
  "equipment": "柱上开关",
  "reason": "瓷柱断裂损坏",
  "score": 0.5161
},
{
  "equipment": "柱上开关",
  "reason": "本体烧毁",
  "score": 0.5139
},
{
  "equipment": "柱上开关",
  "reason": "端子短路",
  "score": 0.453
},
{
  "equipment": "杆塔",
  "reason": "水泥杆倒断",
  "score": 0.4277
},
{
  "equipment": "用户设备",
  "reason": "断裂脱落",
  "score": 0.3897
},
{
  "equipment": "未发现故障设备",
  "reason": "其他",
  "score": 0.374
},
{
```

```
    "equipment": "跌落式熔断",
    "reason": "端子断裂",
    "score": 0.374
  },
  {
    "equipment": "裸导线",
    "reason": "其他",
    "score": 0.2439
  }
]
```

单类型知识图谱

输入：

路径：/graph/类型名称

方法：GET

参数：无

示例：

```
localhost:5000/graph/FaultyEquipment
```

输出：

返回结果：

```
[
  {
    "name":...
  },
  ...
]
```

双类型知识图谱

输入：

路径：/graph/类型名称1/类型名称2

方法：GET

参数：无

示例：

localhost:5000/graph/FaultyEquipment/FaultDescriptionType

输出：

返回结果：

```
{
  "links":
  [
    {
      "source":源节点id,
      "target":目标节点id
    },
    ...
  ],
  "类型名称1":
  [
    {
      "id":节点id,
      "name":...
    },
    ...
  ],
  "类型名称2":
  [
    {
      "id":节点id,
      "name":...
    },
    ...
  ]
}
```

四类型知识图谱

输入：

路径： /graph/allType

方法： GET

参数： 无

示例：

localhost:5000/graph/allType

输出:

返回结果:

```
{
  "links":[
    {
      "source":源节点id,
      "target":目标节点id
    },
    ...
  ],
  "FaultDescriptionType":
  [
    {
      "id":节点id,
      "name":...
    },
    ...
  ],
  "FaultDescription":
  [
    {
      "id":节点id,
      "name":...
    },
    ...
  ],
  "FaultyEquipmentType":
  [
    {
      "id":节点id,
      "name":...
    },
    ...
  ],
  "FaultyEquipment":
  [
    {
      "id":节点id,
      "name":...
    },
    ...
  ]
}
```

相似事件推荐

输入：

路径：/recommend

方法：GET

参数：line=线路名称（精准匹配）如：大甲线，year=四位数年份，month=两位数月份，day=两位数日期

示例：

```
localhost:5000/recommend?year=2021&month=08&day=21&line=大甲线
```

输出：

返回结果：

```
[
  {
    "各个字段":.....
    ...
  },
  ... (共五个结果，按顺序为日期最近的五个结果)
]
```