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Sponsor Star

Commands

Commands are generated by ChirpStack or external app
ChirpStack Gateway Bridge. Depending the `marshaler`

- JSON: JSON based on the Protobuf Buffers JSON m
- Protobuf: Protocol Buffers binary encoding (recom

For the Protobuf message definitions, please refer to gw

Command types

down - Downlink transmission

Request the gateway to schedule a downlink transmissi

The `items` must contain at least one downlink option b
one item will be emitted by the gateway. By specifying n
gateway can retry with the next item in case of a schedu

The `context` key must contain the same value as the re
gateway internal context (e.g. internal timing informatio

Defined by the `DownlinkFrame` Protobuf message.

JSON example (for Class-A scheduling):

```
{
    "downlinkId": 894104280,
    "items": [{
        "phyPayload": "YKb+agGgAwCSzNbb",
```

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```
            "txInfo": {
                "frequency": 867300000,
                "power": 14,
                "modulation": {
                    "lora": {
                        "bandwidth": 125000,
                        "spreadingFactor": 7,
                        "codeRate": "CR_4_5",
                        "polarizationInversion": tru
                    }
                },
                "timing": {
                    "delay": {
                        "delay": "1s"
                    }
                },
                "context": "xwx0GQ=="
            }
        }, {
            "phyPayload": "YKb+agGgAwCSzNbb",
            "txInfo": {
                "frequency": 869525000,
                "power": 27,
                "modulation": {
                    "lora": {
                        "bandwidth": 125000,
                        "spreadingFactor": 12,
                        "codeRate": "CR_4_5",
                        "polarizationInversion": tru
                    }
                },
                "timing": {
                    "delay": {
                        "delay": "2s"
                    }
                },
                "context": "xwx0GQ=="
            }
        }],
        "gatewayId": "0016c001f153a14c"
    }
```

`config` - Gateway configuration

Request the gateway to re-configure the channels. This with the ChirpStack Concentratord backend.

Defined by the `GatewayConfiguration` Protobuf messa

JSON example:

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```
{
    "gatewayId": "0016c001f153a14c",
    "version": "717c8d9dd858e8b0",
    "channels": [{
        "frequency": 868100000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 868300000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 868500000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 867100000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 867300000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 867500000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 867700000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 867900000,
        "loraModulationConfig": {
            "bandwidth": 125000,
            "spreadingFactors": [7, 8, 9, 10, 11
        }
    }, {
        "frequency": 868300000,
```

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```
            "loraModulationConfig": {
                "bandwidth": 250000,
                "spreadingFactors": [7]
            }
        }, {
            "frequency": 868800000,
            "fskModulationConfig": {
                "bandwidth": 125000,
                "bitrate": 50000
            }
        }],
        "statsInterval": "30s"
    }
```

exec - Command execution request

This will request the execution of a command by the Ch
that these commands must be pre-configured in the Co

Defined by the `GatewayCommandExecRequest` Protobuf r

JSON example:

```
{
    "gatewayId": "0016c001f153a14c",
    "execId": 23451,
    "command": "reboot",
    "token": "[BASE64 ENCODED BLOB]",
    "stdin": "[OPTIONAL BASE64 ENCODED BLOB]",
    "environment": {
        "ENV_VAR_1": "value1",
        "ENV_VAR_2": "value2"
    }
}
```

Note: the given environment variables will be extended
already exposed to the “main” process.

`raw` - Raw packet-forwarder command

This payload is used for raw packet-forwarder comman
ChirpStack Gateway Bridge. Currently these are the:

- BasicStation Remote Command
- BaiscStation Remote Shell

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Defined by the `RawPacketForwarderCommand` Protobuf r

JSON example:

```
{
    "gatewayId": "0016c001f153a14c",
    "payload": "[BASE64 ENCODED BLOB]"
}
```