

Gartan API

Version 1.0

Introduction	2
Standard Response	2
Gartan Status Codes.....	3
Authentication	4
GetAuthenticationToken	4
GetAuthToken.....	5
SignOut.....	6
Mobilising Interface Functions.....	7
GetApplianceStatus.....	7
SetApplianceOffStationStatus.....	9
GetActiveEmployees	9
SetEmployeeOffStationStatus.....	12
SetIncidentAttendance	13
Pushed Updates	15
Appliance Status Updates	15
Employee 48 Hour information	16

Introduction

The Gartan API is a REST-based method of retrieving information from the Gartan Availability and Roster systems, and updating the off station status of appliances and employees.

All methods in the API use either the HTTP GET or HTTP POST requests. The GET request passes parameters in the query string. The POST request passes JSON data in the request body, and the API key as a request header. Responses can be received in either XML or JSON format, by specifying the 'data-type' or 'accept' header in the HTTP request.

To use the API, you must first log in and receive an API key. This key will be passed into every call to the API to validate the user session.

Responses will be a RequestResult object, with the Data field containing the requested information. This may be a string or an array of objects.

Standard Response

RequestResult

The RequestResult will be returned in either JSON or XML format depending on the data type specified. It contains an integer status code indicating the success or failure of the request, along with a data field if there is information to be returned, and a message field.

The RequestResult will generally be sent with a HTTP status code of 200, for success. The Data attribute may be a string, as in the response to GetAuthenticationToken, or an array of objects.

The RequestResult may also return the following HTTP Status codes:

- 400 if the request contains incorrect data
- 401 if the authentication has expired
- 500 if there is an internal server error

A sample of the RequestResult, returned from the GetAuthenticationToken method, is below:

JSON

```
{"code":1,  
"data":"11rrbgp9m8o191zw86lah14",  
"message":""}
```

XML

```
<RequestResult xmlns:i="http://www.w3.org/2001/XMLSchema-instance">  
  <code>1</code>  
  <data>11rrbgp9m8o191zw86lah14</data>  
  <message/>  
</RequestResult>
```

Gartan Status Codes

Each RequestResult is returned with a status code indicating the success or failure of the request.
Those status codes are:

1	Success
2	AccessDenied
3	InvalidDataReceived
4	ServerError
5	SuccessWithFailures

Authentication

These methods are used to sign in to the API, retrieve the API key, and to log out of the API. The API key provided here will be passed to all other calls to the API.

GetAuthenticationToken

(HTTP GET)

This method takes a username and password for a Gartan user, and returns the API key for this user's session.

Resource Location

{installed_location}/v1/GetAuthenticationToken?username={username}&password={password}

Request Parameters

username	Gartan user account name
password	Gartan user account password

Response Detail

code	Integer status code
data	API Key, to be passed to future method calls
message	String description of status

Sample Requests / Responses

Request	192.168.1.1/GartanAPI/v1/GetAuthenticationToken?username=user1&password=asAb234jfaJOTA
Header	Accept: application/json
Response	<pre>{ "code": 1, "data": "m3yjk7loun9ffeix38s21cfghs3xmacpadmk8hyyinvgtfw8q8gcodshptqyakpq xeauwim06ykhhgj9ejudcngidtezxlrdleow", "message": "Success" }</pre>

Request	192.168.1.1/GartanAPI/v1/GetAuthenticationToken?username=user1&password=aaaaa
Header	Accept: application/xml
Response	<pre><RequestResult xmlns:i="http://www.w3.org/2001/XMLSchema-instance"> <code>2</code> <data/> <message>Invalid username or password.</message></pre>

	</RequestResult>
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GetAuthToken

(HTTP GET)

Added September 2016

This method has the same function as GetAuthenticationToken, but does not require the authentication details to be passed in the query string, instead using basic authentication.

The “authorization” header’s value is determined by adding the username and password to a colon delimited string, encoding this in base64, and prefixing the result with ‘Basic ‘. For example:

Username: user1
Password: password1

Converting string “user1:password1” to base64 gives: dXNlcjE6cGFzc3dvcmQx

Header added to the request is: Authorization: Basic dXNlcjE6cGFzc3dvcmQx

Resource Location

{installed_location}/v1/GetAuthToken

Response Detail

code	Integer status code
data	API Key, to be passed to future method calls
message	String description of status

Sample Requests / Responses

Request	192.168.1.1/GartanAPI/v1/GetAuthToken
Header	Accept: application/json Authorization: Basic dXNlcjE6cGFzc3dvcmQx
Response	{ "code": 1, "data": "m3yjk7loun9ffeix38s21cfgbs3xmacpadmk8hyyinvgtfw8q8gcodshptqyakpq xeauwim06ykhg9ejudcngidtezxlrlow", "message": "Success" }

Request	192.168.1.1/GartanAPI/v1/GetAuthToken
Header	Accept: application/xml Authorization: Basic aGVsbG86dGhlcmU=
Response	<RequestResult xmlns:i="http://www.w3.org/2001/XMLSchema-instance"> <code>2</code> <data/>

	<pre><message>Invalid username or password.</message> </RequestResult></pre>
--	------------------------------------------------------------------------------------------------

SignOut

(HTTP GET)

This method deactivates the APIKey provided in the GetAuthenticationToken method.

Resource Location

```
{installed_location}/v1/SignOut?apiKey={apiKey}
```

Request Parameters

apiKey	The alphanumeric string used to identify the API session
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Response Detail

Standard RequestResult indicating success or failure

Sample Requests/Responses

Request	192.168.1.1/GartanAPI/v1/SignOut?apiKey=12lih31l4i13iuvblvcdf79dfhfgdf8g6g5s9f7seh0f
Header	Accept: application/xml
Response	Standard RequestResult indicating success or failure.

Request	192.168.1.1/GartanAPI/v1/SignOut?apiKey=1
Header	Accept: application/json
Response	Standard RequestResult indicating success or failure.

Mobilising Interface Functions

These methods allow a Command & Control system to get the current status of appliances and employees in the Availability and Roster systems, set an appliance as out at an incident, and return an appliance to its home station.

The object or collection of objects in each method is returned within a RequestResult object's 'Data' field.

GetApplianceStatus (HTTP GET)

This method returns the current status, and any skill, rank, or crew deficiencies affecting one appliance or all appliances in the retained or wholetime system. If an appliance call sign is specified which is not found in the system, a RequestResult with status code 3 will be returned, indicating that bad data was provided.

Resource Location

```
{installed
location}/v1/GetApplianceStatus?apiKey={apiKey}&retained={retained}&callsign={callsign}
```

Request Parameters

apiKey	Alphanumeric string used to identify the API session
retained	Boolean indicating if the request is for the retained or wholetime system.
callsign	Optional string. Used to select a single appliance to return information for.

Response Details

callsign	Appliance identifier
status	Code for the current status of the appliance
deficiencies	Array of strings indicating any skill, rank or crew deficiencies affecting the appliance
saStatus	Object containing the selective alerting status of the appliance. This object contains 'group' and 'status', both strings.
retained	Boolean. True if the request was to the retained system, false if the request was to the wholetime system.

Sample Requests/Responses

Request	192.168.1.1/GartanAPI/v1/GetApplianceStatus?apiKey=12lih3114i13iuvblvcdf79dfhfgdf8g6g5s9f7seh0f&retained=true
Header	Accept: application/json
Response	<pre>{ "code": 1, "data": [{ "callsign": "01P1", "deficiencies": [], "saStatus": { "group": "A", "status": "ON" }, "retained": true, "status": "OK" }, { "callsign": "01P2", "deficiencies": ["BA"], "saStatus": { "group": "A", "status": "ON" }, "retained": true, "status": "INT" }, { "callsign": "02P1", "deficiencies": [], "saStatus": { "group": "B", "status": "OFF" }, "retained": true, "status": "OFF" }], "message": "Success" }</pre>

Request	192.168.1.1/GartanAPI/v1/GetApplianceStatus?apiKey=12lih3114i13iuvblvcdf79dfhfgdf8g6g5s9f7seh0f&retained=true&callsign=01P1
Header	Accept: application/xml
Response	<pre><RequestResult xmlns:i="http://www.w3.org/2001/XMLSchema-instance"> <code>1</code> <data> <ArrayOfMobilisingAppliance xmlns:i="http://www.w3.org/2001/XMLSchema-instance"> <MobilisingAppliance> <callsign>01P1</callsign> <deficiencies xmlns:a="http://schemas.microsoft.com/2003/10/Serialization/Arrays"> <a:string>Crew</a:string> </deficiencies> <saStatus> <group>B</group> <status>OFF</status> </saStatus> <retained>true</retained> <status>INT</status> </MobilisingAppliance> </ArrayOfMobilisingAppliance> </data> <message/> </RequestResult></pre>

SetApplianceOffStationStatus

(HTTP GET)

This method allows an appliance to be set to a specified off station status, or returned to its home station.

Resource Location

```
{installed
location}/v1/SetApplianceOffStationStatus?apiKey={apiKey}&retained={retained}&calls
ign={callsign}&state={state}
```

Request Parameters

apiKey	Alphanumeric string used to identify the API session
retained	Boolean indicating if the request is for the retained or wholetime system.
callsign	Appliance callsign for which the status will be updated
state	Optional. Off-station status code to set the appliance to. If none is provided, the appliance will be returned to its home station.

Response Details

Standard RequestResult indicating success or failure

Sample Requests/Responses

Request	192.168.1.1/GartanAPI/v1/SetApplianceOffStationStatus?apiKey=12lih3114i13iuvblvcdf79dfhfgdf8g6g5s9f7seh0f&retained=true&callsign=01P1&state=AtIncident
Header	Accept: application/json
Response	Standard RequestResult indicating success or failure.

GetActiveEmployees

(HTTP GET)

This method returns information on the crew who are contracted to the station for the date of the request and the following date, including their rank and skills on each day.

Resource Location

```
{installed
location}/v1/GetActiveEmployees?apiKey={apiKey}&retained={retained}&callsign={callsign}
```

Request Parameters

apiKey	Alphanumeric string used to identify the API session
retained	Boolean indicating if the request is for the retained or wholetime system.
Callsign	Station call sign for which employee information is being requested

Response Details

A successful response will return an array of MobilisingEmployees. Each one contains:

name	Employee name, for display purposes.
station	Callsign of the station the employee is currently at.
rank	Employee rank
serviceNo	Service number. Ideally a unique identifier.
skills	Comma delimited list of the employee's active skills
activeDate	The date this information relates to, in the format 'yyyy-MM-dd'
retained	Boolean. True if the request was to the retained system, false if the request was to the wholetime system.
saGroup	The selective alerting group the employee belongs to
homePhone	The employee's home phone number
mobilePhone	The employee's mobile phone number
workPhone	The employee's work phone number
workMobilePhone	The employee's work mobile phone number
pageNumber	The employee's pager number

Sample Requests/Responses

Request	192.168.1.1/GartanAPI/v1/GetActiveEmployees?apiKey=12lih3114i13iuvblvcd79dfhfgdf8g6g5s9f7seh0f&retained=true&callsign=S01
Header	Accept: application/json
Response	<pre>{ "code": 1, "data": [{ "activeDate": "2014-05-13", "station": "11", "name": "BENNETT, CA", "rank": "CCc", "serviceNo": "SN1", "skills": "LGV, BA", "retained": true, "saGroup": "Group A", "homePhone": "+123123123123", "mobilePhone": "+441231231231", "workPhone": "+321321312321", "workMobilePhone": "+441231231231" }] }</pre>

	<pre> "pageNumber" : "+441231231231"} , {"activeDate" : "2014-05-13", "station": "11", "name" : "TOLLETT, CA", "rank" : "WCc", "serviceNo" : "SN2", "skills" : "LGV, BA", "retained" : true, "saGroup" : "Group B", "homePhone" : "+456456456456", "mobilePhone" : "+444564564564", "workPhone" : "+654654654654", "workMobilePhone" : "+654654654654", "pageNumber" : "+654654654654"} , {"activeDate" : "2014-05-14", "station": "11", "name" : "BENNETT, CA", "rank" : "CCc", "serviceNo" : "SN1", "skills" : "LGV, BA", "retained" : true, "saGroup" : "No Group", "homePhone" : "+123123123123", "mobilePhone" : "+441231231231", "workPhone" : "+321321312321", "workMobilePhone" : "+441231231231", "pageNumber" : "+441231231231"}] , "message": ""} </pre>
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Request	192.168.1.1/GartanAPI/v1/GetActiveEmployees?apiKey=12lih3114i13iuvblvcdf79dfhfgdf8g6g5s9f7seh0f&retained=true&callsign=S01
Header	Accept: application/XML
Response	<pre> <RequestResult xmlns:i="http://www.w3.org/2001/XMLSchema-instance"> <code>1</code> <data> <ArrayOfMobilisingEmployee xmlns:i="http://www.w3.org/2001/XMLSchema-instance"> <MobilisingEmployee> <activeDate>2014-05-13</activeDate> <station>11</station> <name>BENNETT, CA</name> <rank>CCc</rank> <serviceNo>SN1</serviceNo> <skills>LGV, BA</skills> <retained>true</retained> <saGroup>Group A</saGroup> <homePhone>+123123123123</homePhone> <mobilePhone>+441231231231</mobilePhone> <workPhone>+321321312321</workPhone> <workMobilePhone>+321321312321</workMobilePhone> <pageNumber>+321321312321</pageNumber> </MobilisingEmployee> <MobilisingEmployee> <activeDate>2014-05-13</activeDate> <station>11</station> <name>TOLLETT, CA</name> <rank>WCc</rank> <serviceNo>SN2</serviceNo> <skills>LGV, BA</skills> </pre>

	<pre> <retained>true</retained> <saGroup>Group B</saGroup> <homePhone>+456456456456</homePhone> <mobilePhone>+444564564564</mobilePhone> <workPhone>+321321321321</workPhone> <workMobilePhone>+456456456456</workMobilePhone> <pageNumber>+456456456456</pageNumber> </MobilisingEmployee> <MobilisingEmployee> <activeDate>2014-05-14</activeDate> <station>11</station> <name>BENNETT, CA</name> <rank>CCc</rank> <serviceNo>SN1</serviceNo> <skills>LGV, BA</skills> <retained>true</retained> <saGroup>No Group</saGroup> <homePhone>+123123123123</homePhone> <mobilePhone>+441231231231</mobilePhone> <workPhone>+321321312321</workPhone> <workMobilePhone>+321321312321</workMobilePhone> <pageNumber>+321321312321</pageNumber> </MobilisingEmployee> </ArrayOfMobilisingEmployee> <message/> </RequestResult> </pre>
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SetEmployeeOffStationStatus

(HTTP GET)

This method allows an employee to be set to Off Station, and returned to their home station. In addition, when being set to off station, the employee can be marked as being a Manager or Driver on the appliance they are out with.

Resource Location

```

{installed
location}/v1/SetEmployeeOffStationStatus?apiKey={apiKey}&retained={retained}&serviceNumber={serviceNumber}&stationCallSign={stationCallSign}&isManager={isManager}&isEFAD={isEFAD}&isOffStation={isOffStation}

```

Request Parameters

apiKey	Alphanumeric string used to identify the API session
retained	Boolean indicating if the request is for the retained or wholetime system.
serviceNumber	Employee's service number
stationCallSign	Station the employee is contracted at. Dual contracted employees must be marked off station at all of their stations individually if required
isManager	Boolean indicating if the employee is the manager at the incident
isEFAD	Boolean indicating if the employee is a driver on the appliance
isOffStation	Boolean indicating if the employee is being set off station or being returned

	to station
--	------------

Response Details

Standard RequestResult indicating success or failure

Sample Requests/Responses

Request	192.168.1.1/GartanAPI/v1/SetEmployeeOffStationStatus?apiKey=12lih31l4i13iuvblvcdf79dfhfgdf8g6g5s9f7seh0f&serviceNumber=sn123&stationCallsign=S01&isManager=true&isEFAD=false&isOffStation=true
Header	Accept: application/json
Response	Standard RequestResult indicating success or failure.

SetIncidentAttendance

(HTTP POST)

This method allows an appliance and its crew to be set off station to a particular incident, or to return them from an incident. The method returns a standard RequestResult indicating success or failure. The method will make as many of the bookings as possible – if one service number is not recognised, the other employees will still be booked off. The appliance callsign and/or employee callsigns which were not recognised will be returned in the data field of the RequestResult, with a status code of 5 if some changes were saved.

If an off station state is specified, the appliance will be set to that state and the employees will be booked off station. If no state is specified, both the appliance and employees will be returned to station.

Resource Location

{installed location}/v1/SetIncidentAttendance

Request Details

The POST method does not pass parameters in the query string. As such, the API key must be passed as a request header. Additionally, the Content-Type header should be set to 'application/json' for passing the incident details.

Headers

apiKey	Alphanumeric session identifier
Content-Type	Application/json

Body

The body data is the JSON serialized MobilisingIncident object. This object has the following attributes:

MobilisingIncident		
incidentNo	String	Incident number, to be stored when the appliance and crew are marked off station.
state	String	Off station status. Populated with a particular state or left empty to mark appliance / crew back at station.
applianceCallsign	String	The callsign of the appliance involved in the incident
stationCallsign	String	The callsign of the station at which the appliance and employees are based.
employees	Array of IncidentEmployee	The details of the employees being marked off station.
retained	Boolean	Boolean indicating if the appliance is from the retained or wholetime system.

IncidentEmployee		
serviceNo	String	Service number of the employee.
isMGR	Boolean	True/false if the employee is attending the incident as a manager.
isEFAD	Boolean	True/false if the employee is attending the incident as a driver.
retained	Boolean	Boolean indicating if the employee is from the retained or wholetime system.

Sample Request

Request	192.168.1.1/GartanAPI/v1/SetIncidentAttendance
Headers	apiKey:1o8y2db1897gfd917gdp937hdpa9sdb79pq37gd91bdpf9ysdf793 Content-Type: application/json Accept: application/json
Body	<pre>{ "incidentNo": "1234", "state": "AtIncident", "applianceCallsign": "A1101", "stationCallsign": "A11", "employees": [{ "serviceNo": "SN290", "isMGR": true, "isEFAD": false, "retained": true, "serviceNo": "SN304", "isMGR": false, "isEFAD": true, "retained": true, "serviceNo": "SN305", "isMGR": false, "isEFAD": false, "retained": false, "serviceNo": "SN287", "isMGR": false, "isEFAD": false, "retained": true }], "retained": true, }</pre>

Pushed Updates

In addition to receiving the above requests, the system can be configured to push updates when an appliance state changes or an employee's contract status changes within the current 48 hour period. This functionality will require a POST request receiver, the address of which will be registered with our system. The requests detailed below will be sent from our application to your receiver when new information is available.

Appliance Status Updates

(HTTP POST)

Appliance status updates are pushed as soon as the current live status of an appliance changes. For example:

- If bookings exist in the system which will leave a pump off the run at 2pm tomorrow, the 'Off the Run' message is not sent until 2pm tomorrow.
- If bookings are made for the current hour leaving a pump off the run at present, the 'Off the Run' message is sent immediately.

Updates are only sent if the status of the appliance actually changes.

For example: If a pump requires four crew to be considered 'Available', but the total crew fluctuates between 10 and 20 during the day, no messages will be sent – the status has not changed from 'Available' all day.

The status update will be considered successful if we receive a response with a HTTP status code 200. If we receive any other status code, the message will be attempted again a configurable number of times, before being considered a failed message.

Receiver Location

`{registered location}/v1/ReceiveApplianceUpdate`

Request Details

In the POST request body, we will be passing an array of MobilisingAppliance objects – as would be returned by the GetApplianceStatus method. The items in the array will not necessarily all belong to a single station.

In the request header, we will be passing a security key. This will be unrelated to any apiKeys generated in communication with the non-push side of the interface.

Headers

apiKey	Alphanumeric identifier
---------------	-------------------------

Content-Type	Application/json
---------------------	------------------

Body

MobilisingAppliance		
callsign	String	Callsign of the appliance.
status	String	Status the appliance has changed to.
deficiencies	Array of String	A list of all deficiencies affecting the appliance
saStatus	SASStatus object	The selective alerting status. This object contains the group and status as refers to selective alerting.
retained	Boolean	Indicates whether the appliance is retained or wholetime

SASStatus		
group	String	Selective alerting group the appliance belongs to.
status	String	Selective alerting status in effect against the appliance.

Sample Request

Request	192.168.2.2/MobilisingReceiver/v1/ReceiveApplianceUpdate
Headers	apiKey:1o8y2db1897gfd917gdp937hdpa9sdb79pq37gd91bdpf9ysdf793 Content-Type: application/json
Body	<pre>[{ "callsign": "01P1", "status": "INT", "deficiencies": ["BA", "Crew"], "retained": true, "saStatus": { "group": "A", "status": "ON" } }, { "callsign": "03P2", "status": "OK", "deficiencies": [], "retained": true, "saStatus": { "group": "", "status": "" } }]</pre>

Employee 48 Hour information (HTTP POST)

Employee information is pushed as soon as a change occurs which affects the rank, skills or contracted availability of an employee in the current 48 hour period. If a change is approaching, for example a skill expires in a week, the change will be pushed 24 hours before it takes effect.

Receiver Location

{registered location}/v1/ReceiveEmployeeUpdate

Request Details

In the POST body, we will be passing an array of MobilisingEmployee objects, as we do in the response to the GetActiveEmployees method. The employees within the array will not all necessarily be from the same station.

In the request header, we will be passing a security key. This will be unrelated to any apiKeys generated in communication with the non-push side of the interface.

Headers

apiKey	Alphanumeric identifier
Content-Type	Application/json

Body

MobilisingEmployee		
serviceNo	String	Service number of the employee.
station	String	Callsign of the station the employee is currently at.
activeDate	String	The date this information relates to, in the format 'yyyy-MM-dd'
name	String	The employee's name, for display purposes
skills	String	Comma delimited list of skills.
rank	String	The employee's rank
saGroup	String	The selective alerting group the employee belongs to
active	Boolean	True/false indicating if the employee contract is active. Generally passed as true. If false, indicates that this employee is no longer contracted at the station from the given date, and no further updates will be sent.
retained	Boolean	Indicates whether the employee is a retained or wholetime fire fighter.
homePhone	String	The employee's home phone number
mobilePhone	String	The employee's mobile phone number
workPhone	String	The employee's work phone number
workMobilePhone	String	The employee's work mobile phone number
pageNumber	String	The employee's pager number

Sample Request

Request	192.168.2.2/MobilisingReceiver/v1/ReceiveEmployeeUpdate
Headers	apiKey:1o8y2db1897gfd917gdp937hdpa9sdb79pq37gd91bdpf9ysdf793 Content-Type: application/json
Body	<pre>[{ "serviceNo": "12345", "station": "11", "activeDate": "2014-01-20", "name": "Smith, John", "skills": "BA, LGV, ERP", "rank": "FFc", "saGroup": "Group A", "active": true, "retained": true, "homePhone" : "+123123123123", "mobilePhone" : "+441231231231", "workPhone" : "+321321312321", "workMobilePhone" : "+321321312321", "pagerNumber" : "++321321312321"} , { "serviceNo": "12345", "station": "11", "activeDate": "2014-01-21", "name": "Smith, John", "skills": "BA, LGV", "rank": "FFc", "saGroup": "Group A", "active": true, "retained": true, "homePhone" : "+123123123123", "mobilePhone" : "+441231231231", "workPhone" : "+321321312321", "workMobilePhone" : "+321321312321", "pagerNumber" : "++321321312321"} , { "serviceNo": "54431", "station": "12", "activeDate": "2014-01-20", "name": "Doe, Jane", "skills": "BA, LGV, OIC", "rank": "WCc", "saGroup": "No Group", "active": true, "retained": true, "homePhone" : "+456456456456", "mobilePhone" : "+444564564564", "workPhone" : "+654654654654", "workMobilePhone" : "+654654654654", "pagerNumber" : "+654654654654"}]</pre>