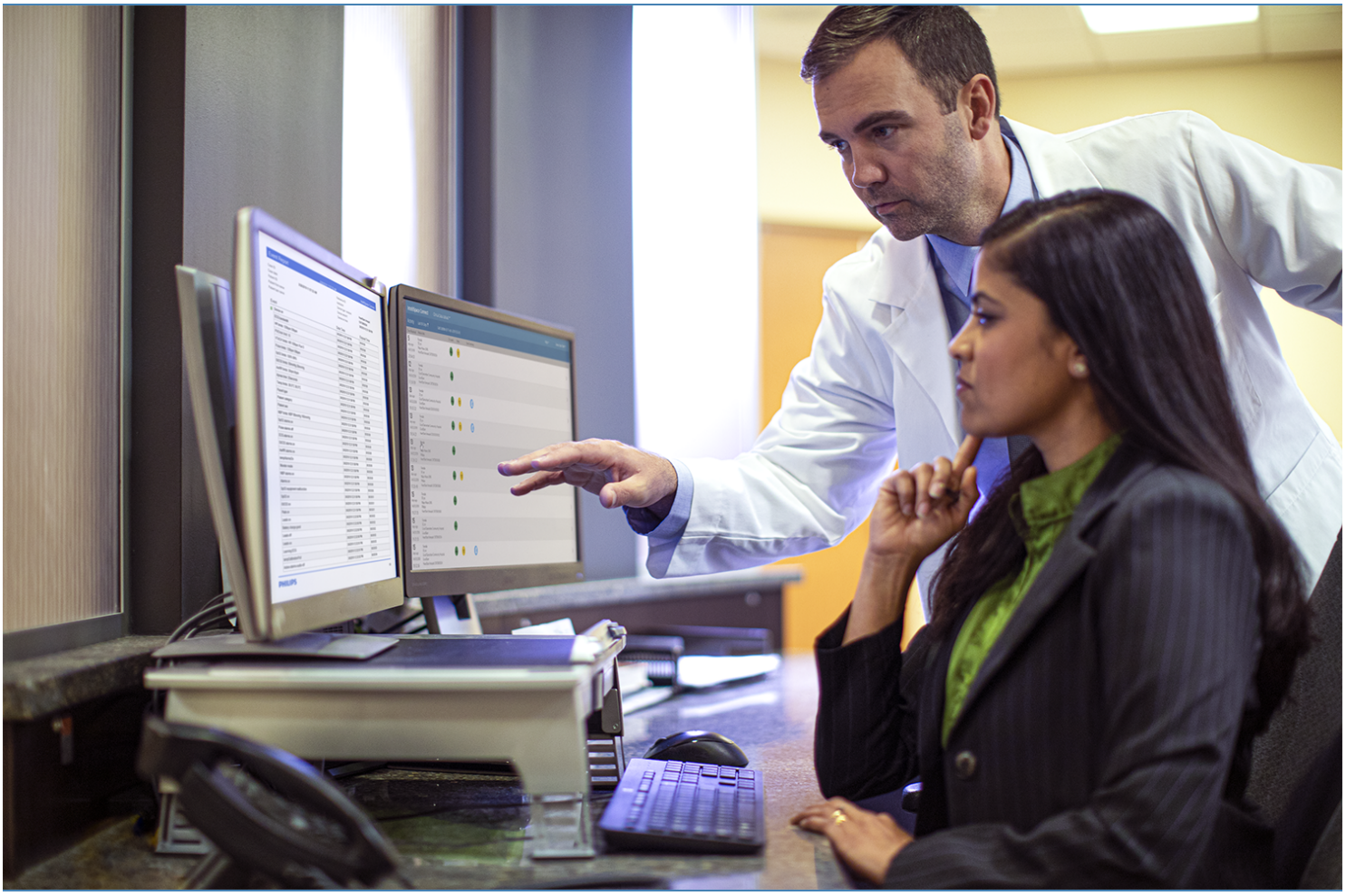

Emergency Care
Patient Care Reporting API Guide

Technical Specifications

PHILIPS

About this edition

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About this guide

Audience

The Philips Emergency Care Patient Care Reporting API Guide is written for third-party software developers who want to integrate patient care reporting data from Philips Emergency Care Informatics Suite into a solution that can support HTTPS client requests.

Document organization

The information in this guide is organized as follows:

- Introduction – Provides general information about the audience, intended use, and notation conventions of this guide.
- APILogin and APILogout resources – Provides usage information for the APILogin and APILogout resources.
- Organizations and Incidents resources – Provides usage information for the Organization and Incidents resources.
- Incidents sub-resources – Provides usage information for Incidents sub-resources.

Notational conventions

This guide uses the following notational conventions to convey information.

Notes call attention to important information.

Introduction

Overview of Emergency Care Informatics Suite

Philips Emergency Care Informatics Suite is a cloud-based data solution for Emergency Medical Services (EMS) personnel, Advanced Life Support (ALS) personnel, Advanced Cardiac Life Support (ACLS), Basic Life Support (BLS) personnel, post-event review personnel, and organizations who support EMS agencies and hospitals.

Emergency Care Informatics Suite consists of applications and tools that enable users to set up and manage role-based accounts and transfer data from supported monitor/defibrillators to Electronic Patient Care Records (ePCR) or Electronic Health Records (EHR) for record keeping.

Post-event viewing of clinical data is also available to support code reviews and quality initiatives. Data is stored securely and privately and can be accessed using a supported web browser and an Internet connection.

Patient Care Reporting uses the REST API (Application Program Interface) web service of Emergency Care Informatics. The REST APIs consist of sending an HTTPS request to a Patient Care Reporting resource for a response. Your request contains a request method, a resource URI, and any applicable query strings. The response contains an HTTPS status code and response data.

Data ownership and access

To use Patient Care Reporting APIs, an Emergency Care Informatics administrator for the organization that owns the data must establish and manage an organization connection with the organization that wants to use the APIs. After the organization connection has been established, the organization using the Patient Care Reporting APIs can view the data shared by the Emergency Care Informatics organization that owns the data, as defined by the source organization as part of the organization connection.

If patient information is available in Emergency Care Informatics, the response data will include values for applicable fields, such as **PatientName**, **PatientAge**, and **PatientGender**. If the patient age is not available in Emergency Care Informatics, the **PatientAge** value in the response data will be -1.

Base URL

Patient Care Reporting APIs use HTTPS. To ensure data privacy, unencrypted HTTP is not supported.

All URLs referenced in this documentation have the following base:

```
https://www.philips-emergencycare.com
```

API response format

The response format to a Patient Care Reporting resource includes the following information:

- HTTPS status code.
- Response body. For a successfully processed response (HTTPS status code 20x), the response body includes the status of the resource request, the results, and, if applicable, an error message.

Example

```
{
   ErrorMessage:<message text if applicable>
   IsSuccessful: <true or false>
   Data: <resource-specific JSON-formatted data>
   IsRedirect: <not used, always false>
   RedirectUrl: <not used>
}
```

All resource-specific data is returned in the JSON format. All dates and times reflect Coordinated Universal Time (UTC) in ISO-8601 format.

Image data

For resources that return images, the JPEG images are returned inline in the JSON-formatted response data (`Response.Data`) as an array of strings containing base64-encoded binary data, as in the following example:

```
WaveFormImages: [
     /9j/4AARXTJSRgADG…
     /9j/4AAQSkZJRgAEZ…
     /9j/4AAQSkZCBsBAB…
     ]
```

You can render the strings as images in browsers using an <IMG> tag and a source data URI, as in the following example:

```
src=<string>.
```

XML file data

For resources that return embedded XML data, the XML file is returned inline in the JSON-formatted response data as a string containing base64-encoded binary data, as in the following example:

```
TwelveLeadXml: PD94bWwgdmVyc2lv…
```

You must decode the base64 string to reconstitute the original XML file.

Emergency Care Informatics support

For support, contact your local Philips Customer Care Solutions Center or local Philips representative.

APILogin and APILogout resources

APILogin

APILogin authenticates the HTTPS client session and is required to use Patient Care Reporting APIs:

- The authentication method is session-based, basic authentication protected with Secure Sockets Layer (SSL) that requires cookie support on the HTTPS client.
- A user account name and password associated with the Patient Care Reporting organization is required. The access rights associated with the user account determine the data that the user can access.

A client session times out at 20 minutes of inactivity and must be re-authenticated. If the session is not re-authenticated, resource requests will be rejected.

Resource URI

```
POST /Account/APILogin
```

Headers

Name	Value	Requirement Status
Content-Type	application/x-wwwform-urlencoded	Required
Accept	Application/json	Required

Body

Key	Value	Requirement Status	Description
username	[string]	Required	User name associated with the account that has Patient Care Reporting access.
password	[string]	Required	Password associated with the account that has Patient Care Reporting access.

Example response

For a successful login, you receive the following response:

```
{Is Successful = true}
```

For an unsuccessful login, you receive the following response:

```
{Is Successful = false}
```

APILogout

APILogout logs the user out of the session. For security, close your session after logging out as a best practice.

Resource URI

```
GET /Account/APILogout
```

Parameters

None.

Example response

For a successful logout, you receive the following response:

```
{Is Successful = true}
```

For an unsuccessful logout, you receive the following response:

```
{Is Successful = false}
```

Organizations and Incidents resources

Incidents resources retrieve Emergency Care Informatics patient information for a specified organization and are read-only. The organization that sent the information to Emergency Care Informatics is considered the owner of that information.

Organizations

Returns a list of the organizations that are linked to the user's organization for Patient Care Reporting. You use an organization ID to view the incidents sent to Emergency Care Informatics by that organization.

Resource URI

```
GET /Api/Organizations
```

Parameters

None.

Example response

```
{
   Id: 8b1caff4-4778-4cdf-bb54-8ec37f33b89f
   Name: Major Metro EMS
   Description: Major Metro EMS
   },
   {
   Id: 7294ce05-ed97-44b5-b4de-23850f3468cc
   Name: EPCR Vendor One
   Description: EPCR Vendor One
}
```

Incidents

Returns a list of patient incidents recorded in the device and sent to Emergency Care Informatics for the specified organization. The **organizationId** is a required parameter. You can filter the list by device serial number, date and time range, or both.

Resource URI

```
GET /Api/Clinical/Incidents
```

Parameters

Name	Type	Requirement Status	Description
organizationId	[path]	Required	ID of the organization associated with the incident list.
deviceSerialNumber	[string]	Optional	Limits incidents to those sent by the specified serial number of the device.
fromDate	[DateTime]	Optional	Limits incidents to after this date, inclusive.
toDate	[DateTime]	Optional	Limits incidents to before this date, inclusive.

Example response

If patient information is available in Emergency Care Informatics, the response data will include values for applicable fields, such as **PatientName**, **PatientAge**, and **PatientGender**. If the patient age is not available in Emergency Care Informatics, the **PatientAge** value in the response data will be -1. Also, if the patient ID is entered on the Intrepid device, then **PatientId** is the same as the patient ID on the device. Otherwise, **PatientId** is the same as **DeviceIncidentId**.


```
[
   {
      PatientAge: 55
      IncidentId: cbb591a0-a355-4918-afd2-fd1671538d5b
      PatientGender: Male
      PatientBirth: 0001-01-01T00:00:00
      PatientName: BIFF DAVIS
      PatientId: DCBA1234
      ReferenceId: Philips Intrepid 1
      DeviceIncidentId: 0DF04D42A220210127160608
      DeviceSerialNumber: CN73900550
      SendOrganizationName: Device Data organization 1
      DestinationOrganizationName: Device Data organization
      1
      StartTime: 2021-01-27T23:12:37.3687571Z
      LastUpdateTime: 2021-01-27T23:16:06.2304774Z
   }
]
```

Incidents sub-resources

For a specified incident ID, you can use sub-resources to retrieve the following information:

- Vitals
- Events
- 12-lead electrocardiogram images

Vitals

Returns a list of patient vitals for the specified incident.

Resource URI

```
GET /Api/Clinical/Incidents/{IncidentId}/Vitals
```

Parameters

None.

Example response

In the Vitals response, note the following field information:

- **Name** – Name of the measurement type, translated into the language associated with the Emergency Care Informatics user account. The translation occurs within Emergency Care Informatics before the response is sent.
- **LanguageNeutralName** – Name of the measurement type without translation.
- **LoincCode** – Logical Observation Identifiers Names and Codes (LOINC) result code for the measurement type. For more information, see the LOINC website.

```
[
   {
      DataAcquisitionTimeUtc: 2016-03-25T11:14:16.559Z
      PatientIncidentId: f2e0e11f-721f-4d32-8a84-
      267a60b5c829
      Name: HR
      Value: 80
      Measurement: bpm
      LanguageNeutralName: hr
      LoincCode: 8867-4
   },
   {
      DataAcquisitionTimeUtc: 2016-03-25T11:14:16.559Z
      PatientIncidentId: f2e0e11f-721f-4d32-8a84-
      267a60b5c829
      Name: Pulse rate
      Value: 83
      Measurement: bpm
      LanguageNeutralName: pulseRate
      LoincCode: 8889-8
   }
]
```


Events

Returns a list of events for the specified patient incident. Images are not included in the event information.

Resource URI

```
GET /Api/Clinical/Incidents/{IncidentId}/Events/
```

To view a single event, add the event ID to the resource URI. For example:

```
GET /Api/Clinical/Incidents/{IncidentId}/Events/{ID}
```

Parameters

None.

Example responses

Note the following field information in an event response:

- **EventLabel** – Name of the event, translated into the language associated with the Emergency Care Informatics user account. The translation occurs within Emergency Care Informatics before the response is sent.
- **LanguageNeutralName** – Name of the event without translation.

Event list response example

```
[
   {
      PatientIncidentId: 06608acb-0f57-4908-9a08-
      43041b6afed8
      Id: 8de9a652-46f8-42e9-aae8-7bb487297147
      DataAcquisitionTimeUtc: 2016-03-25T11:15:58.559Z
      HasWaveform: <not used>
      HasVitals: <not used>
      EventLabel: Temp high alarm
      LanguageNeutralEventLabel: alarmTempHi
      WaveFormImages: <not used>
      Vitals: <not used>
      ValueLimitSetting: <not used>
      EventParameters: <not used>
   }
]
```

TwelveLeads

Returns a list of 12-lead information with placeholders substituted for the waveform images.

Resource URI

```
GET /Api/Clinical/Incidents/{IncidentId}/TwelveLeads
```

To view a single 12-lead item with its image data, add the 12-lead ID to the resource URI. For example:
`GET /Api/Clinical/Incidents/{IncidentId}/TwelveLeads/{ID}`

Parameters

Name	Type	Requirement Status	Description
withXml	[true/false]	Optional	Embeds the raw 12-lead XML file in the response data instead of JPEGs. Applicable only to a specified 12-lead ID. For format information, see XML file data on page 8.

Example responses

12-lead list response example

```
[
   {
   Id: f40520ef-3354-4df1-9aa1-44cb0b42a7ff
   DataAcquisitionTimeUtc: 2016-03-25T11:15:58.559Z
   TwelveLeadImages: <not shown>
   TwelveLeadXml: <not shown>
   PatientIncidentId: 3c1e9cb1-c497-459f-90c1-cfac078e05d1
   },
   {
   Id: 5f8d0589-f5d8-4fcd-9f4f-3713961a0c52
   DataAcquisitionTimeUtc: 2016-03-25T11:15:58.559Z
   TwelveLeadImages: <not shown>
   TwelveLeadXml: <not shown>
   PatientIncidentId: 3c1e9cb1-c497-459f-90c1-cfac078e05d1
   },
   {
   Id: 8b624c4f-a8b9-4eb1-b472-81201eec8901
   DataAcquisitionTimeUtc: 2016-03-25T11:15:58.559Z
   TwelveLeadImages: <not shown>
   TwelveLeadXml: <not shown>
   PatientIncidentId: 3c1e9cb1-c497-459f-90c1-cfac078e05d1
   }
]
```

Individual 12-lead response example with image data

```
{
   Id: 4fde8a7d-16a0-471c-9fc6-459cab478b7a
   DataAcquisitionTimeUtc: 2016-03-25T11:15:58.559Z
   TwelveLeadImages:

   9j/4AAQSkZJRgABAQEAlgCWAAD/2wBDAAgGBgcGBQgHBwcJCQgKDBQND
   AsLDBkSEw8UHRofHh0aHBwgJC4nICIsIxwcKDcpLDAxNDQ0Hyc5PTgyP
   C4zNDL/...

   PatientIncidentId: 729032a5-919d-4d4e-8d61-6909b7e85d59
}
```

Individual 12-lead response example with XML image data


```
{
   Id: 4fde8a7d-16a0-471c-9fc6-459cab478b7a
   DataAcquisitionTimeUtc: 2016-03-25T11:15:58.559Z
   TwelveLeadImages: <not shown>
   TwelveLeadXML:

   <?xml version=\"1.0\" encoding=\"UTF-
   8\"?>\r\n<restingecgdata
   xmlns=\"http://www3.medical.philips.com\"
   xmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\"
   xsi:schemaLocation=\"http://www3.medical.philips.com
   \r\nPhilipsECG.xsd\" status=\"Not yet determined\"
   lang=\"eng\">\r\n\t<documentinfo>\r\n\t\t<documentname>1
   2Lead20190710094204.xml</documentname>\r\n\t\t<documentt
   ype>PhilipsECG</documenttype>\r\n\t\t<documentversion>1.
   04.02</documentversion>\r\n\t</documentinfo>\r\n\t<userd
   efines>\r\n\t\t<userdefine
   index=\"1\">\r\n\t\t\t\t<label>Incident Id</label>\r\n\t\t
   ...
   \nkmTZRlWWZdmGZZpm2cZ1nmfaBoWiaNpGlaZp2oalqmraxrWua9sGxb
   Js20bVtm3bhuW6btvG9b5v\r\n3AcFwnDcRxXGcdyHJcpy3Mc1znPdB0
   XJLA0HNNAsGbAD/wAUAQAAAQAAAAAQBAUCQNBEFQZB0IQl\r\nCkLQxD
   UOQ9EERRJE0URVFkXRhGUaRtHEdR5H0gSFIkjSRJUmSdKEpSpK0sS1Lk
   vTBMUyTNNE1TZN\r\n04TlOk7TxPU+T9QFBUJQ1EUVRlHUhSVKUtTFNU
   5T1QVFUlTVRVVWVdWFZVpW1cV1XlfWBYViWNZF\r\neP4AVgAE/kxEBb
   VuW9cFxXJc10XVdl3XheV6XtfF9X5f2AYFgmDYRhWGYdiGJYpi2MY1jm
   PZBkWS\r\nZNlGVZZl2YZlmmbZxnWeZ9oGhaJo2kaVpmnahqWqatrGta
   5r2wbFsmzbRtW2bduG5bpu28b1vm/c\r\nBwXCcNxHFcZx3IclynLcxz
   XOc90HRcksDQc00CwZsAP/AA==</parsedwaveforms>\r\n\t</wave
   forms>\r\n</restingecgdata>\r\n>

   PatientIncidentId: 729032a5-919d-4d4e-8d61-6909b7e85d59

}
```