

# Capricorn REST methods

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## Capricorn

Note:



Please contact Medical Objects for a Development version of Capricorn. Development should NOT be performed on a live practice Capricorn.

Medical-Objects Capricorn is a HL7 real-time communication system for the delivery of real-time results. It has the ability to send and retrieve in a variety of formats. The Development pages list some of the ways in which you can integrate your systems with Capricorn.

It should be noted that integration is performed in Capricorn using either a traditional HL7 File Drop or through HL7 Lower level protocol. You can use these facilities to send communications, receive acknowledgements etc. In addition Capricorn also supports integration on the local network to perform various tasks such as Send a message to a clinician, check the status of a report or letter. You can also interrogate the provider directory to search for particular providers.

Local integration is performed in one of two ways. All the requests are local HTTP requests and these HTTP requests can in most cases return either XML or JSON data.

Integration from November 2014 will be advised to perform requests via HTTPS(For software not installed at the practice performing requests on the Capricorn this is mandatory). The HTTPS session will use mutual authentication. Medical Objects can supply you with a Client certificate for development purposes(Further configuration is required in the Capricorn. Please contact Medical Objects and ask for assistance with integration, this is free of charge.). The certificates required for verifying the authenticity of the Capricorn can be found at the links below.

[Test\\_moroot\\_ca\\_g2.cer](#)

[Test\\_moservers\\_ca\\_g2.cer](#)

Many are familiar with XML as a data format and this can be used quite easily to work with data, especially if you have an application that is written in Java, .NET, C++, Perl etc. There are many processors of XML available. For more information on XML visit <http://www.w3.org/XML/>

The JSON format is mainly used on the web, so if the application you are using is a Rich Web 2.0 based system, you can still use calls to examine the local information. For more information on JSON, visit: <http://www.json.org/>

## Overview of Available Calls

The following table lists the available local calls that can be made to Medical-Objects Capricorn. Please note that this information is available primarily for organisations with clinical packages. For consulting services for integration, contact Medical-Objects at [info@medical-objects.com.au](mailto:info@medical-objects.com.au).

Please note that the XML send will contain no formatting(e.g. Bold). HL7 can be supplied to the Capricorn via a HTTPS post if required. This will allow for formatted results to be sent, but requires HL7 that has passed Medical Objects standards testing.

Warning:



Only the ASCII displayable character set (hexadecimal values between 20 and 7E, inclusive) and the ASCII Carriage Return character is permitted for the content of your communications at this time.

See the following article for understanding the responses: [Recipient Lookup Response Explanation](#)

Method	URL	Return Format	Sending Format	HTTP Method
<b>IsProviderOnline</b>	<p>This method indicates if the provider communicates via Medical Objects. It does not indicate that they are online at the exact time the request is made.</p> <p><code>/rest/localintegration/isprovideronline?PROVIDERNO=[ProviderNo]&amp;FORMAT=[Format]</code></p> <p>[ProviderNo] represents the Provider number that you wish to search for and the format is either JSON (default) or XML</p>	JSON or XML	n/a	GET

<b>Provider Search by Name</b>	<p>/rest/provider/lookup/byname?FAMILYNAME=[Surname]&amp;GIVENNAME=[GivenName]&amp;FORMAT=[Format] This performs a partial search against the Surname and Given names provided and returns a list of the potential matches.</p>	JSON or XML	n/a	GET
<b>Provider Search by ID</b>	<p>/rest/provider/lookup/byid?ID=[MedicareProviderNo or MedicalObjectsAssignedProviderNo]&amp;FORMAT=[Format] This performs a search for a particular provider and returns the details of the provider if found. Format is either JSON (default) or XML</p> <p>NOTE: If only the first portion of a provider number is supplied multiple possible results may be returned. E.g. Lookup of value 296163 returns 296163HY, 296163EL, 296163KX, 296163MW and 296163JJ.</p>	JSON or XML	n/a	GET
<b>Provider Search by Organisation</b>	<p>/rest/provider/lookup/byorganisation?ORGANISATION=[OrganisationName]&amp;FORMAT=[Format]&amp;onlineProvidersOnly=True Returns all providers for an organisation name(Practice name).</p> <p>If your patient doesn't know the practitioner they will be seeing at the practice use the first valid returned result.</p> <p>For JSON:</p> <p>Always use "&amp;onlineProvidersOnly=True". You don't want providers you can't deliver to!</p> <p>If an idNumber is available for the namespaceID "AUSHICPR" please use as the primary. idNumber for namespaceID "Medical-Objects" are only to be used if an AUSHICPR is not available.</p> <p>For XML:</p> <p>Only routable providers will be listed. There should be no need to filter.</p> <p>Output limited to 1000 records</p> <p>Results are returned alphabetically based upon Surname then Firstname.</p>	JSON or XML	n/a	GET
<b>Get Local Providers List</b>	<p>/rest/practice/providers/asJSON This returns a JSON list of the health professionals at your location that are registered on the local Capricorn (Your providers that are installed with Medical Objects on this server). The format is consistent with HL7 v2.3.1 XCN segment.</p>	JSON	n/a	GET
<b>Send Basic Text Message</b>	<p>/rest/content/creation/webxml Content-Type: text/xml</p> <p>Allows sending a message through the Medical-Objects network. An XML message (format available on request) containing the details is created by the sending system and then POST-ed to this URL. The Medical-Objects server converts this XML format into a traditional HL7v2 message, which is then routed through the Medical-Objects network. The only message format supported is XML and returns OK on success or an error description in the HTTP response message-body (this should not be confused with "200 OK" in the HTTP Response header Status Code).</p> <p>Please note that MedicareProviderNo or MedicalObjectsAssignedProviderNo are rejected if invalid. This can be disabled for the "from" provider if necessary. Capricorn Build 5136 and above.</p> <p>Warning:</p> <p> To ensure line breaks in your report body please use an ASCII Carriage Return then Line Feed.</p>	XML	XML	POST

# Send HL7 Message

/hl7/  
 Accept: application/hl7

Content-Type: application/hl7

Note the trailing / in /hl7/ must not be missed.

Allows sending a HL7 message through the Medical-Objects network. The POST returns a HL7 Ack message(which you will have to check for a positive or negative response) or an error description in the HTTP response message-body (this should not be confused with "200 OK" in the HTTP Response header Status Code).

Please note that MedicareProviderNo or MedicalObjectsAssignedProviderNo are rejected if invalid. This can be disabled for the "from" provider if necessary. Equator Build 5136 and above. Please note certificate authentication is required. Please contact Medical Objects for more details.

Primarily HL7. Plain text for some errors

HL7

POST

Message In	Status Code	Status	Expected Response	Valid Ack Codes
Valid HL7	200	OK	HL7 Acknowledgement	AA, AE, AR, CA, CE, CR
Flawed HL7	200	OK	HL7 Acknowledgement with ERR segment	AE, AR, CE, CR
Critically Flawed HL7	400	Bad Request	Error message. HL7 response not possible with invalid input	N/A
Authorisation Failure	401	Unauthorised	Error message. HL7 response not possible without input HL7	N/A