1. Introduction to the UK Hydrographic Office

The UK Hydrographic Office (UKHO) are a world-leading centre for hydrography, specialising in marine geospatial data that helps others to unlock a deeper understanding of the world's oceans.

Working with a wide range of partners, we source, process and provide access to this data, ranging from seabed to surface. This is key to helping others make the best use of our oceans in safer, more secure and more sustainable ways.

We then share this data with governments, defence users and academia, as well as make it available through our portfolio of ADMIRALTY Maritime Data Solutions. This includes our world-leading range of navigational charts, publications and data sets which can be found on board over 90% of ships trading internationally.

We are continuing to innovate so that we can meet the evolving needs of these users and reach wider markets. As our marine data and technology capabilities grow, we will help people working in the blue economy to make better decisions and truly make the most of the world's oceans.

2. Introduction to AVCS

The ADMIRALTY Vector Chart Service (AVCS) is the world's leading official digital maritime chart service, with over 18,000 official Electronic Navigational Charts (ENCs) to help bridge crews navigate safely and efficiently whilst meeting flag and Port State requirements.

Key features of AVCS include:
- Global maritime ENC coverage with more routes and ports than any other competing service
- Unique ADMIRALTY Information Overlay (AIO) for additional passage planning information
- Delivered in IHO industry standard formats, guaranteeing compatibility with all ECDIS sold today

3. Introduction to AVCS Online

AVCS Online is **an online** shore-based version of the world's leading maritime chart service that is used on-board most ships trading internationally **to support navigation**.

Key features of AVCS Online include:
- Supports non-navigation shore-based maritime decision-making, such as vessel tracking, planning and Accident and Emergency incidents
- Provides world-leading coverage, including all available scales just like AVCS used on ships
- Supplied as an Application Programming Interface (API) to be integrated within end users' systems
- Includes similar functionality as ECDIS, including pick reports where you can select a feature for more information
- Uses internationally recognised Open Geospatial Consortium (OGC) standards and internet-accessible Web Map Service (WMS) protocols

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4. Information about AVCS Online for TSPs

Below is further information about AVCS Online which potential TSPs should note:

What is AVCS Online?
ADMIRALTY Vector Chart Service (AVCS) Online is **an online** shore based version of the world's leading maritime chart service that is used on-board most ships trading internationally.
It is not for navigation and mainly supports navigation decision-making
It only displays images of ENCs for shore-based use, without giving access to the ENC data
As supplied as an API, it requires integration development by end users, **as not provided as an already built API**

What technology does AVCS Online use?
AVCS Online is a Web Map Service that provides images of official ENCs via **an API.**

It uses internationally recognised Open Geospatial Consortium (OGC) standards for easy integration.

Why should I include AVCS Online in my software?
- AVCS Online enables your software to display images of official ENCs from national hydrographic offices, following IHO standards
- Includes ENC display settings to enable end users to replicate the on-board experience from ashore
- Includes Pick reports, allowing you to click on a feature for more information
- Provides Extra Temporary and Preliminary Notices to Mariners information, known as the ADMIRALTY Information Overlay (AIO)
- AVCS Online ENC images are automatically and timely updated, delivering updated information 'as soon as it is ready', so you are always viewing the most up-to-date charts

What ENC coverage is available?
AVCS Online end users can purchase worldwide ENCs at all zoom scales, provided by ENCs from national Hydrographic Offices, when using the service. This allows you to always see the best scale chart for your needs.

Note: ENCs from South Korea are not currently available.

How is AVCS Online licensed?
Below are the AVCS Online licensing terms:

▪ Each end user must first have a **12-month shore-based Licence**, created by the selected TSP in the UKHO Fleet Manager (FM) licensing system

▪ Before being able to purchase individual ENCs, an order then must be placed for the initial promotional Folio, covering the Liverpool Harbour area. This is **free of charge for all AVCS Online shore-based customers only**

▪ Once the order for this Folio is completed, orders for individual ENCs can then be placed. Within each Licence, end users can purchase worldwide ENCs at all scales (Overview, General, Coastal, Approach, Harbour, Berthing), on a pay-per-chart basis

▪ Most ENC purchases can be for flexible durations according to the supplier, e.g. 3,6,9 and 12 months. A full "AVCS Online Pricing Schedule" is available for all TSPs on the ADMIRALTY Website Partners Page, to advise customers

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- One AVCS Online shore-based Licence can be used by up to five concurrent users only within the same company (i.e. if customers require 30 users for example, they need to get 6 separate Licences)

How much does it cost?
There is no upfront subscription cost and ENCs can be purchased straightaway, after the initial free-of-charge Folio is ordered, on a per-per-chart basis

Is there any cost for AVCS Online development?
All development costs to complete the AVCS Online integration is at the customer's expense.

However, the UKHO does not charge for access to the technical documentation, systems, support and initial compliance checks required to help you with your AVCS Online development and testing.

How do I try the AVCS Online Web Map Service?
The UKHO provides an AVCS Online Discovery API. This enables you to freely sample the WMS capability to see how it works for you.

You first need to go to the ADMIRALTY Developer Portal, at https://admiraltyapi.developer.azure-api.net/. Once signed up, you can then select the AVCS Online Discovery API from the "APIs" list.

How do I get access to AVCS Online development?
To develop an AVCS Online solution, you need to:

- Apply to become a TSP

or

- Purchase AVCS Online from a TSP *(TBC with each TSP)*

The appointment criteria that organisations must meet before their applications to develop AVCS Online are approved can be found on our website with the application

Point 3 within Section 5 below contains the AVCS Online TSP Application Questionnaire which needs to be completed and submitted to UKHO via email to: channel@ukho.gov.uk

What support does the UKHO provide?
We provide you with access to our UKHO Developer Portal which contains comprehensive technical documentation to help you develop your AVCS Online system.

This includes a Checklist to help guide you through the system requirements you will need to implement.

We also provide ad-hoc development support. Requests should be submitted via our Customer Services Portal.

What happens after AVCS Online development is complete?
When you have completed developing your AVCS Online solution, your software application will need to be submitted to UKHO for compliance testing.

When approved by UKHO, you can then make your solution available commercially.

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Where appropriate, we can discuss with you whether any communications need to be made to the market, for example via our website or press release.

5. AVCS Online Development Process

1. You can try AVCS Online for yourself and browse our Web Map Service documentation by accessing our freely available Discovery API. Sign up via our ADMIRALTY API Developer Portal at: https://admiraltyapi.developer.azure-api.net/

2. Complete the AVCS Online TSP Application Questionnaire at https://www.admiralty.co.uk/working-with-us. This should include comprehensive answers about your capabilities whilst staying within the stated word limit

3. Submit your completed application to UKHO by email to channel@ukho.gov.uk

4. Upon receipt, UKHO will assess your application against the pre-defined criteria within 30 days of Acknowledgement. There is no set time in the year to send your application as assessment of applications are made on a case-by-case basis when received

5. Following the assessment, UKHO will notify you of your application result. If successful, UKHO will contact your referees and will either visit your operating location or telephone you for introductions and to obtain further details about your business and project

6. On successful completion of Step 5, an R&D TSP Agreement will be issued and Countersigned

7. UKHO will set up your access to our test systems and ADMIRALTY Developer Portal which contains the technical API documentation. At this point, UKHO will provide systems training and once completed you can begin developing your system to integrate with AVCS Online. UKHO can provide you with ad-hoc developer support if required. A Compliance Checklist is available on the ADMIRALTY Developer Portal for you to ensure that your system meets UKHO standards

8. When you have finished developing your AVCS Online solution, you must test your system against the criteria specified in the Compliance Checklist before submitting to the UKHO for compliance testing

9. UKHO will test your system against the criteria stated in the compliance checklist within 20 business days of receipt. If any tests fail, UKHO will contact you to request remedial action

10. UKHO will inform you when your AVCS Online solution passes compliance testing and you will be awarded an AVCS Online TSP Agreement. This is a legal document which must be signed, and counter-signed by UKHO

11. When the AVCS Online TSP Agreement has been countersigned by UKHO, you will need to change your system to call the AVCS Online Live API and then be able to sell your solution and promote as an ADMIRALTY TSP

6. TSP Appointment Criteria for AVCS Online

The scoring of answers to Section 7.2 in the TSPs Questionnaire are based on your proposed AVCS Online solution and will assess your capability to deliver the criteria below:

- A sales and marketing strategy for AVCS Online that demonstrates to the UKHO's satisfaction that the applicant would offer a selling proposition to the market that will be attractive to end users and fully support the ADMIRALTY brand positioning of official, reliable, accurate and trusted

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- The technical infrastructure to support ordering and **selling of AVCS Online**

- Investment in the promotion of AVCS Online

- Broad knowledge and experience of working with and selling software solutions

- A mechanism that ensures the optimal availability of AVCS Online

- Demonstrate the skills, knowledge and capability to develop AVCS Online, either internally or via outsourcing

- Personnel with the skills, experience and capacity to effectively provide technical support, product development and customer services support during business hours and out of hours

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