

Federal Maritime Commission
Office of Information Technology
SERVCON Automated filing using Web Services
Technical Guidelines for Testing and Implementation

The FMC has developed a Web service that clients can use to incorporate the filing of service contracts into their own contract management systems (CMS) and eliminate the need to manually log into SERVCON to file contracts.

Your CMS will use Web Services to “push” the org number, contract number, amendment number, effective date, username, and attached file to SERVCON. SERVCON then processes the filing and returns a confirmation number if the filing was successful or an error message giving the reason it was not. Both the filing of the contract and the return message are sent as XML over the secure socket layer (https). Your CMS would receive the return message, parse out the confirmation number or, error message and take appropriate action.

The following guidelines address the FMC's Office of Information Technology (OIT) responsibilities in assisting the industry with testing and implementation of automated filings in to the SERVCON system using Web Services.

- OIT will provide clients with a new Web Services account and password.
- OIT will maintain a test site for clients to test their scripts for automated filing with Web services. The test site is a mirrored copy of the production SERVCON system. The Web Service to test file automated service contracts is located at <https://servcon.fmc.gov/ServconWebServiceIntegration/ServconWebService.aspx> . Test documents will be purged on a periodic basis.
- OIT will provide a sample program written in ASP.NET C# that files a contract to the SERVCON system.
- When the client has successfully developed and tested the Web Service, OIT will review and schedule a date when the client will switch to production.
- Post production, if OIT needs to make changes to the Web Service on the SERVCON system, clients will be notified ahead of time so they can make modifications to their contract management systems accordingly.

It is the responsibility of the client to make modifications within their contract management systems to implement automated filings using Web Services. It is recommended that clients new to the automated filing system use Web Services in ASP.NET C# or VB, but other languages such as JAVA can be used.

- The client should post only test documents, and test documents should be no more than 4 MBs in size.
- Documents must be searchable by keyword.
- Filings consisting of more than one document, e.g., a Word document for essential terms and an Excel spreadsheet for rates, should embed one document inside the other or be packaged together into a ZIP file (WinZip or PKZIP format).

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You will need to log on to view the service description and to see the three operations that it exposes (File Contract, File Corrected Copy, and File Notice).

The methods are implemented using the Simple Object Access Protocol (SOAP) to describe requests and responses to and from the Web Service, and these are transferred using the Http Post using SSL.

Below are the headers of these methods which show the parameters, the required order, and their type. All parameters are required.

```
public ServiceContractFiling FileContract(byte[] FileData, string FileName, string OrgNum, string ConNum, string AmdNum, string EffDate, string UserName)
```

```
public ServiceContractFiling FileNotice(byte[] FileData, string FileName, string OrgNum, string ConNum, string EffDate, string UserName)
```

```
public ServiceContractFiling FileCorrectedCopy(byte[] FileData, string FileName, string oldOrgNum, string oldConNum, string newOrgNum, string newConNum, string changeFlag, string AmdNum, string UserName, string Comments)
```

All these methods return a ServiceContractFiling object. This object is a structure shown below.

```
public struct ServiceContractFiling
{
    public string FileName;
    public string OrgNum;
    public string ConNum;
    public int AmdNum;
    public string UserName;
    public long SessionId;
    public int FMCNum;
    public string EffDate;
    public string ConfirmNum;
    public int FileSize;
    public int errCodeUserName;
    public int errCodeOrgNum;
    public int errCodeConNum;
    public int errCodeAmdNum;
    public int errCodeEffDate;
    public int errCodeFile;
    public string errMsgUserName;
    public string errMsgOrgNum;
    public string errMsgConNum;
    public string errMsgAmdNum;
    public string errMsgEffDate;
    public string errMsgFile;
}
```

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}

This structure is sent back in an XML SOAP message, as such. The **placeholders** shown need to be replaced with actual values.

```
HTTP/1.1 200 OK
Content-Type: text/xml; charset=utf-8
Content-Length: length

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <FileContractResponse xmlns="http://www.fmc.gov/ServconWebServices/">
      <FileContractResult>
        <FileName>string</FileName>
        <OrgNum>string</OrgNum>
        <ConNum>string</ConNum>
        <AmdNum>int</AmdNum>
        <UserName>string</UserName>
        <SessionId>long</SessionId>
        <FMCNum>int</FMCNum>
        <EffDate>string</EffDate>
        <ConfirmNum>string</ConfirmNum>
        <FileSize>int</FileSize>
        <errCodeUserName>int</errCodeUserName>
        <errCodeOrgNum>int</errCodeOrgNum>
        <errCodeConNum>int</errCodeConNum>
        <errCodeAmdNum>int</errCodeAmdNum>
        <errCodeEffDate>int</errCodeEffDate>
        <errCodeFile>int</errCodeFile>
        <errMsgUserName>string</errMsgUserName>
        <errMsgOrgNum>string</errMsgOrgNum>
        <errMsgConNum>string</errMsgConNum>
        <errMsgAmdNum>string</errMsgAmdNum>
        <errMsgEffDate>string</errMsgEffDate>
        <errMsgFile>string</errMsgFile>
      </FileContractResult>
    </FileContractResponse>
  </soap:Body>
</soap:Envelope>
```

1. The FileName, OrgNum, ConNum, AmdNum, UserName, SessionId, and EffDate fields are the same as the input parameters.

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2. The SessionId is used to track files that are filed in the same Web session. It is not used in the Web Service; it will always be returned as a zero.
3. An FMCNum is assigned to original service contracts only. If an amendment is filed, this will be returned as 0.
4. If there are no errors with the filing, a Confirmation number will be provided. If there are errors, the Confirmation number will be returned as Error.
5. The FileSize is returned.
6. The errCode values for particular parameters can be returned as 0, 1, or -1.
7. If the errCode is 0, there was no error for that particular parameter and the errMsg field will be blank.
8. If the errCode is 1, there was an error for that particular parameter and the errMsg field will provide a description of the error.
9. If the errCode is -1, there was a warning issued for that particular parameter and the errMsg will provide a description of the warning. If there are no other errors with the filing, the filing is accepted and a confirmation number is given. Warnings are used mainly to alert manual filers of potential typos in the Org Number.

Returned Error Codes and Messages

Errors with File

The returned int errCodeFile will be set to 1 when any of the following is true:

- "The File Size is 0."
- "User already filed a contract with the same file name and org number."
- "Unknown File Type (no file extension)"
- "Invalid File Extension: " + invalidExt

The returned string errMsgFile will be set to one of the above messages.

Errors with User Name

The returned int errCodeUserName will be set to 1 when the UserName parameter is not on file.

The UserName is the same as the UserName used in Basic Authentication.

- "Invalid User Name: " + UserName

The returned string errMsgUserName will be set to the above message.

Errors/Warnings with Organization Number

The returned int errCodeOrgNum will be set to 1 when:

- "Organization Number is not 6 digits (include leading zeroes) "

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The returned int errCodeOrgNum will be set to -1 when one of these warnings occur:

- "Organization number is not on file. If the Org number is incorrect, please file Corrected Transmission/Copy (CT)."
- "Our records show this is the first time a Service Contract has been filed using Org Number: " + SC.OrgNum + " with User Name: " + SC.UserName + ". If the Org Number is incorrect, please file a Corrected Transmission/Copy (CT).";

The returned string errMsgCodeOrgNum will be set to one of the above messages.

Errors with Contract Number

The returned int errCodeConNum will be set to 1 when:

- "This Contract Number for this Organization is already in use. You can file this contract as an amendment or File a Corrected Transmission/Copy or contact the FMC Office of Contracts. "

The returned string errMsgConNum will be set to the above message.

Errors with the Amendment Number

The returned int errCodeAmdNum will be set to 1 when:

- "Incorrect Amendment Number. The next number should be " + AMNum
- "No Original Service Contract has been Filed for this Amendment."

The returned string errMsgAmdNum will be set to the above message.

Errors with Effective Date

The returned int errCodeEffDate will be set to 1 when:

- "Date must be in the YYYYMMDD format"
- "Invalid Effective Date: " + EffDate;
- "Effective Date must be between '20010101' and '20200101'";

The returned int errCodeEffDate will be set to -1 when:

- "The Effective Date is before the Date of Filing."
-

The returned string errMsgEffDate will be set to the above message.