

IBM Daeja ViewONE Professional



# Document Streaming Server Module Setup Guide

*Version 4.1*



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*Version 4.1*

**Note**

Before using this information and the product it supports, read the information in “Notices” on page 13.

This edition applies to Version 4 Release 1 Modification 0 of IBM® Daeja ViewONE Professional Edition (product number 5725-Q03) and to all subsequent releases and modifications until otherwise indicated in new editions.

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## Introduction

Without the IBM® Daeja® ViewONE® Professional Document Streaming Server module installed, the client typically requests a document directly from a document store by using a URL. The document store then sends the requested document back to the client for viewing.

The Document Streaming Server module is designed to sit between the IBM Daeja ViewONE Professional client and your source document store. After this is done, the client requests a document by using the Document Streaming Server module. The Document Streaming Server module then contacts the original document store, requests the source document, and then streams the document page-by-page back to the client.

### Prerequisite Requirements

The setting up and configuration of the Document Streaming Server module requires you to have already installed and deployed the viewer and are able to view images in the viewer.

The use of the Document Streaming Server module also requires that you have a working knowledge of the client-side viewer and are familiar with deploying a web application on your preferred web application server.

### Document Streaming

The Document Streaming Server module processes both multipage TIFFs and multipage PDFs on the server. Since version 4.0.2, this functionality was extended to include Microsoft Word and Microsoft PowerPoint files.

The Document Streaming Server module sends only the data for the pages that was requested by the viewer. Sending pages on viewing or printing demand significantly reduces the amount of network data transferred, which in turn speeds up viewing considerably and lowers network traffic for all users.

In the case of PDF files, the Document Streaming Server module further reduces the amount of network traffic by performing (patent-pending) optimization of PDF information. This can have a significant impact by saving up to 50% in network activity.

The Document Streaming Server module is designed to minimize load on the server to be truly scalable for even the largest of user groups.

The Document Streaming Server module encrypts all data it sends to the client machine so adds an additional level of security for any documents sent to the client machine by using the Document Streaming Server module.



## Combining Streaming with Prefetching

IBM Daeja ViewONE already has an option to prefetch pages (see the *IBM Daeja ViewONE Parameters Reference Manual*, "preFetchPages"). This feature is designed for use when pages of a document can be sent to the viewer separately, as when the Document Streaming Server module is used; IBM Daeja ViewONE reads ahead as a user browses a document.

When considering whether to use the Document Streaming Server module and if so, with or without prefetching, it is important to consider your actual use case. Consider how users are viewing documents to determine if the Document Streaming Server module is appropriate for your needs and, if it is, how best to configure it.

This is best illustrated with some sample use cases and consideration of how the Document Streaming Server module would work with prefetching for these cases:

### Scenario A

Users download large multi-page documents >100 pages and then typically view them sequentially. That is, the users start at page 1, which they need to view as quickly as possible, and then move through subsequent pages 2,3,4, 5, and so on. This scenario is the idealized scenario of the best use of the Document Streaming Server module with the PreFetch pages parameter.

Typically in this scenario, you would set the preFetch value to a value such as 5. Then while user is looking at the first page, the viewer downloads the subsequent pages in the background ready for the user to view instantly. Without PreFetch turned on, the user might experience a slight delay moving from one page to the next because the viewer must reconnect to the server to get each page for display.

Note that if the user is in a thumbnail view, they are effectively prefetching already because the viewer gets each of the pages for display in a thumbnail. Therefore, there is little benefit in using preFetch set to 5, for example, and thumbnail view set to thumbsleft. These two parameter settings do the same thing.

### Scenario B

Users download large multipage documents, perhaps on average 50-100 pages per document, and then move around different pages randomly. For example, the user scans quickly the contents on page 1, then views pages 50 through 53, and then goes to the document appendix.

In this scenario, setting the preFetch pages parameter set has a detrimental effect because the viewer downloads additional pages that the user never views. Indeed, it might be preferable to use the Document Streaming Server module in this scenario because the module must to make a connection for every single page. If the network speed is sufficient, the user can get the whole document in an acceptable time anyway and then the entire document is kept in memory so that moving between pages is instantaneous.

## Deployment

The IBM Daeja ViewONE Document Streaming Server module is deployed as a Java servlet. Therefore, you must use a Java web application server of your choosing. The procedure for deploying the Document Streaming Server module depends on the web application server and varies in detail depending on which web application server you choose.

However, the principles of deployment are the same for any web application server and are described in the *IBM Daeja ViewONE Servlet Setup Guide*, so you should follow the steps in this guide to deploy the core Document Streaming Server servlet.

## Configuring the Client Viewer

The changes required in your viewer HTML are minimal since the `StreamerURL` parameter takes care of the construction of the URL to include the Document Streaming Server module and assembles all available cookies for inclusion with the request.

After the Document Streaming Server module is installed, you only need to make some minor code changes to link it in with the IBM Daeja ViewONE Professional client-side viewer as follows.

(Note that the following code samples assume that you have mapped the servlet as shown in the sample `web.xml` file that is described in the *IBM Daeja ViewONE Servlet Setup Guide*. If this is not the case, substitute the `<servlet-name>` and `<url-pattern>` values that you have specified in the `web.xml` file in place of "viewone" and "v1files")

### Modifying the applet definition

It is important that the "mayscript" applet element is present in the `<applet>` definition so that the client can correctly obtain the browser's cookies. If it is not, you see errors in the client's Java console and you find that the Document Streaming Server module cannot stream documents from a document repository that requires a login. The correct way to specify the `mayscript` parameter is as follows:

```
<applet mayscript="true" name="IBM Daeja ViewONE" ...
```

It is not sufficient to use the `<param name="mayscript" value="true">` method.

### Setting up the Document Streaming Server Module URL

The only other inclusion required to enable the Document Streaming Server module is to point the `StreamerURL` HTML parameter (or JavaScript equivalent) to the location of the Document Streaming Server module servlet. Effectively, you are pointing to the location of the Document Streaming Server module servlet using either the full URL or a relative path, for example:

```
<param name="StreamerURL" value=http://localhost:8080/viewone/v1files/streamer>
```

This parameter and other Document Streaming Server module-specific HTML parameters and JavaScript methods are documented in the *IBM Daeja ViewONE Parameters Reference Manual* and the *IBM Daeja ViewONE JavaScript Reference Manual*.

# Configuring the Document Streaming Server Servlet

## The <servlet-name>.properties file

While the viewer is configured with HTML parameters or the JavaScript API in the code of the web page that runs the viewer, the servlet is controlled by using the properties file that has the same name as the defined servlet.

This file contains the configuration parameters for the IBM Daeja ViewONE servlet and its setup and configuration is described in the *IBM ViewONE Daeja Servlet Setup Guide*.

Typical uses of this configuration file include:

- Adding trace parameters to enable debug output to a specified log file
- Adding parameters to control how the servlet controls its own caching area
- Adding further parameters that determine how documents are retrieved

To add property for the Document Streaming Server module, you should precede the property with the text “streamer”, for example:

```
streamer.documentExpiryTime=1d
```

Refer to the *IBM Daeja ViewONE Server Properties Reference Manual* for further details on the properties that are available. This manual contains detailed descriptions of each property that can be added to the properties file and how that property affects viewer operation.

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Product Number: 5725-Q03

SC27-6393-00

