Technical Overview

For

IBM Sterling Connect : Direct

Contents

1. IBM Sterling Connect:Direct Overview

IBM Sterling Connect:Direct is a high-performance, secure, and reliable managed file transfer (MFT) solution. It is designed for the unattended transfer of large files or data sets between enterprises, ensuring data integrity and high-speed transfers. This product is commonly used in industries such as finance, retail, telecommunications, and manufacturing where secure and efficient file transfer is critical.

2. Key Features

1. *Secure File Transfers:*
   - Utilizes robust encryption protocols like SSL/TLS and FIPS-compliant security to protect sensitive data in transit and at rest.

2. *Automated Workflow:*
   - Enables the scheduling and automation of file transfers, reducing manual intervention and ensuring reliable operations.

3. *High Performance:*
   - Optimized for high-volume and large-scale data transfers, leveraging checkpoint restart capabilities to resume interrupted transfers.

4. *Cross-Platform Compatibility:*
   - Supports multiple platforms, including Windows, Linux, UNIX, z/OS, and cloud environments, ensuring seamless integration across diverse IT infrastructures.

5. *Error Handling and Recovery:*
   - Provides detailed logs, error reporting, and automated recovery options to handle interruptions or failures.

6. *Compliance Support:*
   - Helps organizations meet regulatory requirements such as GDPR, HIPAA, and PCI DSS by maintaining secure data exchange practices.

3. Use Cases

1. *Enterprise Data Exchange:*
- Facilitates data exchange between business partners or within an organization's different departments securely and reliably.

2. ***Integration with ERP and Supply Chains:***
- Automates data transfers between ERP systems, partners, and suppliers, streamlining supply chain operations.

3. ***Disaster Recovery:***
- Ensures secure and reliable backup of critical data to remote or cloud storage systems.

4. ***Financial Transactions:***
- Manages secure file transfers for payment processing, bank transactions, and regulatory reporting.

5. ***Data Consolidation:***
- Enables efficient movement of large volumes of data for data warehousing or analytics purposes.

4. Benefits

1. ***Enhanced Security:***
- Protects sensitive information through encryption and authentication mechanisms.

2. ***Improved Efficiency:***
- Reduces manual effort with automation, resulting in faster and more consistent file transfers.

3. ***High Reliability:***
- Ensures uninterrupted operations with error-handling, recovery, and robust logging features.

4. ***Scalability:***
- Adapts to growing data volumes and evolving business needs across platforms and environments.

5. ***Compliance Assurance:***
- Simplifies adherence to regulatory requirements with built-in security and monitoring capabilities.

5. Architecture

6. Installation Procedure

Step 1: Access the IBM Partner Plus Software Catalog

1. Navigate to the [IBM Partner Plus](#) website.
2. Log in to your account using your credentials.
3. After logging in, locate and click on the Benefits tab.
4. Under the Benefits section, select Technical.
5. Click on Software Access Catalog to proceed.

Step 2: Search for and Download the Software Package

After proceeding to the Software Access Catalog, you have two options to find the desired package:

1. **By Package Name:**
   1. Enter the package name in the text box provided.
   2. Select the HTTP option.
   3. Click on Search to locate the package.

Software Access Catalog downloads

IBM Partner Plus | Search for software | Popular Downloads | Obsolete Software | Download History | Request Assistance | Sign out

Overview
Search options
Your previous searches
Related Links

Overview

IBM's Software Access Catalog allows you to download IBM software products at no charge. The products downloaded may only be used for learning, development, testing, and proof of concept activities.

Select

Note that some products req[...]. Look for links to more details in the "Related link[...] this page.

Notice: QRadar 7.3.1 contains an operating system upgrade. This upgrade has been found to cause occasional spontaneous reboots on some M5 hardware. Please see APAR IJ02902 for more detail. Additional information can also be found in this Flash.

Insert Package Name

Search options

Text | Brand | Part number

Find by text

Product name

IBM Sterling Connect:Direct V6.4 Multiplatform English eAssembly

Type all or part of a product name and click Search to click one of the pop up suggestions. You can select additional filters below.

Show filter options

No

Select

Download method
○ Download Director ● HTTP

Search

Click

2. **By Part Number:**

   1. Enter the part number in the text box provided.
   2. Select the HTTP option.
   3. Click on Search to locate the package.

IBM Partner Plus   Search for software   Popular Downloads   Obsolete Software   Download History   Request Assistance   Sign out

Overview

Search options

Your previous searches

Related Links

Software Access Catalog downloads

Overview

IBM's Software Access Catalog allows you to download IBM software products at no charge. The products downloaded may only be used for learning, development, testing and proof of concept activities.
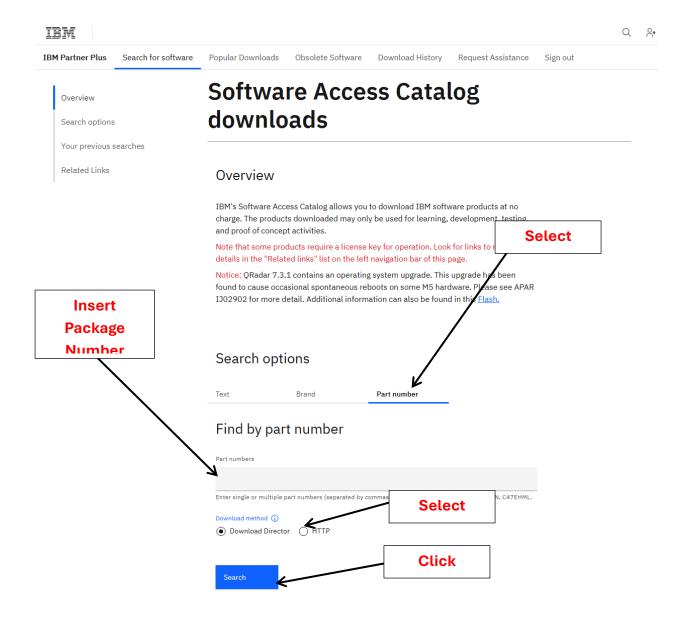
Note that some products require a license key for operation. Look for links to details in the "Related links" list on the left navigation bar of this page.

Notice: QRadar 7.3.1 contains an operating system upgrade. This upgrade has been found to cause occasional spontaneous reboots on some M5 hardware. Please see APAR IJ02902 for more detail. Additional information can also be found in this Flash.

Select

Insert Package Number

Search options

Text   Brand   Part number

Find by part number

Part numbers

Enter single or multiple part numbers (separated by commas)   N, C47EHML.

Download method ⓘ
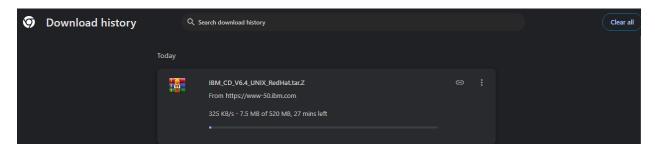● Download Director   ○ HTTP

Select

Click

Search

3. **Once the package appears in the search results:**
   1. Select the package you want to install.
   2. Scroll down and review the license agreement.
   3. Select Agree and click on Download Now.
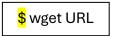   4. The download will begin immediately.

Step 3: Download the File Using wget in CentOS

1. Once the file starts downloading, go to your browser's download history.
2. Locate the file and copy its download link by:

- Right-clicking on the download item.
- Selecting Copy Link or a similar option depending on your browser.

3. Open a terminal in CentOS and navigate to the desired directory where you want to download the file.
4. Use the **wget** command with the copied **URL** to download the file. For example:

> $ wget URL

5. The file will be downloaded to your CentOS system.

```
[root@remote Arcana]# wget https://ak-dsw-mul.dhe.ibm.com/sdfdl/v2/fulfill/M0NHL
EN/Xa.2/Xb.ll8YenSwxvESvd6Ijjosxycj0aKqtis1CA8ca2k/Xc.M0NHLEN/IBM_CD_V6.4_UNIX_R
edHat.tar.Z/Xd./Xf.lPr.A6VR/Xg.13156308/Xi./XY.sm/XZ.yRDsFBCCR72c0dRVqDQaZUTaKDZ
dJ5QX/IBM_CD_V6.4_UNIX_RedHat.tar.Z
```

Step 4: Extract the Downloaded File

1. Verify the file is present in your directory by using the ls command:

> $ ls

2. Extract the .tar.Z file using the following command:

> $ tar -xvf IBM_CD_V6.4_UNIX_RedHat.tar.Z

3. The contents of the file will be unpacked into the current directory. You can confirm the extraction by listing the files again:

```
$ ls
```

4. You are now ready to proceed with the installation or setup of the extracted files.

```
[Arcana@remote ~]$ ls
IBM_CD_V6.4_UNIX_RedHat.tar.Z
[Arcana@remote ~]$ tar -xvf IBM_CD_V6.4_UNIX_RedHat.tar.Z
./cdinstall
./cdinstall_a
./cdunix
[Arcana@remote ~]$ ls
cdinstall  cdinstall_a  cdunix  IBM_CD_V6.4_UNIX_RedHat.tar.Z
[Arcana@remote ~]$ 
```

Step 5: Execute the Installation File

1. Navigate to the extracted directory to ensure the cdinstall file is accessible:

```
$ cd <extracted_directory>
```

Replace <extracted_directory> with the actual directory name where the files were extracted.

2. To start the installation interactively, run the following command:

```
$ ./cdinstall
```

3. For silent installation, use the cdinstall_a script:

```
$ ./cdinstall_a
```

4. Follow the on-screen instructions (for interactive mode) or let the silent installation complete automatically.

   After the installation completes, verify that the software is installed correctly.

```
================================================================
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IBM(R) Connect:Direct(R) for UNIX

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restricted by GSA ADP Schedule Contract with IBM Corp.

You are beginning the Connect:Direct for UNIX Installation
Procedure.  You will be asked to specify a directory (called
the destination directory) where the Connect:Direct for UNIX
files will be stored.

Please follow the Getting Started Guide and/or Release Notes for the
proper Media Name.

UNIX is a registered trademark of The Open Group
================================================================

Press ENTER when ready.
```

Step 6: Complete the Installation and Configuration of Sterling Connect:Direct

1. **Start the Installation:**

   After running the cdinstall or cdinstall_a command, press Enter when prompted to continue.

2. **Specify Installation Path:**

   Enter the directory path where you want to install Sterling Connect:Direct and press Enter.

3. **Select the Installation Option:**

   Choose your preferred installation type when prompted:

   For a recommended setup, select Option 1: Server and Client CLI/API.

4. **Configure Sterling Connect:Direct:**

   Select Option 3 to configure Sterling Connect:Direct for UNIX (server and client).

5. **Set Node Name:**

   Provide a unique Node Name for the server.

6. **Specify TCP/IP Control Center Details:**

Enter the Port Number and Hostname for the TCP/IP Control Center direct request.

7. **Install the CCD Install Agent:**

When prompted, type Y (Yes) to install the CCD Install Agent.

8. **Configure Remote Connection Request:**

Provide the Port Number and Hostname for remote connection requests.

9. **Configure Client Connection:**

Enter the Client Connection Port Number and Hostname to handle client connection requests.

10. **Complete the Installation:**

Follow any additional prompts to finalize the installation.

Upon completion, verify that the configuration is correct by reviewing the installation log or running a connectivity test.

You have now successfully installed and configured Sterling Connect:Direct for UNIX!

Step 7: Configure Root User Permissions and Access Control

1. **Select Option 4 for Configuration**:
    - During the Sterling Connect:Direct installation or configuration process, you might be prompted with a menu of options. Option 4 could refer to configuration settings that require root privileges or administrative access.
    - Navigate to this option (likely using your terminal, depending on your installation method).
2. **Type 'Y' for Root Privileges:**
    - When prompted whether you want to proceed with root privileges, type Y (Yes) to grant the necessary permissions. This will allow the system to make changes that require administrative control (like modifying system files, configuring services, etc.).
    - If you are installing or configuring Sterling Connect:Direct as a root or superuser, you will need to confirm these permissions for successful setup.
3. **Press 'Y' for Denying Root User Access:**
    - In some configurations, you may be asked whether root should be allowed to access or manage certain services in Sterling Connect:Direct.
    - Pressing Y here might imply that restricting root user access for certain operations or that you're setting up the system in a way that limits root's interaction with the Sterling software, which can enhance security.
    - This step is important for preventing potential security risks by restricting overly permissive access for the root user.

Step 8: Navigating and Listing Files in the Installation Directory

This step demonstrates navigating into specific directories of an application and listing their contents on a Linux system. Here's a breakdown of what happens:

1. **Navigate to the cdunix Directory:**
   - The command cd cdunix is used to move into the cdunix directory.
   - This is the main directory where the application or its components are stored.

2. **List Contents of the cdunix Directory:**
   - The $ls command lists the contents of the cdunix directory.
   - Subdirectories like etc, ndm, properties, and others are displayed. These likely contain configuration files, logs, and executable.

3. **Navigate to the ndm Directory**:
   - The command $cd ndm moves into the ndm directory, which might contain core components of the application.

4. **List Contents of the ndm Directory:**
   - Using $ls, the contents of the ndm directory are displayed.
   - Subdirectories and files like bin, cfg, lib, and others are shown. The bin directory is notable as it typically contains executable files.

5. **Navigate to the bin Directory:**
   - The command $cd bin moves into the bin directory.
   - This directory likely contains the executable scripts or binaries required to run the application.

6. **List Executables in the bin Directory:**
   - The $ls command lists the contents of the bin directory, which includes:
   - Scripts or executables like **cdenv.sh, cduStart, cdpmgr,** and others.
   - These files are essential for starting, stopping, or managing the application.

```
[root@remote ~]# ls
anaconda-ks.cfg  cdunix  initial-setup-ks.cfg
[root@remote ~]# cd cdunix
[root@remote cdunix]# ls
etc       jre       ndm       properties  Third_Party_Licenses  work
install   license   process   temp        UninstallerData
[root@remote cdunix]# cd ndm/
[root@remote ndm]# ls
bin  cfg  include  ioexit-plugins  lib  man1  SACL  security  src  xlate
[root@remote ndm]# cd bin/
[root@remote bin]# ls
aspera.conf  cdsacomp   direct     ndmcmgr    ndmsmgr      ndmview.awk    uninstall
cdenv.csh    cdstatm    initcnvt   ndmmsg     ndmstat      ndmxlt
cdenv.sh     cduStart   ndmauthc   ndmpmgr    ndmstat.awk  sample.cd
cdmsgutil    cduStop    ndmauths   ndmproc    ndmumgr      statarch.sh
cdpmgr       cfgcheck   ndmcli     ndmproc.awk  ndmview    statrestore.sh
[root@remote bin]#
```

Step 9: Starting and Accessing IBM Connect:Direct for UNIX

This step demonstrates how to initialize and run IBM Connect:Direct for UNIX. Below is a detailed explanation of the steps:

1. **Print Working Directory (pwd):**
   The command pwd confirms the current working directory, which is:

   $/root/cdunix/ndm/bin

   This ensures the user is in the correct location where the required binaries are stored.

2. **Run the ndmpmgr Command:**
   The command executed:

   $./ndmpmgr -i /root/cdunix/ndm/cfg/Test/initparm.cfg

   This initializes the application using the specified configuration file (**initparm.cfg**), which is located in the **cfg/Test** directory.

   ndmpmgr is likely a manager or initializer for IBM Connect:Direct.

3. **Set Up the Environment:**
   The command:

   source /root/cdunix/ndm/bin/cdenv.sh

   This sets the necessary environment variables for IBM Connect:Direct by running the **cdenv.sh** script.

   Using source ensures the environment changes take effect in the current shell session.

4. **Start the Application:**
   The command:

   ./direct

   This starts IBM Connect:Direct for UNIX. The **./** indicates that the direct executable is being run from the current directory.

5. **Verify Startup:**
   The output confirms that IBM Connect:Direct is successfully initialized:
   Licensed Materials - Property of IBM
   IBM(R) Connect:Direct(R) for UNIX 6.4.0.0
   Build date: 06Nov2024

The version (6.4.0.0) and build date (06Nov2024) are displayed, verifying the software is up-to-date and operational.

```
[root@remote bin]# pwd
/root/cdunix/ndm/bin
[root@remote bin]# ./ndmpmgr -i /root/cdunix/ndm/cfg/Test/initparm.cfg
[root@remote bin]# source /root/cdunix/ndm/bin/cdenv.sh

setting C:D UNIX environment
[root@remote bin]# ./direct


        ****************************************************************
        *                                                              *
        *              Licensed Materials - Property of IBM            *
        *                                                              *
        *          IBM(R) Connect:Direct(R) for UNIX 6.4.0.0           *
        *                      Build date: 06Nov2024                   *
        *                                                              *
        *   (C) Copyright IBM Corp. 1992, 2024 All Rights Reserved.    *
        *                                                              *
        ****************************************************************

Enter a ';' at the end of a command to submit it. Type 'quit;' to exit CLI.

Direct> █
```

6. **Access the Command Line Interface (CLI):**
   The system enters the Connect:Direct CLI, indicated by the prompt:
   Direct>
   At this prompt, commands can be entered to manage file transfers, configurations, or other tasks related to Connect:Direct.