

A digital landscape with a grid of binary code (0s and 1s) on the ground, a glowing blue sphere in the center, and a sky filled with circuitry and data patterns.

# **EView/390z Mainframe Discovery for ServiceNow Discovery for CMDB**

## **Concepts Guide**

**Software Version: 7.2**

**April 2018**

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## Revision History

This manual's title page contains the following identifying information:

- Version number, which indicates the software version.
- Print date, which changes each time the document is updated.

Table 1 indicates changes made to this document since the last released edition.

**Table 1: Changes to This Document**

Date	Description
April 2018	Version A.07.20

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# Documentation Map

EView/390z Mainframe Discovery (EView/390z) for ServiceNow Discovery provides a set of manuals that help you use the product and understand the concepts underlying the product. This section describes what information is available and where you can find it.



In addition to EView/390z documentation, related ServiceNow products provide a comprehensive set of manuals that help you use the products and improve your understanding of the underlying concepts.

## EView/390z Printed Manuals

This section provides an overview of the printed manuals and their contents.

### *EView/390z Mainframe Discovery Concepts Guide*

Explains EView/390z features, functions, architecture, and data flow. Describes EView/390z agent and server components, and process management.

### *EView/390z Mainframe Discovery Installation Guide*

Explains how to upload EView/390z installation files from the EView proxy server, update z/OS, NetView/390, and SOLVE:NETMASTER software, and start and stop EView/390z. Also describes EView/390z console commands.

### *EView/390z Mainframe Discovery Administrator's Reference*

Explains how to install, de-install, configure, and use EView/390z. Also includes detailed troubleshooting procedures and explanations of EView/390z system messages.

## EView/390z Online Information

The following information is available online:

*EVIEW/390z Software Release*

## About EView/390z

This chapter describes EView/390z Discovery for ServiceNow (EView/390z). It also provides a brief overview of its benefits, architecture, and data flow.

## What is EView/390z?

EView/390z Discovery (EView/390z) integrates the z/OS mainframe platform into ServiceNow Discovery. With the addition of EView/390z, ServiceNow Discovery provides you with true end-to-end discovery of your information technology (IT) environment, from PCs to mainframe computers.



While the product name retains the name of the former OS/390 operating system, this latest release of EView/390z communicates with mainframes running z/OS. Unless otherwise noted, "z/OS" can be substituted for "OS/390" in these manuals.

## What EView/390z Does

EView/390z is closely integrated into the ServiceNow Discovery instance. An EView/390z agent collects information from the z/OS mainframe environment to be processed and stored in the ServiceNow CMDB.

## Benefits of EView/390z

EView/390z provides you with the following benefits:

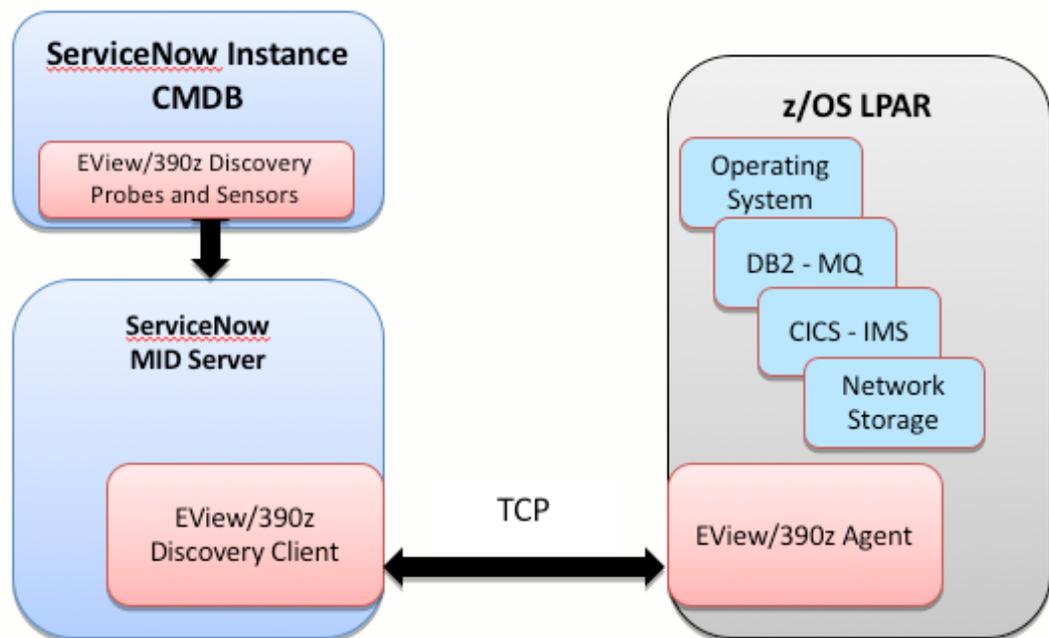
- **Compatibility with z/OS**  
Ability to co-exist with currently installed z/OS solutions.
- **Health Monitoring for z/OS Systems**  
Health monitors for z/OS systems and their standard business applications.
- **Consolidated Management View**  
Consolidated end-to-end management view, which gives you a business-centric perspective.
- **Automatic Problem Resolution**  
Two-way communication with z/OS systems to resolve problems quickly and automatically.

## About EView/390z Architecture and Data Flow

EView/390z consists of two main components: the agent component that runs on the z/OS mainframe, and the client component that runs on a ServiceNow MID server. The EView/390z client sends requests to the agent which executes the request and returns the requested information.

Figure 2-1 shows the data flow between the z/OS mainframe, the EView/390z proxy server and the MID server.

**Figure 2-1: EView/390z Data Flow**



The ServiceNow MID server agent receives requests to run commands that are sent by the EView/390z Discovery client to the EView/390z mainframe agent to be executed. Results are returned to the EView/390z client and returned to the ServiceNow instance where the results are processed by the associated sensor and configuration items added to the ServiceNow CMDB.

## About the EView/390z Agent

This chapter describes the agent and agent components provided with EView/390z.

## What the EView/390z Agent Does

The EView/390z agent operates as a z/OS started task. In a Discovery environment the agent is waiting for data requests from the EView/390z client on the ServiceNow MID server.

### About the EView/390z Main Task

The EView/390z agent executes as a started task or batch job on the mainframe system. The Job Control Language (JCL) starts the main task program. The main task program opens and reads initialization cards from System Input (SYSIN), which specifies the subtasks to be started. As the cards are processed, a set of interprocess communication queues is set up in storage to be shared by the main task and all subtasks. All communication between tasks within the EView/390z agent is accomplished by these queues. After SYSIN card processing is complete, the EView/390z agent main task routes messages between the subtask queues and processes maintenance (Modify) commands from the z/OS console operator.

### About EView/390z Subtasks

The EView/390z agent subtasks collectively provide all the necessary communications and system interfaces. Each of the subtasks is dedicated to a particular interface function and communicates with other subtasks using the EView/390z agent interprocess communications queues.

#### Types of Subtask Queues

Each subtask uses the following two queues:

- **Subtask Input Queue**

Queue used for messages destined for processing in the subtask interface. These messages can be commands for execution or messages to be transmitted to the EView/390z server component.

- **Subtask Output Queue**

Queue used for messages that are the result of subtask processing. Messages from this queue are routed by the main task to other subtasks for processing.

#### About the TCP Subtask

The TCP/IP (TCP) subtask is an executable that requests the opening of two TCP/IP ports from the TCP/IP address space on the mainframe, and then waits for the EView/390z MID server component to start communication with the EView/390z agent mainframe component through these ports. The TCP subtask accepts commands from the EView/390z server component, routes them to the appropriate subtask for execution, and sends the replies back to the MID server component.

As a rule, you must have one TCP subtask defined for each EView/390z server component that will be connecting to the mainframe through TCP/IP.

## About the CMD Subtask

The Command (CMD) subtask is an executable that does the following:

1. Establishes an extended Multiple Console Support (MCS) console for EView/390z.
2. Receives z/OS commands (for example, Modify) from the EView/390z server components.
3. Sends the commands to the defined console.
4. Receives the response messages from z/OS.
5. Sends the responses back to the EView/390z MID server component that initiated the command.

## About the SPO Subtask

The Secondary Program Operator (SPO) subtask is an executable that does the following:

1. Initializes a SPO Active Control Block (ACB) to VTAM.
2. Receives VTAM commands (for example, Vary or Display) from EView/390z server component subtasks.
3. Sends the commands to VTAM over the SPO.
4. Receives the response messages from VTAM.
5. Sends response messages back to the EView/390z server component subtask that initiated the command.

If several commands arrive at nearly the same time from different operators, the EView/390z agent allows for multiple SPO subtasks to distribute the work.

## About the OSINFO Subtask

The Operating System Information subtask (OSINFO) collects on-demand information about the mainframe system its active address spaces, DASD statistics, memory usage, and submitted jobs. These data can be requested at any time using a command script on the MID server to allow users to develop customized queries about the status of the mainframe.

## About the SMF Subtask

The SMF when active initializes SMF exits to collect SMF record data and forward that data to the EView/390z client on the ServiceNow probe. For mainframe job discovery, SMF type 30 subtype 5 records are collected.

## **About the Subtask Restart Function**

The EView/390z agent has a subtask restart function that automatically restarts the mainframe subtasks when communication is lost from the host. This restart function eliminates the need to restart the entire EView/390z agent address space.

## About the EView/390z Client

This chapter describes the client components and process management provided by EView/390z Discovery (EView/390z).

## About Client Components

Client components are installed on the ServiceNow MID server. The client components perform two primary functions:

- Establish and maintain communication with the EView/390z mainframe agent
- Send requests for discovery data through the communication channel to the EView/390z mainframe agent and receive responses to those requests.
- A configuration interface to define z/OS systems to be discovered and start and stop communication between the client and the EView/390z mainframe agent.

## Types of EView/390z Client Components

For each mainframe LPAR to be discovered there is one service defined on the MID server. This service runs the EView/390z Message and Command server service which maintains an active connection with the EView/390z mainframe agent.

The ev390hostcmd utility program is the vehicle for sending data requests to the EView/390z mainframe agent and receiving responses to those requests. The ev390hostcmd program may be executed directly by discovery probes or by scripts which are executed by discovery probes.

EView/390z configuration interface is a web based interface that is used to define the configuration for z/OS instances to be discovered and also start and stop the communication service for the z/OS instance on the MID server.

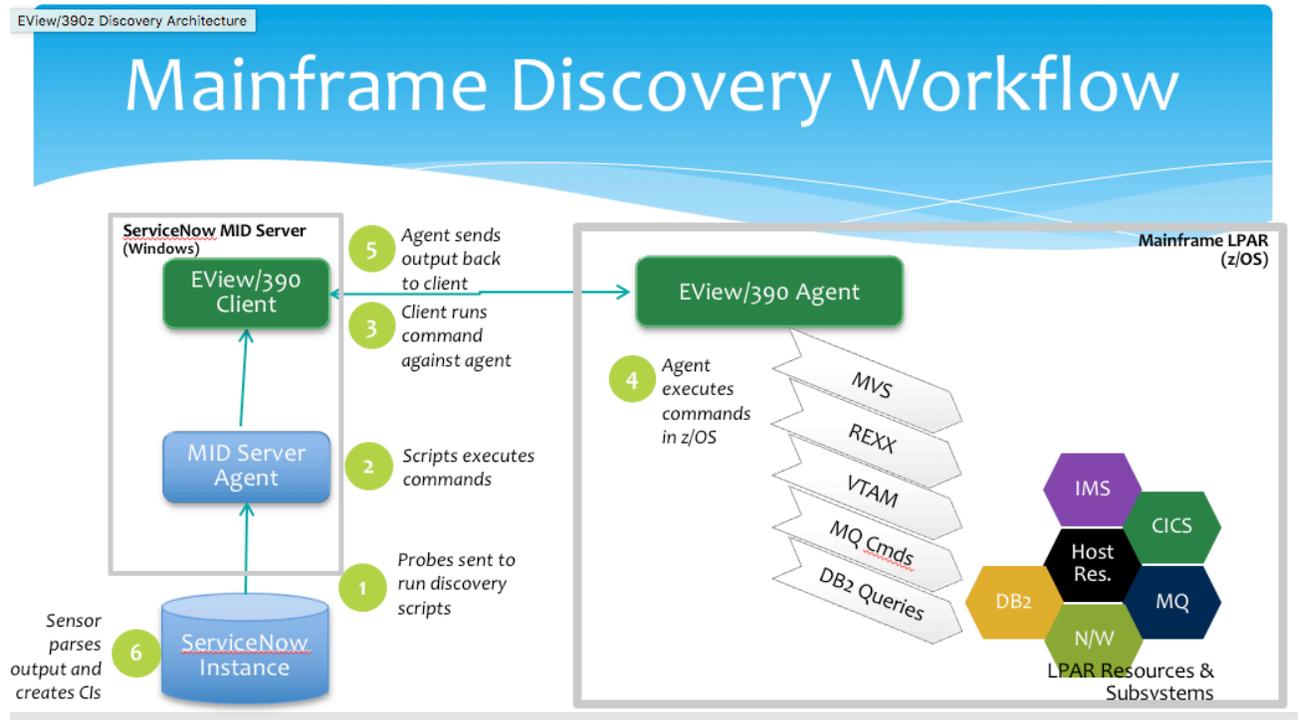
You must install these EView/390z server components before you install the EView/390z mainframe agent.



# Mainframe Discovery Probes and Sensors

This chapter describes the different discovery probes and sensors that and the type of data discovered.

## Discovery Data Flow



## LPAR Resource Discovery

There are probes and sensors available for LPAR Resource Discovery:

- DB2 Discovery
- CICS
- MQ
- IMS