**MERVA ESA Components**
**Version 4 Release 1**
**Program Number 5648-B30**

The IBM licensed program Message Entry and
Routing with Interfaces to Various Applications
ESA Components Version 4 Release 1 (MERVA
ESA Components Version 4.1) is an IBM program
product that does not contain basic material but
covers all features that are available for MERVA
ESA Components Version 4 Release 1. In detail,
these features are:

- MERVA USE and Branch for Windows NT
- MERVA USE and Branch for Windows NT with
  SWIFT Link
- MERVA Message Processing Client for
  Windows NT
- MERVA Automatic Message Import/Export
  Facility
- MERVA Connection/NT
- MERVA Connection/400
- MERVA ESA Directory Services
- MERVA ESA Traffic Reconciliation

**MERVA ESA Version 4.1 together with MERVA**
**ESA Components Version 4.1** allows you to
send financial messages to the SWIFT II network
(the private network of the Society for Worldwide
Interbank Financial Telecommunication s.c.
(S.W.I.F.T.), the public telex network, and other
MERVA systems.

MERVA ESA Version 4.1 is installed on S/390
mainframes only. The different features of MERVA
ESA Components Version 4.1, however, require
the following hardware:

- Five features run on Intel-compatible
  processors supporting Windows NT.

- One feature runs on AS/400 systems with
  OS/400.

- Two features run on S/390 systems with
  OS/390.

MERVA ESA Components Version 4.1 allows
you to order the following priced features:

– MERVA USE and Branch for Windows NT

  This feature provides full MERVA proc-
  essing capabilities except the connection to
  the S.W.I.F.T. network in domestic or
  foreign branches. A permanent connection
  to the central installation is not necessary.

  In detail, MERVA USE and Branch for
  Windows NT consists of the following ele-
  ments:

  — MERVA Base providing common ser-
    vices and functions for the other compo-
    nents, such as printer control, message
    display facilities, and an application pro-
    gramming interface (API).

    MERVA Base also includes support for
    the S.W.I.F.T. User Security Enhance-
    ment (USE) services:

    - Secure Login and Select (SLS)
    - Bilateral Key Exchange (BKE)

  — MERVA-to-MERVA connection enabling
    MERVA USE and Branch for Windows
    NT to communicate with MERVA ESA
    Version 4.1 systems and with other
    MERVA USE and Branch for Windows
    NT, or MERVA USE and Branch for
    Windows NT with SWIFT Link systems.
    It allows you to exchange messages
    between MERVA systems independent
    of the S.W.I.F.T. or telex network.

  — Message processing is added via
    MERVA Message Processing Client for
    Windows NT as a separate feature.

– MERVA USE and Branch for Windows NT
  with SWIFT Link

  This feature provides the same functions as
  MERVA USE and Branch for Windows NT
  but includes a connection to the S.W.I.F.T.
  network in case that the link to the
  mainframe or the link from the mainframe to
  the S.W.I.F.T. network does not work.

– MERVA Message Processing Client for Windows NT

This feature provides message-processing and message-administration services on local and remote personal computers running on Windows NT.  It allows you to create, verify, edit, and authorize S.W.I.F.T. messages.  It also allows you to prepare S.W.I.F.T. messages for transmission via the public telex network.

Note that for any installation of MERVA USE and Branch for Windows NT or MERVA USE and Branch for Windows NT with SWIFT Link, at least one MERVA Message Processing Client for Windows NT is required.

– MERVA Connection/NT

This feature provides real-time links to applications running on personal computers with Windows NT.

– MERVA Connection/400

This feature provides real-time links to applications running on AS/400 systems.

– MERVA Automatic Message Import/Export Facility

This feature allows a MERVA user to export MERVA messages of different types to message files of different formats, and import message files of different formats to MERVA messages of different types.

## Specified Operating Environment

**"Year 2000 Readiness"**

This IBM program, when used in accordance with its associated documentation, is capable of correctly processing, providing and/or receiving date data within and between the twentieth and twenty-first centuries, provided that all products (for example, hardware, software, and firmware) used with this IBM program properly exchange accurate date data with it.

**Machine Requirements**

1. **MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link**

MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link run all Intel-compatible processors that are supported by Windows NT.

Files accessed by these components must reside on an NTFS file system.

Dialog functions can be used from any terminal supported and operated by Windows NT.

The estimated minimum machine requirements are:

- Intel Pentium processor, 166 MHz or higher
- 96 MB of RAM (128 MB recommended)
- 4 GB of available disk space on an NTFS-formatted drive
- A CD-ROM drive for installation
- A diskette drive (software keys will be delivered on a diskette)
- Screen resolution of 1024 x 768 pixels or higher

To use the S.W.I.F.T. USE functions, the following requirements are necessary in addition to the machine requirements listed before:

- A Basic (BCR) or Secure (SCR) card reader, or both, as required by S.W.I.F.T.
- An asynchronous port on the workstation for each connected SCR or BCR
- 5 MB of disk space per 3,000 correspondents

**Additional Machine Requirements for Multi-User Support**

MERVA's multi-user support is implemented using the Windows NT Server 4.0, Terminal Server Edition. For each additional user, the memory should be increased by 20 MB RAM.

**Additional Machine Requirements for the MERVA Connectivity**

MERVA Link, the remote MERVA family clients, and the connection features support the interconnection of MERVA systems within an SNA network using LU 6.2 services or a TCP/IP network (except MERVA Connection/400).

Therefore, one of the network control facilities supporting this communication method is required, for example, an IBM 37xx communication controller with a networking interface card on the PC, such as an ATM or SDLC card.

**Additional Machine Requirements for the SWIFT Link (MERVA USE and Branch for Windows NT with SWIFT Link only)**

The connection to the S.W.I.F.T. network using the X.25 protocol requires the following:

- ARTIC X.25 Interface CoProcessor Adapter (PCI or ISA bus).

  – Public Switched Telephone Network (PSTN) connections to the S.W.I.F.T. network require a cable and a modem that supports V.25 bis dialing. A V.25 bis capable modem allows MERVA USE and Branch for Windows NT with SWIFT Link controlled automatic dialing. This is recommended to ensure integrated customization and processing.

  – Device driver: IBM ARTIC Support for Windows NT.

  – X.25 software: IBM ARTIC Support for X.25 Windows NT.

- Encryptor box Secure X.25 provided by S.W.I.F.T. The encryptor box from S.W.I.F.T. can be used to connect the computer and the modem. Note that the encryptor box is optional for PSTN connections but mandatory for PSPDN connections.

2. **MERVA Message Processing Client for Windows NT**

   - Processor:

     Any workstation that runs under Windows NT Version 4.0 or a subsequent release. A Pentium with 133 MHz or an equivalent processor is recommended.

   - RAM:

     32 MB RAM or more is needed.

   - Disk space:

     The program files require approximately 30 MB of disk space.

- Printer:

  Any printer supported by Windows NT.

- Interface device:

  Any interface device supported by the end user communication software, for example, Token Ring Card or SDLC Adapter for remote connections.

3. **MERVA Connection/400**

   The MERVA Connection/400 feature runs on an AS/400 system connected to MERVA USE and Branch for Windows NT or MERVA USE and Branch for Windows NT with SWIFT Link via SNA. MERVA Connection/400 can communicate with MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link.

4. **Connection/NT**

   Connection/NT is supported on any system running on Windows NT 4.0.

   The remote MERVA API Client can be installed on any Windows NT system with approximately one megabyte of free space on its hard disk.

5. **MERVA Automatic Message Import/Export Facility**

   MERVA Automatic Message Import/Export Facility is supported on any system running on Windows NT 4.0.

   The following machine requirements are needed to install the MERVA Automatic Message Import/Export Facility:

   - Any workstation that runs under Windows NT Version 4.0 or a subsequent release
   - 16 MB or more RAM, and 20 MB or more additional hard disk space

6. **MERVA ESA Directory Services**

   The MERVA ESA Directory Services runs on the same system as MERVA ESA Version 4.1 (see Licensed Program Specifications for MERVA ESA Version 4.1, 5648-B29).

7. **MERVA ESA Traffic Reconciliation**

   The MERVA ESA Traffic Reconciliation runs on the same system as MERVA ESA Version 4.1 (see Licensed Program Specifications for MERVA ESA Version 4.1, 5648-B29).

### Programming Requirements

1. **MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link**

   **Operating System**

   MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link are based on Microsoft Windows NT 4.0, Service Pack Level 4, US English. They also run on subsequent releases or modification levels of this operating system, unless otherwise stated.

   **License Management**

   MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link expect the License Use Management program product iFOR/LS Version 4.0.1 using the software key capability.

   **Database System**

   - DB2 Universal Database Workgroup Edition Version 5.2, Service Pack Level 9084, or subsequent releases

   **Communication Systems**

   - The SNA support is based on the following communication systems:

     – Personal Communication Version 4.2, or subsequent releases
     – IBM eNetwork Communications Server for Windows NT Version 6.0

   Examples refer to the IBM eNetwork Communications Server.

   SNA must be started as a Windows NT service. The service must run under a user account other than **System Account**. The users access control list must contain the MERVA user group, for example, umerva1.

   - The TCP/IP support is based on the availability of TCP/IP. TCP/IP is part of the Microsoft Windows NT 4.0 product.

   MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link also require the following software:

   - Object REXX Runtime Edition Version 1.0.2.3
   - Java Runtime Environment (JRE) Version 1.2

   **Additional Program Requirements for Multi-User Support**

   - Windows NT Server 4.0, Terminal Server Edition

   **Additional Program Requirements for the API**

   MERVA USE and Branch for Windows NT and MERVA USE and Branch for Windows NT with SWIFT Link support the C programming language to write application programs using the API functions. The following compilers are supported:

   - VisualAge for C++ for Windows Compiler Version 3.5.4
   - Microsoft Visual C++ 6.0

   **Additional Program Requirements for SWIFT Link**

   - SWIFT Link connection is based on IBM ARTIC Support for X.25 on Windows NT.

2. **MERVA Message Processing Client for Windows NT**

   - Operating system: Microsoft Windows NT Version 4.0 with Fix Package 4, or a subsequent release.
   - Communication software for remote connections:

     For SNA APPC:
     – IBM eNetwork Personal Communication Version 4.2, Program Number 5639-B94, or a subsequent release.
     – IBM eNetwork Communications Server for Windows NT Version 6.0, Program Number 5639-F25, or a subsequent release.

     For TCP/IP:
     – The TCP/IP support is incorporated in the Windows NT 4.0 operating system.

3. **MERVA Connection/400**

   An LU 6.2 connection between Communications Server and OS/400 must be customized for the PC connection.

   MERVA Connection/400 requires an APPC LU 6.2 session between the PC and the AS/400. This can be achieved by Token Ring, SDLC, Twinax, and other types of connection for which Communications Manager SNA Server and OS/400 provide support for an LU 6.2 session.

For a list of alternatives and the required hardware, refer to the corresponding books listed in the bibliography of the MERVA Connection/400 documentation.

Programs required on the MERVA USE and Branch for Windows NT side are:

- Communications Server, including the latest available Corrective Service Diskette (CSD) level, or a subsequent release

Programs required on the AS/400 side are:

- OS/400 Version 3.1, including the latest available Corrective Service Diskette (CSD) level, or a subsequent release
- A compiler for one of the following languages:
  - IBM C/ILE
  - IBM RPG/ILE
  - IBM COBOL/ILE

Note that only ILE is supported. EPM/OPM is no longer supported.

4. **MERVA Connection/NT**

The following software must be installed on the client side:

- Windows NT 4.0.
- Personal Communications for NT Version 4.2, or Communications Server for NT Version 6.0, or a subsequent release. The TCP/IP support is based on the availability of TCP/IP.  TCP/IP is part of the Microsoft Windows NT 4.0 product.
- The C Compiler VisualAge for C++ 3.5.4.

Personal Communications or Communications Server for NT is only required if an SNA APPC connection is used for the communication between the Remote MERVA API Client and Server. Personal Communications is not required if a TCP/IP connection is used for that purpose. In this case, TCP/IP must be installed on the Windows NT system.  Communications Server for NT has the same functions as Personal Communications for NT. When Personal Communications for NT is mentioned, Communications Server for NT is also sufficient for the task.

The MERVA Connection/NT Client Application System and the MERVA Server System must be interconnected by a Data Communication Link. As specified by the used Data Communication Service (SNA APPC or TCP/IP), Token Ring, SDLC, Twinax, or other types of intersystem links can be used. A corresponding data link adapter must be installed on the Windows NT system.

5. **MERVA Automatic Message Import/Export Facility**

The following requirements are necessary:

- Windows NT Version 4.0 or a subsequent release of the operating system
- MERVA USE and Branch for Windows NT or MERVA USE and Branch for Windows NT with SWIFT Link as a MERVA environment on the server

6. **Mainframe Based Features**

The requirements are the same as for MERVA ESA Version 4.1 (see Licensed Program Specifications for MERVA ESA Version 4.1, 5648-B29) including the requirement for a DB2 database. The database is prerequisite for MERVA ESA Directory Services and MERVA ESA Traffic Reconciliation.

In addition, the following is required for the MERVA ESA Directory Services:

- IBM Language Environment for MVS/VMS Version 1 Release 4 (5688-198)

**Licensed Program Materials Availability**

Restricted materials: No.  This licensed program is available without source licensed program materials.  It is available in object code.

## Supplemental Terms

**Designated Machine Identification**

- Designated Machine Identification Required: No.

**Testing Period**

- Basic License: 2 months (60 days outside the US)

### Installation/Location License

- Not applicable.  A separate license is required for each machine on which the licensed program materials are used.

### Usage Restriction

- Usage restriction applies: Yes.
- Usage restriction: Usage charges for the following features are based on the number of copies installed:
  - MERVA USE and Branch for Windows NT
  - MERVA USE and Branch for Windows NT with SWIFT Link
  - MERVA Message Processing Client for Windows NT

When the licensed use exceeds the registered tier level, you are required to contact your IBM representative to order an additional tier or tiers.

### Object REXX Interpreter Edition for Windows 95 and Windows NT

Components of the licensed IBM product 'Object REXX Interpreter Edition for Windows 95 and Windows NT' are packaged with MERVA solely for the use of MERVA. If you want to build applications based on Object REXX without a connection to MERVA, a separate Object REXX license is required.

### Type/Duration of Program Services

- Central Service, including the IBM Support Center, is available until discontinued by IBM upon six months written notice.

## Warranty

This program is warranted as specified in the IBM licence.

Licensed Program Specifications may be updated from time to time and such updates may constitute a change in specifications.

Following the discontinuance of all program services, this program will be provided "As Is" as specified in the IBM license.

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