

Distributed Systems Management

hos

Dansk BiblioteksCenter A/S

Projektplan

Den 30. oktober 1997

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1 Organisering af projektet

1.1 Baggrund

Nærværende dokument beskriver de overordnede retningslinier for implementering af Systems Management værktøjet Unicenter TNG (TNG) hos Dansk BiblioteksCenter A/S (DBC).

I hovedtræk er ændringen den, at DBC i større grad selv foretager implementeringen.

Det forventede ressourceforbrug fra CAs side udgør herefter 65 konsulentarbejdsdage fordelt på 20 dages projektledelse, 9 dages uddannelse og 36 dages teknisk assistance.

Det forventede ressourceforbrug fra DBCs side er estimeret til 99 dage eksklusiv undervisning.

Projektplanen beskriver rammerne for implementeringen, detailfordelingen af ressourcerne og de forventede overordnede slutkriterier.

1.2 Projektorganisation

Styregruppen består af: Projektchef Per Kogut og Salgschef Kristian Reseke/Divisional Manager Daniel Elfort, CA samt Jørgen Rishøj, DBC. Styregruppen initierer og bemander projektet. Styregruppen sikrer, at de nødvendige forudsætninger er opfyldt - eller bliver det. Ansvarsfordeling, ressource-allokering samt projektets placering i tid og rum præciseres. Det forventes, at styregruppen mødes ca. hver 3. uge eller efter behov.

DBC's projektleder: Aftales nærmere

CAs projektleder: Jens Henriksen

1.3 Tidsplan

Oversigtsmæssigt er der aftalt følgende tidsplan for projektet:

Projekt nr.:	Delprojekt	Start uge/år	Formål	Forventet ressourceforbrug i dage	
				DBC	CA
1	Projektstart	47 - 1997	Danne projektgrupper. Sikre at tekniske forudsætninger er opfyldt. Nedsætte styre- og projektgruppe, samt eventuelle sub-contractors.	1	1
2	System specifikation	47 - 1997	Udarbejde systemspecifikation.	10	10
3	Software installation	50 - 1997	Grundinstallation CA-Unicenter (AHD og System Alert) på servere. Påbegyndelse af System Alert og Integration til AHD.	25	9
4	Undervisning / Projektledelse	50/51 1997	Undervisning i CA-Unicenter og del-systemer Case-baseret undervisning. Påbegynde udarbejdelse af DBCs eget regelsæt for CA-Unicenter. Fast tilknyttet projektleder.		20
5	Advanced Help-Desk	3 - 1998	Opbygge administrationen af DBCs egne regler i forbindelser med Advanced Help-Desk. Strukturere anvendelsen inkl. Procedurevalg og funktionsanvendelse. Funktionerne tages i pilotdrift sammen med den øvrige pilotdrift/test af CA-Unicenter.	20	13
6	Event management	8 - 1998	Tilretning af CA-Unicenter. Overvågning af konsol, logs og automatisering	6	2
7	System og DB/Alert	8 - 1998	Opstart af overvågning af systemressourcer samt database (Oracle).	10	3
8	Workload	11 - 1998	Etablering af drift rutiner i følge systemspec. samt automatisering	5	2
9	Asset Management og Software Delivery	14 - 1998	Etablering af Asset Management del-system til indsamling af oplysninger om og rapportering af PC konfigurationer.	22	5
10	Overtagelsesprøve	Senest 1. maj 1998	Endelig overtagelsesprøve, jvf. kontraktens specifikationer.	1	1

2 Systemspecifikation/foranalyse

For at sikre forankring i DBC gennemføres denne aktivitet med deltagelse af både DBCs projektleder og CAs "arkitektur-konsulent".

Med det formål at udarbejde en endelig detaljeret projektplan analyseres opgaverne i de enkelte del-projekter. Ressourceplanerne detailplanlægges og indbyrdes afhængigheder mellem del-projekterne afklares. De endelige operationelle slutkriterier fastlægges, dvs. kriterier der ligger til grund for endelig godkendelse af aktivitetsprøve og samlet overtagelsesprøve.

Den overordnede fordeling af System Management opgaverne i DBCs miljø defineres under hensyntagen til skalering, recovery og performance. Fastlæggelse og dimensionering af Unicenter "Master" server, hvor disciplin-managerne (Help Desk, Workload og Event) installeres. Fastlæggelse af krav til de servere der omfattes af projektet under hensyntagen til omfanget af opgaver, der i forvejen afvikles på serverne og de nye opgaver, der skal varetages af Unicenter, herunder overvågningsdal til web-server og Exchange server

Delaktiviteter	Ansvarlig
Fastlæggelse af konfigurationen (arkitektur)	CA/DBC
Dimensionering af servere	CA/DBC
Definition af roller for servere	CA/DBC
Placering af TNG repository	CA/DBC
Fastlæggelse af uddannelsesplan	CA/DBC
Integration af Legato Networker planlægges	CA/DBC
Kommentering/beskrivelse af arbejdsgange	CA/DBC

Forventet ressourceforbrug			
CA	10 dage	DBC	10 dage

4. Undervisning / projektledelse

Til undervisning er der afsat følgende:

Helpdesk på brugerniveau	1 dag
Helpdesk administrator	2 dage
Undervisning i TNG intro	2 dage
Undervisning i Enterprisemanagement	2 dage
SWD/AMO	2 dage
Undervisning i alt konsulentdage	9 dage

Foruden ovenstående er der initielt afsat 20 dage til projektledelse, hvilket svarer til gennemsnitligt 2 dage om ugen i 10 uger.

4.1 Slutkriterie

Gennemførelse af uddannelsesforløb:

- Teori kombineret med hands-on skal give mulighed for at fortsætte i praksis hos DBC

Delaktiviteter	Ansvarlig
Gennemførelse af ovenstående kurser	CA/DBC
20 dages projektarbejde fordelt efter plan og behov	CA/DBC

5. Advanced Help Desk

Advanced Help Desk vil sikre en optimal styring af de problemer, som enten oprettes automatisk eller manuelt. Via integration med de øvrige CA/DBC-Unicenter områder, sikrer Help Desk personalet en komplet oversigt over samtlige problemer, herunder problemet status, prioritering, omfang og at der kontinuerligt informeres til både brugeren og øvrige via escalering og notifications regler.

5.1 Slutkriterie

Implementering af Help Desk-applikation:

- Implementering af overordnede forretningsgange for at håndtere kald fra slutbrugere (Call Management)
- Implementering af overordnede forretningsgange for at håndtere problemer, hvad enten de er født fra et telefon kald eller via en system-hændelse (Problem Management)
- Trouble ticketing samt problemhåndtering via web-interface.

Delaktiviteter	Ansvarlig
Installation og implementering af Advanced Help Desk	CA/DBC
Installation af administrative klienter til AHD	CA/DBC
Opsætning af supportgrupper (mapning af DBC organisation)	DBC
Opsætning af eskaleringspolitikker og SLA for 3 specifikke problemområder	DBC
Evt. konvertering af konfigurationsoplysninger fra DBCs databaser til Advanced Help Desk	CA
Definition af regler i Event Manager for automatisk åbning af problemer	CA/DBC
Forudsætninger	
Unicenter Master Server + intranetserver dimensioneret efter aftale	DBC
Beskrivelse af support grupper + 3 specifikke problemområder	DBC
DBC's support organisation er klar, evt. beskrevet	DBC
Identificering af 3 specifikke problemområder og tilhørende SLA	DBC

Forventet ressourceforbrug	
CA 13 dage	DBC 20 dage

6. Event Management

Event Management-funktionaliteten omhandler opbygning af regelsæt, så gængse events bliver håndteret automatisk, når de indtræffer. Funktionaliteten indebærer en ressourcefriggivelse for driftafviklere, så opgaver af større vigtighed og kompleksitet kan adresseres.

6.1 Slutkriterie

Etablering af basis for automatiseret overvågning og kontrol af DBCs servere

- 3 i forvejen automatiserede events er konverteret til Unicenter/Event Manager
- De 3 højst prioriterede problemer er automatiseret.

Delaktiviteter	Ansvarlig
Implementering af kendte regler/aktions i Event Manager herunder åbning af problemer i AHD og opdatering af TNG repository	CA/DBC
Definering af top 3 problemer og forslag til aktioner	DBC
Implementering af top 3 regler i Event Manager herunder åbning af problemer i AHD og opdatering af TNG repository	CA/DBC
Overførsel af viden til DBC personale	DBC

Forudsætninger	
Dokumentation af alle definerede automatiserede events forefindes (frekvens, aktion)	DBC
Unicenter/Enterprise Management version installeret på relevante servere	CA/DBC
Serverne grupperes evt. logisk, så automatisering kan gøres ens på tværs af serverne (min 1 gruppe, max 4 grupper)	CA/DBC

Forventet ressourceforbrug
CA 2 dage DBC 6 dage

7. Alert Management

I dette del-projekt skal samtlige IT-komponenter, som DBC ønsker overvåget identificeres, og regler for Alerts skal opbygges. Typisk vil centrale servere, databaser og netværkskomponenter overvåges.

7.1 Slutkriterie

Fra centralt hold kan DBC få en samlet status på 4 servere (hvoraf 2 er web/exchange servere), som findes i DBCs netværk. Overvågning af følgende objekter er etableret :

- Servere inkl. web/exchange servere:
 - Server i live (heartbeat)
 - Oracle DB (3 alerts)
 - Filesystem
 - Processor
 - Memory
 - Logs.

Delaktiviteter	Ansvarlig
Identificere de objekter der skal overvåges	DBC
Fastlægge status og grænseværdier for de enkelte objekter	DBC
Implementer regler i Domain Manager	CA/DBC
Instrumentering af agenter	CA/DBC
Automatisere de tilhørende events i Event Manager herunder åbning af problemer i AHD og opdatering af TNG repository	CA/DBC
Overførsel af viden til DBC personale	DBC
Forudsætninger	
Serverne er ens i karakteristik (gruppering på max 4 logiske grupper)	DBC

Forventet ressourceforbrug	
CA 10 dage	DBC 10 dage

8. Workload

I scheduling-området defineres de jobs, som Unicenter TNG skal aktivere og sikre afvikling under den fastlagte indbyrdes afhængighed.

8.1 Slutkriterie

DBC's "batch produktion" kan afvikles fuldautomatisk.

- Implementerede batchopgaver fra 2 servere er konverteret til Workload Manager, og er sat i produktion
- Aktiviteter, som ikke er implementeret, er defineret og kan sættes i produktion med Workload Manager.

Del-aktiviteter	Ansvarlig
Implementerede opgaver	DBC
Hvad findes defineret til cron (UNIX) eller via andre services?	DBC
Historik for batchafvikling afdækkes (køretider, recovery etc)	DBC
Opsætning af kalendere	CA/DBC
Implementering af regler for Workload Manager	CA/DBC
Implementering af regelsæt for fejl i forbindelse med batch i Event Manager, herunder åbning af problemer i AHD og opdatering af TNG repository	CA/DBC
Ikke implementerede opgaver	DBC
Identifikation af eksisterende ikke automatiserede opgaver	DBC
Implementering af regler for Workload Manager	CA/DBC
Overførsel af viden til DBC personale	DBC

Forudsætninger	
Dokumentation af alle definerede opgaver forefindes (frekvens, datagrundlag, fejlkoder)	DBC
Enighed mellem DBC og CA/DBC om et maksimum antal implementerede opgaver/server konverteres	DBC
Unicenter/Enterprise Management AIX (som manager eller agent) installeret på alle AIX servere	CA/DBC
Unicenter/Enterprise Management NT (som manager eller agent) installeret på relevante NT servere	CA/DBC

Forventet ressourceforbrug	
CA 2 dage	DBC 5 dage

9. Asset Management og Software Delivery

Software-delivery er den funktion, der anvendes for at kunne foretage en ensartet og automatisk håndtering af software-vedligehold i client/server miljøet. Det er i dette del-projekt, at inventory-basen bliver opbygget.

Uddannelse omfatter: SWD/AMO 2 dage

9.1 Slutkriterie

Opsætning af software delivery miljø for DBC.

- Installation af 5 SWD/AMO klienter
- Distribution for et software produkt (installation, upgrade, remove)
- Opsamling af inventory information (for hardware og standard-software) via AMO.

Delaktiviteter	Ansvarlig
Detaildefinering af opgave, klienttyper, 1 eller flere repositories? Fanoutservere	CA/DBC
Installation af Software Delivery Manager, Enterprise Server, 1 local server	CA/DBC
Definition af login script for automatisk installation af agenter på workstations	CA/DBC
'Pakning' af automatisk installation af standard applikationer:	CA/DBC
Fx. Antivirus-pakke	CA/DBC
Aftestning af applikationsdistribution på ovenstående klienter, herunder rollback etc.	CA/DBC
Aftestning af installation på 5 pc-arbejdspladser.	DBC
Implementering af regelsæt for fejl i forbindelse med distribution i Event Manager, herunder åbning af problemer i AHD (Unicenter/Advanced Help Desk) og opdatering af TNG repository	CA/DBC
Overførsel af viden til DBC personale	CA/DBC

Forudsætninger	
1 NT Server (mindst Pentium 133 mhz med 64 MB, 2GB hardisk)	DBC
Unicenter/TNG World View (konsol) findes operationel	CA/DBC
Unicenter/TNG Enterprise Management Event Manager/Agent installeret på Software Delivery server	CA/DBC
Adgang til at kunne installere software delivery sager på workstations	DBC
Operativsystemerne på klienter skal være ens konfigureret (min 1 max 3 grupper), så installationsscripts kan genbruges.	DBC

Forventet ressourceforbrug	
CA 3 dage	DBC 23 dage

10 Afslutning og kommentarer

Det samlede ressourceforbrug (medregnet uddannelsesplanen) opgøres til 65 dage af 8 timer for CA (inklusive 9 dages undervisning) og 99 dage for DBC, ekskl. undervisning. Heri er inkluderet, at CAs projektleder medvirker til projektets fremdrift, rapportering til styregruppen, og koordination af del-aktiviteterne fordelt på 20 dages projektledelse, svarende til f.eks. 2 dage i 10 uger.

Hvert enkelt del-projekt tænkes afsluttet med en aktivitetsprøve (del-projekt2-9), der skal sikre, at den i slutkriterierne aftalte funktionalitet er tilstede. Disse prøver kan gennemføres på DBCs begæring om hvilke funktioner, der ønskes afprøvet. Ved hver prøves afslutning meddeler DBCs styregruppemedlem, om DBC kan tiltræde, at prøven er behørigt gennemført.

10.1 Overtagelsesprøve

Levering og installation bliver gennemført i henhold til projektplanen og system-specifikationen. Når installationen er afsluttet, dvs. efter projekt nr. 9, gennemføres en samlet overtagelseprøve. Specifikationer for overtagelseprøven aftales i projekt nr. 2, herunder tilstedeværelse af de anskaffede funktioner og deres rette funktionalitet i forhold til DBCs edb-miljø.

DBC's projektorganisation oplyses senest ved projektstart.

Bilag A



Unicenter TNG Introduction

UT005

2 days

(Hands-On)

Course Description

This course introduces students to the Unicenter TNG product. Students will be provided with information needed to understand the basic functions in the product.

Topics of discussion include:

- Unicenter TNG Overview and Architecture
- WorldView
- Common Object Repository
- Unicenter TNG Agent Technology
- Unicenter TNG Options
- Unicenter TNG – "The Final Challenge"

Prerequisites

Familiarity with Microsoft Windows NT. Student must have read the Unicenter TNG Concepts Guide and be prepared to answer questions taken from it before attending this course.

Who Should Attend

System administrators, network engineers, or system managers responsible for installing or using Unicenter TNG.

Objectives

Upon completion of this course, you will be able to:

- Discuss how Unicenter TNG integrates Enterprise Management and Business Process controls with an open solution
- Explain Unicenter TNG architecture: WorldView, Agent Technology
- Use the GUI interface and WorldView tools for accessing and changing information in the Common Object Repository
- Use the Unicenter TNG Console and Console Logs to monitor events
- Explain how TCP/IP and SNMP are used by Unicenter TNG
- Explain the concept of Distributive State Machine



Unicenter TNG Enterprise Management

UT050 2 days

(Hands-On)

Course Description

This course introduces students to the Unicenter TNG Enterprise Management facilities (Event, Storage, Workload and Agent Technology Management). Students will be provided with information needed to get the product up and running. On-line workshops teach them how to use these facilities that are key to any Unicenter TNG implementation.

Topics of discussion include:

- Unicenter TNG Overview and Architecture
- Installing Unicenter TNG
- Discovery
- Manager Agent Technology
- Event Management
- Storage Management
- Workload Management

Prerequisites

Familiarity with Microsoft Windows NT and the course *Unicenter TNG Introduction* (UT005) or corresponding knowledge.

Who Should Attend

System administrators, network engineers, or system managers responsible for installing or using Unicenter TNG.

Objectives

Upon completion of this course, you will be able to:

- Explain Unicenter TNG architecture: Agent Technology, Enterprise Management
- Use the Discovery tools to identify resources, populate the Common Object Repository, and support ongoing configuration management for the network
- Implement Event Management policies
- Use the Unicenter TNG Console and Console Logs to monitor events
- Implement workload policies
- Use Agent tools for Manager and Agent activities



Unicenter Software Delivery Implementation

UX300 2 days

(Hands-On)

Course Description

This hands-on course offers the attendee an in-depth examination of Unicenter Software Delivery. Installation of Unicenter Software Delivery Server components on both UNIX and Windows NT platforms are discussed. Workshops are offered in a Windows NT environment and the exercises are applicable for all platforms. Successful installation of Software Delivery Servers and delivery of software to Agent computers is the focus of the course.

Topics of discussion include:

- Software delivery implementation planning
- Installing software delivery servers
- Installing admin clients and agents
- The software delivery database and registering hardware
- The software delivery library and registering software
- Delivering software
- Monitoring software delivery

Prerequisites

A working knowledge of use of a graphical user interface on a PC

Who Should Attend

Anyone who will be responsible for planning, installing, or implementing software delivery.

Objectives

Upon completion of this course, you will be able to:

- Establish an architecture for a software delivery system
- Install the software delivery servers, administer clients and agents
- Register the proper hardware and software information to software delivery
- Deliver software and monitor the progress of a delivery
- Administer Unicenter software delivery



Unicenter Advanced Help Desk (AHD) Paradigm Service Desk User Training

PA010 1 day

(Hands-On)

Course Description

Provides the student with an overview of Paradigm/AHD's functionality and environment. The students will participate in practical lab sessions where they will acquire the fundamental skills needed to effectively operate a production Paradigm/AHD system.

Topics of discussion include:

- Opening and tracking Call Requests
- Scoreboard customization
- Dynamic gathering of information
- Caller identification and verification
- Dispatching to the problem management system
- Incident reporting
- Trouble ticketing
- Action planning
- Network resource detail
- Using knowledge management

Prerequisites

Basic computer knowledge; knowledge of UNIX and SUN workstations.

Who Should Attend

Users responsible for the daily operation of the Paradigm/AHD system.

Objectives

Upon completion of this course, you will be able to:

- Describe the purpose of Paradigm/AHD and its basic functional capabilities
- Create and track the status of Call Requests
- Create and locate Incident Reports and Trouble Tickets
- Attach Call Requests and Incident Reports to Trouble Tickets
- Create a "Quick" Ticket
- Create an Incident Report and Trouble Ticket by E-Mail
- Establish an Action template and attach it to a Trouble Ticket
- Close a Trouble Ticket •Automate the Trouble Ticket process



Unicenter Advanced Help Desk (AHD) Paradigm Service Desk Administrative Training

PA020 2 day

(Hands-On)

Course Description

Provides the student with an architectural overview of the system and the environment issues that need to be addressed in planning and maintaining an installation. Students participate in the installation of Paradigm/AHD and tailor the environment for a number of hypothetical customer scenarios. The hands-on lab sessions will reinforce course topics.

Topics of discussion include:

- System overview
- System defaults
- Sequence control
- Data base table
- Security within Paradigm/AHD
- Service level agreements
- Notification
- Stored query
- Call Management Shared Tables
- Call number setup
- Call request codes
- Troubleshooting

Prerequisites

Basic knowledge of UNIX and UNIX platforms and experience as a System Administrator.

Who Should Attend

Administrators responsible for installing, configuring, maintaining, and applying the Paradigm/AHD system.

Objectives

Upon completion of this course, you will be able to:

- Setup and use Reference Data, Notifications, Escalations, Service Level Agreements, Filters, Security, and System Defaults
- Configure Mail, Logs, and Database · Use the command line interface, Stored and Customized Scripts, Report Generator, and the De-Referencing Tool
- Troubleshoot the Paradigm/AHD system

Bilag B

NORDIC SUPPORT CENTER

1. Computer Associates

Computer Associates forpligtelse (Quality Commitment) overfor vore kunder og partnere:

Computer Associates Quality Commitment:

- *At levere fejlfri produkter og tjenester i samarbejde med vore kunder og kolleger*
- *At definere og forstå kravene i vores arbejde og de systemer, der hjælper os til at leve op til vore kunders forskellige behov*
- *At leve op til vore mål - til tiden, hver gang*

Hos Computer Associates er mennesket i centrum. Det er det vigtigste aktiv og styrke - både hos vores kunder og hos os. Loyalitet og dedikation har altid været nøglen til vores succes.

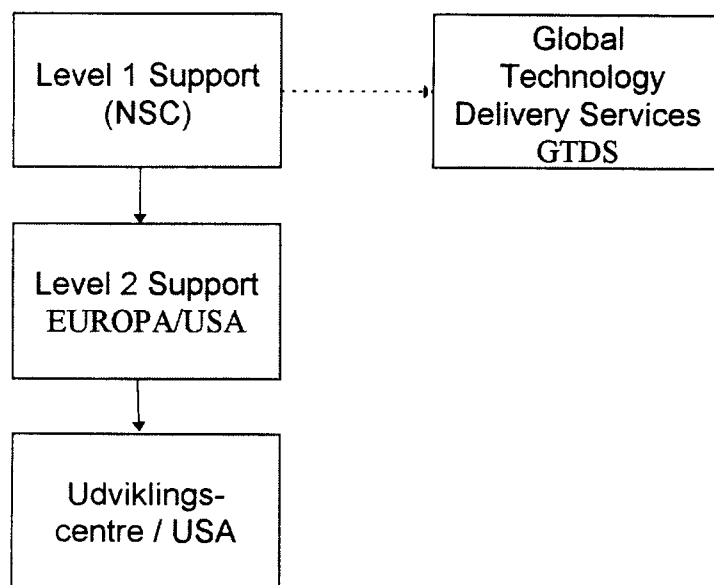
Vi mener, at den software, den service og support vi kan tilbyde er byggeklodser for vore kunders loyalitet. Det er vort mål at fastholde denne loyalitet ved at give vore kunder den bedste og bredeste integrerede software-løsning i overensstemmelse med vore kunders behov.

At realisere dette mål kræver ansvarlighed overfor kravene fra vore kunder og kræver levering af software-løsninger på en ordentlig og rettidig måde. Det kræver også kontinuerlig support for og forbedring af vore eksisterende software-løsninger for at sikre løsningernes levedygtighed både med hensyn til økonomi og funktionalitet. Sidst - men ikke mindst - state-of-the-art software-løsninger skal udvikles for at holdt trit med den teknologiske udvikling.

2. Computer Associates Tekniske Supportorganisation

CA's tekniske supportorganisation giver os mulighed for at levere omfattende support til vore kunder. Vores on-line supportsystemer og enhederne i organisationen arbejder sammen for at yde hurtige svar og præcise løsninger til spørgsmål og problemer.

Enhederne i Computer Associates supportorganisation er organiseret således:



3. Nordic Support Center - NSC

Nordic Support Center er ansvarlig for at give den bedst mulige support til vore kunder i alle de nordiske lande, og har dermed det overordnede ansvar for en sag fra start til slut.

Mål

Nordic Support Center er etableret som en selvstændig organisatorisk enhed med følgende mål:

- ◇ At yde den bedst mulige service og kvalitet ved support af CA-kunder i de nordiske lande.
- ◇ At fokusere på kundeservice ved at:
 - sikre et højt niveau af information til kunder
 - sikre kvalitet i alle kontakter med NSC
- ◇ At sikre hurtige og effektive løsninger på problemer og svar på spørgsmål ved at:
 - yde en kombination af tekniske færdigheder og serviceorienteret adfærd over for vores kunder
 - evaluere og bruge tilgængelig teknologi, som kan fremme beslutningsprocessen.

- ◇ At repræsentere den verdensomspændende CA-support ved at:
 - tage ansvar for alle sager over for nordiske kunder
 - agere som kvalitativt bindeled mellem kunde og supportfunktioner i Europa/USA (Level II)
 - kunne beskrive mål og procedurer for CA-support - globalt såvel som lokalt
 - give mest mulig relevant information i CA's rapporteringssystem, og give mulighed for at andre enheder inden for CA kan bruge denne information.

Normalt håndteres supporten ved kommunikation mellem kunden og NSC pr. telefon, fax eller andre elektroniske kommunikationsmuligheder. Der foregår endvidere en del kommunikation mellem NSC og internationale support- og udviklingscentre.

Medarbejderne i NSC er højt uddannede teknikere, som arbejder ifølge beskrivelserne i CA's Support Håndbog.

NSC bruger supportsystemet STAR til at holde styr på alle sager med en kunde, og systemet anvendes i kommunikationen mellem kunder, NSC og USA-support for at rapportere de igangværende aktiviteter i en sag. Supportsystemet indeholder også problembeskrivelser og løsninger på CA-produkter.

Supportsystemet fungerer derved som en verdensomspændende "videns-database" for alle CA-produkter - det øger muligheden for hurtigt og effektivt at finde løsningen på et givet problem.

Tredje-parts produkter

Ved problemer i grænseområder mellem CA-produkter og tredje-parts produkter anbefaler vi at åbne sager hos både CA og tredje-parts leverandøren for at sikre en hurtig og effektiv forretningsgang.

CA samarbejder gerne med tredje-parts leverandører for at løse kundens problemer. Mange af vore produkter "interfacer" direkte med andre leverandørers produkter, og CA har endvidere indgået samarbejdsaftaler med en lang række væsentlige leverandører.

3.1 Dispatcher-funktionen

For at sikre en ensartet og korrekt prioritering af problemløsning skal alle sager oprettes hos en af supportcentrets dispatchere.

Målet med dispatcheren

Det er målet med dispatcheren at:

- ◇ sikre, at alle sager rapporteres i supportsystemet STAR
- ◇ sikre en homogen håndtering af alle opståede sager
- ◇ være behjælpelig til en hurtigere problemløsningsproces
- ◇ være den lokale NSC-"samvittighed"

- ◇ vedligeholde kendskabet til kunden, og sikre, at kunden føler sig fortrolig med at ringe til CA's tekniske support.
- ◇ afstemme forventninger til prioritet, tilbagemelding etc.

Dispatcherens ansvar

Det er endvidere dispatcherens ansvar at:

- ◇ modtage al relevant information fra kunden så vidt muligt i første opkald
- ◇ indrapportere release- og versions-numre på operativsystemer og anden relevant software
- ◇ rapportere ALLE informationer, der kan hjælpe til en hurtigere løsning
- ◇ aftale sagens prioritet (se nedenfor) i fællesskab med kunden
- ◇ informere kunden om, hvornår tilbagemelding fra NSC kan forventes
- ◇ informere kunden om STAR-sagsnummeret til senere reference.
- ◇ underrette supportchefen samt den kundeansvarlige konsulent ved oprettelse af prioritet 1 sager
- ◇ kontakte NSC når en kunde ringer for status på eksisterende sager

Efter registrering af en sag hos dispatcheren vil NSC - afhængig af prioriteten - ringe tilbage inden for 15 minutter ved prioritet 1, 30 minutter for prioritet 2 og henholdsvis 60 og 120 minutter ved prioritet 3 og 4.

3.2 Prioritering af sager - severity

Alle sager tildeles en prioritet (severity) mellem 1 og 4, som aftales i fællesskab mellem kunden og dispatcheren. De fire prioriteter er defineret således:

- Prioritet 1: Kundens operativsystem, produktionssystem eller væsentlige dele af dette er nede eller er inoperativt, formentlig på grund af et CA-produkt.
- Prioritet 2: Et CA-produkt giver væsentlige gener for en systemkomponent eller et subsystem eller ved afvikling af produktionen.
- Prioritet 3: Spørgsmål omkring produkt-performance, uregelmæssighed i afviklingen eller mindre problemer i forbindelse med anvendelse af produktet.
- Prioritet 4: Generelle spørgsmål omkring brug af produktet, implementering og lignende.

Ved prioritet 1 sager vil supportchefen blive underrettet øjeblikkeligt, og mindst én tekniker allokeres fuldtid på sagen. CA vil arbejde kontinuerligt 24 timer i døgnet og slipper ikke sagen før problemet er løst eller omgået på en for kunden tilfredsstillende måde - og vi forventer, at en repræsentant for kunden ligeledes står til rådighed til enhver tid under arbejdet med løsning af problemet.

Prioritet 1 kan også blive brugt ved problemer i forbindelse med installation af kritiske systemprodukter, hvis der opstår problemer uden for kontortid. Vi anbefaler at kontakte NSC i god tid inden større opgraderinger - mange problemer klares på denne måde "i opløbet". NSC medvirker i den forbindelse også gerne med etablering af eventuel vagtordning.

4. Arbejdsgang og procedurer

4.1 Indrapportering af problemer

Inden supportcentret kontaktes er det vigtigt at have følgende information klar:

- ◇ Release-nummer og version på CA-produkt, operativsystem og anden relevant software
- ◇ Navn, telefonnummer, eventuelt lokalnummer og IBM Mail/Internet ID
- ◇ Firmanavn og site ID
- ◇ Dokumentation der måske kan hjælpe til løsning af problemet, som for eksempel dump, produkt-log, fejlmeddelelser etc.

4.2 Supporttider - supporttelefon 44 39 93 93

Den danske dispatcher-funktion er bemannet i den almindelige kontortid mandag til torsdag fra kl. 08.30 til 16.30, fredag fra 08.30 til 15.30.

4.3 Support udenfor kontortid

24 Timers Teknisk Support

Computer Associates giver 24-timers teknisk support 365 dage om året.

Uden for normal kontortid er vores 24 timers support tilgængelig i kritiske situationer, dvs. prioritet 1 problemer.

Administrativt personale vil registrere opkald til supportnummeret 44 39 93 93, og ved prioritet 1 problemer henvises til det tekniske supportnummer i USA, +1 516 342 4683. Kundennummer (STAR SiteID) vil blive oplyst til brug for supporten i USA.

Her kommer kunden i kontakt med en dispatcher, der indskriver problemet i STAR og samtidig kontakter en supporttekniker. Supportteknikeren vil derefter ringe til kunden og tage sig af sagen. NSC vil også blive underrettet med henblik på opfølgning næste arbejdsdag.

I ekstreme nødstilfælde kan en tekniker fra NSC eller supportchefen kontaktes.

NSC vil endvidere mod betaling kunne stå til rådighed i specielle situationer udenfor normal kontortid, for eksempel i forbindelse med større opgraderinger, konfigurationsændringer og lignende.

4.4 Eskalering af sager

I tilfælde af behov for eskalering af en sag er der mulighed for at kontakte enten kundens CA-kontaktperson eller supportchefen i NSC.

Ønsket om eskalation af sagen begrundes, beskrives, hvorefter supportchefen i NSC vil sørge for at eskalere sagen gennem de relevante kanaler.

Eskalationssager vil normalt blive opprioriteret i supportsystemet. I sager, der på gældende tidspunkt behandles hos en Level II supporttekniker i USA, vil supportchefen eskalere sagen gennem lederen af Level II.

5. CA på Internettet

Computer Associates har en homepage på Internettet, som man kan få adgang til på følgende adresse: <http://www.cai.com>. Mange forskellige informationer er tilgængelige, blandt andet:

- ◇ Pressemeldelser
- ◇ Produktinformation
- ◇ Salg
- ◇ CA-brugergrupper
- ◇ Information om konferencer som for eksempel CA-World.
- ◇ Produkt-fixes
- ◇ Service & Support - se pkt. 6

Computer Associates udvider til stadighed brugen af Internettet til fordel for vores kunder. For eksempel kan dokumentation udveksles via vores FTP-server (File Transfer Protocol) <mf.cai.com>.

Vi anbefaler vores kunder til at "surfe på nettet" med CA.

6. TCC - Total Client Care

Computer Associates tilbyder også TCC som en væsentlig udvidelse af det normale CA support program. TCC giver adgang til den centrale support database STAR via Internet, CompuServe eller Advantis (IBM's Information Netværk - IIN).

TCC giver on-line adgang til programrettelser (Program Temporary Fixes - PTF) og og nyheder (Product Information Bulletins - PIB) for alle produkter og miljøer, og giver vore kunder mulighed for såvel at indrapportere problemer som at deltage aktivt i løsningen af problemet i dialog med NSC og supporten i USA. Ydermere er der mulighed for nøgleordssøgning på beskrivelse af kendte problemer og løsninger til disse. Det er muligt at downloade løsninger (PTF'er), og umiddelbart installere disse.

Hyper Fixes

En vigtig del af TCC er muligheden for automatisk levering af kritiske programrettelser. Ved hjælp af et abonnementssystem er det muligt at få leveret såkaldte *hyper fixes* i elektronisk format.

Systemkrav - IIN og CompuServe

TCC adgang kræver hardware med mulighed for at emulere enten IBM 3101 eller VT-100. Dial-up adgang opnåes via CompuServe; CompuServe ID med adgang til TCC gives i forbindelse med tilslutningen til TCC. Brug af TCC er gratis, dog fakturerer IBM for oprettelse og anvendelse, og CompuServe fakturerer anvendelse.

Adgang via Internettet

Registrering som TCC bruger via Internettet fås ved at gå på CA's homepage www.cai.com, vælge punktet **Service & Support** og herefter **CA-Total Client Care**. Det er nu muligt at registrere sig som bruger, og under normale omstændigheder vil registreringen være godkendt næste arbejdsdag omkring frokost.

7. Distribution

CA's Distributions Service er en vigtig del af samarbejdet med vore kunder. Vi tilstræber at kunne levere samtlige manualer og media til alle CA produkter fra vores lager i Farum; en proces der styres af vort on-line lager- og ordre-system.

Nye versioner af vore produkter vil automatisk blive distribueret med tilhørende manualer eller opdateringer til manualer.


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Bilag C

Unicenter[®] TNG[™]

Managing The Wired Enterprise

 Experience a Web-based [synchronized multimedia presentation](#) to hear and see many benefits of Unicenter TNG. *(The presentation requires the Progressive Networks [Progressive Networks](#). For optimal video, use 800x600 monitor resolution.)*

-
- [Enterprise Management Challenges In An Ever-Changing Business World](#)
 - [Unicenter TNG Benefits The Modern Enterprise](#)
 - [Unicenter TNG Features And Functions Bring Enterprise Management To A Whole New Level](#)



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Enterprise Management Challenges In An Ever-Changing Business World.

Managing today's IT environment is a formidable task. Distributed computing has evolved into a complex web of heterogeneous resources scattered throughout the enterprise. The sheer number of IT resources multiplied by a variety of platforms, operating systems, networks, databases, applications, and vendors makes it difficult to control. And as the business world continually changes, new technologies will emerge, presenting even more challenges.

Because every aspect of the modern enterprise depends on IT, organizations must gain and maintain control over this complex infrastructure in order to survive.

Point solutions cannot sufficiently control the IT environment. Instead, the enterprise management solution must be fully integrated, support the multi-platform infrastructure, be open to third-party extension, and allow customization by clients and service providers. Furthermore, it must adapt to new technologies as they emerge.

Unicenter TNG Benefits The Modern Enterprise.

Unicenter TNG simplifies the task of managing today's IT environment and business processes. It manages all types of resources, from one end of the enterprise to the other, and does so from a business point of view. Designed with end users in mind, Unicenter TNG is intuitive to use and increases employee productivity. Its integrated suite of management functions and their capabilities increase efficiency through streamlined business operations.

Unicenter TNG enables:

- **End Users** to effortlessly navigate throughout the global IT environment, gaining an intuitive understanding of complex information.
- **IT Managers** to manage the entire IT environment from one end of the enterprise to the

other, from single or multiple points of control.

- **IT Administrators** to address business-relevant questions.



Unicenter TNG's Real World Interface intuitively shows the enterprise network, from the city maps and buildings, down to the computers and processes.

Unicenter TNG automatically discovers your networks, visually depicting each system, router, and hub as they actually look.



Unispace (TM) shows the abstract objects running on the system: jobs, processes, and databases, as well as the Unicenter TNG management functions.

Unicenter TNG Features And Functions Bring Enterprise Management To A Whole New Level.

Unicenter TNG's Innovative Features Simplify Complex IT Environments.

End-To-End Management. Unicenter TNG provides comprehensive management of your entire IT infrastructure--not just specific technologies. It integrates the management of all your resources: systems, networks, databases, applications, and provides a cohesive view of your complex IT environment.

Business Process ViewsTM. Unicenter TNG adds a business perspective to enterprise management. The Business Process Views feature filters out unnecessary information. Your administrators deal with only those resources involved in a business process, which enables them to address business-relevant questions.

Real World Interface. Unicenter TNG's revolutionary Real World Interface is a 3-D visualization and animated representation of the IT environment. Large amounts of data are presented in a manner that is easy to comprehend. This interface enables you to effortlessly move throughout the IT environment and view all your represented resources. Abstract resources, including processes, databases, applications, and users, are in a special virtual area called **Unispace**.

Object-Oriented, Multi-Tiered Architecture. Unicenter TNG's management functions use a **distributed object repository** to store the characteristics and status of managed objects, forming a powerful and open mechanism for integration between management functions at all levels. This repository supports the Real World Interface and Business Process Views.

Multilevel Manager/Agents. Unicenter TNG's **multilevel manager/agent architecture** provides the scalability and resiliency required for end-to-end management. Managers and agents may be deployed in any configuration.

Agents are Intelligent and Active. They can implement policies, coordinate with other active agents, monitor events and status, perform distributed configuration management, and manage storage across heterogeneous networks. Agents built with Unicenter TNG may also be deployed in Internet and Intranet environments.

Robust Infrastructure. Under the Unicenter TNG architecture, management functions share a common infrastructure and common information across applications and across platforms while sharing a common policy-based management approach. This provides the scalability, performance, efficiency, and openness required by the most complex IT environments.

Unicenter TNG Empowers You With Fully Integrated Management Functions.

Security Management. Unicenter TNG provides complete enterprise-wide security, across all your hardware platforms and all your operating systems. It simplifies everything with easy pull-down menus and policy-based administration. Unicenter TNG enhances native system security through advanced login and access controls, calendar restrictions, and unique facilities that let you protect files, even from privileged users. Security officers will finally have a central point of control for all security-related functions, including a single log file for all security-related messages. With Unicenter TNG, you can separate security administration from other management functions. And its reporting facilities enable you to answer all of your auditor's requirements.

Event/Status/Exception Management. This Unicenter TNG function gives you the tools to be proactive as well as reactive. It alerts your staff to all types of problems--system, network, database, and application. Event management helps prevent disasters by graphically displaying warning signs through the Real World Interface. Additionally, event management automates operations by responding to messages that would otherwise require manual intervention.

Storage Management. In today's distributed environment, critical data is located across the network, making backups time-consuming and difficult. Unicenter TNG's backup and archive facilities provide encryption, compression, version and time control, vaulting and robotics support--as well as full, partial, and incremental backups to multiple media types located throughout the network. The tape management facility protects critical data stored on tape, including all database and application backup tapes, from unauthorized use, overwriting, or deletion. The file manager automatically archives data before you run out of disk space, and transparently restores the files when you need them. It also transparently and automatically moves infrequently accessed files to and from slower and less expensive networked or local storage devices.

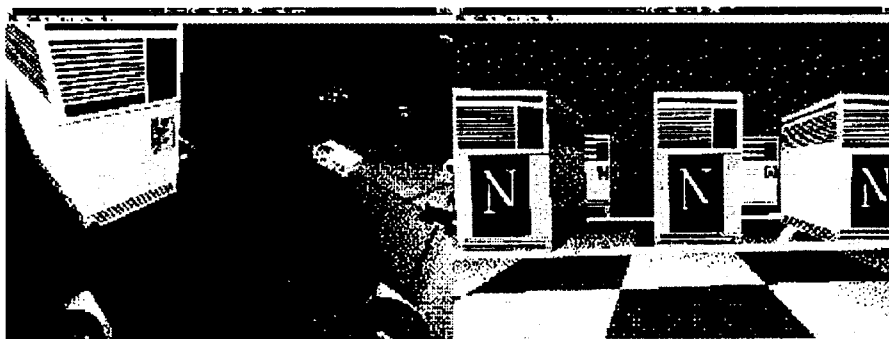
Workload Management. With Unicenter TNG, work can be scheduled through calendars or triggered events. It enables job and jobset scheduling across multiple platforms with predecessor, date, time, and resource controls. The built-in workload balancing routines intelligently distribute work to the systems with the most resources available. The integration of security, event management, problem tracking, and automatic recovery operations ensure that your critical applications complete successfully.

Service/Help Desk. Unicenter TNG effectively manages your user and system-related problems and questions. A customizable interface lets you easily create, track, and resolve Service/Help Desk problems. This function can automatically escalate problems to ensure prompt response. Problem tickets can even be automatically generated based on system events.

Output Management. Collating and distributing reports has always been an operational nightmare. Unicenter TNG enables you to distribute reports online, bringing immediate relief. By identifying the specific report requirements of each user, and selecting only those pages of reports each recipient needs, Unicenter TNG helps reduce paper costs and increases staff efficiency.

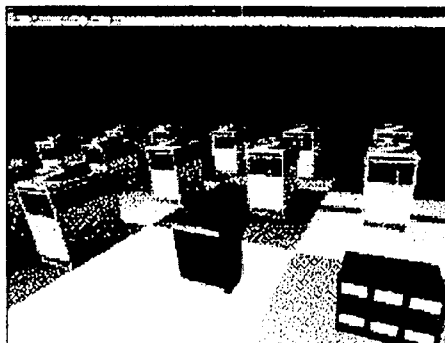
Performance And Accounting. Unicenter TNG identifies network, system, database, and application problems. It utilizes intelligent low-overhead agents, thresholds and correlation to identify declining performance. And, through the Real World Interface, it graphically warns you when performance starts to drop below thresholds before it impacts your business applications. Whether or not you charge back your end users, understanding how computing resources are utilized is important for capacity planning and budgeting. The Unicenter TNG resource accounting facility lets you create an accounting structure to match your organization and associate charges for CPU time, I/O, disk, etc. You can also allocate overhead, perform split charges, and invoice your users, or simply query the resource information online.

Database And Application Management. The performance, availability, and dependability of databases and applications running across distributed client/server systems depends upon the synchronization of your computing resources. The greater the number of interrelated components, the greater the number of points of failure. Unicenter TNG's systems agents and the CA-Unicenter/Agent for CA-OpenIngres, Oracle, and Sybase, enable the continuous monitoring and proactive management of all your network, systems, databases, and applications. These localized, intelligent, low-overhead agents monitor resources, CPU utilization, memory load, file space, database transactions, and more. They can automatically initiate corrective measures and alert managers to problems based on thresholds and policies you set centrally or locally. Remote access and software-guided analysis of a problem results in faster, more accurate problem resolution. Using the Unicenter TNG SDK (Software Development Kit), administrators and developers can easily extend agent capabilities to monitor and manage in-house programs and applications.



Unicenter TNG facilitates online report distribution, reducing paper costs and increasing staff efficiency.

Unicenter TNG's multilevel manager/agent architecture enables you to build intelligent agents that can be deployed in Internet and Intranet environments.



Unicenter TNG employs advanced hierarchical storage management (HSM) methods to effectively increase your disk storage capacity.

Discovery. This function enables Unicenter TNG to automatically discover all networked objects and resources, including: system model, CPU type, network cards, routers, hubs, gateways, etc. It then associates the resource with a specific object in Unicenter TNG's repository and visually depicts the resource in the appropriate topology through the Real World Interface. This greatly increases user efficiency and productivity in the management of your entire enterprise from end-to-end.

Network Management. Unicenter TNG provides tools to customize your network and define appropriate Business Process Views. These special views only display related objects simplifying application and network problem resolution. Unicenter TNG utilizes extensible agents to report and respond to all types of network events. Domain Managers and a hierarchical structure give you the ability to filter and correlate SNMP events across your enterprise so that agents respond to only those events that you select.

Job Flow. Job flow capabilities provide real-time job monitoring indicating dependencies, job status, and required resources in an easy-to-view Gantt chart style. Your scheduling operators can visually see which jobs are running on which systems, as well as provide forecasting of future job schedules.

Unicenter TNG's comprehensive set of integrated management functions are built on top of its flexible infrastructure and can also extend to Intranets or the Internet. The integration between the functions and the depth of their capabilities make Unicenter TNG the end-to-end management solution of choice.

Unicenter TNG SDK. The Unicenter TNG SDK allows clients, vendors, and service providers to quickly and easily integrate their own technology within the system. The SDK includes wizards and easy-to-use tools, along with three complete sets of APIs (Application Programming Interfaces). Its Agent Factory provides a quick, convenient method of developing manager/agent applications.

CA-Unicenter Advanced Options. CA-Unicenter's advanced management options bring enterprise management to a whole new level for clients with extended requirements in specific areas:

- **CA-Unicenter/Advanced DocServer™** enables document archival, retrieval, and online viewing from the LAN.
- **CA-Unicenter/Advanced Help Desk™** completely automates Help Desk service tasks to reduce response time, ensure availability of enterprise resources, and optimize response to

user requests.

- **CA-Unicenter/Automation Point™** provides expanded, automated event management, including remote IPL and notification services for voice and paging.
- **CA-Unicenter/ICE™** provides a comprehensive solution for managing and securing electronic commerce on the Internet and Intranets.
- **CA-Unicenter/MVS Backup** moves data from distributed environments to the mainframe for purposes of data centralization, disaster recovery, and data backup.
- **CA-Unicenter/Network Security** provides network-level security, including firewall capabilities and NSF socket and port management.
- **CA-Unicenter/Response Manager** monitors user response time in client/server environments and compares it to preset thresholds or norms.
- **CA-Unicenter/Single Sign-On™** provides Windows-based end users with secure single sign-on and access to enterprise-wide network applications.
- **CA-Unicenter/Software Delivery™** offers scalable multi-platform, multi-protocol enterprise-wide software distribution and control.

Unicenter TNG offers a complete solution for enterprise management--an extremely robust, scalable, extensible, and open infrastructure; a rich set of CA and partner functions; tools for clients to build their own functions; and the services needed to make them successful.

Unicenter TNG is designed to meet the needs of any growing enterprise.

Technical Specifications.

Supported CA-Unicenter Platforms Include:

Platform	Operating System
RS/6000	AIX 3.2.4, 3.2.5, 4.1.x
AS/400	OS/400 2.2, 2.3, 3.04, 3.10, 3.6
DG	DG/UX-88K 2.01, 2.10, 3.0, 3.10
HP	HP-UX 9.x, 10.x
ICL	DRS/NX 7.5.5, 7.74
NCR	SVR4 MP 2.02, 2.03, 3.0
Novell	NetWare 3.1x, 4.x
OS/2	LAN Server 2.1 and up
Pyramid	DC/OSx C063, C079, D079
Sequent	DYNIX 4.0.x, 4.1.x
Siemens	SINIX 5.42, 5.43
Cray	SPARC Solaris 2.3, 2.4
Sun	SPARC Solaris 2.3, 2.4, 2.5
Microsoft	Windows NT 3.51
Tandem	NonStop Kernel D30
DEC	Digital UNIX 3.0, 3.2a-c
Fujitsu	UXP/DS

The Real World Interface supports Windows NT 3.51 or above.

Unicenter TNG Discovery Services supports MIB-II SNMP agents to discover systems internals. In addition, CA-Unicenter agents will conform to SNMP 2.0 standards for communication to managers.

TCP/IP, SNA, and LU6.2 protocols will be supported for communications between management platforms.

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Unicenter TNG Information Request Form

Computer Associates offers more kinds of software solutions for more kinds of computers than any other software company in the world. To receive more information about how Unicenter TNG can meet your needs, please fill out this form for our immediate attention.

Thank you for your interest in Computer Associates software solutions.

Name		
Title		
Company.....		
Address.....		
Address 2.....		
City.....	St/Prcv: <input type="text"/>	Zip/Postal Code: <input type="text"/>
Country.....		
Phone.....		
FAX.....		
Email.....		

Do you have any questions about Unicenter TNG?

Do you want someone to call you?

Yes No

If so, what time (your local time) is most convenient for you?



Click to submit. Thank you! (If you wish to clear all fields, press .)





Unicenter[®] TNG[™] Advanced Help Desk[™]

Managing the Wired Enterprise

Unicenter TNG Advanced Help Desk completely automates help desk service tasks to reduce service response time, ensure the availability of enterprise-wide resources, and optimize your organization's response to user requests.

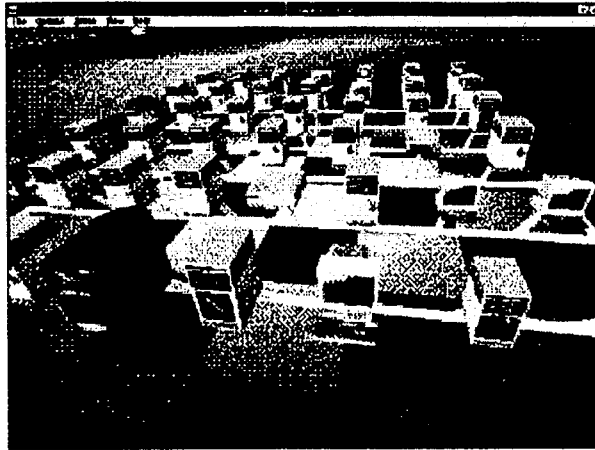


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The Service Challenge In A Distributed Environment.

Information Technology has emerged as an essential component in today's business process. The advent of distributed systems has rendered this environment more complex, while end-user demands have continued to escalate. With cost-effectiveness as the goal, organizations are merging their business and technical help desk functions for improved tracking and faster incident resolution. Most of the problem management tools in today's market are designed for simple problem tracking and do not possess the power and flexibility demanded by the enterprise. Their lack of integration with the rest of IT management functions renders them of little use in production environments. A more robust and scalable solution is required, one that is integrated and can be easily tailored to meet the unique needs of your business.

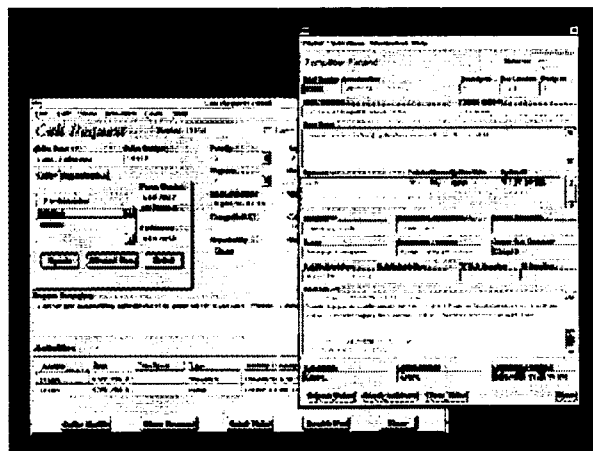




Unicenter TNG Advanced Help Desk Benefits The Entire Organization.

Unicenter TNG Advanced Help Desk is a high-end help desk management extension to CA-Unicenter, providing automated call and problem management. Unicenter TNG Advanced Help Desk provides:

- **End Users** with fast, efficient service and problem resolution.
- **Help Desk Staff** with a comprehensive solution for addressing problems and requests for service from inception to resolution.
- **Administrators** with an enterprise view of problem status to rapidly recognize and balance priorities and resource allocation.
- **Purchasing Managers** with historical information on managed resources, provided services, and vendors to assess future contracts.
- **IT and Business Executives** with Service Level Agreement tracking to validate internal and external support guarantees.



Unicenter TNG Advanced Help Desk Distinctive Features.

Call Management. Calls to the help desk are handled quicker and with higher efficiency due to the intuitive display of caller information, their computing environment, and past call history. Automatic logging creates a detailed record that allows the analyst to rapidly gather information with a minimum of key strokes.

Problem Management. Designed to reflect your business processes and restoration procedures, Unicenter TNG Advanced Help Desk's trouble ticketing functions bring a high degree of automation to the tracking of network and computing problems captured from

both manual or automatic sources.

Automatic Notification And Escalation. Unicenter TNG Advanced Help Desk utilizes the event notification facility of CA-Unicenter to notify the appropriate personnel via e-mail, FAX, telephone, pager, or cellular phone, and escalate problems according to established priorities and procedures. This automated functionality accelerates response time, keeps users and service staff up-to-date on problem status, and allows problems to be visible until resolution.

Service-Level Agreement Tracking. Keep track of all internal and external support agreements with Unicenter TNG Advanced Help Desk. Manage the performance of your vendors and ensure compliance with your current service contracts.

Customizable And Intuitive Interface. Unicenter TNG Advanced Help Desk lets you tailor displays or reports and view information according to the demands of your business. An intuitive GUI enables your administrators and managers to instantly evaluate the enterprise-wide problem management status

Automatic Incident Generation. The advanced event management capabilities of CA-Unicenter provide Unicenter TNG Advanced Help Desk the ability to trap events from any source in your distributed environment and to automatically generate incident reports. The filtration facility extracts irrelevant information, displaying only the information you wish to receive, thus providing you with greater control of event handling, monitoring, and reporting.

Trouble Ticket And Action Templates. The Unicenter TNG Advanced Help Desk modeling feature automatically populates selected trouble ticket fields, reducing analyst time and minimizing human errors. Its fully automated templates define action plans or successful repair strategies, and can be re-used as similar problems arise.

Security And Control. Integration with CA-Unicenter provides auditability, security, and control. Administrators can customize user access groups and assign individuals to one or more access groups. Groups can be assigned access privileges to each Unicenter TNG Advanced Help Desk feature area, such as: call records, trouble tickets, inventory, reference data, notification, and administration.

Open And Interoperable. Through industry-standard interfaces, Unicenter TNG Advanced Help Desk seamlessly integrates with other applications. Interfaces to leading network monitoring systems, such as HP's OpenView, IBM's NetView, SunSoft's SunNet Manager, and Cabletron's Spectrum, enable Unicenter TNG Advanced Help Desk to detect potential network problems before users experience any interruption in service. In addition, an open gateway exists between Unicenter TNG Advanced Help Desk and mainframe problem management applications, facilitating a peer-to-peer relationship for sharing critical problem data in a synchronized and orderly manner.

System Requirements.

Unicenter TNG Advanced Help Desk is an integrated solution that supports and enhances the following CA-Unicenter environments:

- Unicenter TNG Advanced Help Desk server
 - CA-Unicenter Release 1.1 or above running on HP-UX, Sun Solaris, IBM AIX, and Silicon Graphics IRIX

- Unicenter TNG Advanced Help Desk client
 - HP-UX, Sun Solaris, IBM AIX, and Silicon Graphics IRIX
 - Microsoft Windows NT, Microsoft Windows, and Microsoft Windows 95

Unicenter TNG Advanced Help Desk Information Request

Submit this form to have Computer Associates send information and/or contact you about Unicenter TNG Advanced Help Desk:

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City.....	<input type="text"/>	St/Prov: <input type="text"/>	Zip/Postal Code: <input type="text"/>
<input type="text"/>			
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Email.....	<input type="text"/>		

Do you have any questions about Unicenter TNG Advanced Help Desk?

Do you want someone to call you?

Yes No

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CA-Unicenter®/Software Delivery®

Managing The Wired Enterprise

CA-Unicenter/Software Delivery® is an enterprise-wide software distribution solution that provides the broadest platform and protocol coverage available today.

- Software Delivery Challenges In Today's Distributed Environment
- CA-Unicenter/Software Delivery Delivers
- CA-Unicenter/Software Delivery --The Automated Software Delivery Solution
- Integration With CA-Unicenter
- Summary
- System Requirements



Send Me Information!

Software Delivery Challenges In Today's Distributed Environment.

Software distribution is one of the biggest challenges facing enterprise management today. Distributed computing has evolved into a complex web of heterogeneous resources scattered throughout the enterprise. The cost of manually delivering, installing, and administering software in this distributed environment often exceeds the purchase price of the software itself, and the costs increase as the distributed environment becomes more complex.

Today's IT environments include a variety of in-house and shrink-wrapped software residing in multiple local and remote locations. This makes it difficult to track and enforce purchases, manage licenses, maintain inventory, and company policy.

Other software delivery methods are old-fashioned, inefficient, and inadequate, requiring manual distribution and installation of software. This wastes company resources and is risky-making proactive management of software installations virtually impossible.

The ideal solution for managing software in today's distributed environment must:

- Support major platforms and protocols
- Be scalable to the distributed environment
- Administer automated local and remote sites, and multiple copies in multiple locations
- Provide automated time-critical synchronization of delivery
- Provide license management and the ability to track and enforce purchases and company policy
- Provide both central and local administration



CA-Unicenter/Software Delivery Delivers.

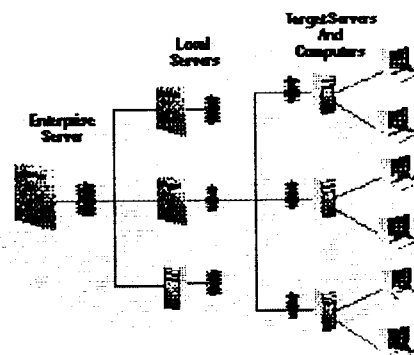
CA-Unicenter/Software Delivery is a scalable and flexible tool for installing, configuring, distributing, activating, verifying, updating, and de-installing software from a central point. Administrators can configure software and data into packages for delivery to one or more users or groups. CA-Unicenter/Software Delivery simplifies management and distribution tasks by providing full support for in-house or shrink-wrapped software.

CA-Unicenter/Software Delivery is easy to use and configure, and meets today's software distribution challenges by enabling you to:

- Set up distribution schedules, perform auto-installs based on date and time, or "fan-out" installs in multiple phases
- React quickly to changes in the business and technical environments
- Monitor software licenses

CA-Unicenter/Software Delivery --The Automated Software Delivery Solution.

CA-Unicenter/Software Delivery's features significantly reduce the amount of time needed for software administration. Its central software library, housing both in-house and shrink-wrapped software, provides control over software versions. With CA-Unicenter/Software Delivery, administrators can centrally manage remote sites and track hardware and software configurations throughout the enterprise.



Multi-Platform, Multi-Protocol. CA-Unicenter/Software Delivery provides the broadest platform and protocol coverage available for enterprise-wide software delivery. In a heterogeneous world, CA-Unicenter/Software Delivery enables software and data to be installed on OS/2, UNIX, DOS, Windows, Windows 95, and Windows NT workstations operating with TCP/IP, IPX/SPX, NetBIOS, Async, and SNA.

CA-Unicenter/Software Delivery's built-in flexibility allows installation of software from a network, CD-ROM, or floppy sources, making it easy to work with shrink-wrapped software.

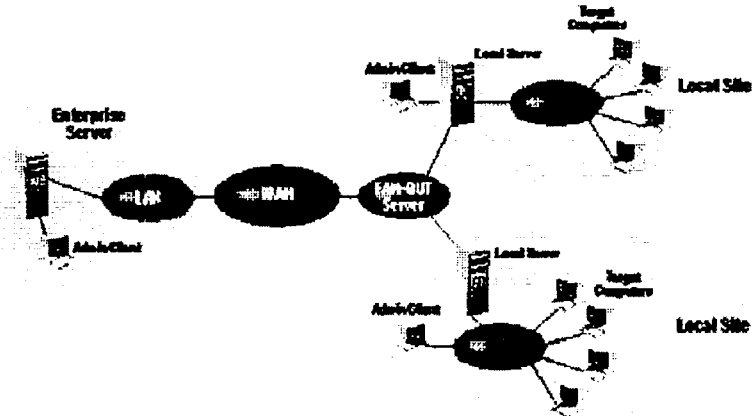
Push And Pull Distributions. Whether working with LAN-connected targets or a remote dial-up, CA-Unicenter/Software Delivery supports both push (server initiated) or pull (target initiated) distribution. This flexibility allows CA-Unicenter/Software Delivery to work well in all environments.

Centralized Management And Control. A critical aspect of software delivery is centralized management and control of all activities. CA-Unicenter/Software Delivery maintains a centralized record of all software installed in the network regardless of whether or not it was installed through CA-Unicenter/Software Delivery. Additionally, it tracks all software installed at a particular location and identifies when, where, how, and by whom the programs were installed, providing full audit and control.

Event Monitoring And Automation. Overall operations management benefits from the automated capture of events and automated responses. CA-Unicenter/Software Delivery makes it easier to administer, deploy, and control software by automating and monitoring all delivery events.

Multi-tiered Distribution. A tiered architecture provides both local and enterprise control with the scalability to support thousands of nodes. Enterprise managers can see the entire environment, while local administrators will have the power and flexibility to respond to their groups' needs.

The CA-Unicenter/Software Delivery system consists of one or more local servers and an optional enterprise server. Software delivery agents installed at target nodes ensure that communication between local servers and target computers is maintained.

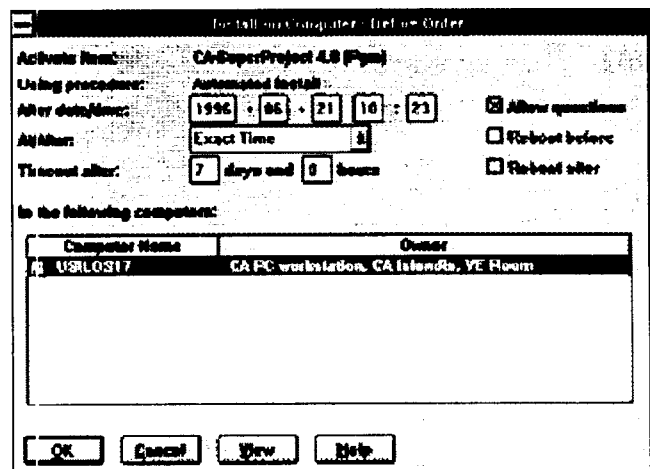


The enterprise server distributes software to local sites and performs other system-wide administration, providing a single point of control for all users.

When there are a large number of local servers, a fan-out server is used to reduce network load on the enterprise server. Fan-out servers intercept distributions from the enterprise server and direct them to the local sites.

A local server usually has a local administrator who controls the distribution of software to those computers; however, all administrative functions for a local site can also be performed at the central site. In this way, CA-Unicenter/Software Delivery provides the monitoring and control you need, while still allowing flexibility in how you configure your system.

The enterprise administrator can distribute, install, and configure software packages on remote LANs from a central location. A local administrator can do the same for all target computers networked within the local site. Information coming from the local sites up to the enterprise server, however, proceeds directly, and does not go by way of the fan-out server (for example, there is no "fan-in").



License And Remote Access. Tracking remote software purchases, licenses, and installs is critical

to avoid buying unnecessary software and to monitor the purchased licenses.

CA-Unicenter/Software Delivery allows administrators to track the number of software installations at any given site.

Attribute	Value
• Date of attribute	10/10/97 10:00:00 AM
• Time of attribute	15:01:23 (hh:mm:ss)
• OS type	Windows NT
• OS version	3.51
• Memory after boot	5900 kb
• System unit model	AT/AT COMPATIBLE
• Base memory size	640 MB
• Extended memory size	20473 MB
• BIOS date	10/05/94
• Processor	INTEL 486
• Math coprocessor	x86 Family 4 Model 7 Stepping 0
• Bus type	ISA
• DMA controller	Present
• Number of processors	1

Automatic Inventory Discovery. Inventory Discovery is a tool that uses customizable detection and verification scripts to search for the presence or absence of a particular software package(s) on a targeted computer. Inventory Discovery is used most commonly to determine which software programs were installed without intervention by CA-Unicenter/Software Delivery.

Automated Installation Script Creation. The Install Builder component allows for the creation of customized install diskettes for home-grown Windows, Windows 95, and Windows NT applications. By using Install Builder to package applications for distribution, you can standardize and automate installation of that application through the familiar CA-Installer™ utility.

Integrated With Event Management. CA-Unicenter Event Management is automatically updated with all CA-Unicenter/Software Delivery messages and events. Through CA-Unicenter's powerful event console, administrators can centrally or locally view messages and define automated actions for any selected messages.

Integration With Desktop Management. A key element of software delivery is integration with the desktop and its functions. CA-Unicenter/Software Delivery provides desktop management of software licenses, remote access and control, and integration with third-party products to extend or complement functionality.

Integration With CA-Unicenter.

CA-Unicenter/Software Delivery provides an integrated solution for desktop management within the enterprise. It is built on a solid infrastructure of CA technology that easily integrates with CA-Unicenter.

CA-Unicenter brings enterprise management to a new level. Its rich set of management functions are built on top of its flexible infrastructure, allowing any system or service to be integrated with its core components. Its own robust functionality, combined with in-house developed or third-party applications, provides a complete solution to one of today's most daunting challenges: managing the wired enterprise.

Summary.

CA-Unicenter/Software Delivery is a scalable multi-platform, software distribution and administration solution. It addresses software management issues using proven technology and encompasses the broadest platform coverage, native protocol support, built-in automation, inventory discovery, and integration with enterprise management-CA-Unicenter.

CA-Unicenter/Software Delivery meets the software administration challenges of today's distributed environment.

System Requirements.

Servers:

- Windows NT Server 3.51
 - Intel Based Systems
 - 486-66 or above (Pentium 90 recommended)
 - Minimum 32Mb RAM memory
 - 500Mb of available hard disk space
 - CD-ROM and 3.5" floppy for software registration
 - MS SQL Server V 6.0 or above
- UNIX (64Mb memory, 500Mb hard disk space)
 - HP-UX 9.04 or above
 - Sun Solaris 2.4 or above
 - AIX 4.1 or above
- OS/2 2.x and above

Clients:

- Windows 3.1 or above
- Windows 95
- Windows NT 3.51 or above
- HP-UX 9.04 or above
- Sun Solaris 2.4 or above
- AIX 4.1 or above
- DG/UX 4.1 or above
- DOS
- NetWare 3.x and 4.x
- OS/2 2.x and above

Networks:

- TCP/IP
- IPX/SPX
- NetBIOS
- Async Dial-in
- SNA LU6.2

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CA-Unicenter/Software Delivery Information Request Form

Computer Associates offers more kinds of software solutions for more kinds of computers than any other software company in the world. To receive more information about how CA-Unicenter/Software Delivery can meet your needs, please fill out this form for our immediate attention.

Thank you for your interest in Computer Associates software solutions.

Name	
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Do you have any questions about CA-Unicenter/Software Delivery?


Do you want someone to call you?

Yes No

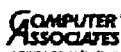
If so, what time (your local time) is most convenient for you?

When you are through, just click **SUBMIT** to send us your request.

If you have made a mistake, choose **Reset** to clear all the fields.

Thank you! 





Unicenter[®] TNG[™] Microsoft Exchange Option

Management Of The Wired Enterprise

The Unicenter TNG Microsoft Exchange Option ensures the reliability and availability of Microsoft Exchange environments by monitoring and automating the functions required to keep Exchange servers up and running.

- [Send Me Information!](#)

Managing Exchange Servers In Today's Distributed Environment.

In today's business world, organizations are relying more and more on messaging systems for both internal and external communication. These systems transcend organizational boundaries, reaching out to customers, clients, partners, the Internet, and other outside contacts. An organization's success depends upon these systems and any interruption in service could be a disaster, resulting in a loss of revenue. Organizations need a solution that meets the challenge of insuring the reliability and availability of these messaging systems while curtailing management costs.

Unicenter TNG Microsoft Exchange Option Benefits Your Entire Organization.

Unicenter TNG Microsoft Exchange Option offers complete monitoring and response capabilities, simplifying management of Exchange applications and host environments. It allows organizations to secure, manage and maintain their Exchange environment with flexible, business-based policies, while guaranteeing the reliability and availability of internal and external business communications.

With its high level of scalability, the Unicenter TNG Microsoft Exchange Option enables organizations to control costs, even as the number of end users and their locations increase. Through its use of distributed, intelligent agents, organizations can now manage their entire Exchange environment from a central location. In short, this option:

- **Reduces the total cost of ownership** of Exchange environments, eliminating the need for manual monitoring and automating management tasks.
- **Improves service levels** by providing tools to automatically monitor the Exchange system and its most important components.
- **Improves availability** through high performance, (hot) online backup and by automatically detecting and correcting errors.
- **Protects critical data** with real time anti-virus scanning features.

Unicenter TNG Microsoft Exchange Option Distinctive Features.

The Unicenter TNG Microsoft Exchange Option gives organizations a full set of integrated functions for monitoring and managing their Exchange infrastructure.

Exchange Server Agent. The Unicenter TNG Microsoft Exchange Option utilizes lightweight, intelligent agents to correlate events and collect information from multiple servers. These agents can perform realtime analysis to isolate problems, report events and fix problems automatically. Unicenter TNG Microsoft Exchange Option provides realtime monitoring of critical processes such as memory and CPU usage, file monitoring, disk space utilization, file access and scanning of log files. It also allows predefined procedures for verifying that all Exchange server activities, like mail gateways in replication, are functioning properly. By monitoring NT Registry keys, this option also identifies attempts to alter system parameters in a way that might disrupt the Exchange server. It replaces time-consuming server-by-server management with distributed agents and simultaneously reduces costs.

Online (Hot) Backup And Restore. The Unicenter TNG Microsoft Exchange Option lets administrators completely backup and restore Exchange servers, including information and directory-level backup, while the server is operational. As a result, users have access to critical business communications 24-hours-a-day, 7-days-a-week.

Workload Scheduling. This option gives administrators the ability to automate the scheduling of backup and restore procedures -- as well as other Exchange maintenance functions -- quickly and easily without having to shut down the server.

Antivirus Protection. Included with this option is an Exchange antivirus agent. When used in conjunction with the Unicenter TNG AntiVirus Option, it provides automatic, realtime scanning of messages from all sources (including the Internet) and attachments as they enter the Exchange server. This protection also includes live scanning of viruses in email messages and the shared folders created by Exchange servers. Because The Unicenter TNG Advanced AntiVirus Option provides comprehensive virus protection throughout the enterprise, email can be used freely, without the threat of virus-related disasters.

Manage Everything From Anywhere With Unicenter TNG.

Powerful, Integrated Base Functionality. Unicenter TNG provides out-of-the-box functionality for a number of management areas: application and database monitoring, backup and disaster recovery, event monitoring, help desk integration, performance monitoring, output management, security, and workload management. These robust, integrated management functions provide a dependable solution and infrastructure that ensures highly reliable, secure, and available business processing. This is especially important since email has become an integral part of the enterprise, providing content and services for critical business processes.

Powerful Options. Unicenter TNG's functionality can be further extended through additional Unicenter TNG options. The Unicenter TNG Software Delivery Option, for example, provides automated, unattended installation and configuration of Exchange software and upgrades. The Unicenter TNG Asset Management Option can be used to

provide an inventory of desktops running Exchange, and ensure that the necessary protocols are in place to support Exchange installations.

Supported Environments.

- Microsoft Exchange Server 4.x and above
- Microsoft Windows NT 3.51 or 4.0 for Intel

Unicenter TNG Microsoft Exchange Option Information Request

Submit this form to have Computer Associates send information and/or contact you about Unicenter TNG Microsoft Exchange Option:

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Country.....:

Phone.....:

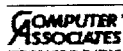
FAX.....:

Email.....:

Do you have any questions about Unicenter TNG Microsoft Exchange Option?

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Unicenter® TNG™ Asset Management™ Option

Management Of The Wired Enterprise

The Unicenter TNG Asset Management Option provides a complete set of tools for managing DOS, Windows 3.1, Windows 95, Windows NT, OS/2, Macintosh, UNIX, and VMS.

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Asset Management In Today's Large Heterogeneous Environments.

By collecting and maintaining an accurate IT inventory throughout the enterprise, asset management serves a critical role in the effective management of a complex, heterogeneous environment. As such, asset management is essentially the foundation from which other IT management functions derive their knowledge.

A comprehensive asset management solution is one that:

- Integrates with strategic management systems throughout the enterprise, such as software distribution, help desk, network management, and others.
- Supports all types of clients including DOS, Windows 3.1, Windows 95, Windows NT, OS/2, Macintosh, UNIX, and VMS.
- Supports all network platforms, including NetWare, LAN Manager, LAN Server, PATHWORKS, Banyan VINES, PC-NFS, and Windows NT.
- Supports ODBC-compliant SQL databases, including OpenIngres®, Oracle, MS-SQL Server, Informix, and Sybase.
- Minimizes LAN traffic by processing and storing only changes to inventory information.

Asset Management Benefits The Entire Enterprise.

The Unicenter TNG Asset Management Option delivers immediate benefits to the enterprise. Specifically, this option:

- **Reduces total cost of ownership** by minimizing the need to visit individual desktops for routine management of the environment.
- **Helps to control software costs** by metering software usage, allowing the organization to only buy what they need.
- **Improves service levels** by providing better information about hardware, software and configurations, and by notifying the help desk when problems are detected.
- **Improves end-user productivity** by providing consistent system

configurations and minimizing desktop downtime.



Click for larger images

Unicenter TNG Asset Management Option Distinctive Features.

Hardware Inventory. The Unicenter TNG Asset Management Option provides a complete set of hardware inventory functions. Built-in hardware detection capabilities automatically record all appropriate devices. Additional equipment or information that cannot be detected automatically can easily be entered into an inventory database.

Software Inventory. From its ever-expanding knowledge base, the software inventory scanner can detect over 3,000 brand name applications. In addition, any "unknown" applications can be detected by the software scanner and easily registered into the knowledge base as needed.

Configuration Management. The Unicenter TNG Asset Management Option provides the capability to centrally administer system configuration files. It keeps historical configuration information and allows the system to be restored to earlier configurations. A unique profile can follow users around the network, so regardless of which workstation or server they are connected to, they get consistent desktop functionality. Administrators can also secure desktop configuration files and prevent a user from making unauthorized changes.

Software Metering And Auditing. Any application can be metered and audited regardless of whether the software is located on the desktop or the server. Asset management can control and deny the use of unauthorized software ensuring that no user can access or install applications not approved by the IT department.

Scripting Tools. The integrated scripting tools enable System Administrators to easily change settings on an individual or group basis, such as changing Registry information or network addresses.

Policy-Based Management. The Unicenter TNG Asset Management Option provides system managers the ability to define system-wide policies for desktops. A policy can entail identifying a breach of a corporate software policy such as the installation and use of games on a corporate desktop. It can also identify the appropriate actions to take when a corporate guideline is violated or a problem is detected.

Dynamic Groups. The concept of Unicenter TNG Asset Management Dynamic Grouping helps system administrators maintain users and desktops across multiple LANs and locations with little effort. For example, an SAP administrator may be responsible for maintaining all SA users. When a new user gets the SAP client software, the user automatically becomes a member of the SAP group. Dynamic groups also provide a vehicle to enforce policies based on the characteristics of the group, such as the hardware or software that resides on a desktop. For example, a network manager may want to identify all clients running NetBIOS and IPX, and

then upgrade these clients for TCP/IP support.

Extensive Cross-Platform Reporting Capabilities. To assist administrators, the Unicenter TNG Asset Management Option provides many predefined reports and the possibility to easily create new and advanced reports on any data in the inventory database.

Unique Scalable Architecture. The Unicenter Asset Management Option has been designed to be fully scalable in large and heterogeneous environments. By not requiring specific management servers or host/agents to be loaded on either clients or servers, there is no additional overhead or conflicts on your existing network configuration.

Manage Everything From Anywhere With Unicenter TNG

Powerful, Integrated Base Functionality. Unicenter TNG provides out-of-the-box functionality for a number of management areas: application and database monitoring, backup and disaster recovery, event monitoring, help desk integration, performance monitoring, output management, security, and workload management. These robust, integrated management functions provide a dependable solution and infrastructure that ensures highly reliable, secure, and available business processing.

Powerful Options. Unicenter TNG's functionality can be further extended through additional Unicenter TNG options. For example the Unicenter® TNG™ Software Delivery™ Option electronically distributes software across the enterprise environment. The Unicenter® TNG™ Advanced Help Desk™ Option provides a comprehensive Help Desk solution.

Supported Environments.

Unicenter TNG Asset Management clients:

- DOS
- Windows (3.1, 95, and NT)
- OS/2
- Macintosh
- UNIX
- VMS

Designed for



Unicenter TNG Asset Management Option Information Request

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City.....:	<input type="text"/>	St./Prov: <input type="text"/>	Zip/Postal Code: <input type="text"/>
Country.....:	<input type="text"/>		
Phone.....:	<input type="text"/>		
FAX.....:	<input type="text"/>		
Email.....:	<input type="text"/>		

Do you have any questions about the Unicenter TNG Asset Management Option?

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Unicenter® TNG™ Web Management™ Option

Management Of The Wired Enterprise

The Unicenter TNG Web Management Option manages and secures Microsoft IIS and Netscape Web servers. Through integrated security, storage, event, problem, and performance management, this option ensures the reliability, availability, and security of Intranets and the Internet.

- [Send Me Information!](#)

The Electronic Commerce Opportunity-- And Challenge.

The Internet offers incredible electronic commerce opportunities. It is now possible to conduct business and reach the global marketplace at a fraction of the cost of traditional methods. Electronic commerce is in its infancy, and the organizations that successfully make the connection and are able to manage it, will gain a competitive edge. In fact, the possibilities of doing business on the Internet are limited only by an organization's inability to manage this extraordinary resource. Today, organizations need a Web server management solution that ensures uninterrupted service, data integrity and bulletproof security.

Internet/Intranet Peace Of Mind.

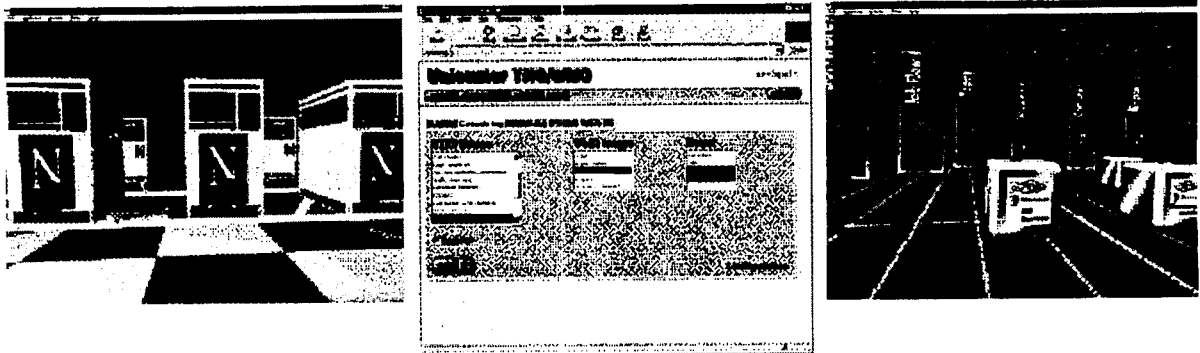
The Unicenter TNG Web Management Option is an end-to-end management solution, enabling secure and reliable business processing on both the Internet and Intranets. This option:

- Provides policy-based Web server security.
- Automatically archives infrequently used Web pages for efficient storage utilization.
- Performs realtime analysis to isolate a problem, report the event, and either fix the problem automatically, or send a message to the Unicenter® TNG™ event manager.
- Collects and correlates events with systems, networks, databases and applications.
- Monitors Web server performance and working with Unicenter TNG, end-to-end performance of Internet/Intranet transactions.

Integrated Web Server Management Benefits The Modern Enterprise.

Implementing the Unicenter TNG Web Management Option enables organizations to confidently exploit the Internet/Intranet to its fullest extent. Through comprehensive, integrate Web server management, this option:

- **Reduces the total cost of ownership** by decreasing the need for manual Web server monitoring and management.
- **Secures business information** through policy-based user authentication and authorization.
- **Conserves disk space** by automatically archiving HTML pages and other Web site objects.
- **Improves Web server availability** by automatically detecting and correcting errors.
- **Improves service levels** by providing end-to-end performance management.



Click for larger images

Unicenter TNG Web Management Option Distinctive Features.

Security. The Internet exposes organizations to new security risks. This option supports existing secured communication capabilities and provides the authorization and access control that existing Web server software lacks. It also protects HTML pages based on user authentication and authorization, secures HTTP proxy servers, and provides full audit trails of Web page accesses and attempted security breaches. This allows customers to conduct business through your Web site, while protecting the contents of your HTML pages.

Storage Management. The Unicenter TNG Web Management Option monitors how frequent Web pages are viewed and automatically offloads infrequently used pages. An intelligent restore capability transparently brings them back, when accessed. This hierarchical storage management conserves disk space while preserving links to your HTML pages.

Realtime Web Server Monitoring. The Unicenter TNG Web Management Option monitors wide range of system parameters to ensure the proper functioning of Web servers. It monitors memory, CPU and file usage, as well as detects abnormal file size growth, disk space utilization and file accesses. Administrators can also analyze patterns of usage and peak consumption to help assess the effectiveness of a Web site. For example, Web access demographics can help justify the ROI of Web page advertising.

Event Management. The Unicenter TNG Web Management Option monitors the Web server status and event logs and automatically responds to selected events. It correlates system, network, database, application and Web server events, providing a complete picture of the status of the Web site.

Performance Monitoring. Customers accessing Web sites demand immediate response times. If they are unable to access a Web site, they go elsewhere. This option continually monitors Web server performance--such as response times and queue lengths--and displays them in the Unicenter TNG console. Using filtering and correlation policies, agents trigger events to notify administrators of potential problems, open help desk tickets, or automate actions.

Manage Everything From Anywhere With Unicenter TNG

Powerful, Integrated Base Functionality. Unicenter TNG provides out-of-the-box functionality for a number of management areas: application and database monitoring, backup and disaster recovery, event monitoring, help desk integration, performance monitoring, output management, security and workload management. These robust, integrated management functions provide a dependable solution and infrastructure that ensures highly reliable, secure, and available business processing. This is especially important since Web servers have become an integral part of the enterprise, providing content and services for critical business processes.

Powerful Options. Unicenter TNG's functionality can be further extended through additional Unicenter TNG options. The Unicenter® TNG™ Network Security™ Option, for example, secures the entire system at the network packet level, serving as a "firewall" to protect your Web site from unauthorized accesses and changes. Customers and users access only the system you want them to access. The Unicenter® TNG™ Advanced AntiVirus™ Option provides comprehensive virus protection throughout the enterprise. Because it scans attachments as well as incoming messages, e-mail can be used freely, without the threat of virus-related disasters.

Supported Environments.

Microsoft IIS Web Servers:

- Windows NT

Netscape Web Servers:

- Netscape Commerce Server
- Netscape Communications Server

UNIX

Designed for



Unicenter TNG Web Management Option Information Request

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FAX.....:			
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Do you have any questions about the Unicenter TNG Web Management Option?

*Click **SUBMIT** to submit. (Press **Reset** to clear all fields and start again.)*

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CA-Unicenter[®]/Agent[™] For Oracle

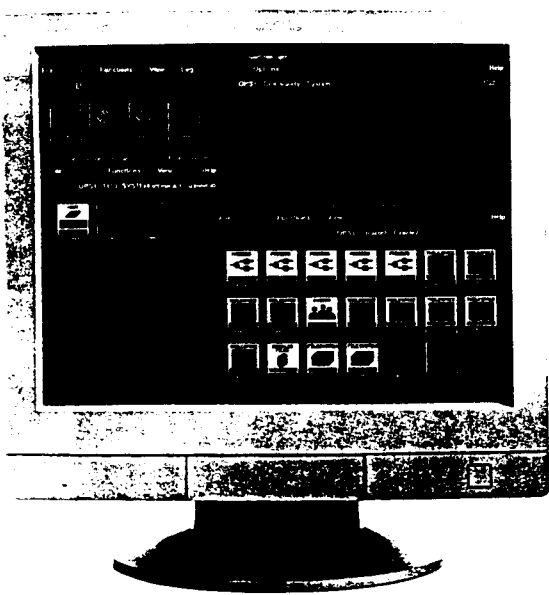
Database Alert For RDBMS Management

CA-Unicenter/Agent for Oracle provides you with an effective tool for the proactive management of your mission-critical database applications and resources.

The Database And Application Management Challenge.

Information Technology has emerged as an essential component of today's business process. Complex computing environments and end-user demands for instant access to applications, database information, and networked resources, make total enterprise management a goal for IT.

The advent of distributed systems has transformed the database administrator's role, and added to the intricacies of the IT structure. The result is that the same DBA staff, which may not have increased in head count, must now manage user requests for concurrent access to different databases on multiple platforms, and must also handle the additional performance monitoring required. The emerging challenge for IT has become that of multi-database management.



A robust, proactive solution is required to contend with these new challenges; one that optimizes manageability and ensures the resiliency of your database.

Distribute The Benefits Of Intelligent Management Of RDBMS Environments.

CA-Unicenter/Agent for Oracle detects and corrects problems *before* they impact the availability of critical database and related application processes. As a fully integrated CA-Unicenter option, the Agent enables the efficient monitoring and proactive management of Oracle RDBMS resources, and related applications. Furthermore, the incorporation of Oracle management data with the diverse set of management data accumulated by CA-Unicenter enables the adoption of a unified enterprise management view. CA-Unicenter/Agent for Oracle provides:

- **End Users** with a heightened dependability and availability of the database and related application resources critical for their job performance and business effectiveness
- **Administrators** with a consistent and comprehensive toolset for enabling remote management of distributed database and related application resources
- **Advanced Technology Experts** with an extensible and interoperable standards-based open framework and Software Development Kit to extend the solution set and build enhanced management applications
- **IT Executives** with a reliable and comprehensive solution for assuring delivery of services against Service Level Agreements



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**COMPUTER[®]
ASSOCIATES**
Software superior by design.

CA-Unicenter/Agent For Oracle Distinctive Features.

CA-Unicenter/Agent for Oracle provides enhanced management in the following ways:

Enhanced Availability.

- Remote operation facilities allow the administrator to directly access remote databases, gather information, and take pre-defined actions for quick and accurate problem diagnosis and correction
- Service Views enable monitoring of critical business functions by bringing together all the database services essential to an application under a single icon: this includes application resources that span many different Oracle databases, and databases on different platforms
- Integration with CA-Unicenter®/Advanced Help Desk™ (AHD) provides automatic opening and tracking of Oracle-related problem incidents
- Integration with CA-Unicenter's Event Manager provides a wide range of automated responses to system conditions and interoperability with Network Managers such as HP's OpenView, IBM's NetView, and Sun's SunNet Manager

Efficient Continuous Monitoring.

- A graphical user interface (GUI) displays the managed Oracle objects through a network-like topography with a multilevel hierarchy
- "Smart Agent" design provides top performance, thus minimizing the need for network polling
- Standby server capability ensures continuous monitoring of network-wide system conditions

Extensible Agent Architecture.

- Open Application Programming Interfaces (APIs) enable Oracle Agents to be easily extended to meet the management requirements of any application
- Standard monitors are provided for the following Oracle objects:
 - Database Instance Status File Systems:
 - \$ORACLE_HOME
 - Archived Redo Log
 - Alert File Location
 - Tablespace Usage Thresholds
 - Users Connected Processes:

Systems Monitor	Process Monitor
Recovery	Database Writer
Log Writer	Recovery Process

System Requirements.

CA-Unicenter/Agent for Oracle is available today for:

- Manager platforms running Sun Solaris Release 2.4 and above; Hewlett-Packard HP-UX 9.x and 10.x; IBM AIX 4.1.x
- Agents for Oracle databases running on: Hewlett-Packard HP-UX; Sun Solaris (Intel and RISC); ICL DRS/NX (Intel and RISC); IBM AIX

For more information on CA-Unicenter and the available options, please contact your Computer Associates Client Service Representative.

