

Software Verification

Team Presentation#2

201311301 이재규
201411261 김건우
201411264 김민범
201511248 김소영

Advertising Management

INDEX

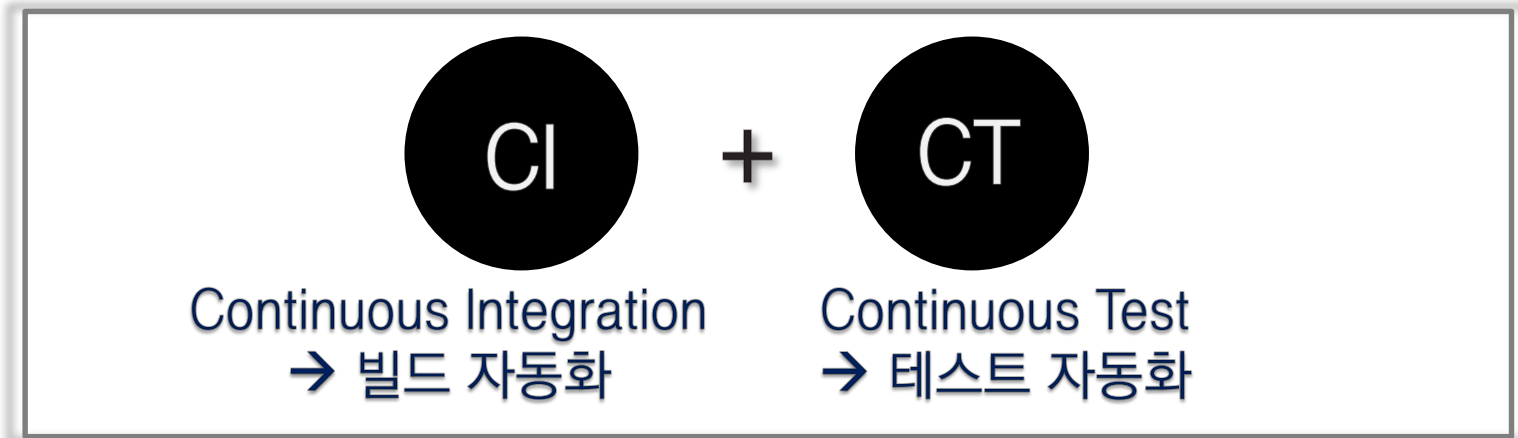
- CTIP / 1차 구축 현황
- 이슈 관리
- 요구사항 관리
- Summary / 2차 구축 현황

CTIP / 1차 구축 현황

Continuous Test & Integration Platform

01

정의를 Continuous Test & Integration Platform



02

03

04

기능

- Unit단위로 자주 통합 → 전체적인 통합 소요시간 감소
- 빌드, 테스트 자동화 → 수동적인 반복 작업 감소
- 지속적인 통합 → 문제의 조기 발견 및 해결
- 빌드 결과의 피드백

01

»» 장점

02

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개별 개발 결과물의 통합 빌드 자동화 & 테스트 자동화를 통해
소프트웨어 개발 과정에서 발생하는 문제점을
문제발생 직후 해결할 수 있다.



개발자

개발자의 노력은 줄어들고

&



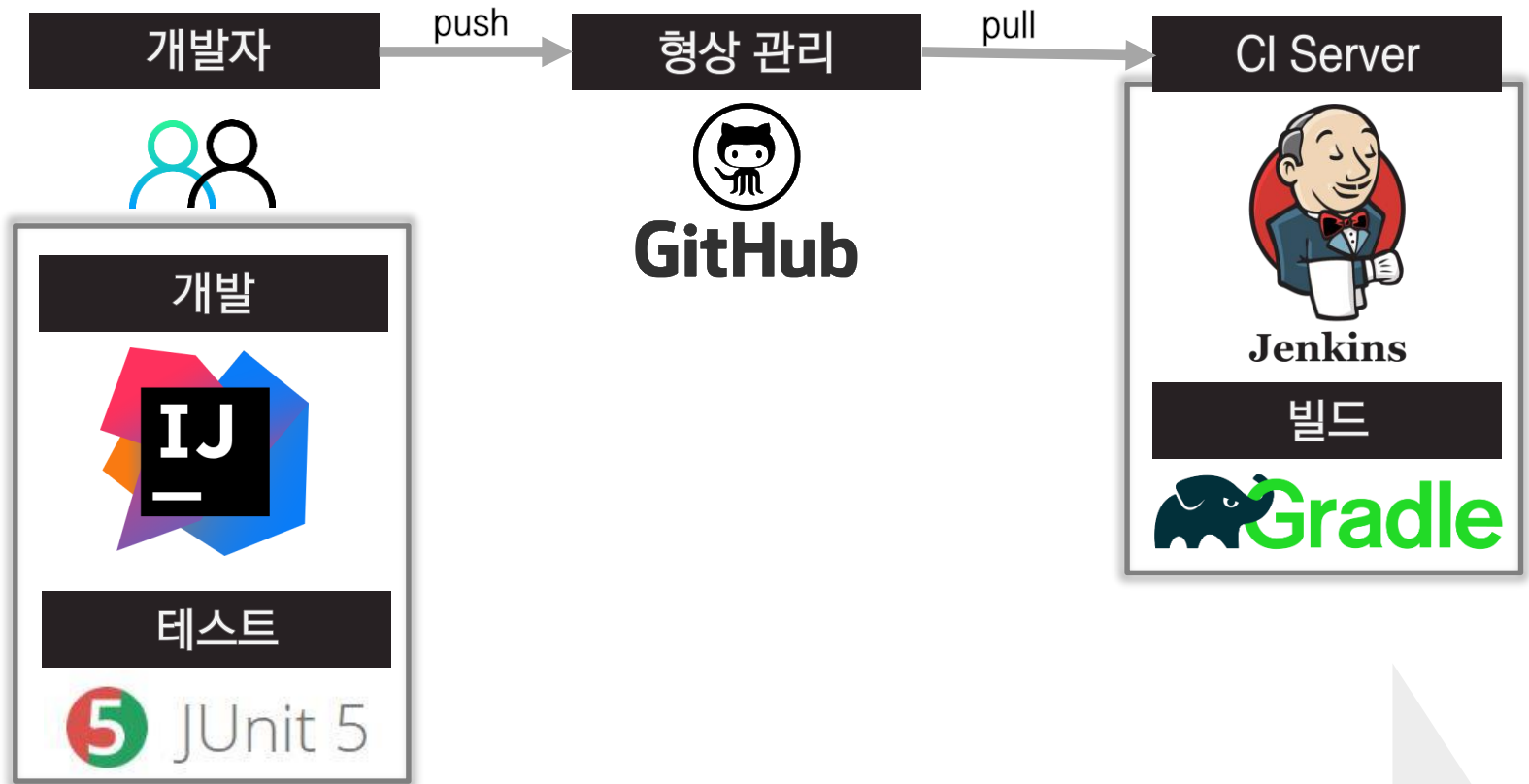
소프트웨어 품질은 향상됨

01

02

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04



- + Web Server
- + 이슈 관리
- + 요구사항 관리

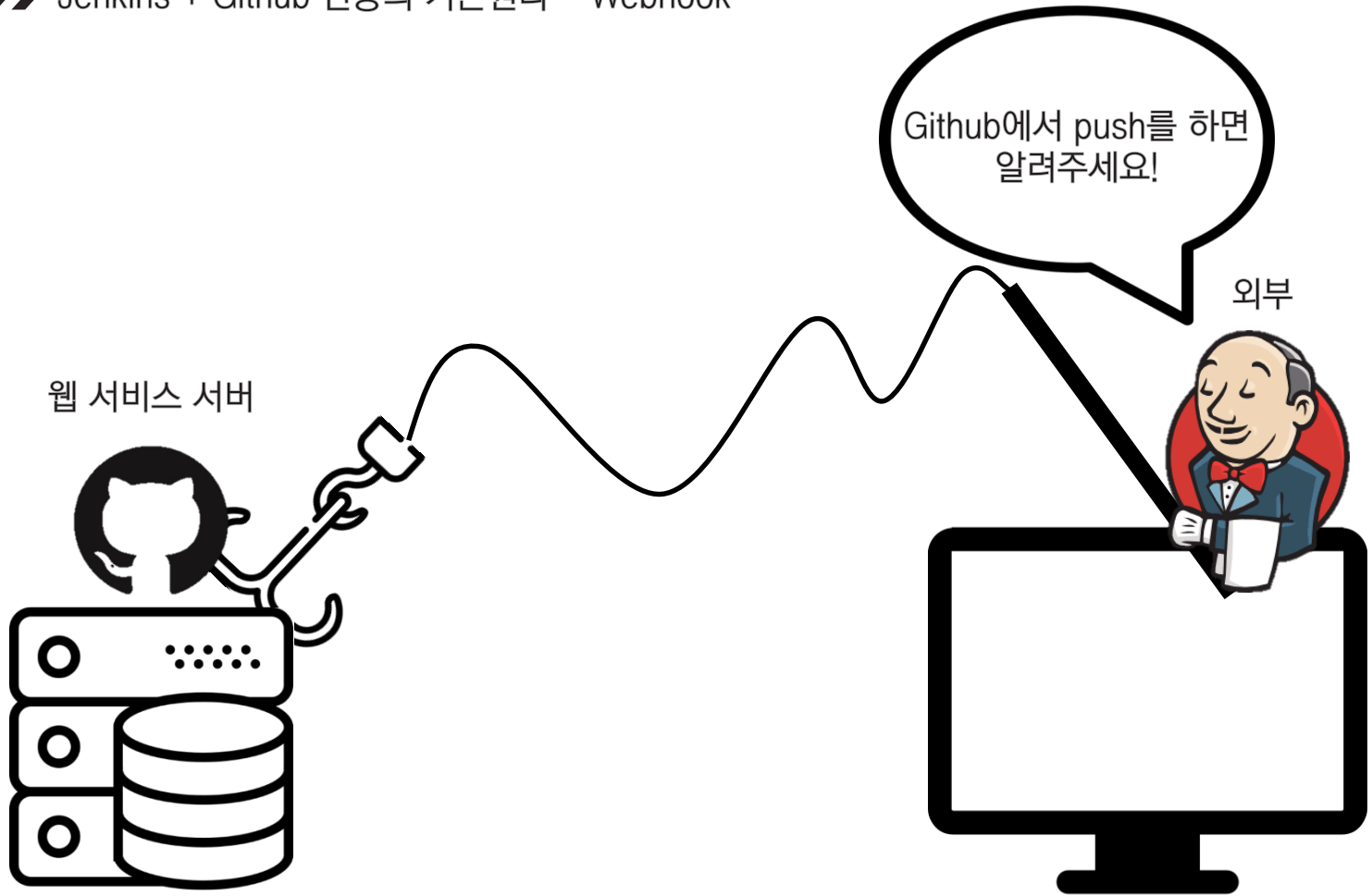
01

▶▶ Jenkins + Github 연동의 기본원리 “Webhook”

02

03

04



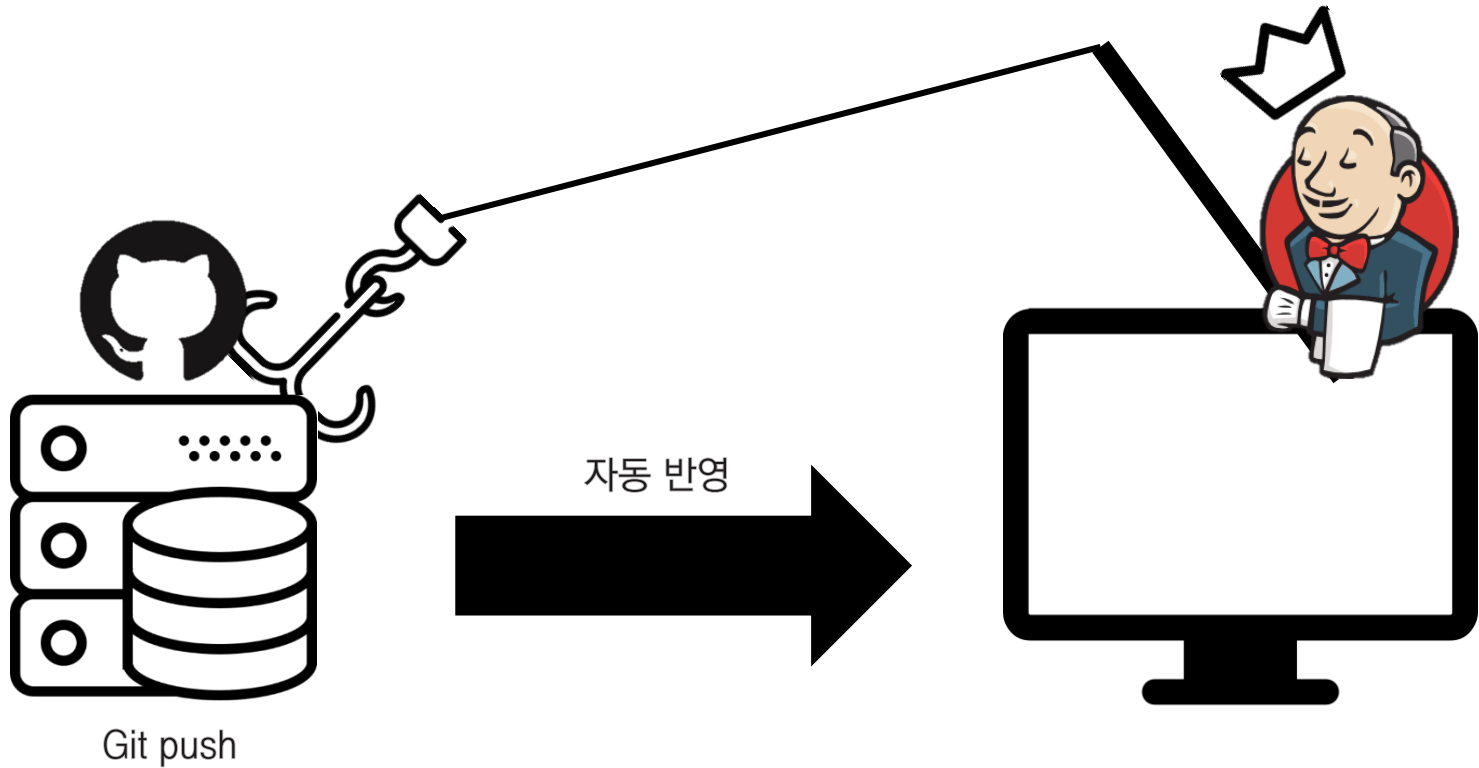
01

➤➤ Jenkins + Github 연동의 기본원리 “Webhook”

02

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04



01

➤➤ Git add / status를 통한 변경사항 확인

02

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04

```
C:\Users\김건우\mbSW\Software_Verification\src\main\java>vim Test.java
C:\Users\김건우\mbSW\Software_Verification\src\main\java>git add Test.java
C:\Users\김건우\mbSW\Software_Verification\src\main\java>git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

    modified:   Test.java
```

01

➤➤ Git commit / push

02

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04

```
C:\Users\김건우\mbS\Software_Verification\src\main\java>git commit -m "modified Test.java by keonwoo"
[master 9619708] modified Test.java by keonwoo
1 file changed, 1 insertion(+)
```

```
C:\Users\김건우\mbS\Software_Verification\src\main\java>git push
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 8 threads.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 514 bytes | 257.00 KiB/s, done.
Total 6 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/mbkim95/Software_Verification
ce93ded..9619708 master -> master
```

01

▶▶ Github 반영결과 확인

02

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The screenshot shows the GitHub interface for the repository 'mbkim95 / Software_Verification'. The top navigation bar includes 'Pull requests', 'Issues', 'Marketplace', and 'Explore'. Below the repository name, there are buttons for 'Watch', 'Star', and 'Fork'. The main content area shows the commit history for the 'master' branch. The commit 'modified Test.java by keonwoo' is highlighted with a red box. Other visible commits include 'EAGT-1 JIRA TEST', 'test commit', 'Merge pull request #1 from ljj294/master', 'Update CalculatorTest.java', and 'test commit'.

Commit Message	Author	Time	SHA-1	Verified
modified Test.java by keonwoo	hutgae	committed 28 seconds ago	9619708	
EAGT-1 JIRA TEST	mbkim95	committed 2 hours ago	ce93ded	
test commit	mbkim95	committed 2 hours ago	004bba3	
Merge pull request #1 from ljj294/master	ljj294	committed 8 hours ago	cc6b2c9	Verified
Update CalculatorTest.java	ljj294	committed 8 hours ago	34c82ec	Verified
test commit	mbkim95	committed 9 days ago	ab9787f	

01

▶▶ Jenkins 반영결과 확인

02

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The screenshot shows the Jenkins interface for a project named 'Software_Verification'. The main content area is titled '변경 사항' (Changes) and lists five build entries. The entry for build #5, dated 2019. 4. 3 오후 1:36:11, is highlighted with a red box. The build log for #5 shows a single commit: '1. modified Test.java by keonwoo --- tmffka789 / githubweb'. Other builds listed include #4 (EAGT-1 JIRA TEST), #3 (test commit), and #2 (Update CalculatorTest.java). A 'Build History' table on the left provides a summary of all builds. The footer indicates the page was generated on 2019. 4. 3 오후 1시 36분 32초.

Build Number	Timestamp
#5	2019. 4. 3 오후 1:36
#4	2019. 4. 3 오전 11:47
#3	2019. 4. 3 오전 11:40
#2	2019. 4. 3 오전 5:57
#1	2019. 3. 25 오후 1:31

이슈 관리

Redmine

01

>> Issue ?

02

- Bug & Problem
- 새 기능, 개선, 작업, 의견, 문의 등 프로젝트에서 발생하는 모든 것

03

04

>> Issue Tracking System (ITS) ?

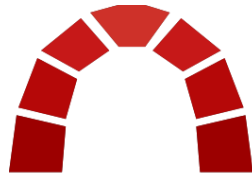
- 초기 계획에 매몰되지 않고 변화에 대응하기 위한 방법론과 프로세스를 구현한 제품
- 형상 관리와 더불어 프로젝트의 핵심 인프라
- Web기반이라 별도의 설치없이 손쉽게 사용가능
- 회사의 프로세스, 이력, 지식이 쌓이는 핵심자산
- 형상 관리, 메신저 등 다양한 제품과 지속적인 통합 필요

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REDMINE

flexible project management

- 웹 기반의 프로젝트 관리와 버그 추적 기능
- 다중 프로젝트 지원
- 유연한 역할기반 접근제어 및 이슈 추적 가능
- 형상 관리 소프트웨어와의 통합
- 무료

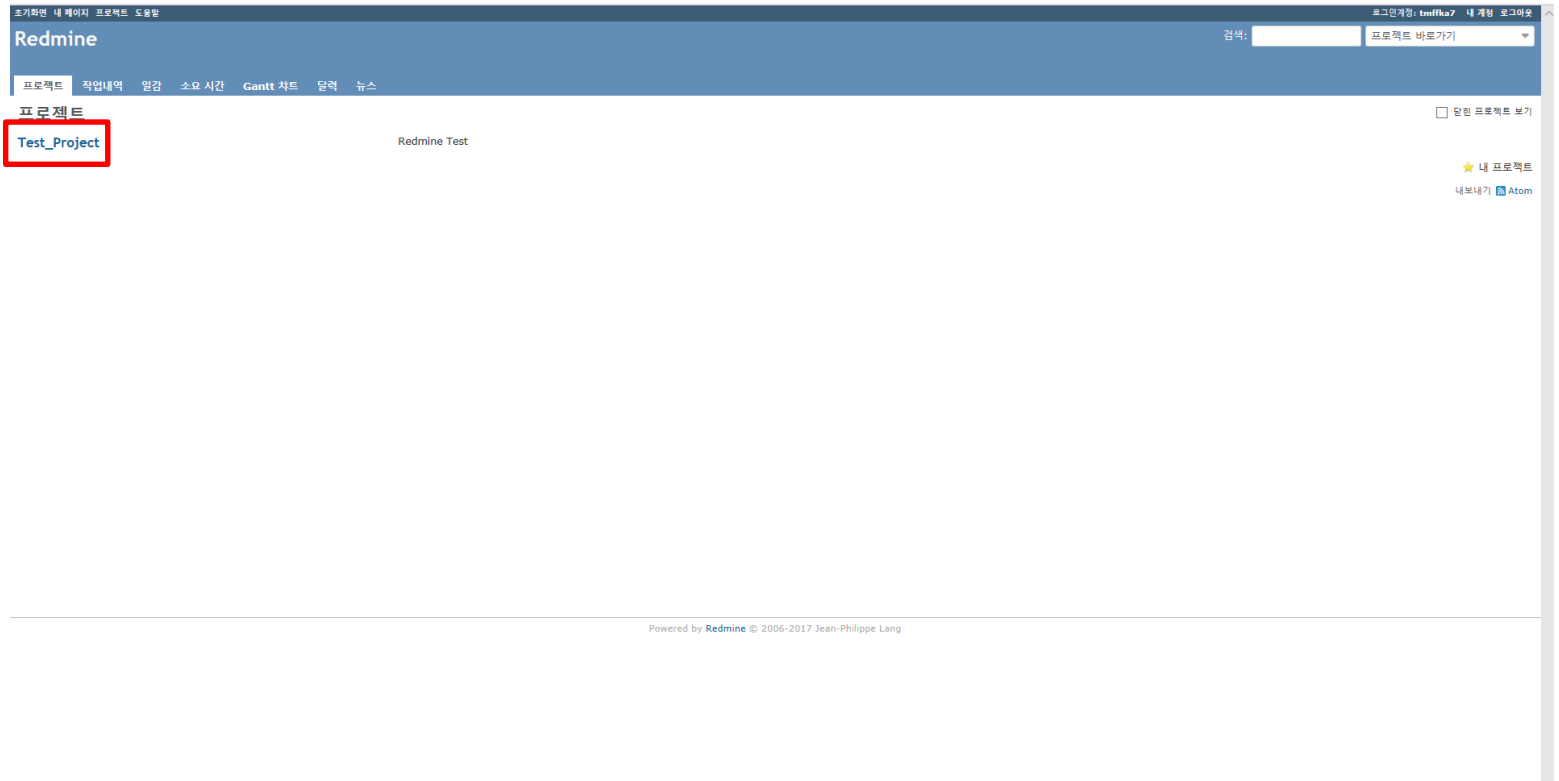
01

➤➤ 새로운 일감 추가

02

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04



01

▶▶ 새로운 일감 추가

02

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The screenshot shows the Redmine interface for the '일감' (Tasks) section. The top navigation bar includes '프로젝트', '작업내역', '일감', '소요 시간', 'Gantt 차트', '달력', and '뉴스'. The '일감' menu item is highlighted with a red box. Below the navigation bar, the '일감' section has a search bar with '검색조건' and '상태' (set to '진행중'). A '+ 새 일감 만들기' button is highlighted with a red box. The main content area displays a message: '표시할 데이터가 없습니다.' (No data to display). The footer shows 'Powered by Redmine © 2006-2017 Jean-Philippe Lang'.

01

➤➤ 새로운 일감 추가

02

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04

초기 화면 내 페이지 프로젝트 도움말

로그인 계정: tmffka7 내 계정 로그아웃

Redmine

검색: 프로젝트 바꾸기

프로젝트 작업내역 일감 소요 시간 Gantt 차트 달력 뉴스

새 일감만들기

프로젝트 * Test_Project

유형 * Feature

제목 * Requirements documentation

설명 **B** *I* U **C** **11** **112** **113** **114** **115** **116** **117** **118** **119** **120** **121** **122** **123** **124** **125** **126** **127** **128** **129** **130** **131** **132** **133** **134** **135** **136** **137** **138** **139** **140** **141** **142** **143** **144** **145** **146** **147** **148** **149** **150** **151** **152** **153** **154** **155** **156** **157** **158** **159** **160** **161** **162** **163** **164** **165** **166** **167** **168** **169** **170** **171** **172** **173** **174** **175** **176** **177** **178** **179** **180** **181** **182** **183** **184** **185** **186** **187** **188** **189** **190** **191** **192** **193** **194** **195** **196** **197** **198** **199** **200** **201** **202** **203** **204** **205** **206** **207** **208** **209** **210** **211** **212** **213** **214** **215** **216** **217** **218** **219** **220** **221** **222** **223** **224** **225** **226** **227** **228** **229** **230** **231** **232** 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**733** **734** **735** **736** **737** **738** **739** **740** **741** **742** **743** **744** **745** **746** **747** **748** **749** **750** **751** **752** **753** **754** **755** **756** **757** **758** **759** **760** **761** **762** **763** **764** **765** **766** **767** **768** **769** **770** **771** **772** **773** **774** **775** **776** **777** **778** **779** **780** **781** **782** **783** **784** **785** **786** **787** **788** **789** **790** **791** **792** **793** **794** **795** **796** **797** **798** **799** **800** **801** **802** **803** **804** **805** **806** **807** **808** **809** **810** **811** **812** **813** **814** **815** **816** **817** **818** **819** **820** **821** **822** **823** **824** **825** **826** **827** **828** **829** **830** **831** **832** **833** **834** **835** **836** **837** **838** **839** **840** **841** **842** **843** **844** **845** **846** **847** **848** **849** **850** **851** **852** **853** **854** **855** **856** **857** 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**983** **984** **985** **986** **987** **988** **989** **990** **991** **992** **993** **994** **995** **996** **997** **998** **999** **1000**

상태 * New

우선순위 * Urgent

담당자 Keon woo Kim

파일 (최대 크기: 5 MB)

시작시간 2019-04-03

완료기한 2019-04-10

추정시간 시간

진척도 40%

Powered by Redmine © 2006-2017 Jean-Philippe Lang

01

➤➤ 새로운 일감 추가

02

03

04

The screenshot shows the Redmine interface for a project named 'Test_Project'. At the top, there is a navigation bar with 'Test_Project' and a search field. Below the navigation bar, a green notification bar states '#1 일감이 생성되었습니다.' (Task #1 has been created). The main content area displays 'Feature #1' with a yellow background. Underneath, there is a section for 'Requirements documentation' with a note: 'Keon woo Kim이(가) 월분 이하 전에 추가함.' (Keon woo Kim added before the end of the month). A table of task details is shown:

상태:	New	시작시간:	2019/04/03
우선순위:	Urgent	완료기한:	2019/04/10
담당자:	Keon woo Kim	진척도:	<div style="width: 40%;"></div> 40%
		추정시간:	

Below the table, there is a '설명' (Description) section with the text: 'Requirements documentation for SWVerification must be done by Friday'. A list of items follows: 1. Hardware spec, 2. Software spec, 3. Vision, 4. AI. On the right side, there is a sidebar with '일감' (Tasks) and '모든 일감 보기 요약' (Summary of all tasks). At the bottom of the page, it says 'Powered by Redmine © 2006-2017 Jean-Philippe Lang'.

01

➤➤ Gantt 차트 확인

02

03

04

The screenshot shows the Redmine interface for a project named 'Test_Project'. The 'Gantt 차트' (Gantt Chart) tab is selected and highlighted with a red box. The chart displays a Gantt chart for the project, with a task named 'Feature #1: Requirements documentation' highlighted in red. The chart shows the task's progress from April 2019 to September 2019. The task is currently 45% complete, as indicated by the green bar and the text 'New 45%'. The chart is set to show 6 days per week, starting from the beginning of the month (4월). The interface includes navigation buttons for '뒤로' (Back) and '다음 >' (Next), and a footer indicating 'Powered by Redmine © 2006-2017 Jean-Philippe Lang'.

2019-4	2019-5	2019-6	2019-7	2019-8	2019-9														
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39

01

➤➤ Redmine + Github 연동 [git add/status/commit/push]

02

03

04

```
C:\Users\김건우\mbS\Software_Verification\src\main\java>git add Test.java

C:\Users\김건우\mbS\Software_Verification\src\main\java>git status
On branch master
Your branch is up to date with 'origin/master'.

Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   Test.java

C:\Users\김건우\mbS\Software_Verification\src\main\java>git commit -m "Modified Test.java by Keonwoo kim at 02am"
[master cfb0ce] Modified Test.java by Keonwoo kim at 02am
1 file changed, 1 insertion(+)

C:\Users\김건우\mbS\Software_Verification\src\main\java>git push
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 8 threads.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 521 bytes | 173.00 KiB/s, done.
Total 6 (delta 2), reused 0 (delta 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
To https://github.com/mbkim95/Software_Verification
   59e8db1..cfb0ce  master -> master

C:\Users\김건우\mbS\Software_Verification\src\main\java>_
```

01

➤➤ Redmine + Github 연동 [Github 반영 결과 확인]

02

03

04

Read our documentation on [safer password practices](#).

mbkim95 / Software_Verification Watch 0 Star 0 Fork 1

Code Issues 1 Pull requests 0 Projects 0 Wiki Insights

Branch: master

Commits on Apr 4, 2019

- Modified Test.java by Keonwoo kim at 02am
hutgae committed 3 minutes ago cfbd0ce
- final test
mbkim95 committed 35 minutes ago 59e8db1
- test commit
mbkim95 committed 39 minutes ago 92d7eff
- redmine test
mbkim95 committed an hour ago 0352ca2

Commits on Apr 3, 2019

- modified Test.java by keonwoo
hutgae committed 4 hours ago 9619708
- EAGT-1 JIRA TEST
mbkim95 committed 5 hours ago ce93ded
- test commit
mbkim95 committed 5 hours ago 004bba3
- Merge pull request #1 from ljq294/master Verified
ljq294 committed 11 hours ago cc6b2c9
- Update CalculatorTest.java Verified
lia294 committed 11 hours ago 34c82ec

01

Redmine + Github 연동 [Redmine 반영 결과 확인]

02

03

04

Test_Project

root @ master

이름	크기	개정판	마지막 수정일	지자	설명
.gradle		61e556a0	9일	MinBum Kim	Initial commit
.idea		59e8db15	37분	MinBum Kim	final test
gradle		61e556a0	9일	MinBum Kim	Initial commit
out		61e556a0	9일	MinBum Kim	Initial commit
src		cfd0cefc	5분	Keonwoo	Modified Test.java by Keonwoo kim at 02am
.gitattributes		61e556a0	9일	MinBum Kim	Initial commit
README.md	24 Bytes	61e556a0	9일	MinBum Kim	Initial commit
build.gradle	225 Bytes	61e556a0	9일	MinBum Kim	Initial commit
gradlew	5.17 KB	61e556a0	9일	MinBum Kim	Initial commit
gradlew.bat	2.13 KB	61e556a0	9일	MinBum Kim	Initial commit
settings.gradle	30 Bytes	61e556a0	9일	MinBum Kim	Initial commit

최근 개정판

수	날짜	지자	설명
cfd0cefc	2019/04/03 17:03	Keonwoo	Modified Test.java by Keonwoo kim at 02am
59e8db15	2019/04/03 16:26	MinBum Kim	final test
92d7eff6	2019/04/03 16:26	MinBum Kim	test commit
0352ca2b	2019/04/03 15:55	MinBum Kim	redmine test
96197080	2019/04/03 13:35	Keonwoo	modified Test.java by keonwoo
ce93dedf	2019/04/03 11:46	MinBum Kim	EAGT-1 JIRA TEST
004bba35	2019/04/03 11:39	MinBum Kim	test commit
ccc6b2c9a	2019/04/03 05:56	Ijg294	Merge pull request #1 from Ijg294/master
34c82ec0	2019/04/03 05:52	Ijg294	Update CalculatorTest.java
ab9787f7	2019/03/25 13:31	MinBum Kim	test commit

차이점 보기

모든 개정판 표시 | 개정판 보기

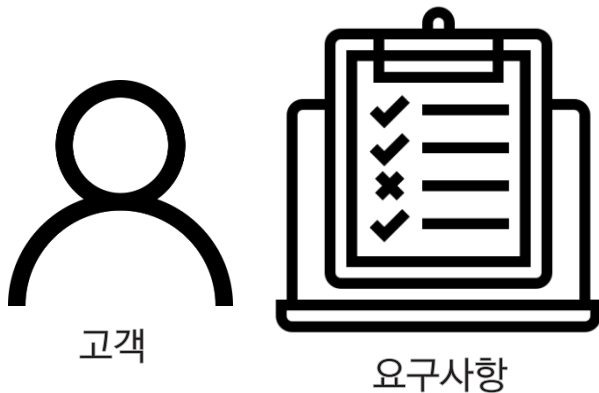
나눠내기 Atom

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요구사항 관리

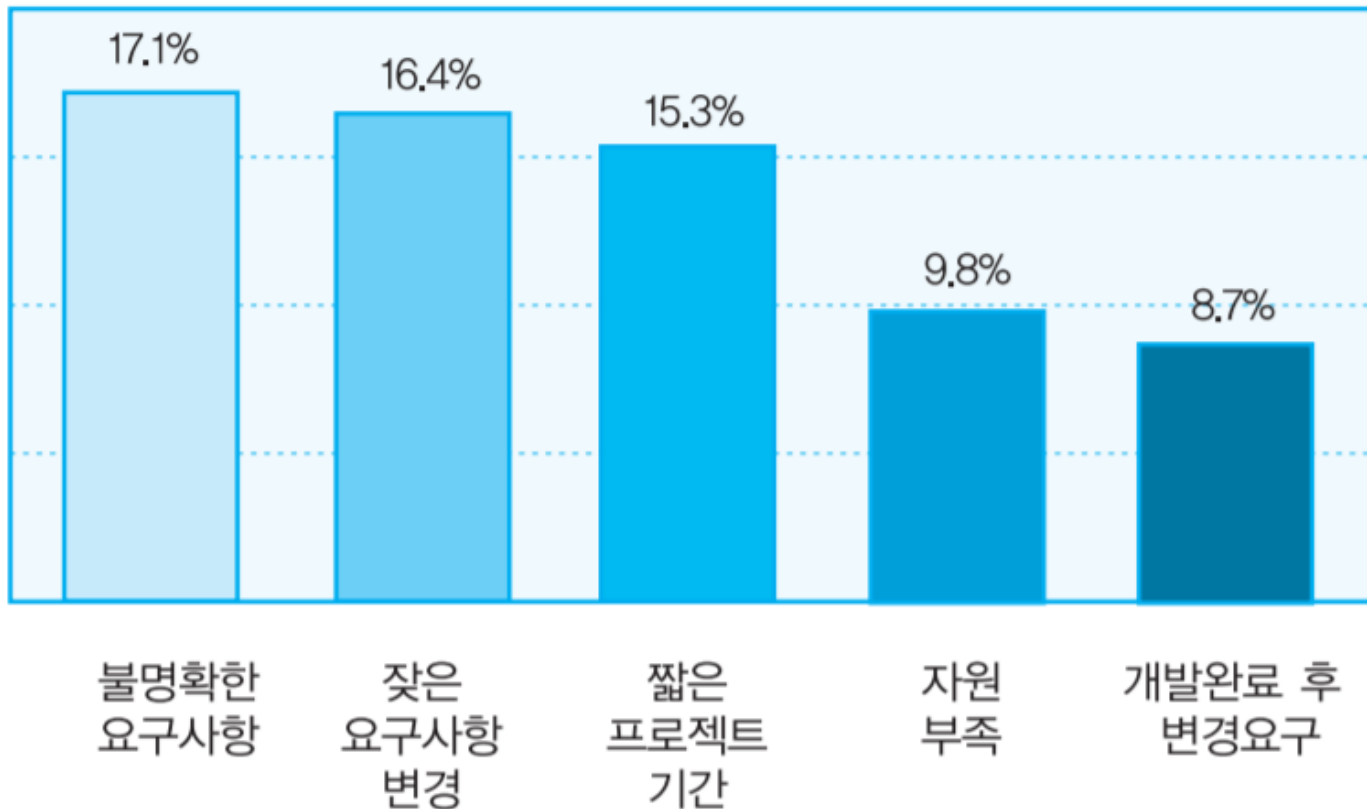
Reqview

»» Does the software system meets the user's real needs?



01
02
03
04

01 >> 문제 프로젝트의 주요 5대 요인



정책연구센터 @ 한국소프트웨어진흥원
성공적 프로젝트 수행 : 체계적 요구사항 관리로

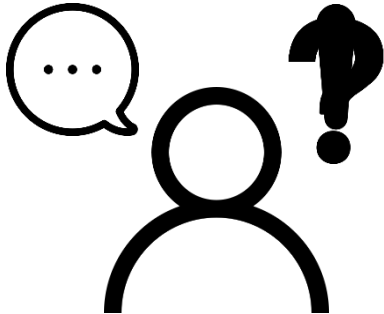
01

»» 요구사항의 특성

02

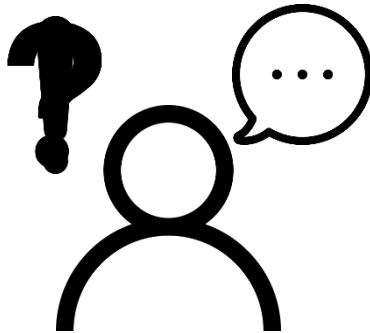
03

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고객

- 개발될 시스템에 대한 고객의 기술적/업무적 이해도 한계 존재
 - SW의 비 가시성
 - 서로의 관심 및 이해 수준에서 의사소통
- 요구사항은 명확하게 **초기에 파악이 어려움**



개발자

- 프로젝트를 진행할 수록 고객의 이해도 향상
 - 지속적이고 반복적인 의사소통
 - 새로운 요구사항 추가
- 요구사항은 진행 될 수록 **완벽해지고 변화하는 특성이 있음**

요구사항 변경의 필연성의 부정적 영향을 줄이기 위해 **요구사항 추적/관리 노력이 필요**

ReqView 설치

The screenshot shows the ReqView website's 'Software Download' section. At the top, there is a navigation bar with the ReqView logo and links for 'Download', 'Free Trial', 'Pricing', 'Services', 'Blog', and 'Resources'. A 'Feedback' button is located on the right side. The main heading is 'Software Download'. Below this, the 'ReqView 2.5.1' section is highlighted, with a date of '2018-12-07' and a link to 'Release Notes'. It lists four installation options: 'Windows 64-bit Application' (Windows 7+), 'Linux 64-bit Application' (Ubuntu 16.04+ LTS, Debian 9+ LTS), 'Mac 64-bit Application' (macOS 10.12+), and 'Web Application' (Latest version of Chrome or Firefox). Each option has a corresponding 'Download' or 'Open' button. A light blue banner below the options states: 'ReqView is activated with the limited FREE plan. Request the PRO trial to evaluate the advanced features.' Below this, the 'ReqView Beta 2.6.0-beta1' section is partially visible, with a date of '2019-03-11' and a link to 'Release Notes'. At the bottom of the page, there is a cookie notice: 'This website uses cookies to ensure you get the best experience on our website. Learn more' and a 'Got it!' button.

Platform	Application Name	OS Version	Action
Windows	Windows 64-bit Application	Windows 7+	Download
Linux	Linux 64-bit Application	Ubuntu 16.04+ LTS, Debian 9+ LTS	Download
Mac	Mac 64-bit Application	macOS 10.12+ New	Download
Web	Web Application	Latest version of Chrome or Firefox	Open

ReqView 2.5.1 2018-12-07 [Release Notes](#)

ReqView Beta 2.6.0-beta1 2019-03-11 [Release Notes](#)

This website uses cookies to ensure you get the best experience on our website. [Learn more](#) **Got it!**

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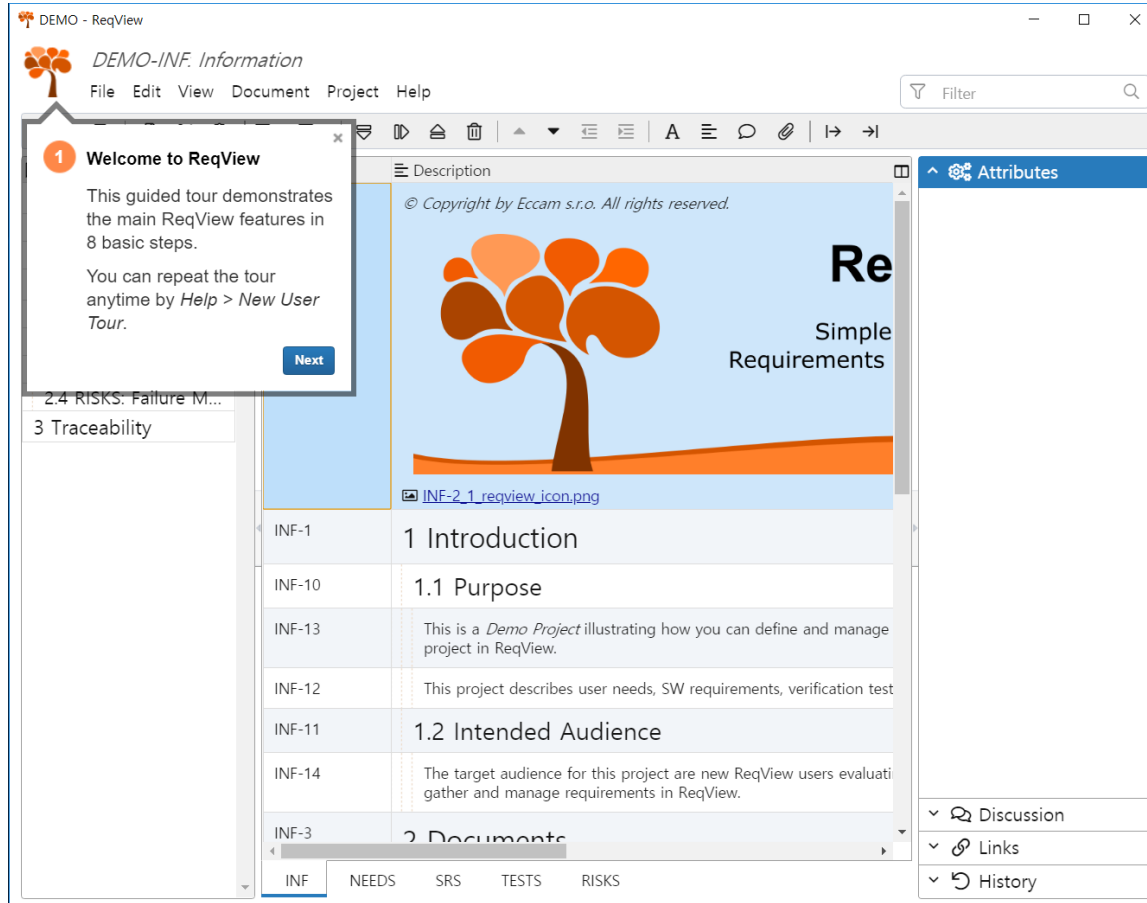
ReqView 설치

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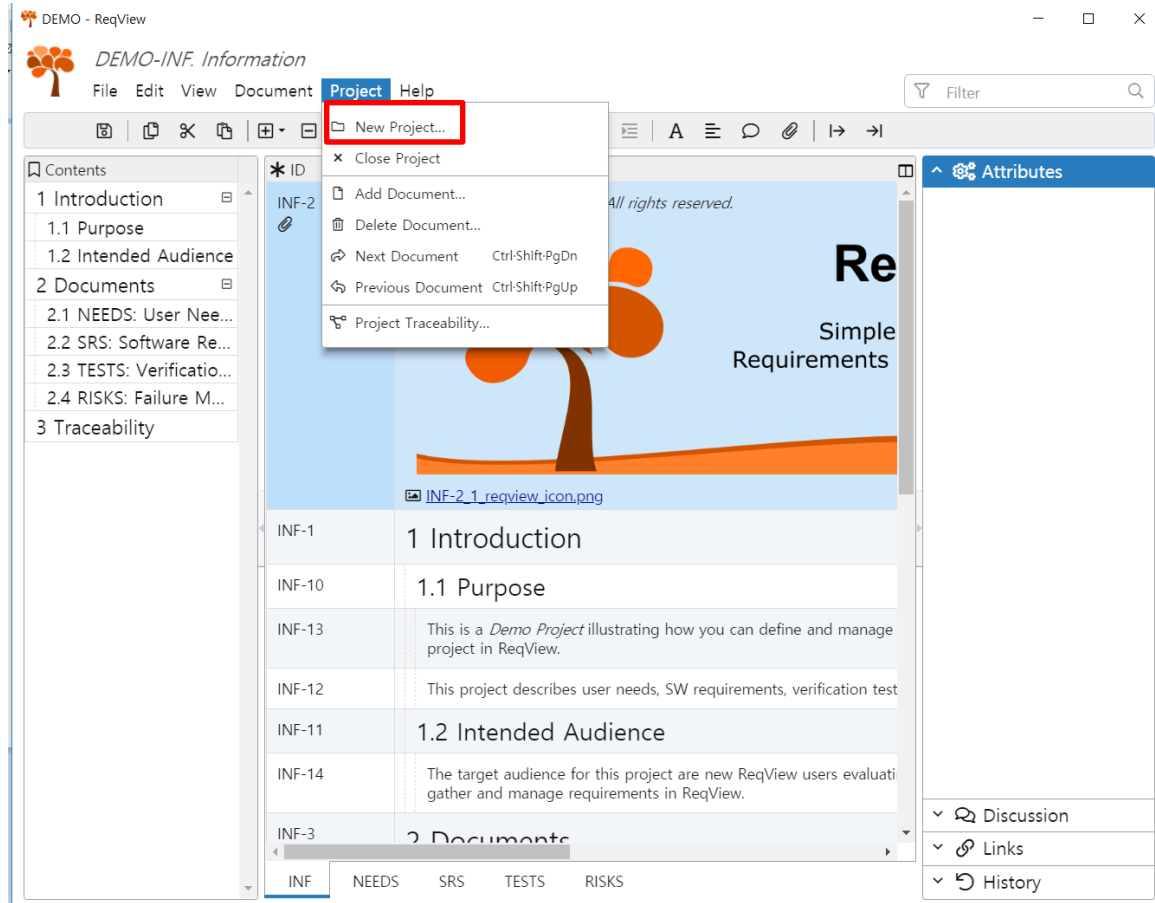
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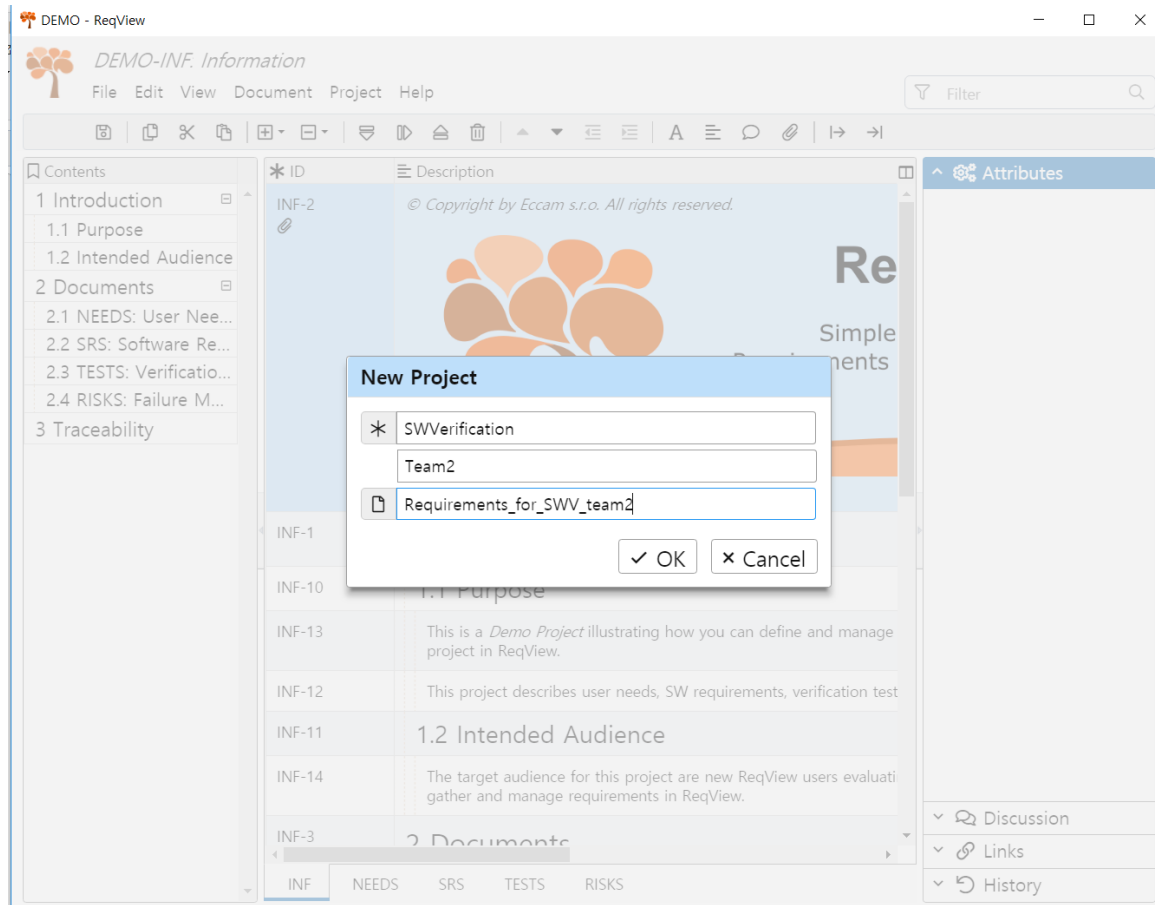
04



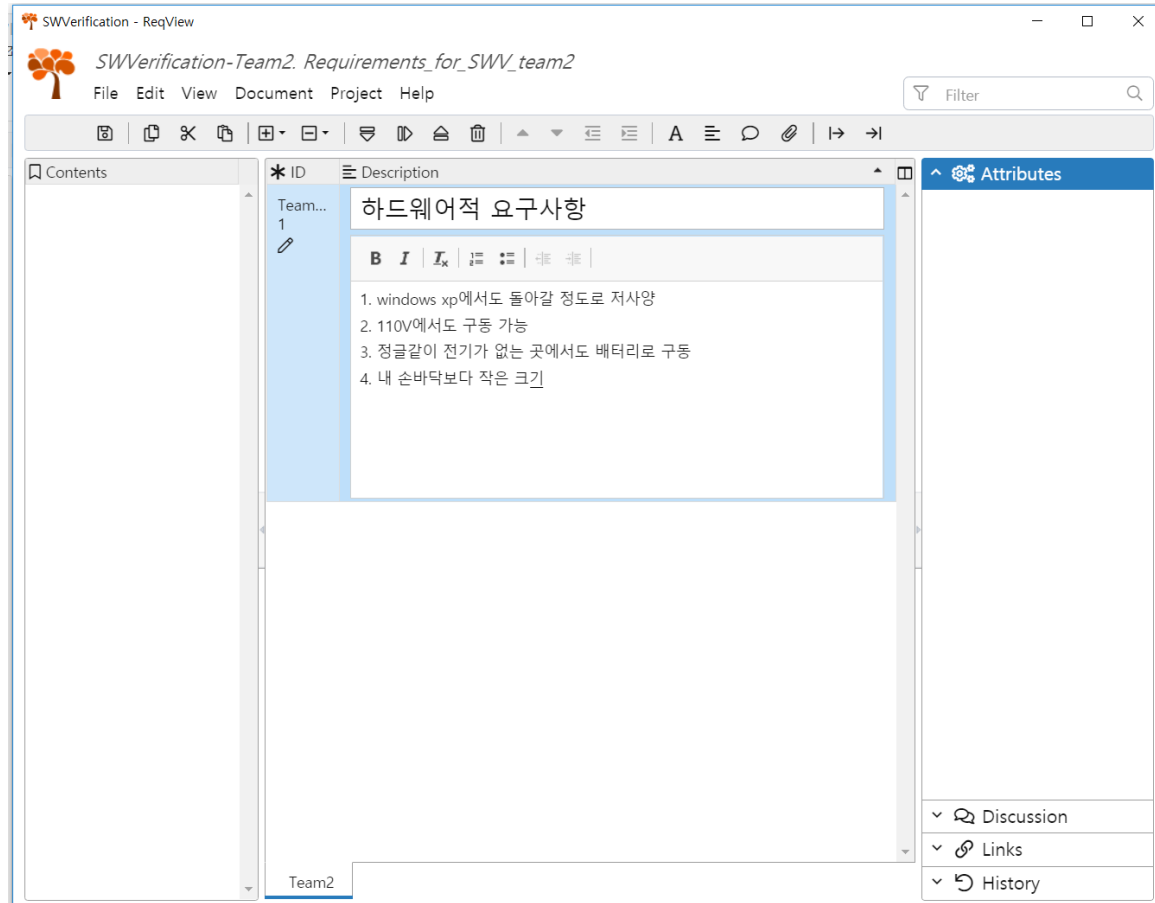
➤➤ 새로운 프로젝트 생성



➤➤ 새로운 프로젝트 생성



➤➤ 요구사항 작성



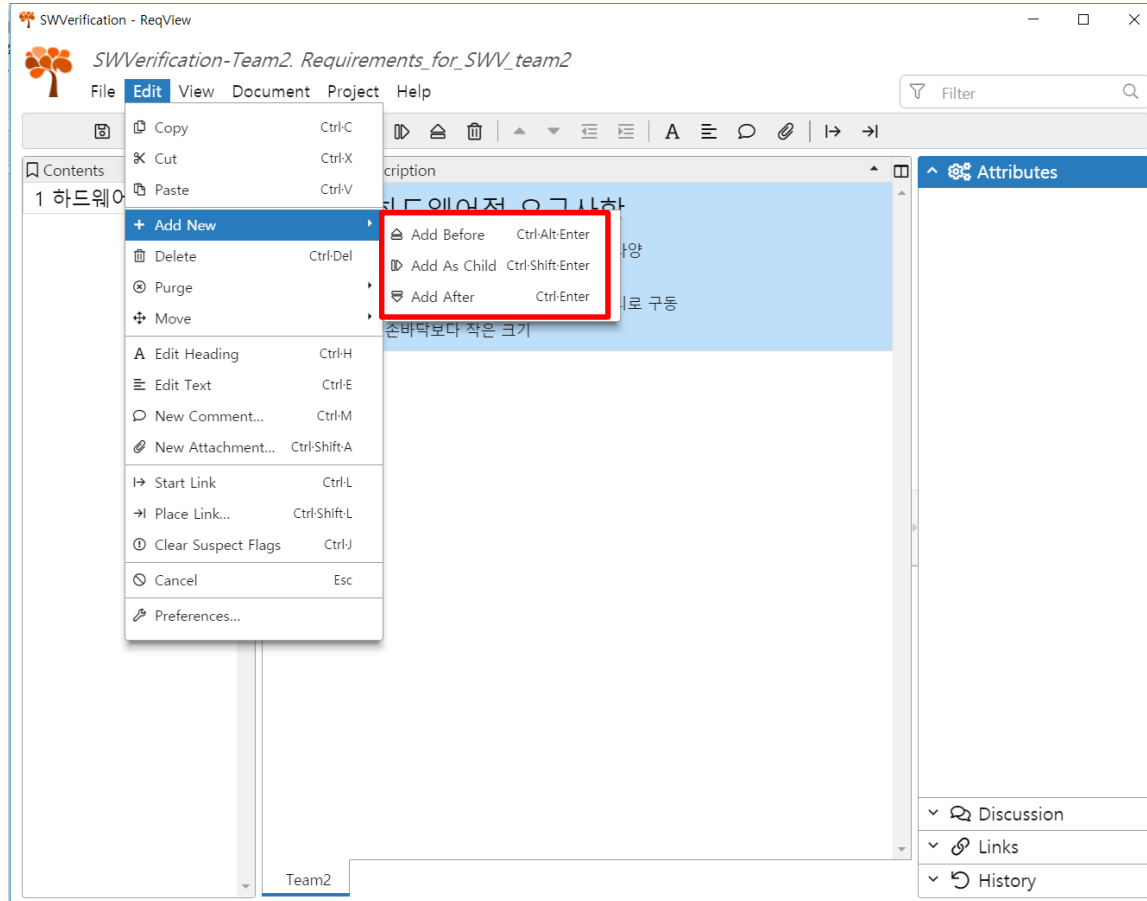
➤➤ 요구사항 추가 작성

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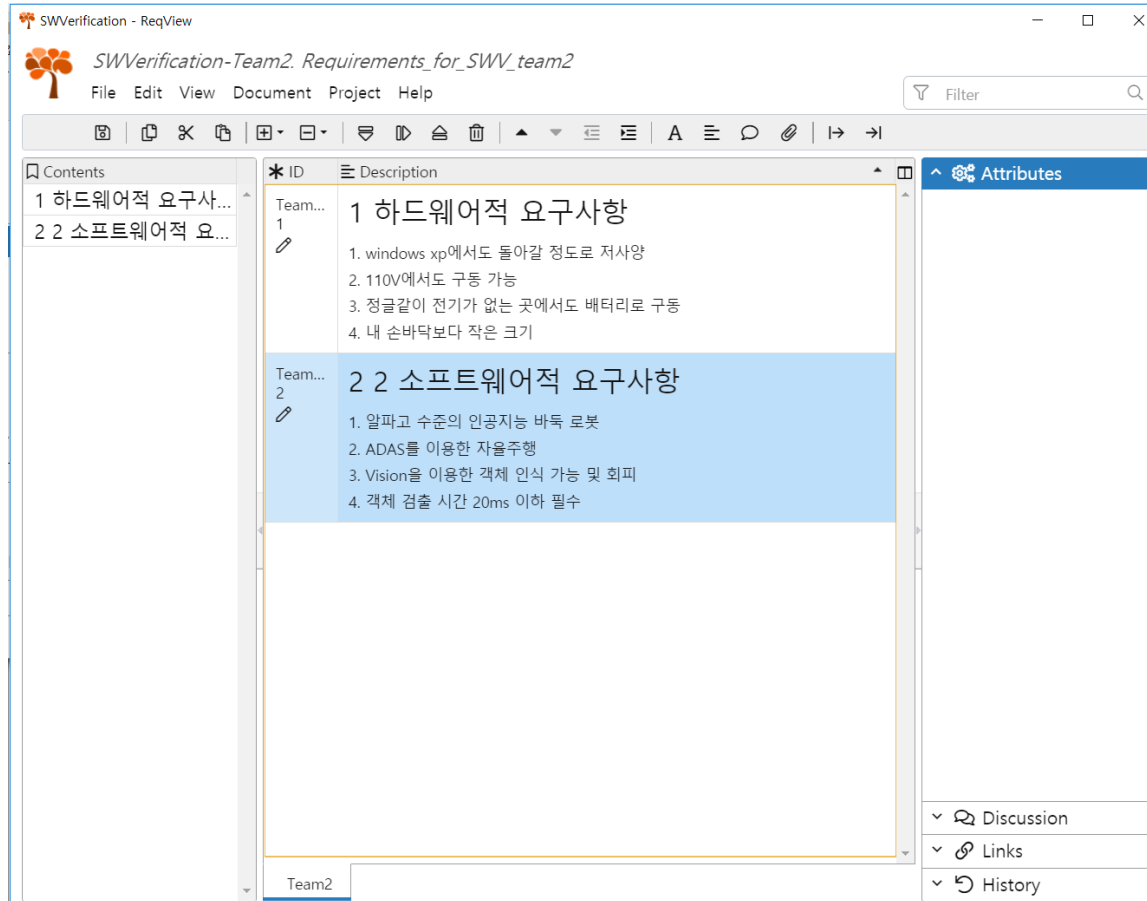
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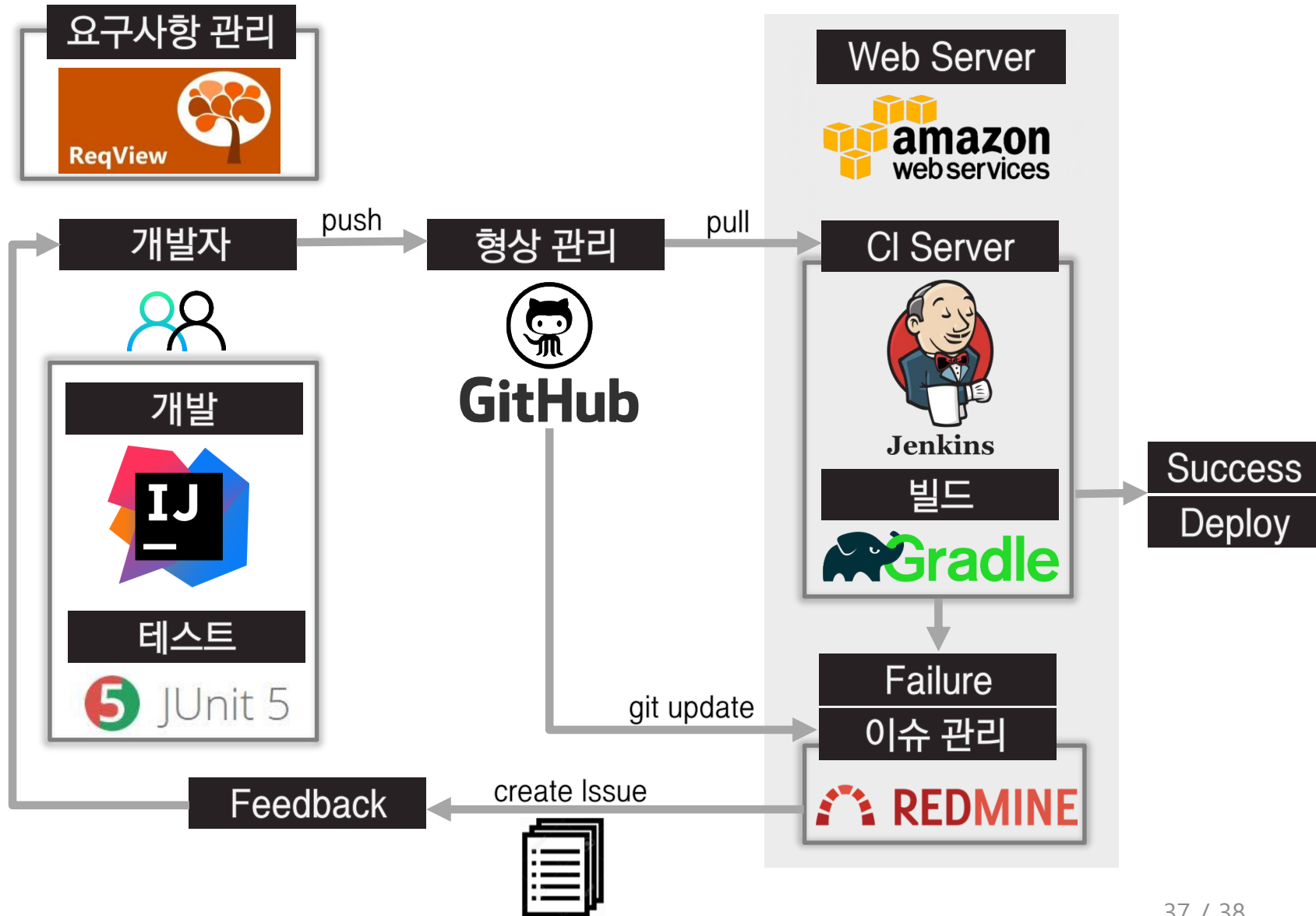
Summary

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THANK YOU